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**BUILDING LOCAL TRENCHES: INTRA-PARTY LINKAGES AND
ELECTORAL PERFORMANCE IN BRAZIL, 1996-2010.**

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Resumo do trabalho:

In a previous paper, we estimated a positive effect of electing a mayor on the local performance of the mayor's party in statewide proportional elections realized two years later. In this paper, again, we employ a regression discontinuity design (RDD) to focus on observations in which the electoral difference between the elected mayor and the runner-up is very tight. At this time, however, we used an enlarged dataset that covers elections between 1996 and 2010. This procedure allows us to explore parties' heterogeneity in both cross-section and temporal analyses. Main results show that the positive effect of electing a mayor on party performance holds for the entire period. Moreover, the effect is connected to party characteristics, reinforcing our claim that we are indeed testing party's strength with this specification.

Palavras-chave:

Political parties, elections, party organization, decentralization

Some authors have attested the fall in Brazilian electoral volatility since 1994. Although this fall has not been homogenous, it has been consistent during last decades and should place Brazilian electoral volatility close to the average among democratic countries. According to Mainwaring and Torcal (2006), the average electoral volatility for Brazil between 1982 and 2002 was 24.1%, a median value for a set of 39 countries, mostly from Europe and Americas. [1]

In a recent paper, Carneiro e Almeida (2008) went a step further in this issue by showing high levels of correlations of party electoral performance across Brazilian municipalities. These works have pointed to an unsuspected ability of Brazilian parties to organize their electoral efforts not only for elections at the same level of government but also for elections across different levels.

In a previous paper, we addressed the issue of whether electing a mayor affects the same party performance at subsequent proportional elections in the same municipality. In this paper, again, we employ a regression discontinuity design (RDD) to focus on observations in which the margin of victory between the elected mayor and the runner-up is very tight. At this time, however, we used an enlarged dataset that covers elections between 1996 and 2010. This procedure allows us to identify the causal electoral effect of electing a mayor and to explore parties' heterogeneity in both cross-section and temporal analyses.

Main results strengthened our suspicion abut the importance of party organizations matter in Brazilian elections. Results show that the positive effect of electing a mayor on party performance in subsequent proportional election holds for the entire period. Another finding is that Brazilian parties show different capabilities in getting votes from their mayors. Results were robust after constraining the margin of victory to only 3%, and also to different model specifications.

This paper is organized in the following way. After this short introduction, the paper has six more sections. The first section clarifies the concept of intra-party linkages and its relation to reverse coattail effects that are the main subject of the paper. The second section describes the Brazilian political system; particularly, its electoral calendar, which provides the opportunity do explore the discontinuity that is at the core of the methodological approach. The next section focuses on the role of mayors and their ability to transfer votes to their party's candidates. The fourth section clarifies our dataset and the methodological procedure.

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[1] For an analysis of the heterogeneity of electoral volatility among Brazilian states, see Bohn and Paiva (2009); Peres, Ricci e Rennó (2011); and the works cited therein.

The fifth section present and discuss main results. Finally, the sixth section summarizes and concludes.

1. INTRA-PARTY ORGANIZATION

Party activity at multiple territorial levels of government has increased with political decentralization. Though one should expect decentralization to impose greater coordination challenges on political parties, as these last have to manage the interaction among local and national electoral arenas, we still have limited understanding about how parties operate at different levels.

How parties organize themselves at different levels and how they manage partisan linkages between politicians at different levels? As it is well known, the ability parties demonstrate to integrate actions in different levels will say much about the nature of the party system. If multilevel party systems develop differently throughout the territory, then different local parties should lead to an excessive fractionalization at the national level, which should turn making and managing governments in a difficult task to accomplish.[2] On the other hand, the decline in electoral volatility opens an opportunity for the stabilization of party competition at different government levels. In this last case, the presence of similar parties in national and local party systems will demand organizational ability from party leaders to create organizational linkages and cooperation across party levels.[3]

The type of intra-party linkages will depend on how parties are organized;[4] specifically, the level of party centralization. For instance, in centralized parties, the national leadership centralizes crucial party decisions such as the membership recruitment, candidate selection, and coalitions strategy. In this type of party, intra-party conflicts should be low, as integration among electoral arenas is defined ex-ante by party statutes. In more decentralized parties, local organizations retain some autonomy facing national leaders, and cooperation among

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[2] See Lima Jr. (1983) for a first approach on Brazilian regional party systems for the period between 1945-64.

[3] We avoid using the term "coordination" as introduced by Cox (1997, 1999, and 2005). This author does refer to comparisons of party system fractionalization at different levels, but his primary concern is with strategic solutions to the problem of more candidates than seats in dispute. Though strategic solutions proposed by Cox require intra-party linkages, this last issue is not considered as a specific problem.

[4] For a more detailed analysis on this issue, see Deschouwer (2003 and 2006), and Thorlakson (2009 and 2011).

different party levels will be a consequence of intense negotiations between national and local leaderships.

This paper is concerned with one type of intra-party linkages, the reverse coattail electoral effect that goes from local party organizations to upper levels of electoral competition. Coattails electoral effects are common in the American politics literature, but rare in other political systems. It can be understood as the capability of a party top-level candidate to transfer votes to her party candidates on lower levels. The most common example in American politics relates the vote for president to the vote for legislative seats in a district.

Reverse coattails electoral effects also refer to an intra-party transfer of votes, but this time observed from a bottom-up perspective. More specifically, it deals with the ability of local party organizations to transfer votes to upper levels party candidates. Contrary to the usual coattail effect, we assume that this type of vote transfer does not depend on a charismatic majoritarian candidate, but on local party relations within local communities. In an integrated party, these relations will enable local members to customize party message to local voters in a way to maximize the party electoral performance at all levels.

In this paper, we analyze the Brazilian political system. More specifically, we analyze whether local mayors are able to transfer votes for their party candidates for state and federal legislative seats. Some authors have argued for a reverse coattail effect in Brazil before; yet, scholars have never focused their attention to mayors as an important electoral piece for party performance in subsequent proportional elections.[5]

Before dealing with the specificities of the empirical analysis, some information on the Brazilian political system is in order.

2. BRAZILIAN POLITICAL SYSTEM: FEDERALISM AND PARTY ORGANIZATION

Although Brazilian electoral system presents a rare combination of electoral formulas, the electoral calendar has acquired considerable stability when compared to the country's

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[5] On reversed coattail effects referred to the Brazilian case, see Ames (1994), which deals with the effect of local party organization on presidential vote in the 1989 election, and Samuels (2000a and 2000b), who is concerned with the relationship between the number of candidates competing for governor and the number of lists competing in the legislative elections.

past, and elections are regularly held every two years. Accordingly, national and estate elections are held concurrently, with a two-year lag from municipal elections.

In more details, in national and state elections, presidents and state governors are elected for four-year terms through a two-round majority method, with a runoff between the two top finishers if no candidates reaches more than 50% of votes in the first round. Members of both the federal Chamber of Deputies and State Assemblies are elected, also for four-year terms, in a statewide open-list proportional method. Finally, senators are also elected in statewide elections for eight-year terms; the Senate is renewed every four years, in a one-third, and two-thirds basis, through a plurality system also held concurrently with presidential and state elections.

Municipal elections are held every other year electing mayors and city members for a four-year term. In each municipality, the mayor is elected through a single round plurality system, and municipal councilors slots are filled in through an open list proportional method.[6]

Contrarily to most federations, which are organized through the relationship between a central government and state/provincial ones, Brazilian federalism is organized as a three-level government, as municipalities are also recognized as autonomous sources of political power. Due to this peculiarity of Brazilian federalism, mayors enjoy authority over policies within their jurisdiction, which have increased their importance, as the decentralization promoted by the 1988 Constitution delegated to municipalities the implementation of important public policies such as education and health. As a result, municipal offices are coveted, and municipal arenas have increased their importance as loci of political competition.

In face of this type of federal arrangement, it is not surprising that Brazilian parties show low levels of party centralization. Typically, parties have a decentralized structure based on municipal sections, which are in charge of the party daily affairs, such as the recruitment of new members. Although there have been some occasional top-down interventions, municipal conventions have considerable autonomy on decisions about municipal campaigns such as the selection of candidates to the municipal executive and legislative seats, definition of policy proposals, coalition strategy, etc. Finally, municipal conventions also select municipal

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[6] In municipalities with more than 200 thousand registered voters, mayors are elected through the same two-round, with runoff, majority system that rules elections for president and state governors. Moreover, reelection is limited to two consecutive terms for all executive positions (president, governors, and mayors). All legislative positions (senators, federal and state deputies, and member of municipal councils) have no reelection restriction.

delegates to the party state convention, which decide about the same issues on state level and selects state delegates to the national party convention

According to most of the literature, federalism implies that state politics matters, voters and candidates will have incentives to link their efforts across districts within their states, and these linkages define the party system as composed by either state or national parties. In the Brazilian federation this implies that municipalities must be taken into account in considering those linkage efforts; as argued, these autonomous local powers are paralleled by strong municipal sections of parties, which also enjoy considerable autonomy regarding party leadership at upper levels.

In this sense, what may distinguish Brazil from other countries is that the geographical space that defines the primary unit of party organization corresponds to a constitutionally delimited source of political authority, selected through competitive elections. This local political authority may work a focal point to influence voters' decision on subsequent statewide legislative elections. The occurrence of this type of reversed coattails effect, even after a two-year period, would be an evidence of party vertical integration.

3. MAYORS AND STATEWIDE LEGISLATIVE ELECTIONS

Several reasons explain how winning the municipal executive would be able to influence voters' decision. By winning the municipal executives, a party has access to considerable resources. First, there is the power to hire and fire, as public employees may represent a significant share of local employment, and voters whose income depends on local government may constitute a reliable group of supporters. Second, as discussed above, local government are in charge of implementing most public policies; particularly, in the Brazilian federation, where most public policies have a shared responsibility of all three levels of government, making it hard to disentangle the role of each level. Despite the usual dependency of Brazilian municipalities on state and federal transfers, this characteristic strengthens the role of mayors as the most important channel through which upper level governments' policies are implemented and credit can be claimed.

Mayors may also influence local voters because, they are considered as "locals", and as such, they usually have more credibility than their party. This greater credibility stems from the better information and experience of the party municipal section about how to mobilize voters, which can be reached through daily interactions with voters allowed by the

implementation of local public policies. As the municipal party leader, mayors can lend credibility to the promises made by their party candidates.

This source of credibility is very important in an open list proportional representation electoral system that allows parties to launch a large number of candidates.[7] As voters have just one vote and too many candidates running for the state and federal chambers; usually, voters resort to their local sources of information to select their candidate. In other words, within this complex electoral scenario, mayors – the most important local authority – may work as a focal point to where local voters look to get information on candidates before casting their vote.

To sum up, electing the mayor can get a considerable advantage to party candidates in proportional elections two years later. This advantage came from mayors' access to public resources, their role either as implementing local public policies or as an intermediate of state and federal transfers, or even by lending credibility to their party electoral promises. This means that we should expect a significant and positive electoral coattail effects between municipal and statewide elections. But how can we isolate the causal effect of electing a mayor from other potential causal effects?

4. DATA SOURCES AND IDENTIFICATION STRATEGY

Election data used in this paper comes from Tribunal Superior Eleitoral (TSE – Superior Electoral Court), which is the public office responsible for managing all elections in the country. We have detailed information on both municipal election in 1996, 2000, 2004 and 2008 and federal and state elections in 1998, 2002, 2006 and 2010. We started from ballot data for every candidate that was then aggregated by municipality and type of candidate by party.[8] We then keep in each municipality just parties that either won the mayoral election in 2008 or were runners-up, ending (potentially) with two parties for each municipality. We have also eliminated municipalities with second round elections (with more than 200 thousand registered voters) and municipalities with just one competitor for the mayoral election.

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[7] In São Paulo, the largest state of the federation, there were more than one thousand candidates competing for the seventy seats for federal representatives in the 2010 elections.

[8] As discussed earlier, for municipal elections we have two types of candidates (mayor and city councilors - "vereadores").

Furthermore we collect population data from IBGE, fiscal and municipal grants revenue from the national treasury, and number of party affiliates in the municipality from TSE. Those variables are used to test the robustness of the results and also to check for possible heterogeneity among results (see below).

To identify if there is some party internal coordination in Brazil we explore one opportunity from Brazilian electoral rules, discussed earlier in this paper. In Brazil, since 1994, there are elections every other year alternating between Federal and State elections (1994, 1998, etc.) and local elections (1996, 2000, etc.) We hypothesize that if parties are not relevant in selecting mayor candidates, i.e. candidates would choose any party that opens space for her, the election of a mayor from one party would not have (causal) impact on the votes for the party in the subsequent election.

We do not dispute the claim by Carneiro and Almeida (2008) that correlations between votes for the same party in different elections are evidence that parties may perform an important role in Brazilian elections. Compared to these authors, our claim is that if there is no internal cooperation within parties, we should not expect a mayor election to increase party votes in the subsequent proportional elections. Consequently, our goal is to uncover causal mechanisms, and if we find evidence of causality between electing a mayor and increasing party votes in the subsequent elections, we will interpret this result as evidence that parties do matter in Brazilian elections.

The fundamental identification problem in generating unbiased estimates of a pure party effect arises from the likelihood that party votes in a given municipality is determined by local traits that are unobserved by the econometrician. A strong party in one municipality may have a large share of the votes in any election with no intra-party coordination. To deal with this endogeneity issue, we compare cities where the party barely won an election with cities where the party barely lost. Lee (2008) demonstrates that this strategy provides quasi-random variation in party winners, because for narrowly decided races, which party wins is likely to be determined by pure chance as long as there is some unpredictable component on the vote behavior.

We estimate variations of the following functional form:

$$v_{m,p,t+2} = \alpha + \delta d_{m,p,t} + \tau_t y_t + \tau_{dt} y_t d_{m,p,t} + V(x_{m,p,t}, d_{m,p,t}; \beta)$$

$$+ \sum_{k=1}^{Z} \gamma_k z_{m,p,t}^k + \sum_{k=1}^{\bar{Z}} \lambda_k \bar{z}_{m,p,t}^k d_{m,p,t} + \sum_{k=1}^{W} \mu_k w_{m,t}^k + \sum_{k=1}^{\bar{W}} \pi_k \bar{w}_{m,t}^k d_{m,p,t} \quad (1)$$

where $V_{m,p,t+2}$ represents the proportion of votes in municipality m to party p in the state wide election subsequent to the municipal election held in t; $d_{m,p,t}$ is an election dummy variable that takes on a value of 1 if the party p won the election in municipality m in year t and 0 if it got the second position; y_t represents a set of dummy variables taking on value 1 if the year is t (t = 1996, 2000 or 2004; 2008 was omitted to avoid perfect collinearity) and 0 otherwise; $x_{m,p,t}$ represents the margin of victory in the mayoral election i.e. the proportion of votes to the most voted mayor minus the proportion of votes for the second most voted mayor in municipality m, year t; $V(\bullet;\bullet)$ is a smooth non-linear continuous function on the margin of victory and the mayor election dummy parameterized by S; $z_{m,p,t}^k$ represent a covariate k related to characteristics of municipality m, party p in year t; $\bar{z}_{m,p,t}^k$ represent a subset of $z_{m,p,t}^k$ which we interact with the mayor election dummy; $w_{m,t}^k$ represent a covariate k related to characteristics of municipality m in year t (i.e. for variables that do not vary among parties) and $\bar{w}_{m,t}^k$ represent a subset of $w_{m,t}^k$ interacted with the mayor election dummy. For the sake of generality we kept the possibility of Z covariates varying in all three dimensions (municipality party and time) and W covariates varying in just two dimensions (municipality and time). The subsets of variables that we interact with the mayor election dummy are also arbitrary set (as far as $\bar{Z} \leq Z$ and $\bar{W} \leq W$). Finally, $\eta_{m,p,t}$ is an error term with the usual (desired) attributes. α, βs and γs are parameters to be estimated by the regression.

Ignoring selection bias and interaction terms it is straightforward that d identifies the party effect on subsequent election votes. In other words, given specification (1) d estimates E[v/d=1]-E[v/d=0] where E[ ] is the expectancy operator and, for the sake of simplicity we omit the subscripts. If we can control for all sorts of selection bias with observable (by the econometrician) variables or if we can notice a discontinuity around a very low margin of victory we can claim that this difference is causal. We attempt a selection on observables approach using variables to control for the power of the party in the municipality, namely (i) the proportion of votes for municipal councilors, and (ii) the proportion of party affiliates in the population.

The definition of the running variable (x) is different from the variable typically adopted in the literature. We define the margin of victory as the difference between the proportion of votes for the party wining election and the runner-up. So, we eliminate any other party from the analysis concentrating just on the first and second positions. It is not possible to adopt the definition used in the US in Brazil since we have a multi-party system as described in the introduction. When we focus on those two parties we are claiming that those parties are the main actors in the municipality. Also, when we restrict the sample to very narrow margin of victory we are claiming that the winner party has won by chance.

Other variables that might be correlated both with the dependent variable and the mayor election dummy were included to improve the control and add robustness to the findings. We control for total municipal revenues, fiscal dependency (proportion of total revenues that is from other jurisdictions' grants) and population. We have also interacted those variables with the mayor election dummy in order to check for possible heterogeneity among results. Although we allow for a large class of functions in specification (1), we have actually used a 4th level polynomial function. We interacted the polynomial with the mayor election dummy to allow for different patterns before and after the discontinuity.

5. RESULTS

Table 1 shows that parties that won elections (treated) have systematically a larger share of municipal votes for Federal Congressmen than runner-up parties (control). This is valid for any year considered and also for the whole sample pooled together. Looking at the standard errors in parenthesis it is also clear that a mean comparison will certainly accept the null hypothesis that both averages are the same. However, this is a very imprecise way to test the hypothesis.

Except for 1998 election, the difference between averages is quite stable around 4.5%. However, when we consider the impact of mayor election over the baseline (i.e. the average party share of municipal votes for Federal Congressmen), 2008 shows up as the outlier of the sample of years. The reason for this result is connected to the fact that the average percentage of votes for Federal Congressmen for the two main parties in the municipality has been declining since 2002. In 2010 this proportion was at its lowest value. It is interesting to notice that the (supposedly) dominant parties in the municipality have been loosing dominance since 2002 (the highest proportion in the sample).

In such a non-parametric approach (just comparing means) we can compute the average treatment effect (ATE), the effect on the treated (ATT) or the effect on the untreated (ATU) just changing the relevant baseline, i.e. using respectively the average for the sample, the average for the group that won municipal elections two years before and the average for the group that lost this election. Evidently the impact would be larger for parties that loose the election. Ignoring statistical significance at this point, the impact is quite large for any group considered. Electing a mayor may increase votes for Federal Congressmen from 19% up to 39%.

We interpret this result as evidence that party matters. Once elected, the mayor would be working for her party in order to have more representation in the national Congress. We cannot say very much about the reasons why and how the mayor is influencing the votes but it seems revealing that the averages are systematically different and at an economic significant size. So, we have to find a more efficient way to test if this result is also statistically significant. The main problem, however, is that we may be confounding the mayor effect with some other differences between the first and the second parties in the municipality. It may be the case that the first party is also more powerful in all instances. In the following section we take care of both identification problems.

5.1 DO PARTIES MATTER? POOLED ANALYSIS.

To increase efficiency we just adopt a parametric approach, namely, ordinary least square (OLS). As discussed in section 4, we regress the party share on Federal Congressmen votes on a dummy variable that will takes the value of one if the party won previous municipal election. To solve for the endogeneity problem we adopt two approaches. First we add variables that might be able to control for the general power of the party in the municipality. Second we adopt a Regression Discontinuity Design in order to deal with unobservable sources of endogeneity.

Working initially with the sample pooled we can see that the impact is statistically significant. As discussed in section 4, we control for a 4th degree polynomial form on the margin of victory in order not to confound the possible discontinuity with other non-linarites. The first row shows that the impact using regression is exactly the same as comparing means. Notice that the ATE for the pooled sample (last row on Table 1) is identical to the first row in Table 2. It could be different because we control for the margin of victory. So, the statistical non-significance reported on Table 1 was merely a consequence of an inefficient estimation.

We then proceed to test whether this result is casual or it is just revealing correlation between one election and the subsequent election. The first approach is adding controls for the power of the party in the municipality. We start controlling for the party share of votes for municipal council. In the second row we can see that the impact is dramatically reduced but it is still statistically significant. It is also substantive since a 12% increase in the party share of votes for Federal Congressmen is quite relevant for the party performance. We feel, however that this variable may be over controlling and that the impact might be actually larger. Votes for the mayor and for the council might be correlated not only through the power of the party in the municipality but rather through other electoral mechanisms that we may not want to control. To check this possibility we attempt another specification where we control for the share of party affiliates in the number of registered voters, using the number of affiliates as a proxy for the party strength in the municipality. Interestingly, the third row of table 2 shows that results for controlling for party affiliates in the municipality are closer to results of entering no control for party power, which are in the first row of the same table.

We proceed with testing the possible causal relationship between electing a mayor and the performance of the party in the (subsequent) statewide proportional elections by reducing the sample to elections where the party barely wins the election. Considering that we are controlling for a 4th degree polynomial function on the margin of victory (that defines the discontinuity when it moves from negative to positive), restricting the sample to municipalities for which the margin is very small is equivalent of a regression discontinuity design (RDD). We restrict the sample to municipalities for which the margin is less than 5%, 3% and 2%. As a matter of fact, the impact is dramatically reduced but it is still statistically significant increasing the confidence that mayors are indeed working for their party. Based on this analysis we are very confident that electing a mayor would increase party share in votes for Federal Congressmen at least by 10% that is still very meaningful.

Using the Imbens' test we conclude that in general the ideal margin to explore the discontinuity is around 3%. So, we add the party share on votes for councilors to the specification restricted to municipalities where the difference between the first and the second candidate was bellow 3%. The estimated impact would be reduced to 11% compared to 13% if we do not control for this variable. However, when we control for the proportion of party affiliates instead of the party share on votes for councilors the impact of the mayor on the party share of votes for Federal Congressmen is unchanged. This result reinforce our feeling that the contemporaneous share of votes for councilors over control the results under

estimating the impact of electing a mayor on the party performance in the subsequent election.

We keep testing the result adding control variables to the regression. We stick to the specification on eighth row, i.e. working with municipalities where the margin of victory of the mayor was below 3% and controlling for a 4th degree polynomial equation on this margin. On Table 3, column (1) just repeats the result reported on Row 8 in Table 2 showing the coefficient on the proportion of party affiliates that was omitted from Table 2.

On column (2) we add the incumbency status to the specification. If the mayor is an incumbent we expect that the initial party share will be larger than it would if the mayor was a newcomer. It is also more likely to an incumbent to win elections so we expect that the incumbency status may be correlated with our independent variable of interest (winning municipal elections). In this case we have to add the variable otherwise the coefficient on the election dummy would be biased. We can see in column (2) that the incumbency status is indeed (significantly) positively correlated to the party share in the votes for Federal Congressmen. However, the coefficient of interested is almost unchanged. The same is true when we add the size of the population to the regression, as a way to check whether the influence of the mayor in subsequent proportional elections would be restricted to small cities. There is no change in the coefficient.

All in all, we can say that in the last decade electing a mayor is probably increasing the party share on subsequent proportional elections. The size of the impact is certainly lower than what would be estimated by simple OLS estimation but it is still substantive. Increasing the share by 10% is not negligible at all. This result is robust when we constrain the sample to municipalities where the margin of victory was below 3% and it is also robust to the addition of control variables. We interpret this result as evidence that parties, as organizations, matter for electoral results.

5.2. HETEROGENEITY, DIRECT AND INDIRECT EFFECTS

Although the general result is quite revealing, we would like to go deeper into it. We are interested first in possible differences among years. Table 4 shows the results from a regression specified exactly as column (3) on Table 3 for each year of the sample. The main result from this decomposition is that the result is much more intense and significant in 2010

than in any other year included in our analysis. For 1998 and 2002 the coefficient is significant just at 5% and at 10% respectively.

We have one suspicion to explain this result. On 2007 a new electoral law intended to reduce party switching was enacted. It is not clear why 2006 was not significant but the difference in significance is not large: in 2002 the significance was 10% while on 2006 it was 13%. This is certainly an area for further research. On the other hand it may be the case that party switching actually decreased, i.e. the 2007 law did work. Finally it is possible that parties as organizations were actually improving during the decade and are more mature in 2010.

We will go back to this issue shortly but we still can just speculate about the origins of these differences in time. To really understand this phenomenon we need to study the migration of mayors among parties in our time frame. Tracking the party would allow us to understand if the problem was connected to measurement errors, if the party switching law was able to change politician's behavior after 2007, or even if it represents a longer trend.

We have also checked for heterogeneity among continuous variables. Column (1) on Table 5 interact the election dummy with population. The result is somehow puzzling since the coefficient on the election dummy is now not significant but the interaction term is also not significant. Not considering the significance, the negative sign is possibly revealing that the power of the mayor is inversely proportional to the population. In this case, the mayor would be working as a local focal point to which municipal voters would converge.[9] This is one possible explanation for the mechanism behind the mayor impact on the subsequent election. It is also important to notice that the impact would be zero for municipalities with more than 15 million inhabitants. Since we restrict our sample to municipalities with just one round, there is no municipality with more than 300 thousand inhabitants. Furthermore, the average impact obtained when substituting for the average population in the sample, is very much the same as reported in the equivalent regression with no interaction terms (the coefficient would be 0.019).

We also interact the election dummy with the (initial) percentage of party affiliates. Once again the coefficient is not significant and negative. It means that the mayor will have less impact on municipalities initially with a larger proportion of voters affiliated to the party. Once again, if the mayor acts as a political canvasser for the party, having more affiliates would

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[9] Recall that the number of candidates per seat is quite high; moreover, voters in small municipalities would face the need to coordinate their votes as the only way to make their local needs electorally distinctive.

substitute for this role. So, we have two indirect evidences that the mayor may be having the role as a focal point/political canvasser. Specifying this role may explain how winning municipal elections may fuel the party in the subsequent Congress election.

Finally we interact the incumbency dummy with the election dummy to check if the impact was larger for municipalities that were just "gained" by the party. The impact on municipalities that were just won by the party is slightly higher than the impact on incumbent municipalities but, once again, not significant. This result may be revealing that mayors in second term are not so interested in national elections. One possibility is that the impact of electing a mayor on subsequent elections is largely related to first term mayors, who would be eager to get access to resources provided by the federal government to assure their own reelection. This result would weaken our interpretation of the party as a strong organization since the interest of the mayor would be limited to the first election. However, despite being not significant, the difference is not substantive either. This is not the case for population or proportion of affiliated voters that are nor significant but are substantive in size.

If we believe that mayors are working for their parties, we would expect that winning municipal elections would enhance other attributes of the party in the municipality. On Table 6 we repeat the main specification changing the control to votes for councilors, but changing the dependent variable to the percent variation in the number of voters affiliated to the party in the municipality. Electing a mayor seems to impact the number of party affiliates although the result is significant just from 2004 to 2008. Once again this might be connected to the restriction on party switching from the 2007 law. In any case, it reinforces the idea that the mayor is working for her party and, consequently, party matters.

This result also poses a problem to the impact estimation reported above. The mayor may have an indirect effect on subsequent elections acting directly but also she may have an indirect effect through the increase in the number of affiliates that would supposedly work for their candidates as well. One way to decompose the direct and indirect effect of mayor election is running a regression controlling for the change in affiliates and comparing to the result of a regression not controlling for this variable. The result of this exercise,[10] controlling for the party share on the votes for councilors, is that the 11% impact of the mayor on subsequent election may be decomposed in a direct effect of 7%, and an indirect effect (through increasing the number of affiliates) of 4%.

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[10]The regression behind this exercise is available upon request.

5.3. WHICH PARTY DOES MATTER?

The results presented above have not considered possible specificities of the parties involved. As discussed in the introduction, the Brazilian democracy resulted in a multi-party system. In the period analyzed in this paper, for instance, there were 29 parties that won at least one municipal election besides around half a dozen of parties that have not won any municipal election in the period and, consequently, are out of our analysis. Some of this parties disappear during the period and most of them have no relevance whatsoever in the country politics.

Consequently, to understand the phenomenon we are studying by party we decide to use just seven parties to analyze them more carefully. Empirically, those parties represent more than 83% of our sample and have a relevant presence in any year. In more theoretical terms, these parties were the same set analyzed by Carneiro e Almeida (2008) and Guarnieri (2011), an author that has delved into organizational features of Brazilian parties. Table 7 presents the number of municipalities won by each party and year. It is important to notice that some parties on the list have changed their name during the period.[11] Due to some problems with information about the PR in 2008, we will not analyze this party in this specific year.

PMDB is the most relevant party regarding municipalities. Although the party has not participate with own candidates in the presidential elections since 1998 it is very stable in its dominance at the municipal level. PFL/DEM that used to be the second main player at the municipal level has been considerably reducing its participation. PFL is a right wing party founded in 1985 under the name of Liberal Front Party (Partido da Frente Liberal, PFL) from a dissidence of the defunct Democratic Social Party (PDS), successor to the National Renewal Alliance (Arena), the official government party during the military dictatorship of 1964–1985. It changed to its current name in 2007. In 2008, DEM has less than half municipalities that it used to have in 2000, when it was still part of the national government.

On the other hand, PSDB that is the main opposition party disputing the presidency against PT since 1994 has been losing space in the municipal sphere as well but at a slower

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[11] The Partido Progressista Brasileiro (PPB) changed its name to Partido Progressista (PP) in 2003. The Partido Liberal (PL) incorporated the Partido da Reedificação da Ordem Nacional (PRONA), and became the Partido da República (PR) in 2006. Finally, in 2007, the Partido da Frente Liberal (PFL) changed its name to Democratas (DEM).

pace. It seems that (not surprisingly) being in the opposition makes it harder to the party in local elections. The opposite is also true for government parties. PT has more than tripled the number of municipalities managed by mayors from the party. In any case, we believe that there is more than just being in the opposition or in the government in defining the performance of the parties in local elections. Since our results indicate that parties matter, we believe that this performance is also connected to the internal organization of each party.

Table 8 shows the average party share in votes for Federal Congressmen by year. Once again, PMDB is very stable and have a quite large participation in the municipalities where it got the first or the second position in local elections. PT, PFL/DEM and PSDB have also a high average but it is not as stable as PMDB. In particular PT have oscillated from 15% to 24% in the period. It is interesting to notice that the main parties in the system are also the parties that have the largest share in the previous table. As a matter of fact, PSDB has the presidency from 1995 to 2002 while PFL was the main party in the coalition, while PT got the presidency since 2003 and PMDB is its main allied. PDT and PTB have a very low share compared to other parties and this share is quite uniform in the period.

On Table 9 we check the impact of wining local election on the subsequent election by party with the same (econometric) strategy adopted for the whole sample (see Table 2). To do this analysis we add a set of six dummy variables that would equal one for the party under analysis. We left PMDB out of the analysis to avoid perfect multicolinearity. Consequently, the coefficient on PMDB represents its impact while the coefficient reported for other parties indicate if the impact of this party on subsequent elections is larger or lower than PMDB´s impact. When we report the impact relative to the baseline we sum up the coefficient of PMDB to the coefficient on the party dummy to get the actual relative impact.[12] We estimate the impact controlling for the share of votes for councilors and reducing the samples for elections with a lower margin of victory (10%, 5% and 3%).[13] The result is significant for any specification considering all seven parties pooled. It is also significant for PMDB in any specification, though in this case, the result lost part of its significance when we restricted the margin of victory to 3%.

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[12] That is, we sum up the coefficients presented in Table 9 for PMDB and the party and then divide it by the average share of the party reported on Table 8.

[13] When we constrain the sample to low margins of victory we control for the percent of voters that are affiliated to the party instead of the share in votes for councilors as discusses before.

Looking at other parties we can notice that just PT is significantly positive in the first two specifications while PTB and PFL are significantly negative for the first specification (controlling for the party share in votes for Federal Congressmen). However, the impact of winning local election for PFL is significantly (at 5%) higher than PMDB when we restrict the sample to municipalities that has won the election by a margin that is lower than 3%. We are suspicious that reducing the sample will give us too little observations to analyze the impacts by party specially when we attempt to make the analysis by year. Consequently we opt to do the analysis by year just controlling by the party share of votes for councilors. As discussed we may be over controlling but we adopt this "conservative" strategy of identification on Table 10.

We can see that the impact is significant at 1% for PMDB in any year considered. This result contrasts with the result observed for the whole sample where the impact is not significant for 2004. It may be the case that those small parties eliminated from the sample were just adding noise to the analysis. It is also important to notice the size of the impact. The impact of PMDB has being growing steadily since 1998 from 8% up to 18% in 2010. Actually the impact in 2006 is not much larger than the impact on 2010. This result shows that the hypothesis that parties were improving their organization skills over the years may be considered. It is still likely that the Party Fidelity Law has also played a role in the results but we may not discard the trend interpretation.

We can also see that the impact of PT is significantly higher than the impact of PMDB just in 2010. PDT on the other hand has an impact significantly lower than PMDB in any year considered while PTB has also a significant lower impact since 2002. PSDB impact is significantly lower than PMDB just in 2010. This result may be connected to the fact that the party is currently the main opposition party but it may also be connected to some sort of internal lack of organization inside the party.

These results reinforce the classification of Brazilian political parties suggested by Guarnieri (2011). Based on the number of municipal party organizations and the centralization of party decisions, parties are classified in three groups. At one extreme is the "polyarchic" group that is defined by parties with a large number of municipal organizations, and a decentralized decision-making; this group comprises PT and PMDB. At the other extreme is the "monocratic" group, which is defined by a limited number of municipal organizations with a very centralized decision-making; this group comprises PTB and PP. At the middle is the "oligarchic" group, which is defined by its mixed characteristics regarding either the number of

municipal organizations or the centralization of party decisions; this group comprises PSDB, PDT, and DEM.

Using the suggested party classification to reinterpret table 9, we could say that "polyarchic" parties with a large number of strong municipal organizations, such as PT and PMDB, are more capable to extract votes from winning a mayorship, strengthening our claim that party organization matters for electoral performance. On the other side, the difference between "oligarchic" and "monocratic" parties is not so clear, as all other five parties show a negative sign. Moreover, according to table 10, an "oligarchic" party, such as PDT, shows a declining performance over the years similar to the performance of the PTB, a "monocratic" party.

6. CONCLUSION AND FURTHER STEPS

This paper extended a previous analysis of the electoral effects of intra-party linkages, an important aspect to understand most federative political systems. Again, it focused on a peculiarity of the Brazilian federation to explore reverse coattails effects from municipal mayors to statewide legislative elections, as a way to analyze the influence of party organizations on electoral performance.

At this time, we employed a larger dataset with data from the 1996 to the 2010 elections. Our findings reinforce our former evidence of a strong reverse coattail electoral effect, calling attention to the importance of municipal party organizations to understand statewide legislative electoral results.

Results from the pooled sample of observations reassured us that our previous findings could be generalized for the entire period. Though effects are somewhat weaker, electing a mayor would probably increase the party share of votes in subsequent proportional elections. These results were also significant when we analyzed them by year; except for the 2006 election, which loses statistical significance, all years included in the sample showed the correct sign and statistical significance.

Moreover, results endured not only after we constrained the sample to municipalities where the margin of victory was below 3%, but also after the addition of control variables, such as the number of party affiliates, the fact that the mayor was in her second term, and some municipal characteristics.

Finally, we explored the possible variation between Brazilian parties in their ability to reach some level of intra-party cooperation. Using a classification of party organizations, we uncover interesting relations, as more organized parties are more capable to extract votes on subsequent proportional elections from a mayorship. Additionally, the ability of parties to extract votes at local level seems to vary along the years, suggesting increasing or decreasing trends over time.

This paper's findings also uncover several paths for future research. One path is to further analyze the conditions that may favor or hinder the capability of the mayor to transfer her votes to party candidates in legislative elections. In other words, how a mayor is able to transfer votes for her party candidates in subsequent proportional and statewide elections. In order to answer this question, we need to explore further the two ways suggested here. The first is the role of mayor as a focal point that coordinates municipal voters. Brazilian voters have a sole vote, but are exposed to high number of candidates per seat in proportional elections, and this abundance of options may require some informational shortcut to render a choice possible. The second way mayors can influence party performance is more indirect: by increasing the number of local party affiliates, who would be responsible for the increasing in party candidates in the proportional elections.

Another important path of research leads to understand why mayors chose to support their party candidates in the subsequent statewide elections. Facing the upcoming elections a mayor has at least four choices: support her party candidates, support other party candidates, support multiple parties' candidates, support no candidate at all. The answer to this question should lead to a deeper research on party organizations. For instance, we need a better understanding of party switching. Besides the noise it brings to data analysis, party switching, particularly among mayors, seems to contradict the main argument of this paper concerning the importance of party organizations to party's electoral performance.

Another interesting research issue is the decline in electoral volatility and the potential consolidation of party competition throughout Brazilian states. As shown by Bohn and Paiva (2009), electoral volatility has declined at different rates at state level. One possible explanation for this variation, at least for legislative elections, is that electoral volatility declines only in regions were parties could achieve some degree of internal cooperation among different government levels. That is, we should see a larger decline in electoral volatility in states where parties' organization succeeds in keeping and transferring votes from local to statewide elections.

Finally, contrary to the homogeneity assumption, multi-level party systems may develop in a heterogeneous way throughout the Brazilian territory. In this case, as long as the number of observations may preclude state-level approaches, future research should resort to case-studies analyses.

REFERENCES

AMES, B. "The Reverse Coattails Effect: Local Party Organization in the 1989 Brazilian Presidential Election." *American Political Science Review*, v. 88, n. 1, p. 95-111, 1994.

BOHN, S. R. e PAIVA, D. "A Volatilidade Eleitoral nos Estados; Sistema Partidário e Democracia no Brasil." *Revista de Sociologia e Política*, v. 17, n. 33, p. 187-208, 2009.

CARNEIRO, L. P. e ALMEIDA, M. H. T. "Definindo a arena política local: sistemas partidários municipais na federação brasileira." *Dados*, v. 51, p. 403-432, 2008.

COX, G. W. *Making votes count*: *Strategic coordination in the world's electoral systems*. Cambridge, U.K; New York, Cambridge University Press, 1997.

_____. "Electoral Rules and Electoral Coordination." *Annual Review of Political Science*, v. 2, n. 1, p 145-161, 1999.

_____. *Electoral Institutions and Political Competition; coordination, persuasion and mobilization*. Handbook of New Institutional Economics. C. Ménard and M. M. Shirley, Springer: 69-89, 2005.

DESCHOUWER, K. "Political Parties in Multi-Layered Systems." *European Urban and Regional Studies,* v. 10, n. 3, p. 213-226, 2003.

_____. *Political Parties as Multi-Level Organizations*. Handbook of Party Politics. R. S. Katz and W. Crotty. London: Sage Publications, 2006.

GUARNIERI, F. "A Força dos Partidos 'Fracos'." *Dados*, v. 54, p. 235-258, 2011.

LEE, D. S. "Randomized experiments from non-random selection in U.S. House elections." *Journal of Econometrics*, v. 142, n. 2, p. 675-697, 2008.

LIMA JR., O.B. *Partidos Políticos Brasileiros; a experiência federal e regional: 1945/64*. Rio de Janeiro: Edições Graal, 1983.

MAINWARING, S. "Electoral Volatility in Brazil." *Party Politics*, v. 4, n. 4, p. 523-545, 1998.

_____. *Rethinking party systems in the third wave of democratization: The case of Brazil*. Palo Alto: Stanford University Press, 1999.

_____ e TORCAL, M. *Party System Institutionalization and Party System Theory After the Third Wave of Democratization*. Handbook of Party Politics. R. S. Katz and W. Crotty. London: Sage Publications, 2006.

PERES, P.; RICCI, P.; e RENNÓ, L. "A Volatilidade Eleitoral no Brasil." *Latin American Research Review*, 46, n. 3, p. 46-68.

RIKER, W. H. *Federalism: origin, operation, significance*. Boston: Little, 1964.

SAMUELS, D. J. "The Gubernatorial Coattails Effect: Federalism and Congressional Elections in Brazil." *The Journal of Politics*, v. 62, n. 1, p. 240-253, 2000a.

_____."Concurrent Elections, Discordant Results: Presidentialism, Federalism, and Governance in Brazil." *Comparative Politics*, v. 33, n. 1, p. 1-20, 2000b.

THORLAKSON, L. "Patterns of Party Integration, Influence and Autonomy in Seven Federations." *Party Politics*, v. 15, n. 2, p. 157-177, 2009.

_____. "Measuring vertical integration in parties with multi-level systems data." *Party Politics*, *upcoming,* 2011.

TABLES

Table 1: Average Percentage of Votes for Federal Congressmen for Parties that loose previous Mayor Election (control) and For Parties that won previous Mayor Election (treated) by Year

Year	% Votes for Federal Deputy (t+2)			Non-Parametric Impact			
	Average	Control	Treated	Difference	ATE	ATT	ATU
1998	0.157 (0.163)	0.146 (0.154)	0.180 (0.170)	0.034	22%	19%	23%
2002	0.174 (0.175)	0.164 (0.161)	0.208 (0.187)	0.044	25%	21%	27%
2006	0.154 (0.159)	0.146 (0.145)	0.190 (0.172)	0.043	28%	23%	29%
2010	0.140 (0.149)	0.127 (0.130)	0.176 (0.164)	0.049	35%	28%	39%
Pooled	0.157 (0.162)	0.135 (0.147)	0.178 (0.173)	0.042	27%	24%	31%

standard errors in parenthesis
Source: Tribunal Superior Eleitoral (TSE)

Table 2: Impact of Mayor Election (1996 to 2008) on Subsequent (1998 to 2010) Federal Congressman's Votes for Different Specifications/Samples

Covariates and sample restriction	Coefficient	% Baseline
1. Complete sample	0.042*	27%
2. Complete sample controlling for % votes for councilors	0.018*	12%
3. Complete sample controlling for % affiliates	0.039*	25%
4. Margin of Victory<5%	0.023*	15%
5. Municipalities Margin of Victory<3%	0.020*	13%
6. Municipalities Margin of Victory<2%	0.015**	10%
7. Municipalities Margin of Victory<3% + % votes councilors	0.018*	11%
8. Municipalities Margin of Victory<3% + % affiliates	0.020*	13%

* significant at 1%; ** significant at 5%; *** significant at 10%.
Baseline considered as the average percentage of votes for Federal Congressman
Regressions controlling for a 4th degree polynomial equation on the margin of victory
Source: Tribunal Superior Eleitoral (TSE)

Table 3: Impact of Mayor Election (1996 to 2008) on Subsequent (1998 to 2010) Federal Congressman's Voter Controlling for Different Variables

Variable	(1)	(2)	(3)
Mayor Elected	0.020*	0.019*	0.019*
	(0.004)	(0.004)	(0.004)
% Affiliated	1.180*	1.111*	1.102*
	(0.076)	(0.078)	(0.086)
Incumbent		0.023*	0.023*
		(0.005)	(0.005)
Population			-4.176
			(4.653)

* significant at 1%; ** significant at 5%; *** significant at 10%.
Regressions controlling for a 4th degree polynomial equation on the margin of victory (coefficients omitted) restricted to municipalities that the margin of victory was bellow 3%.
Source: Tribunal Superior Eleitoral (TSE) and IBGE

Table 4: Impact of Mayor Election on Subsequent Federal Congressman's Vote by Year

Year	Coefficient	% Baseline
1998	0.0177**	11%
2002	0.0135***	8%
2006	0.0114	7%
2010	0.0378*	27%

* significant at 1%; ** significant at 5%; *** significant at 10%.
Regressions controlling for % of affiliates, incumbency, population and a 4th degree polynomial equation on the margin of victory (coefficients omitted) restricted to municipalities that the margin of victory was bellow 3%.
Source: Tribunal Superior Eleitoral (TSE) and IBGE

Table 5: Heterogeneity on the Impact of Mayor Election (1996 to 2008) on Subsequent (1998 to 2010) Federal Congressman's Voter

Variable	(1)	(2)	(3)
Mayor Elected	0.0446	0.0244*	0.022*
	(0.0351)	(0.0054)	(0.004)
% Affiliated	1.1007*	1.2150*	1.102*
	(0.0865)	(0.1182)	(0.086)
Incumbent	0.0229*	0.0227*	0.030*
	(0.0049)	(0.0049)	(0.007)
Population	0.0009	-0.0005	0.000
	(0.0028)	(0.0021)	(0.002)
Municipal GDP			
(Mayor Elected) ×Population	-0.0027		
	(0.0037)		
(Mayor Elected) × (% Affilates)		-0.2136	
		(0.1527)	
(Mayor Elected) × (Incumbent)			-0.013
			(0.010)

* significant at 1%; ** significant at 5%; *** significant at 10%.
Regressions controlling for a 4th degree polynomial equation on the margin of victory (coefficients omitted) restricted to municipalities that the margin of victory was bellow 3%.
Source: Tribunal Superior Eleitoral (TSE) and IBGE

Table 6: Impact of Mayor Election on the Change in the Proportion of Affiliates During Mayor's Term by Year

Period	Baseline	Coefficient	% Baseline
1996-2000	1.63%	0.04	2.15%
2000-2004	2.11%	0.08	3.98%
2004-2008	2.44%	0.16*	6.53%
Pooled	2.19%	0.09*	4.23%

* significant at 1%; ** significant at 5%; *** significant at 10%.
Regressions controlling for party share on votes for councilors, incumbency, population and a 4th degree polynomial equation on the margin of victory (coefficients omitted) restricted to municipalities that the margin of victory was bellow 3%.
Source: Tribunal Superior Eleitoral (TSE) and IBGE

Table 7: Number of Municipalities with Less than Two Hundred Thousand Voters for which the Party Won Municipal Election by Party and Year

Party	1996	2000	2004	2008	Total
PMDB	1302	1246	1048	1196	4792
PPB/PP	617	601	538	549	2305
PDT	420	285	296	349	1350
PT	125	182	410	560	1277
PTB	368	396	422	408	1594
PFL/DEM	935	1023	791	492	3241
PSDB	924	981	867	785	3557

Source: Tribunal Superior Eleitoral (TSE)

Table 8: Party Share of Votes for Federal Congressmen in Municipalities with Less than Two Hundred Thousand Voters for which the Party Got the First or Second Position in Municipal Elections by Party and Year

Party	Data Pooled	Year			
		1998	2002	2006	2010
All	17%	16%	19%	17%	15%
PMDB	21%	20%	21%	23%	21%
PPB/PP	16%	13%	18%	16%	17%
PDT	8%	6%	9%	9%	8%
PT	21%	15%	24%	19%	23%
PTB	7%	6%	7%	7%	8%
PFL/DEM	19%	23%	24%	18%	N.H.
PSDB	19%	18%	22%	20%	16%

Source: Tribunal Superior Eleitoral (TSE)

Table 9: Impact of Mayor Election on Subsequent Federal Congressman's Vote by Party for Different Specifications

Party	% Vote Council		Margin < 10%		Margin < 5%		Margin < 3%	
	Coeff.	Impact	Coeff.	Impact	Coeff.	Impact	Coeff.	Impact
All Parties	0.017*	10%	0.025*	15%	0.022*	13%	0.019*	11%
PMDB	0.027*	13%	0.024*	11%	0.022*	10%	0.014***	7%
PPB/PP	-0.004	14%	-0.002	14%	-0.009	8%	-0.021	-4%
PDT	-0.027*	0%	-0.013	14%	-0.007	19%	-0.005	11%
PT	0.015**	20%	0.019**	20%	0.011	16%	0.021	16%
PTB	-0.025*	2%	-0.005	26%	-0.007	21%	0.007	29%
PFL/DEM	-0.008***	10%	0.008	17%	0.009	17%	0.023**	20%
PSDB	-0.007	10%	-0.002	11%	0.003	13%	0.014	15%

* significant at 1%; ** significant at 5%; *** significant at 10%.
Significance for PMDB is for the impact; significance for other parties is relative to PMDB
Regressions controlling for incumbency, population and a 4th degree polynomial equation on the margin of victory
Source: Tribunal Superior Eleitoral (TSE) and IBGE

Table 10: Impact of Mayor Election on Subsequent Federal Congressman's Vote by Party and Year

Party	1998		2002		2006		2010	
	Coeff.	Impact	Coeff.	Impact	Coeff.	Impact	Coeff.	Impact
PMDB	0.016*	8%	0.027*	13%	0.033*	15%	0.038*	18%
PPB/PP	-0.009	5%	-0.001	15%	-0.002	19%	-0.008	17%
PDT	-0.021***	-8%	-0.030**	-3%	-0.028**	6%	-0.029*	12%
PT	-0.007	6%	-0.016	5%	0.013	23%	0.022**	26%
PTB	-0.011	8%	-0.030**	-4%	-0.036*	-4%	-0.027*	13%
PFL/DEM	0.006	10%	-0.001	11%	-0.002	17%	N.H.	N.H.
PSDB	0.003	11%	-0.003	11%	-0.009	12%	-0.025*	8%

* significant at 1%; ** significant at 5%; *** significant at 10%.
Significance for PMDB is for the impact; significance for other parties is relative to PMDB
Regressions controlling for party share on % of votes for councilors, incumbency, population and a 4th degree polynomial equation on the margin of victory
Source: Tribunal Superior Eleitoral (TSE) and IBGE