Do Opportunistic and Partisan Fiscal Cycles Come Together?

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Resumo: A literatura sobre ciclos políticos de negócios tem tradicionalmente analisado ciclos políticos oportunistas e partidários separadamente. Porém, não há nenhuma razão teórica ou prática para que assim seja. Por exemplo, choques fiscais durante as eleições podem bem depender, dentre outros fatores, das preferências dos partidos. O presente estudo oferece uma análise empírica integrada dos ciclos fiscais oportunistas e partidários em 3.393 municípios brasileiros entre 2001 e 2008, cobrindo as duas últimas eleições para prefeito (2004 e 2008) ocorridas no novo contexto institucional propiciado pela nova Legislação Eleitoral (1997), a Emenda da Reeleição (1997) e a Lei de Responsabilidade Fiscal (2000), importantes mudanças que provavelmente afetaram os comportamentos fiscal e eleitoral no país. Os resultados apontam para uma significativa associação entre ciclos fiscais oportunistas e partidários no nível local no Brasil, especialmente do lado da despesa e sob administrações orientadas ideologicamente à esquerda. Por outro lado, diferenças partidárias ao longo do mandato (anos não eleitorais) não são tão fortes. Esses resultados sugerem que os partidos brasileiros se diferenciam fiscalmente com mais intensidade durante as eleições.

JEL: D72, H72, H30 **Palavras-chave:** ciclos políticos de negócios**,** eleições, política fiscal

Abstract: The literature on political business cycles (PBC) has traditionally analysed opportunistic and partisan cycles separately. However, there is no theoretical or practical reason why this should be so. For instance, the magnitude and shape of fiscal shocks around election times may well depend, among other factors, on partisan preferences. The present study provides an integrated empirical analysis of opportunistic and partisan fiscal cycles in 3,393 Brazilian municipalities between 2001 and 2008, covering the last two mayoral elections (2004 and 2008) held under the new institutional context brought up by the new Electoral Legislation (1997), the Reelection Amendment (1997) and the Law of Fiscal Accountability (2000), important changes that probably affected fiscal and electoral behaviour in the country. The results point at a significant association between opportunistic and partisan fiscal cycles at the local level in Brazil, especially on the spending side and under left-wing administrations. On the other hand, partisan differences along the term in office (non-electoral years) are not as strong. These results suggest that Brazilian parties distinguish themselves – at least in fiscal terms – with greater intensity during elections.

JEL: D72, H72, H30 **Key words:** political business cycles**,** elections, fiscal policy

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1 Introduction

The literature on political business cycles (PBC) has traditionally identified two sources of politically motivated economic cycles. In the *opportunistic* PBC models, politicians take electoral periods as an opportunity to increase their reelection chances by promoting positive shocks in the economy right before elections.[1] In the *partisan* PBC models, business cycles are partially caused by changes in economic policy according to the different ideological positions of the elected parties.[2] While on opportunistic models the main focus is on economic cycles occurring before elections (with post-elections cycles being necessary adjustments to bring the economy back to its equilibrium), on partisan models the focus is mostly on cycles occurring as a result of government transitions, so that changes in economic policies are observed between mandates rather than along the electoral calendar.

Following these two foundational models, the empirical literature on PBC has usually analysed opportunistic and partisan cycles separately. However, there is no theoretical or practical reason why this should be so. For instance, partisan fiscal cycles can be characterized not only by distinct fiscal policies observed between the mandates of different parties, but also by distinct fiscal movements along the electoral calendar according to the preferences of the ruling party. The magnitude and shape of fiscal shocks around election times would thus depend, among other factors, on partisan preferences. By this view, pre-electoral shocks on some types of fiscal variables could be implemented by the ruling party to signal its competence level or policy preferences to specific groups of voters in turn for their electoral support. For example, a left-wing party could intensify the levels of public expenditures and employment before elections to better signal what policies it intends to run if elected, and thus conquer the votes of those citizens who care about such policies.

The present study provides an integrated empirical analysis of opportunistic and partisan fiscal cycles in 3,393 Brazilian municipalities between 2001 and 2008, covering the last two mayoral elections (2004 and 2008) held under the new institutional context brought up by the new Electoral Legislation (1997), the Reelection Amendment (1997) and the Law of Fiscal Accountability (2000), important changes that probably affected fiscal and electoral behaviour in the country.

The results from this paper confirm the presence of a significant association between opportunistic and partisan fiscal policies at the local level in Brazil, with parties from different ideological cleavages adopting different fiscal strategies during elections. The most significant and strong effects are observed under left-wing administrations, which enact higher changes in capital grants and capital expenditures (e.g. investments) in electoral years. A positive and significant change in the budget balance during elections is observed only for right-wing parties. As for revenues variables, while all parties equally adopt opportunistic reductions in local taxation, partially compensated by increases in current transfers grants, leftist parties are able to get extra funds by additionally increasing capital transfers grants. In terms of the average fiscal policy adopted by parties throughout their mandates (non-electoral years), partisan differences are not as strong, except by a slightly looser budget balance under right-wing administrations and lower levels of investments under left-wing ones. These results suggest that Brazilian parties distinguish themselves – at least in fiscal terms – with greater intensity during elections.

[1] Important initial references on opportunistic political business cycles (PBC) are Kramer (1971), Nordhaus (1975), Tufte (1975), Lindbeck (1976), Fair (1978) – among others – who focused on cycles on monetary (macro) variables. Subsequent studies have switched attention to political cycles on fiscal variables, such as Rogoff and Sibert (1988), Rogoff (1990) and Peltzman (1992). For good reviews on the PBC literature, refer to Drazen (2000), Drazen and Eslava (2003) and Franzese and Jusko (2006).

[2] Key studies on partisan cycles are Hibbs (1977), Beck (1982), Alesina (1987), Alesina and Roubini (1992), Sheffrin (1989) and Alesina, Roubini and Cohen (1997).

This paper is organized as follows: the next section reviews the few studies that analyse opportunistic and partisan cycles simultaneously, showing how the present study adds to that literature. Section III provides descriptive statistics of political parties in Brazil, such as their ideological classifications, reelection rates and fiscal policies. Section IV describes the empirical strategy. Results are discussed in Section V, followed by the final conclusions in Section VI.

2 Literature Review

Few theoretical and empirical studies on PBC have provided an integrated analysis of opportunistic and partisan cycles.

Theoretically, there is the study of Drazen and Eslava (2006), who develop a model where expenditures are targeted to different groups of voters with heterogeneous preferences over fiscal and non-fiscal policies (e.g. ideology). In their model, politicians from parties L and R have preferences over distinct groups of voters. As a result, an incumbent politician/party changes the composition of the budget during electoral periods towards the preferences of the groups with greater electoral importance so as to signal that he/it will continue favouring those groups in the future if elected. Voters have imperfect information about incumbent's type (in terms of which policies and voters he prefers), but must infer what sorts of fiscal policy he will follow if reelected. Such intertemporal inference is made through observing present fiscal policy, especially during elections. As a result, voters reward electoral year targeting even if they know it is politically motivated, because they expect that such targeting will persist over the next mandate. Repeated elections make such opportunistic policy credible due to reputational effects, while true unobserved preferences of politicians over groups of voters guarantee some persistence of targeting over time. Unfortunately, the authors do not properly test their model.[3]

Empirically, works that simultaneously test opportunistic and partisan cycles on fiscal policies are scarce. Veiga and Veiga (2007), for example, suggest that the degree of opportunism can be related to ideology. They test the ideological effects of fiscal opportunism on investment expenditures by interacting electoral year and political dummies. They show that all mayors in Portugal behave opportunistically, but left-wing oriented ones increase their investment expenditures in the election year more than right-wing ones. Overall, however, their results provide little evidence of ideological cycles for other fiscal categories over the whole term in office.

Similarly, Sakurai and Menezes-Filho (2011) include interaction terms between the party ideology of mayors in Brazil and the election year dummy to capture the effects of electoral opportunism for each political group separately. Contrary to the findings in Veiga and Veiga (2007), they do not find significant electoral year differences between left and right-wing parties for any of the fiscal variables analysed. Regarding the overall fiscal policy followed by parties along the term in office, they find only weak evidence of partisan effects, with higher budget balances being observed for leftist political parties and higher current expenditures for the group "other parties" (i.e. parties that are not ideologically classified).

This paper adds to those studies in at least four aspects. First, the time period used for the empirical analysis (2001-2008) explicitly takes into account the new institutional context brought up

[3] In Drazen and Eslava (2010), they develop and test a slightly different model, where partisan differences are not considered. Instead of politicians having preferences over distinct and heterogeneous groups of voters as in Drazen and Eslava (2006), politicians have preferences over different types of spending, while voters have equal policy preferences and receive the same utility from a given targeted expenditure. Thus, distinct preferences over the composition of the budget is present only between voters and politicians rather than within voters.

by the new Electoral Legislation (EL),[4] the Reelection Amendment (ER),[5] and the Law of Fiscal Accountability (LRF),[6] important changes that most probably affected fiscal and electoral behaviour in the country. While the ER relaxed the restriction imposed by term limits, thus possibly creating incentives for greater electoral accountability, as some studies point out,[7] the restrictions imposed by the EL and LRF on the management of fiscal policies may have reduced politicians' means for conducting budget deficits and electoral year increases in expenditures, thus reducing their ability to promote electoral fiscal cycles. Therefore, it is probable that these laws reduced the magnitude of opportunistic fiscal deficits in Brazil.[8] Although the study of Sakurai and Menezes-Filho (2011) covers a longer series (1989-2005) if compared to this study, it is possible that their results suffer from bias on unobservables due to the structural break caused by those important institutional changes. In Veiga and Veiga (2007) an even longer panel is considered (1979-2001) and even though the authors confirm that the legislation on local public finances changed during this period, they do not consider such changes in their empirical analysis nor discuss if their results are sensitive to those changes. This paper avoids such problems associated with structural breaks, since it covers an "ex post" period after which those laws were already fully implemented, thus making its panel quite homogenous and stable for statistical treatment.

Second, the fiscal data in this paper covers a wide range of revenues and spending variables which are key for deepening our understanding of fiscal opportunism at the local level in a context of fiscal federalism. Most Brazilian municipalities, especially the smaller ones, have a big share of their total revenues dependent on constitutional transfers from federal and state-level governments. Take current transfers for example: because the flow of current transfers are quite exogenous and stable, regardless of political motivations and ideological alignments, mayors have only limited discretion over revenues, reducing their ability to generate extra funds so as to promote a sustainable electoral fiscal cycle.[9] On the other hand, mayors can manipulate some local tax revenues and get extra funds from higher levels of government through signing contractual grants (*convênios*), while have considerable influence over spending. In this sense, this paper carefully discusses the results taking into account the degree of discretion mayors have over the fiscal variables considered.

Another important aspect of the present study is its short panel structure, in which the predominance of cross-sectional units over time periods (N > T) reduces the usual problems of serial correlation. Besides, serial correlation should also be diminished by the application of pooled regressions clustered at the municipal level with cluster-robust standard errors, which should additionally circumvent any potential source of heteroskedasticity.

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[4] Lei n.9504, 30th of September 1997. The EL tackles the problems associated with electoral opportunism by imposing limits to reelection candidates on various administrative and fiscal decisions prior to elections.

[5] Emenda Constitucional n. 16, 4th of June 1997. The ER reduced term limits by authorizing the reelection of officials from the Executive for one consecutive term.

[6] Lei Complementar n. 101, 4th of May 2000. The LRF imposed restrictions on the fiscal management of all government levels, especially restricting deficit-making policies. For example, it defined limits to the share of personnel expenditures over net current revenues. Besides, it introduced new rules regarding transparency, control and monitoring of fiscal activity, providing voters with more information and capability to evaluate the fiscal performance of governments.

[7] See for instance the seminal study on the effects of term limits on economic policies by Besley and Case (1995), for whom incumbents who are eligible to run for reelection put in more effort in promoting fiscal policies which are closer to voters' preferences. A recent study on the term limits effects on corruption in Brazil is presented by Ferraz and Finan (2011), who find that first term mayors are less corrupt than second term mayors once those promote greater electoral accountability.

[8] However, this does not mean that they ended fiscal opportunism completely. As Drazen and Eslava (2010) suggest, politicians may engage in opportunistic fiscal policies by simply changing the composition of the budget during elections, directing it closer to voters' fiscal preferences. Such fiscal opportunism is perfectly suitable in a world of fiscally conservative voters (i.e. voters who dislike deficits or overall increase in government spending) but who have a taste for targeted expenditures. This scenario must probably be the case for the current institutional set in Brazil.

[9] On average, current transfers represent 80% of the municipalities' total revenues.

Finally, it is important to mention that the econometric method herein applied differs from those in Veiga and Veiga (2007) and Sakurai and Menezes-Filho (2011), which were based in system-GMM linear dynamic panel data models. Because these models implement regressions in differences, they are not too suited for the present study, as will be explained later in section IV.

3 Data and Descriptive Statistics

This section provides basic data relating the ideological classification of the political parties in the sample, their size in terms of municipalities under their administration, their reelection rates and their average fiscal policies.

Table 1 summarizes how the 25 parties in the sample are ideologically classified as left, center or right, based on Rodrigues (2002) and Dantas (2007).[10] Out of the 25 parties, 6 were alternatively classified according to their official statutes, since they were not found in Rodrigues (2002) and Dantas (2007).[11] Table 1 shows that there are 11 left-wing parties, 2 center-oriented and 12 right-wing parties in the sample.

From Table 2, we see that the most representative parties at the municipal level are PMDB, PSDB, PFL, PP/PPB, PTB and PT, which together have accounted for almost 80% of all the municipal mandates in the sample between 2001 and 2008.[12] In this sense, it can be seen that the multiparty system in Brazil, at least considering the preferences of the electorate at the local level, comes down to about 6 or more effective parties. All together, we see that the ideological representation of municipalities over this period has been dominated by right-wing parties, which ruled 2,797 municipalities (41.2%), followed by centralist parties in 2,607 municipalities (38.4%) and leftist parties in the remaining 1,382 municipalities (20.4%).

However, right-wing parties have shown a lower average reelection rate (17% for all right-wing parties and 22.6% excluding those with zero reelection), while centrist and left-wing parties have had higher average reelection rates (38.1% and 38.3% respectively). The most significant individual reelection rate belongs to PT (53.5%). This evidence confirms the growth of the left-wing parties in Brazil following the successive victories of PT in the last three presidential races (2002, 2006 and 2010). Before PT, the country has been managed by PMDB (1985-1990; 1992-1994) and PSDB (1995-1998; 1999-2002) since redemocratization in 1985.[13]

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[10] Rodrigues (2002) provides a wider classification, covering a greater number of parties, while Dantas (2007) contributes with an update of such classifications. All parties mentioned by Dantas (2007) are present in Rodrigues (2002), and except by the PTB party (Partido Trabalhista Brasileiro - Brazilian Labour Party), they classify all other parties equally. In Rodrigues (2002), PTB is classified as "center", while in Dantas it is classified as "right". This paper follows Dantas (2007), since it is more recent.

[11] Surely, this alternative classification is not free from criticisms. However, these 6 parties together have ruled over only 78 out of 6,786 municipal mandates in the sample (1.14%). The results from this study are thus not sensitive to this classification.

[12] Note that there are 3,393 municipalities and two elections and mayoral mandates, summing up to 6,786 municipal mandates in the sample.

[13] Between 1990-1992, the country was under the administration of the extinct PRN (Partido da Reconstrução Nacional – National Reconstruction Party), whose President suffered an impeachment.

Table 1 - Ideological Classification of Political Parties in Brazil

Left	Center	Right
PT	PMDB	PFL
PDT	PSDB	PP/PPB
PSB		PTB
PPS		PL
PV		PSD
PMN		PSC
PHS[1]		PRP[1]
PT do B		PSL
PRTB[1]		PSDC[1]
PC do B		PST
PTN[1]		PTC[1]
		PRONA

Source: Adapted from RODRIGUES, 2002 and DANTAS, 2007.

[1]Ideological classification made by the author based on the party's official statutes

Party names: PT = Partido dos Trabalhadores (Workers' Party); PDT = Partido Democrático Trabalhista (Democratic Labour Party); PSB = Partido Socialista Brasileiro (Brazilian Socialist Party); PC do B = Partido Comunista do Brasil (Communist Party of Brazil); PPS = Partido Popular Socialista (Socialist People Party); PMN = Partido da Mobilização Nacional (National Mobilization Party); PV = Partido Verde (Green Party); PMDB = Partido do Movimento Democrático Brasileiro (Brazilian Democratic Movement Party); PSDB = Partido da Social Democracia Brasileira (Brazilian Social Democratic Party); PTB = Partido Trabalhista Brasileiro (Brazilian Labour Party); PFL = Partido da Frente Liberal (Liberal Front Party); PPB = Partido Progressista Brasileiro (Brazilian Progressive Party); PL = Partido Liberal (Liberal Party); PSD = Partido Social Democrata (Social Democratic Party); PSC = Partido Social Cristão (Social Christian Party); Prona = Partido de Reedificação da Ordem Nacional (Party of the National Order Rebuilding); PSL = Partido Social Liberal (Social Liberal Party); PST = Partido Social Trabalhista (Social Labour Party); PT do B = Partido Trabalhista do Brasil (Labour Party of Brazil); PHS = Partido Humanista da Solidariedade (Solidarity Humanist Party); PRTB = Partido Renovador Trabalhista Brasileiro (Brazilian Renewed Labour Party); PTN = Partido Trabalhista Nacional (National Labour Party); PRP = Partido Republicano Progressista (Republican Progressive Party); PSDC = Partido Social Democrata Cristão (Social Democratic Christian Party); PTC = Partido Trabalhista Cristão (Christian Labour Party)

Table 2 - Reelection Rates by Parties (2001-2008)

Party Code	Party Name	Number of Municipalities[1]	Total Reelections[2]	Reelection Rate (%)
15	PMDB	1487	585	39,3%
45	PSDB	1120	412	36,8%
25	PFL/DEM	1018	331	32,5%
11	PP/PPB	778	287	36,9%
14	PTB	499	142	28,5%
13	PT	426	228	53,5%
12	PDT	385	130	33,8%
22	PL	348	99	28,4%
23	PPS	289	56	19,4%
40	PSB	180	69	38,3%
41	PSD	47	0	0,0%
43	PV	34	15	44,1%
44	PRP	28	5	17,9%
17	PSL	27	4	14,8%
20	PSC	25	4	16,0%
33	PMN	23	6	26,1%
31	PHS	18	6	33,3%
27	PSDC	14	2	14,3%
70	PT do B	11	1	9,1%
28	PRTB	8	3	37,5%
36	PTC	7	1	14,3%
65	PC do B	5	3	60,0%
18	PST	5	0	0,0%
19	PTN	3	2	66,7%
56	PRONA	1	0	0,0%
TOTAL		6786	2391	35,2%

Source: Author´s elaboration based on TSE (Tribunal Superior Eleitoral)

[1]The number of municipalities administered by the party during the 2001-2004 and 2005-2008 mandates

[2]The total number of municipalities where the party was reelected.

Table 3 relates the average fiscal variables for electoral and non-electoral years (term's average) for parties from the left, center and right. The table suggests the presence of some association between fiscal opportunism and party ideology. Parties oriented to the right seem to present a much higher and positive variation in the budget balance during election years (78%) – although their term's average balance is much lower – whereas parties from the left and center present a lower but still positive change on the budget balance (41% and 37% respectively). This suggests that between 2001 and 2008, all parties have adopted a fiscally responsible opportunistic policy in election years, with parties from the right being even more fiscally conservative during elections, but less so along non-electoral years. The table also shows that left oriented parties appear to have higher electoral year changes in all fiscal variables, especially those related to capital transfers and expenditures. This possibly reflects the combination of a high fiscal dependence of most municipalities on transfers from the states and federal governments and the recent strengthening of the left on all government levels along this period, which must have made capital transfers to be channelled with priority to municipalities under left-wing parties. Given that capital revenues are much more dependent on political agreements between municipalities and the states and/or federal governments, since most of it come in the form of grants – discretionary transfers based on signed agreements (*convênios*) established between municipalities, the federal states and the Union defining each other's budgetary role over specific policy areas – its flow must have been influenced by political alignments and ideological positions, in which leftist parties were particularly benefited.

TABLE 3 - Fiscal Variables and Ideological Classification (2001-2008)

	Left						Center						Right					
	Electoral Year		Non Electoral Years (Term's Average)		Electoral Year change (%)		Electoral Year		Non Electoral Years (Term's Average)		Electoral Year change (%)		Electoral Year		Non Electoral Years (Term's Average)		Electoral Year change (%)	
Fiscal Variables	(A)		(B)		(A)/(B)		(A)		(B)		(A)/(B)		(A)		(B)		(A)/(B)	
	Obs	Mean	Obs	Mean	Obs	Mean	Obs	Mean	Obs	Mean	Obs	Mean	Obs	Mean	Obs	Mean	Obs	Mean
Total Revenues (TR)	1.382	1.409	4.146	1.189	1.382	18%	2.607	1.409	7.821	1.259	2.607	12%	2.797	1.367	8.391	1.183	2.797	16%
Tax Revenues	1.382	104	4.146	89	1.382	17%	2.607	93	7.821	82	2.607	14%	2.797	85	8.391	73	2.797	16%
Current Transfers Grants	1.382	29	3.618	24	1.382	22%	2.607	29	6.416	23	2.607	22%	2.797	28	6.931	24	2.797	21%
Capital Transfers Grants	1.382	53	3.618	32	1.382	64%	2.607	48	6.416	36	2.607	34%	2.797	42	6.931	32	2.797	30%
Total Spending (TS)	1.382	1.360	4.146	1.155	1.382	18%	2.607	1.366	7.821	1.227	2.607	11%	2.797	1.323	8.391	1.158	2.797	14%
Current Expenditures	1.382	1.145	4.146	1.004	1.382	14%	2.607	1.161	7.821	1.059	2.607	10%	2.797	1.132	8.391	1.005	2.797	13%
Capital Expenditures	1.382	215	4.146	150	1.382	43%	2.607	205	7.821	168	2.607	22%	2.797	191	8.391	153	2.797	25%
Personnel Expenditures	1.382	577	4.146	502	1.382	15%	2.607	578	7.821	519	2.607	11%	2.797	563	8.391	495	2.797	14%
Capital Investments	1.382	189	4.146	127	1.382	49%	2.607	181	7.821	145	2.607	25%	2.797	167	8.391	131	2.797	27%
Budget Balance (TR - TS)	1.382	48,7	4.146	34,6	1.382	41%	2.607	43,3	7.821	32	2.607	37%	2.797	44,2	8.391	24,8	2.797	78%

Source: Author´s elaboration based on TSE (Tribunal Superior Eleitoral) and STN (Secretaria do Tesouro Nacional)
Means are expressed in per capita Reais (R$), at 2008 prices using the IPCA inflation index

4 Empirical Strategy

In order to implement an integrated test of how elections and parties affect fiscal policy, the following regression model is applied:

$$FV_{it} = \alpha_i + \beta_1 ELEC_t + \beta_2 RIGHT_{it} + \beta_3 LEFT_{it} + \beta_4 ELEC_t * RIGHT_{it} + \beta_5 ELEC_t * LEFT_{it} + \delta_1 T + X'_{it}\beta_x + \varepsilon_{it} \quad (1)$$

where the dependent variable FV_{it} is a fiscal variable observed for municipality i in year t; α_i is an individual (municipal) effect that can be either random or fixed; $ELEC_t$ is a time dummy equal to 1 in the electoral year and 0 othwerwise; $RIGHT_{it}$ and $LEFT_{it}$ are political dummies equal to 1 when the mayor's party is oriented to the right or left of the ideological spectrum, respectively, and 0 (zero) whenever the party is from the center (i.e. PMDB or PSDB), so that these are the base group; T is a linear time trend accounting for a potential upward trend in FV_{it} and ε_{it} is the idiosyncratic error.[14] The electoral year dummy tests the presence of fiscal opportunism during elections, while the ideological dummies test the partisan effects on the term's average fiscal policy, showing the difference in fiscal variables between parties from the right or the left relative to those from the center.

Following a similar formulation as in Veiga and Veiga (2007) and Sakurai and Menezes-Filho (2011), the simultaneous effects of opportunistic and partisan cycles are captured by the coefficients on the interactions $ELEC_t*RIGHT_{it}$ and $ELEC_t*LEFT_{it}$. These interactions test if changes in the pattern of fiscal policies in the electoral years vary according to the ideological preferences of parties. If parties follow distinct fiscal strategies as elections get closer, these interaction dummies would be statistically significant, whereas no party differences would be confirmed by statistically insignificant coefficients.

The vector X is a set of control variables accounting for other political, demographic and economic determinants of fiscal policy, and they are: (i) the percentage share of total current transfers from the states and federal governments over total revenues; (ii) the share of votes obtained by the mayor's party in the last election, as a percentage of total votes; (iii) the index of votes fractionalization in the last election, given by the formula $1 - \sum_j^J v_j^2$, in which v_j is the share of votes obtained by each candidate j running for mayor at municipality i; (iv) a dummy indicating the political alignment between the mayor's and the governor's parties (1st and 2nd half of mayor's mandate); (v) a dummy indicating the political alignment between the mayor's and the president's parties (1st and 2nd half of mayor's mandate); (vi) population of municipality i; and finally, (vii) the municipality's real GDP per capita (at 2008 prices).

The inclusion of each of these control variables are justified on the following grounds. First, the share of current transfers over total revenues provides a measure of the municipality's fiscal autonomy, where higher shares mean less fiscal resources owned and managed by the mayor's party from which he can promote a political cycle.

Second, the share of votes is used as a proxy for the parties' local popularity and political strength, where the higher are these shares in the previous election, the more

[14] Regarding the time trend T, it is expected that $\delta_1 > 0$, pointing to a positive average annual growth rate in FV_{it} for the sample period. The reason is that total revenues and spending have had a substantial real growth along the eight years in the panel, possibly reflecting the growth in economic activity. Between 2001 and 2008, real GDP in Brazil has experienced an average annual growth rate of 3.64%.

competitive is the party locally, which should reduce the mayor's need of using the political cycle strategy in order to increase his party's reelection chances.

Third, the well-known fractionalization index from Political Science literature accounts for another measure of local political competitiveness, and is based on the degree of heterogeneity in voters' preferences, where the higher is the index, the more fragmented are these preferences, making it harder for the local party to define what set or mix of fiscal policies are closer to voters' preferences.

As for the party dummies, it could be that mayors whose parties belong to the governor's and/or President's parties (be it in the first or second half of the mayor's mandate) receive more voluntary transfers and grants from the state and/or federal governments, especially during electoral periods.

The inclusion of the size of population is used to account for the degree of accountability by voters. Part of the Political Science literature suggests that the degree of accountability is inversely proportional to the size of the electoral district. The idea is that smaller districts reduce the distance between voters and representatives, which facilitates the flow of information and thus improve accountability. Besides, the weight of each single vote, given by 1/N, where N = number of voters, is higher in smaller districts (Porto and Porto, 2000). Given these two facts, voters in smaller districts should be more sensitive to the mayor's performance and should be more capable of clearly identifying the responsible for the success or failure of any given policy. In other words, the adoption of an opportunistic fiscal cycle strategy should become less effective as the size of districts increase.

Finally, the inclusion of the real GDP per capita is important to account for differences in the level of local economic development between municipalities, which might be correlated with different fiscal policies. Besides, its inclusion is an attempt to control for exogenous economic shocks occurring both between and within municipalities, since it is available for all municipalities for each year of the panel.

The fiscal variables considered in this study are Budget Balance, Total Revenues, Total Spending, Tax Revenues, Current Transfers Grants, Capital Transfers Grants, Current Expenditures, Personnel Expenditures, Capital Expenditures and Capital Investments.[15] These fiscal variables were chosen based on both their traditional presence over the PBC literature as well as on their relevance for testing political fiscal cycles at the municipal level in Brazil.

From the list, the fiscal variables that have been traditionally analysed by the PBC literature are budget balance, total revenues, total spending, tax revenues, current expenditures and capital expenditures. According to the classical PBC hypothesis, which states that expansionary policies should be observed during elections (e.g. Nordhaus, 1975), one should expect a decrease in revenues (especially tax revenues) and an increase in spending during elections, leading to a decrease in fiscal balance. Following the most recent literature, focused on the change in the composition of spending under a fiscal conservative context (e.g. Drazen and Eslava, 2010), one should expect increases in those types of expenditures which voters care more about and decreases in those that are found to be less attractive to the electorate, so that overall balance should be kept unchanged.

The other fiscal variables – current and capital transfers grants, personnel expenditures and investments – are particularly important in an analysis of fiscal opportunism in Brazil.

[15] All fiscal variables are expressed in real per capita terms, in Brazilian currency units (Real—R$) at 2008 prices using the IPCA inflation index (Wholesale Consumer Price Index) from IPEA Data (Institute of Applied Economic Research) at www.ipeadata.gov.br. All variables are expressed in logs, except for Budget Balance, expressed in levels.

Take transfers from grants, for example. As already mentioned, these are discretionary transfers based on signed agreements (*convênios*) established between municipalities, the federal states and the Union defining each other's budgetary role over specific policy areas. Even though these grants do not represent a substantive share of total revenues (only about 5% on average), they play an important role in distinguishing mayors' and parties' efforts and capacity in attracting additional funds at low costs to municipalities, which can make a difference during elections. Capital grants, for instance, are used to exclusively finance capital investments on key policy areas which are commonly credited to mayors, such as education, health and sanitation, environment and transportation. Given its discretionary nature, the flow of transfers grants may well be correlated with the degree of ideological alignment between the parties of mayors, governors and the President.[16]

As for personnel expenditures, which represent about 43% of total spending, it is a key fiscal variable to be considered for tests of opportunistic cycles after the electoral legislation (EL) of 1997 and the Law of Fiscal Accountability (LRF) of 2000, which have imposed severe restrictions on the timing and amount of spending on such rubric. While the EL prohibited incumbent politicians to implement administrative changes affecting staff, public employees and civil servants (especially promoting new hires and nominations) three months before elections and to adopt revision of salaries and payments of public employees to a level superior to the inflation rates of the ongoing election year six months before elections, the LRF defined limits to the share of personnel expenditures over net current revenues.[17] Therefore, these new rules limited the ability of mayors of getting votes from delivering "rents" (i.e. higher personnel expenditures), while probably forced them to deliver more "policy" (i.e. higher investments). Hence, given such restrictions, we should observe higher electoral effects on capital expenditures and investments than on current and personnel expenditures.[18] Yet, if parties have different preferences over these policies, we should observe differences in the amount allocated to such expenditures categories throughout their mandates as well as during elections.

The expected signs of the coefficients β_1 through β_5 cannot be precisely defined, since the literature on partisan cycles provides only rough and generic propositions about which economic policies are expected to be followed by ideologically distinct parties. This is especially true for the interaction terms, once there are no theoretical models indicating which policies are to be observed during elections taking into account the different ideological positions of parties.

In any case, we can rely on Chart 1 below as an anecdotal guide to help us interpret the results. It summarizes the most common predictions about partisan policies according to the main literature on partisan cycles.

[16] One important source of revenues are current transfers, which represents about 80%, on average, of the municipalities' total revenues. These current transfers are legally determined redistributions and compensations from the states and the Union to municipalities based on the shares and quotas the municipalities have over state and federal tax revenues and on their legal share over the exploitation of natural resources (water, minerals and oil). Therefore, and most of the times, the flow of current transfers are quite exogenous and stable, regardless of mayors' political motivations and ideological alignments. Thus, current transfers are not too suited for testing opportunistic cycles, once they are not under mayors' discretion, reason why they enter as control in the regressions.

[17] The LRF imposed the following cap limits on the share of personnel expenditures over net current revenues for each government level: 50% for the Union, 60% for the states and 60% for the municipalities.

[18] Personnel expenditures correspond to about 50% of current expenditures, while capital investments accounts for close to 90% of capital expenditures.

Monetary/Fiscal/Economic Policies	Left/Labour/ Democratic	Right/Conservative /Republican
Employment	+	-
Inflation	+	-
Economic Growth	+	-
Income Distribution and Redistribution (e.g. Transfers)	+	-
Tax Revenues	+	-
Total Spending	+	-
Budget Balance	-	+

Chart 1 - Economic Policies and Political Parties

Source: Author´s elaboration based on Hibbs (1977) and Franzese and Jusko (2006)

From the chart, we see that leftist parties are generally seen as having a preference for higher employment and economic growth, even when it comes with higher inflation, while rightist parties tend to put higher importance on price stability, so that inflation under right-wing administration is generally lower, albeit at the expense of lower employment and economic activity. Parties from the left also tend to spend more on distributive and redistributive policies such as governmental transfers (e.g. cash transfers programs and welfare payments). Besides, once left-wing parties is generally known for promoting a higher presence of the state over the economy, fiscal policy under left-wing administrations tends to be more expansive, with higher spending, higher tax collection, but a more loose budget balance, while parties from the right are usually more fiscally conservative, reducing spending, lowering taxation, but keeping a more positive budget balance.

To test model 1, both pooled OLS (ordinary least squares) and GLS RE (generalized least squares with random effects) estimations clustered at the municipal level are used. The reason for running GLS RE is to correct for a possible serial correlation of the error term. Because pooled OLS standard errors ignore this possible (and positive) serial correlation, its t-statistics would not be valid. However, given the short and strongly balanced panel structure of the data (N is large relative to T), serial correlation should not be a major issue, so that the estimated coefficients from GLS RE should be consistent (not unbiased) and very close to those of OLS. Still, cluster-robust standard errors with clustering at the municipal level are used for the variance-covariance matrix of the estimators, which should help circumvent both a potential problem of heteroskedasticity of the error across municipalities and a serial correlation of the error term within municipalities.[19]

Note that fixed-effects (FE) estimations is not too suited for the present study, although it has the great appeal of eliminating observable and unobservable time-constant municipal variables. The reason for not running FE regressions is because the ideological dummies $RIGHT_{it}$ and $LEFT_{it}$ are constant across the four years of a mayoral mandate, and so would be discarded in a fixed-effect estimation (if we look at the mandates separately). For those municipalities who have not experienced ideological changes along the 8 years in the

[19] For additional discussion on how the GLS RE is a possible solution to serial correlation in a panel data, see Wooldridge (2002).

panel (for example, for those where the party standing in 2001-2004 is reelected for the following 2005-2008 mandate), a FE estimation would completely drop the ideological and interaction dummies for the whole period.[20] The same problem holds for a dynamic generalized method of moments (GMM) panel model, such as the well-know Arellano-Bond GMM (A&B) estimation, since it implements a regression in first-differences.[21] Because our main interest relies on testing the fiscal differences between municipalities under different political parties, especially during electoral years, the dropping of the ideological dummies whenever running FE or A&B are not welcomed.

5 Results

The effects of elections and parties on fiscal policy from regression model (1) are shown in Tables 4 through 6 below. The coefficients on *Electoral Year* (β_1) provide the percentage change in the fiscal variable during elections for the base group of center-oriented parties. The differences in the changes in fiscal variables during electoral years between parties are simply given by *Electoral Year*Right* (β_4) and *Electoral Year*Left* (β_5). For example, the sign and magnitude of the parameter β_4 states the percentage difference in the electoral year change in fiscal variable of right-wing parties relative to centrist parties. The overall degree of opportunistic fiscal strategy of parties from the right is captured by the sum *Electoral Year + Electoral Year*Right* ($\beta_1 + \beta_4$), while for parties from the left is captured by *Electoral Year + Electoral Year*Left* ($\beta_1 + \beta_5$). The term's average difference in fiscal variable between parties are given by the coefficients on *Right* (β_2) and *Left* (β_3).

Looking at the GLS RE results from Table 4, one notes significant partisan differences during elections, as confirmed by the coefficients on *Electoral Year*Right* and *Electoral Year*Left*: while parties from the right follow a more conservative fiscal strategy by slightly increasing revenues (+0.94%) and the budget balance (+R$7.97), parties from the left enact a much more significant increase in both revenues (+3.4%) and spending (+3.38%) without resulting in significant differences in their budget balance as opposed to centrist parties.[22] These results confirm the hypothesis that partisan and opportunistic fiscal cycles come together, with parties from different ideological cleavages adopting different fiscal strategies during elections. The results also confirm the predictions in Chart 1 in which left-wing parties tend to promote a higher presence of the government over the economy through higher levels of both revenues and spending, while right-wing parties tend to follow a more conservative fiscal balance.

Partisan differences along the term in office (non-electoral years) are not as strong, except by a relatively looser budget balance under right-wing parties (-R$6.00) as confirmed by the coefficient on *Right*.[23] This finding corroborates the figures in Table 3, and suggests that parties from the right follow a relatively more loose – but usually positive – balanced budget during non-electoral years. Interestingly, such result does not match the prediction from Chart 1 of higher budget balances under right-oriented parties as opposed to left-oriented ones.

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[20] In the 2004 and 2008 elections, the reelection rates of parties were 30% and 41% respectively.

[21] See Arellano and Bond (1991). Examples of recent papers on PBC that have applied GMM estimations are Sakurai and Menezes-Filho (2011), Barberia and Avelino (2011), Drazen and Eslava (2010), Veiga and Veiga (2007) and Brender and Drazen (2005).

[22] Note that Wald tests at the end of Table 4 reject the null hypothesis of equality of coefficients of the interaction terms.

[23] The Wald test rejects the hypothesis that the coefficient on *Right* is equal to that on *Left*.

Table 5 presents the results related to revenues variables. Parties from the left clearly distinguish themselves from centrist and rightist parties by promoting a 15.44% higher change in *Capital Transfers Grants* during elections. While both *Tax Revenues* and *Current Transfers Grants* seem to be affected by electoral years, no significant partisan differences are observed. For such variables, parties equally adopt opportunistic reductions in tax revenues (-5%) and increases in current grants (+15.54%). This opportunistic strategy is probably an attempt to alleviate the tax burden on citizens during elections through lower tax collection while at the same time reward them with increases in transfers grants. While all parties cover such tax reductions with increases in current transfers grants, leftist parties get extra funds by also increasing capital transfers grants during elections. The higher levels of transfers under left-wing parties match the expected positive sign from Chart 1, suggesting that such parties do promote higher distributive policies through transfers. One may argue that this result is in fact reflecting the political alignment between leftist mayors and the President, since during this period Brazil was under the administration of PT, so that grants from the federal government might have been channelled preferably to left-wing local administrations. However, this political connection was controlled for in the regressions, so that the observed result of higher capital grants under leftist parties can be interpreted as a reliable finding attesting for their preference for higher transfers.

Partisan differences over revenues along the term in office (non-electoral years) are not too strong, except by lower levels of *Tax Revenues* (-1.81%) under right wing parties during non-electoral years. This confirms the figures in Table 3, where right-wing parties have the lower term's average tax revenues. This result is also aligned with Chart 1, in which parties from the right are associated with lower levels of tax burden.

The results related to spending variables are presented in Table 6. While the coefficients on *Electoral Year* show that parties from the center reduce *Current Expenditures* and *Personnel Expenditures* during election years by about 2.3%, with parties from the right not behaving much differently – see the weakly significant coefficients on *Electoral Year*Right* – left-wing parties also reduce such expenditures during elections, but not as much as other parties, as confirmed by the positive and significant coefficient on *Electoral Year*Left*.[24] When it comes to *Capital Expenditures* and *Capital Investments*, partisan differences are stronger: while during non-electoral years left-wing parties invest about 4% less than parties from the center and right, they invest 13% more during elections. These results confirm the figures shown in Table 3, where fiscal opportunism is greater under left-wing administrations, especially for capital grants and expenditures. Worth pointing out is that the hypothesis of higher government spending under left-wing administrations is confirmed only during elections, since during non-electoral years leftist parties spend less than other parties.

In sum, the above results provide evidence of a significant association between opportunistic and partisan fiscal policies at the local level in Brazil, especially on the spending side and under left-wing administrations. These findings match the predictions from Chart 1 of higher expenditures and a relatively lower budget balance under leftist parties when compared to right-wing parties, especially during elections. In most cases, the interaction terms *Electoral Year*Right* and *Electoral Year*Left* were statistically significant, with Wald tests rejecting the null hypothesis of equality of such coefficients, indicating the presence of partisan differences during elections. The only exceptions were found for *Tax Revenues* and *Current Transfers Grants*, since all parties equally reduce the former with compensated

[24] As already explained, the electoral year change in fiscal variable for left wing parties is given by $\beta_1 + \beta_5$, which in the case of current and personnel expenditures is still negative.

increases in the latter during elections, with left-wing parties getting extra funds through also increasing *Capital Transfer Grants*.

In terms of the average fiscal policy adopted by parties throughout their mandates, partisan differences were not as strong, except by a slightly looser *Budget Balance* under right-wing administrations (probably reflecting its lower average levels of *Tax Revenues*) and lower levels of *Capital Expenditures* and *Capital Investments* under left-wing ones. While lower taxation was expected for right-wing parties as suggested in Chart 1, lower balances under their administrations and lower capital expenditures under left-oriented parties go against the predictions.

The above results are similar to those found in Veiga and Veiga (2007), who showed that left-wing mayors in Portugal increase their investment expenditures in the election year more than right-wing ones, but differ from Sakurai and Menezes-Filho (2011), who found no significant electoral year differences between left and right-wing parties. On the other hand, like both those studies, this paper found weaker partisan differences regarding the term's average fiscal policy.

One possible explanation for the fact that the results observed for electoral years fit better the expected partisan policies as depicted in Chart 1 than the results for the whole term (non-electoral years) is that parties in Brazil seem to signal their true type or fiscal preferences with higher emphasis during electoral years. This makes perfect sense if, as suggested by the model in Drazen and Eslava (2006), voters infer future expected policies by observing present fiscal policy especially during elections, a time when voting decision must be made. As a result, rational voters reward electoral year targeting even if they know it is politically motivated. Parties in Brazil seem to explore this fact by especially revealing their type and policies preferences during elections.

TABLE 4 - Opportunistic and Partisan Effects on Fiscal Policy (2001-2008)

Dependent Variable:	Budget Balance (R$)		Total Revenues (log)		Total Spending (log)	
	OLS	GLS RE	OLS	GLS RE	OLS	GLS RE
Electoral Year	2.2531	2.3101	-0.0119***	-0.0122***	-0.0147***	-0.0153***
	(2.584)	(2.512)	(0.002)	(0.003)	(0.003)	(0.003)
Right	-5.7886**	-5.9816***	-0.0066	-0.0026	-0.0035	0.0029
	(2.411)	(2.023)	(0.008)	(0.003)	(0.008)	(0.003)
Left	-3.4232	-2.4924	-0.0058	-0.0038	-0.0035	-0.0026
	(3.225)	(2.590)	(0.010)	(0.004)	(0.010)	(0.004)
Electoral Year*Right	7.9455**	7.9758**	0.0092***	0.0094***	0.006	0.006
	(3.718)	(3.569)	(0.003)	(0.004)	(0.004)	(0.004)
Electoral Year*Left	1.7156	1.656	0.0312***	0.0340***	0.0309***	0.0338***
	(4.770)	(4.327)	(0.004)	(0.005)	(0.005)	(0.005)
Linear Trend Line	3.7795***	3.7796***	0.0585***	0.0656***	0.0564***	0.0632***
	(0.305)	(0.313)	(0.001)	(0.000)	(0.001)	(0.000)
Current Transfers / Total Revenues (log)	-108.6356***	-117.8947***	-0.9107***	-0.5769***	-0.8582***	-0.5198***
	(18.594)	(15.621)	(0.029)	(0.020)	(0.030)	(0.022)
Share of votes (log)	5.736	3.6999	0.0773***	0.0150**	0.0781***	0.0191***
	(4.713)	(4.107)	(0.019)	(0.006)	(0.020)	(0.007)
Fractionalization index (log)	-1.5967	-1.0367	-0.0072**	-0.0007	-0.0071**	-0.0019
	(1.151)	(1.151)	(0.004)	(0.001)	(0.004)	(0.001)
Mayor same party Governor (1st half)	0.0455	0.867	0.0027	0.0005	0.0028	0.0019
	(1.919)	(1.851)	(0.007)	(0.003)	(0.007)	(0.003)
Mayor same party President (1st half)	-4.5487**	-4.4143**	-0.0303***	-0.0147***	-0.0274***	-0.0105***
	(2.188)	(2.245)	(0.010)	(0.004)	(0.010)	(0.004)
Mayor same party Governor (2nd half)	-0.707	-1.3358	0.0115	0.0019	0.0099	0.0013
	(2.186)	(2.067)	(0.008)	(0.003)	(0.008)	(0.004)
Mayor same party President (2nd half)	8.1972**	8.5612**	0.0770***	0.0295***	0.0717***	0.0200***
	(3.996)	(3.670)	(0.017)	(0.006)	(0.017)	(0.006)
Population (log)	-15.0099***	-15.7220***	-0.2762***	-0.2551***	-0.2735***	-0.2489***
	(1.737)	(1.476)	(0.005)	(0.004)	(0.006)	(0.004)
Real GDP per capita (log)	20.0755***	18.2363***	0.3404***	0.1568***	0.3367***	0.1685***
	(3.462)	(3.034)	(0.010)	(0.005)	(0.010)	(0.005)
Constant	-92.9795**	-63.0789*	5.6081***	7.4268***	5.6248***	7.2547***
	(43.616)	(33.492)	(0.135)	(0.066)	(0.136)	(0.069)
R-squared	0.09	0.09	0.74	0.68	0.71	0.66
Number of municipalities	27144	27144	27144	27144	27144	27144
F	52.08	na	1740	na	1503.84	na
Right = Left (p-value) [1]	0.051	0.010	0.311	0.548	0.714	0.300
*Elect*Right = Elect*Left (p-value)*[1]	0.089	0.071	0.0031	0.000	0.0036	0.000

Source: Author's estimates

Table presents results from pooled ordinary least squares (OLS) and generalized least squares with random-effects (GLS RE) estimates, with cluster robust standard erros (at the municipal level) shown in parenthesis. All regressions include state dummies. [1]Refers to tests of equality of coefficients, under the null hypothesis that the coefficients are equal. *** 1% significance level; ** 5% significance level; * 10% significance level.

TABLE 5 - Opportunistic and Partisan Effects on Fiscal Policy (2001-2008) - Revenues Variables

Dependent Variable (log):	Tax Revenues		Current Transfers Grants		Capital Transfers Grants	
	OLS	GLS RE	OLS	GLS RE	OLS	GLS RE
Electoral Year	-0.0528***	-0.0502***	0.1560***	0.1554***	0,0125	0,0146
	(0,006)	(0,007)	(0,025)	(0,027)	(0,035)	(0,036)
Right	0,000	-0.0181**	0,0587	0.0573*	-0,0094	0,0248
	(0,015)	(0,008)	(0,040)	(0,032)	(0,047)	(0,038)
Left	0,0028	-0,0041	0,0351	0,0456	-0,0668	-0,0403
	(0,019)	(0,009)	(0,050)	(0,038)	(0,058)	(0,047)
Electoral Year*Right	0,007	0,0057	-0,0377	-0,0358	-0,0541	(0,059)
	(0,009)	(0,009)	(0,035)	(0,037)	(0,046)	(0,049)
Electoral Year*Left	-0,0028	0,0054	0,0002	0,0038	0.1641***	0.1544***
	(0,011)	(0,011)	(0,041)	(0,043)	(0,056)	(0,058)
R-squared	0,71	0,67	0,11	0,11	0,14	0,14
N	27144	27144	23751	23751	23747	23747
F	1592,6	na	80,07	na	78,14	na
Right = Left (p-value) [1]	0,957	0,038	0,335	0,185	0,473	0,318
*Elect*Right = Elect*Left (p-value)*[1]	0,824	0,796	0,485	0,534	0,000	0,001

Source: Author's estimates

Table presents results from pooled ordinary least squares (OLS) and generalized least squares with random-effects (GLS RE) estimates, with cluster robust standard erros (at the municipal level) shown in parenthesis. The complete set of control variables are: linear time trend, share of current transfers over total revenues, share of votes in the last elections, fractionalization index in the last elections, political alignment between mayor's and governor's parties (1st and 2nd half of mayor's mandate), political alignment between mayor's and president's parties (1st and 2nd half of mayor's mandate), population, municipal real GDP per capita and state dummies. [1]Refers to tests of equality of coefficients, under the null hypothesis that the coefficients are equal. *** 1% significance level; ** 5% significance level; * 10% significance level.

TABLE 6 - Opportunistic and Partisan Effects on Fiscal Policy (2001-2008) - Spending Variables

Dependent Variable (log):	Current Expenditures		Capital Expenditures		Personnel Expenditures		Capital Investments	
	OLS	GLS RE	OLS	GLS RE	OLS	GLS RE	OLS	GLS RE
Electoral Year	-0.0224***	-0.0228***	0.0182*	0,0175	-0.0235***	-0.0234***	0,0171	0,017
	(0,003)	(0,003)	(0,011)	(0,012)	(0,003)	(0,003)	(0,013)	(0,015)
Right	-0,0049	-0,0004	0,0121	0.0267**	-0,0088	-0,0057	0,0113	0.0295**
	(0,008)	(0,003)	(0,016)	(0,012)	(0,009)	(0,004)	(0,018)	(0,015)
Left	0,0027	0,0032	-0.0435**	-0.0422***	-0,0034	-0,0058	-0.0548**	-0.0414**
	(0,010)	(0,004)	(0,020)	(0,015)	(0,011)	(0,007)	(0,023)	(0,018)
Electoral Year*Right	0.0064*	0.0061*	0,0012	0,0024	0.0071*	0,0067	0,0032	0,0046
	(0,004)	(0,004)	(0,015)	(0,016)	(0,004)	(0,005)	(0,018)	(0,019)
Electoral Year*Left	0.0147***	0.0188***	0.1271***	0.1252***	0.0169***	0.0199***	0.1333***	0.1309***
	(0,004)	(0,004)	(0,018)	(0,019)	(0,006)	(0,006)	(0,022)	(0,023)
R-squared	0,70	0,63	0,43	0,42	0,64	0,61	0,37	0,37
N	27144	27144	27144	27144	27144	27144	27144	27144
F	1415,07	na	404,24	na	1085,70	na	343,25	na
Right = Left (p-value) [1]	0,658	0,543	0,011	0,000	0,573	0,389	0,007	0,000
*Elect*Right = Elect*Left (p-value)*[1]	0,004	0,000	0,000	0,000	0,010	0,004	0,000	0,000

Source: Author's estimates

Table presents results from pooled ordinary least squares (OLS) and generalized least squares with random-effects (GLS RE) estimates, with cluster robust standard erros (at the municipal level) shown in parenthesis. The complete set of control variables are: linear time trend, share of current transfers over total revenues, share of votes in the last elections, fractionalization index in the last elections, political alignment between mayor's and governor's parties (1st and 2nd half of mayor's mandate), political alignment between mayor's and president's parties (1st and 2nd half of mayor's mandate), population, municipal real GDP per capita and state dummies. [1]Refers to tests of equality of coefficients, under the null hypothesis that the coefficients are equal. *** 1% significance level; ** 5% significance level; * 10% significance level.

6 Conclusions

The present study provided an integrated empirical analysis of both the opportunistic and partisan fiscal cycles in local elections in Brazil. Its main goal was to check whether different partisan ideologies were associated with different opportunistic fiscal policies as local elections approached.

The results have confirmed the presence of a significant association between opportunistic and partisan fiscal policies at the local level in Brazil, with parties from different ideological cleavages adopting different fiscal strategies during elections. The most significant and strong effects were observed under left-wing administrations, which enacted higher changes in capital grants and capital expenditures (e.g. investments) in electoral years. A positive and significant change in the budget balance during elections was observed only for right-wing parties. As for revenues variables, while all parties have equally adopted opportunistic reductions in local taxation, further and partially compensated by increases in current transfers grants, leftist parties were able to get extra funds by additionally increasing capital transfers grants. These findings match the usual predictions of higher expenditures and a relatively lower budget balance under leftist parties when compared to right-wing parties.

In terms of the average fiscal policy adopted by parties throughout their mandates (non-electoral years), partisan differences were not too strong, except by a slightly looser budget balance and lower tax revenues under right-wing administrations and lower levels of investments under left-wing ones. While lower taxation was expected for right-wing parties, lower balances under their administrations and lower capital expenditures under left-oriented parties go against the predictions.

This study has shown that evidence of partisan fiscal cycles is stronger during elections than it is for the whole term (non-electoral years). One possible explanation for this fact is that parties in Brazil seem to signal their true type or fiscal preferences with higher emphasis during electoral years. This makes perfect sense if, as suggested by the model in Drazen and Eslava (2006), voters infer future expected policies by observing present fiscal policy especially during elections, when voting decision must be made. As a result, rational voters may reward electoral year targeting even if they know it is politically motivated. Parties in Brazil seem to explore this fact by especially revealing their type and policies preferences during elections. Whether voters positively respond to this opportunistic signalling of partisan fiscal policy is something to be checked in future research.

References

Alesina, A. (1987). Macroeconomic policy in a two-party system as a repeated game. *Quarterly Journal of Economics*, 102:651-78

Alesina, A. and Roubini, N. (1992). Political cycles in OECD economies. *Review of Economic Studies*, October 59, 663-688

Alesina, A., Roubini, N. and Cohen, G. (1997). *Political cycles and the macroeconomy*. Cambridge: MIT Press

Arellano, M. and Bond, S. (1991). Some tests of specification for panel data: Monte Carlo evidence and an application to employment equations. *The Review of Economic Studies*, 58, 277–297.

Barberia, L. and Avelino, G. (2011). Do political budget cycles differ in Latin American democracies? *Economía*, 11, n.2: 101-46.

Beck, N. (1982). Parties, administrations, and American macroeconomic outcomes. *American Political Science Review* 76 (1):83-93

Besley, T. and Case, A. (1995). Does political accountability affect economic policy choices? Evidence from gubernatorial term limits. *Quarterly Journal of Economics* 110, p. 769-798

Brender, A. and A. Drazen (2005), Political budget cycles in new versus established democracies. *Journal of Monetary Economics* 52, 1271–1295

Dantas, H. (2007). *Coligações em eleições majoritárias municipais: a lógica do alinhamento dos partidos políticos brasileiros nas disputas de 2000 e 2004*. São Paulo, PhD thesis presented to DCP-USP.

Drazen, A. (2000). The political business cycle after 25 years. *NBER Macroeconomics Annual 2000*, Cambridge MA: MIT Press

Drazen, A. and Eslava, M. (2003). Reconciling Fiscal Conservatism and Political Fiscal Cycles. Paper presented at the *V Meeting of the Political Economy Network - PEG of the Latin American and Caribbean Economic Association - LACEA*

Drazen, A. and Eslava, M. (2006). Pork barrel cycles. *NBER Working Paper 12190*.

Drazen, A. and Eslava, M. (2010). Electoral manipulation via expenditure composition: theory and evidence. *Journal of Development Economics*, 92, 39-52.

Fair, R. (1978). The effect of economic events on votes for president. *Review of Economics and Statistics*, 60:159-172.

Ferraz, C. and Finan, F. (2011). Electoral accountability and corruption: evidence from the audits of local governments. *American Economic Review*, American Economic Association, vol. 101(4), pages 1274-1311, June

Franzese, R. and Jusko, K. (2006). Political economic cycles. In: *Oxford Handbook of Political Economy*, Oxford: Oxford University Press.

Hibbs, D. (1977). Political parties and macroeconomic policy. *American Political Science Review*, 71(4):1467-87

Kramer, G. (1971). Short-term fluctuations in U.S. voting behaviour, 1896-1964. *American Political Science Review* 65:131-143.

Lindbeck, A. (1976). Stabilization policies in open economies with endogenous politicians. *American Economic Review* (Papers and Proceedings), 66, 1-19.

Nordhaus, W. (1975). The political business cycle. *Review of Economic Studies*, 42(1):169-90

Peltzman, S. (1992). Voters as fiscal conservatives. *The Quarterly Journal of Economics*, 107, 327–361.

Porto, A and Porto, N. (2000). Fiscal decentralization and voter's choices as control. *Journal of Applied Economics*, Vol. III, No. 1, 135-167.

Rodrigues, L. M. (2002). *Partidos, ideologia e composição social: um estudo das bancadas partidárias na Câmara dos Deputados*. São Paulo: Editora Edusp.

Rogoff, K. (1990). Equilibrium political budget cycles. *American Economic Review*, vol. 80(1), 21-26.

Rogoff, K. and Sibert, A. (1988). Elections and macroeconomic policy cycles. *Review of Economic Studies* 55(1):1-16

Sakurai, S. N. and Menezes-Filho, N. A. (2011). Opportunistic and partisan election cycles in Brazil: new evidence at the municipal level. *Public Choice*, 148 (1-2), 233-247.

Sheffrin, S. (1989). Evaluating rational partisan business cycle theory. *Economics and Politics* 1:239-259.

Tufte, E. (1975). Determinants of the outcomes of midterm congressional elections. *American Political Science Review*, 69:812-826.

Veiga, L. G. and Veiga, F. J. (2007). Political business cycles at the municipal level. *Public Choice*, 131, 45–64.

Wooldridge, J (2002). *Econometric Analysis of Cross Section and Panel Data*. Cambridge, MA: MIT Press