Traditional Electoral Parties and Political Connection: evidence from an electoral experiment[×]

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Abstract

This paper investigates how the accumulated expertise of traditional electoral parties helps with Political Connection (PC). Our investigation uses a quasi-electoral experiment as its methodology (the intra-coalition of state deputies in Brazil) and net expected return as a measure for donor firms. The money spent on financing the campaigns of candidates from traditional electoral parties is 1.93% of net expected return and 1.56% for candidates from traditional, left-wing electoral parties, on average. Trying to capture the influence of the Executive in this process (with different sub-samples: each state, the governor´s party, governor's electoral coalition, the governor in their second term, and candidate for governor in next election), we obtain only those influences on candidates from traditional electoral and left-wing parties when they are in an electoral and government coalition. The returns are very close to the main results. We think that the influence of party expertise exists in PC and it depends very little on the Executive for guaranteeing that state deputy amendments are effective.

Keywords: Net Expected Return; Campaign Donation; Traditional Electoral Parties; Brazilian sub-national elections.

JEL Classification: D72, H57

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1. Introduction

The value of Political Connection (PC) in obtaining electoral results was measured in political science literature, for instance, through the supply of public goods as part of a clientelistic structure between local patrons and politicians (Baldwin 2013), redistributive tax as part of campaign finance between firms and politicians (Großer, Reuben and Tymula, 2013), and public contracts also as part of campaign finance between firms and politicians (Boas, Hidalgo, and Richardson 2014).[1]

However, given that the relationship between the actors in the political market depends on political parties, little attention has been given to this process. In the most intuitively perspective, the ideology of parties may influence the performance of PC by directing the choices of a clientelistic structure, for instance, to members of either right-wing or left-wing parties. Left-wing members may naturally prefer a more redistributive tax than right-wing parties. The ideology of party power may favor public contracts for members of other parties who are ideologically aligned with the party in power.

Yet in this perspective, maybe the expertise of party politicians (Esterling 2007) may help in the PC between donor firms and politicians their politician members because politicians with electoral tradition develop channels of communication with the government structure (bureaucracy) over time, regardless of the party that is in power. [2] Different politicians, (formal and informal) leadership groups in a party, and the party leader may use their expertise to help members of their parties.

In this work we try to demonstrate the importance of political parties (by trying to capture the importance of party expertise) in PC, by observing differences in return on average for donor firms when they finance the campaign of state deputies. We use Brazilian local elections because they have just explored the PC between donor firms and federal deputies with the

[1] There are different types of political connection, which have been shown in the business literature, such as (1) when a politically connected individual joins the corporation's board (Rocholl, Goldman, and So, 2009), and (2) when a businessperson enters politics (Faccio, 2006). In the same way, other targets has been shown as the product of this connection, such as (1) preferential access to financing (Faccio, Masulis, and McConnell, 2006; Claessens, Feijen, and Laeven, 2008), (2) less risk and an accompanying lower cost of capital (Boubakri, Guedhami, Mishra, and Saffar, 2012), and (3) firm capital structure performance (Return on Equity) and to investors' expectations of profit and value (Bandeira de Mello, Marcon, Goldszmidt and Zambaldi, 2012).

[2] Miguel (2003) has just showed the importance of political capital for the political career in Brazil. Miranda (2003) showed also the importance of party leaders in the Federal Congress in Brazil.

federal government (Boas, Hidalgo, and Richardson 2014) and the results show that "spoils of victory" exist for winning over losing candidates from the Worker´s Party (PT). There is a heterogeneous relationship between the Executive and Legislative, which is not found at the federal level (institutionally the federal executive is the same in negotiation on time). Brazilian parties are considered weak in literature (for instance, Mainwaring 1990) because they have individualistic patterns of representation that are reinforced by this electoral system, which has sustained an elitist polity.

We have two contra-factuals which help us to think in this way when observing the Brazilian political scenario. First, there is a rule of resource distribution for individual amendments at the federal level (a similar rule exists at the state level), which do not become effective, although each deputy has their power of bargaining (Pereira and Muller, 2002):

> *"While some are treated like celebrities and suffer harassment in the public halls of the (Federal) Congress, other deputies go unnoticed. Even if they wore lapel badges on their jackets identifying them as parliamentarians, they would walk quietly in a crowd, anonymously. Despite winning nearly 200,000 votes, on average, to take a seat in Congress, a fifth of all parliamentarians have almost nothing to show the country's 202 million inhabitants. They are not the authors of relevant projects, nor can they release a penny of the $15 million to which they are entitled in amendments for a specific budget to their states of origin." Correio Braziliense, newspaper (April 14, 2014)*

Second, although our PC tendency is associated with winning candidates, it is always necessary to remember that there are members of parties who are able to establish a PC regardless of victory (Boas, Hidalgo, and Richardson 2014).

Indeed, there is a class of politicians who know with whom to speak in a ministry (politicians or bureaucrats) to solve their needs (expertise) for herself for other party members to negotiate either an individual amendment or a situation which does not depend directly on an amendment but leave benefit of contracts in a PC

We imagine that bargaining is important in this process. However, if non-elected politicians have a PC and a proportion of elected politicians do not have an amendment made there may be other dimensions which are important in this process.

Großer, Reuben and Tymula (2013) and Boas, Hidalgo, and Richardson (2014) observe that the great majority of these empirical works on PC find it difficult to establish causality

because they do not solve problems related to endogeneity, for instance. In order to avoid this kind of problem, Boas, Hidalgo, and Richardson (2014) explore a quasi-electoral experiment, in which they identify the mechanism used by firms in order to obtain public contracts in Brazil.[3]

We use the intra-coalition dispute of state deputies as a quasi-experiment (using the same technique employed by Boas, Hidalgo and Richardson, 2014: Regression Discontinuity Design), data from campaign donations to state deputy candidates in 2006, and contracts for the 2007-2010 government term. [4] Having shown that there is no electoral manipulation and that important background variables do not affect the electoral result (Eggers, Folke, Fowler, Hainmueller, Hall, and Snyder, 2013), the quasi-experiment allows us to check if there is any difference in the return to winning and losing intra-coalition candidates that justifies calculating the net expected return.

We chose to focus on 8 of the 27 Brazilian states, because we did not have access to data regarding company contracts in the remaining states. However, the eight states considered in this study are sufficiently representative of Brazil because they cover the poorest region (i.e., the northeast: Alagoas, Pernambuco, and Rio Grande do Norte), the richest region (i.e., Espirito Santo, Rio de Janeiro, and São Paulo), and the central region of the country (i.e., the Federal District and Goias). This last region is quite agricultural, whereas the more urban states, such as Rio de Janeiro and São Paulo, are close to the coast.

Our empirical strategy (methodology) and estimates differ from those of Boas, Hidalgo and Richardson (2014) because we use a margin of victory and not a raw vote margin, because the intra-coalition margin of victory for state deputies in our study was not influenced by the size of their districts (i.e., states).

We recognize that our measures of expertise of political parties (named as traditional electoral parties) may not capture the precise measure of this expertise, but we try to use measures that are as close as possible. We used two measures. The first we assume is pure knowledge (without bargaining, the biggest problem of any measure of expertise). We define a pure knowledge measure by parties which have been in the legislative with at least one seat for

[3] The methodology was adapted from Lee (2008). The main idea of Lee (2008) is that in a competitive election (where the margin of victory is low between the candidates), heterogeneity (characteristics of candidates, district and voters) does not exist for voters. Thus, the winner and loser are defined as a random event, just as when we toss a coin. Boas, Hidalgo, and Richardson (2014) used the same idea for competitive federal candidates in an electoral coalition.

[4] We do not get to obtain data of state contracts before.

two terms. In our case, this was before 2006, our central point of investigation (1998 and 2002). The second we assume involves knowledge and bargaining. Our measure includes parties that in the last three terms helped to define the majority of seats in the State Legislative (1998, 2002, and 2006): 50+1%.

The results of our first measure (candidates from traditional electoral parties or not) were not available, because the results for traditional parties may be conditional upon the level of campaign financing received (elected candidates receive more campaign financing per donor firm than non-elected candidates) and upon the different sub-samples used by us (all candidates, candidates from left-wing parties, right-wing parties, and candidates who are trying to be reelected – personal experience). We observed no discontinuity to allow us to calculate the net expected return of donor firms by the average number of candidates.

In our second measure, we do not obtain discontinuity for the different sub-samples used by us for the group of candidates in non-traditional electoral measures. Thus, our main results are centered on the second measure (knowledge with some bargaining) for traditional electoral parties (discontinuity was found for all candidates and candidates from left-wing parties).

An interesting observation for all results is that higher levels of campaign finance are associated with lower margins of victory. The net average return expected for donor firms from PC is high. For traditional electoral parties, the money spent on campaign finance is 1.93% of the net expected return, on average. For traditional left-wing electoral parties it is a little lower: 1.56%. The return is quite high.

When it is possible to obtain observations to implement the RDD, we see that there is no discontinuity. We observed also that there is no discontinuity when we consider the governor´s parties, whether the candidates used in the experiment were in the elected government or in a coalition, and finally, whether the candidates used in the experiment were in their second term. The only result in which we obtain discontinuity was when using candidates that were in an electoral coalition and in government simultaneously.

The net values are higher than before: R$1 million (Brazilian currency) for all traditional candidates and R$1.5 million for traditional candidates from left-wing parties. However, the difference between campaign investment and return is no different from the return obtained before: 1.93% for all candidates from traditional electoral parties in an electoral and government

coalition - before it was 1.68%; 1.56% for candidates from traditional electoral left-wing parties in an electoral and government coalition; before it was 1.54%.

With the large number of non-results with different sub-samples, the result was obtained only for three states (Goias, Federal District and São Paulo) and it was non-robust for all specifications for all candidates from traditional electoral parties in an electoral and government coalition. The small difference between campaign finance and net expected return between in the main results (for the party only) and when the parties considered are in an electoral and government coalition, do not allow us to state the influence of the Executive in determining the return on PC. We think that PC comes much more from the party than from the government (Executive).

This paper is organized as follows. Section 2 describes the institutional background for this study (i.e., the Brazilian electoral system, the relationship between campaign finance and public business, and a brief discussion of our hypotheses). Section 3 describes our data set, Section 4 presents our empirical strategy and our measure of net return, and Section 5 reviews our main results. Finally, Section 6 concludes.

2. Institutional Background

2.1. The Brazilian electoral system

The Brazilian government operates at three levels: federal, state, and municipal. There are 27 states and approximately 5,600 municipalities. Each level of power includes an executive and legislative branch, and the 1988 Constitution (the first constitution after two decades of authoritarianism) established that each branch can determine its policies independently.

National elections for president, governors, senators, and state/federal deputies occur every four years, and the municipal election for mayors and councilors are mid-term elections of these national elections (i.e., these elections occur at fixed intervals). The executive positions are elected by a plurality, and if no candidate obtains 50% plus 1 vote of the total registered votes in the first round, there is a second round in municipalities with over 200,000 registered voters. However, municipalities with fewer than 200,000 registered voters are excluded from this second round. For legislative positions, the electoral rule is proportional.

The legislative positions (federal/state deputies and municipal councilors) are elected according to a proportional rule. Under that rule, the counting of votes measures the percentage of votes that each candidate received in relation to the total number of votes received by the

coalition, or else by the party in the case of parties that have not joined any coalition (the legislation permits any arrangement; see law number 9,504, September 30, 1997). Subsequently, seats are distributed to each coalition using a formula equivalent to Hond's Law. Then, the candidates are ranked in the order of their participation in the coalition. The seats are allocated to candidates with the highest percentages of votes within each coalition until the last seat obtained by the coalition is assigned. Thus, most seats are allocated to the parties that win the highest number of total votes, and the candidate who receives the most votes within a coalition will be elected. This system promotes individualism among election candidates because no party has the power to determine the ranks of its candidates. Therefore, Mainwaring (2002) classified Brazil as an example of a partisan system that is open to new competitors (similar to Peru and Russia).

Furthermore, the high number of candidates who run in legislative elections supports individualistic behavior. Each party has the right to register candidates on the order of one and a half times the number of seats to be filled, which promotes individual competition outside partisan lines and diminishes party control over the candidates who will be elected (Mainwaring, 1991). In addition, public funding for legislative campaign is low compared with the total amount of campaign financing (Bourdoukan, 2012) and is directed only to parties who earmark these funds for elections to executive positions (Boas, Hidalgo, and Richardson, 2014). These facts increase competition among legislative candidates and create greater demand for campaign finance because each candidate must spend more to stand out and win votes (Samuels, 2001). Thus, candidates depend on private financing of their campaigns.

The district of a federal and state candidate deputy is the whole state, and each state candidate deputy can win votes from all municipalities. In this context, the relationship between the state deputies and local power is significant. The state of São Paulo has 645 municipalities, Alagoas has 102 municipalities, Espirito Santo has 78 municipalities, Goias has 246 municipalities, Pernambuco has 185 municipalities, and Rio de Janeiro has 92 municipalities. However, the Federal District does not have municipalities. In this environment, it is necessary to study the political connections between different levels of government because these relationships can influence the financing costs of state deputies' electoral campaigns. Nevertheless, there is scant literature on state deputies' election strategies at the local level in Brazil.

2.2. The relationship between campaign finance and public business

"The State Deputy, Roque Barbiere (PTB), promised the lobbyist Osvaldo Ferreira Filho, who is nicknamed Osvaldinho and was arrested in Operation 'Fratelli' on Tuesday, public funds in the amount of 250,000 reals (125,000 dollars) for the city of Barretos, in São Paulo State. Osvaldinho was the advisor of the current Secretary of Government of the State of São Paulo, Edson Aparecido, for eight years and is appointed as the link between the DEMOP company, which is accused of defrauding public funds and municipalities in São Paulo State" (Veja Magazine: April 13, 2013).

There are four key participants in the process of campaign financing at the state level: donor firms, state candidates/elected deputies, the state executive (i.e., the governor), and municipal politicians (i.e., the local executive, or mayors). Donor firms see campaign finance as a "business" in which they can make gains on their initial investment in a state candidate (i.e., a deputy) in the form of public contracts after elections.[5] Because the public procurements of state governments observe Federal Law 8666 (which mandates a series of public procedures), these firms do "business" in an "uncertain environment" because their candidates may or may not be elected. Moreover, if elected, a candidate's "political relationship" with the state executive may or may not result in amendments to an approved, implemented budget that may end up giving some public procurement contracts to the donor firms. In addition, the party to which he/she belongs may or may not have accumulated political experience on negotiations with the state executive to make amendments (we will explore this dimension on our investigation). Furthermore, the state executive may or may not approve contracts for the firms that financed the state deputy's campaign.[6] In a nutshell, firms' campaign donation in an exchange for procurement contracts is risky activity which the return of donations is uncertain.

The second participants in the above list are state candidate deputies who hope to increase their campaign financing and thereby to improve their electoral chances of victory.[7] The third participant we mentioned is the state executive (governor), who has an interest in negotiating support both during and after the election with the state candidates, and later, with the elected deputies (either with individual parties or with an electoral or governance coalition).

[5] Unlike McCarty and Rothenberg (1996) and Samuels (2006) argues that in the Brazilian context, there are repeated relationships between contributors and candidates. In Brazil, politicians develop a long political career, which promotes numerous iterations between the parties

[6] Samuels (2006) has stated that the proceeds of the contributions will be able to influence public policy from the moment that there is a supply donation by companies or individuals. The regulation of the Brazilian electoral system allows firms to make a donation of up to 2% of their annual gross revenue. For individuals, this limit is raised to 10% of their annual gross income (Bourdoukan, 2012).

7 However, the literature is not right on this causal relationship (see Levitt, 1994; Bronas and Lott, 1997; Gerber, 1998; Rekkas, 2007; Milligan and Rekkas, 2008).

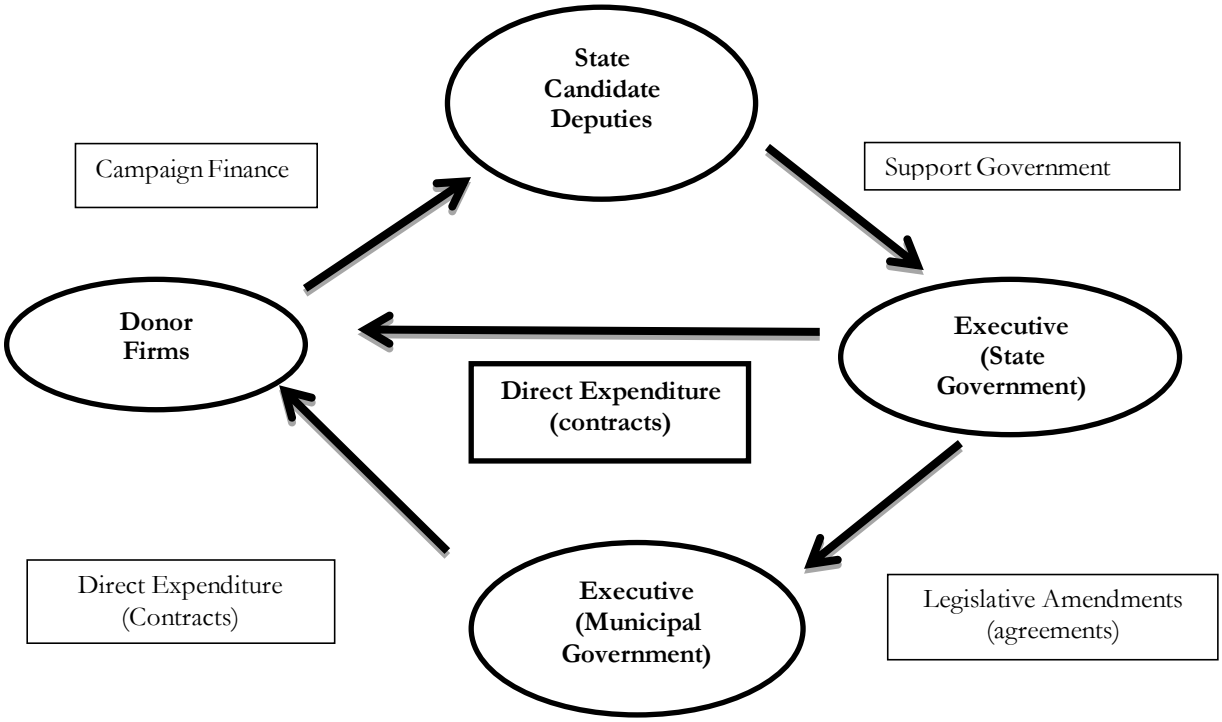
Although there are no studies at the subnational level on the candidate-deputy-governor connections, there is an important debate at the federal level in Brazil on the relationship between executive and legislative forms of government in the context of coalitions' formation. Pereira and Muller (2002), for instance, argued that the executive gains are supported by building on individual agreements. They relate the individualism and fragility observed in parties in the electoral arena to the strong presence of parties in the legislature. The release of budgetary allocations in individual amendments binds the two arenas, and thus, resolves the contradiction found in the literature between party power in these two instances. In contrast, Figueiredo and Limongi (2005) argue that the party model best explains the data and that belonging to a coalition government explains both party behavior in and the execution of individual amendments.

Finally, municipal politicians (i.e., mayors) are key actors in the electoral processes of other levels of government. An extensive theoretical and empirical debate exists on the relationship between different levels of government and strategies of political support. Cox and McCubbins' (1986) "core voter model" represents one perspective, and Lindbeck and Weibull's (1987) "swing voter model" is another, distinct view. Despite their differences, both models envision two parties that compete to win an election by promising to distribute targetable goods to various groups should they be elected.

Cox and McCubbins (1986) argued that incumbent parties have an incentive to direct transfers primarily towards their core supporters to maintain their existing electoral coalition. In contrast, Lindbeck and Weibull (1987) described a model of two-party competition such that if the parties are in equilibrium, then both parties primarily target marginal constituencies rather than their core supporters. In a more general model, Dixit and Londregan (1995, 1996) suggested that parties make trade-offs between the electoral benefits of targeting pivotal constituencies and of satisfying core groups of supporters.

Figure 1 presents the relationship between the different participants in this process and shows a deterministic relationship between the authors.

Figure 1: The influence of state deputies on direct government expenditure



Based on the above description of key participants, it is clear that there are several channels to explore between campaign financing and the award of contracts to favored donors' firms. It is possible that Boas, Hidalgo, and Richardson's (2014) results, which show that 14 times the value of campaign contributions in contract awards, can be attributed to this risk and complicate process of acquiring public contracts. Even when the state deputies who were not financed by donor firms are excluded from the sample, illegal activity can explain the high rewards for campaign financing (see Becker and Stigler, 1974). Ferraz and Finan (2008) list some wrongdoings in the *Convenio* (agreements between the national and municipal government by which a municipality can take resources from a federal deputy´s amendments to the federal budget) that are documented by the Federal Office of Comptroller General (CGU) in random audits. The main forms of corruption are present in this process: fraud in public procurement, embezzlement, and the overpricing of goods and services. For instance, the executive may resort to falsifying invoices for contracting companies that did not deliver a product or service, or to controlling the selection of firms by specifying products that will be targeted to certain companies (Trevisan, 2003). Nevertheless, there is no evidence to suggest that agreements between municipalities and state governments are different from those studied by Ferraz and Finan (2008), and this "gap" in the literature should be addressed in future studies.

2.3. Hypotheses

Our investigation determined two hypotheses:

Hypothesis 1: The expertise of political parties increases the expected return on public contracts as a result of the PC between donor firms and politicians.

The expertise of politicians helps donors and politicians with regard to PC (Esterling 2007). However, the literature has not yet investigated if the expertise of political parties can help their members in government improve their PC. Political parties are the basis of the political market (Aldrich 1995; Anckar and Anckar, 2000). In an instrumental vision of political parties, in addition to the bargaining process to obtain amendments (Amorim and Santos, 2001 at the federal level), politicians, leadership groups (formal and informal) in a party, and the party leader get their expertise from whoever negotiated the effective release of amendments with the executive bureaucracy. Public contracts depend on public procurement, as was mentioned before. Thus, PC depends on bureaucracy. Moreover, with regard to bargaining for amendments to the budget in the first stage, the political party with members close to power may have a negotiating advantage for carrying out amendments with the bureaucracy (they know who to speak to in order to solve problems). In time, political parties close to those in power may have greater expertise of this type than political parties which do not have this tradition to help their members activate the PC they have built up.

Hypothesis 2: The expertise of political parties increases the expected return on public contracts resulting from the PC between donor firms and politicians when these parties are from different ideologies (i.e., left-wing or right-wing parties).

Although Ansolabehere, de Figueiredo, and Snyder (2003) show that politicians are not influenced by donors because they follow their donors' own ideological positions, Boas, Hidalgo, and Richardson (2014) showed that the elected federal deputies of the Worker´s Party (PT) receive more contracts for their donor firms than non-elected [??] federal deputies of the same party (the definition of the spoils of victory). The PT is a left-wing party, and we expanded our investigation on expected returns to investigate the influence of ideology for both left and right-wing parties, relying on Coopedge's (1997) system of classification for Latin American political parties.

3. Descriptive Analysis of the Data

The data collected from the eight states in the sample show that 5,180 candidates ran in the 2006 election. This high number of candidates can be attributed both to the fact that each party can enter a number of candidates that is up to one and a half times the number of disputed seats (Mainwaring, 1991) and to the large number of parties. In this context, several small parties failed to elect candidates because they did not reach the minimum number of votes needed to qualify for a seat. In our sample, the states with the largest number of elected candidates, and consequently, the largest number of candidates are the states of São Paulo and Rio de Janeiro, which had 1,518 and 1,317 candidates, respectively. It is important to note that the ratio between the number of elected state candidates and the total number of candidates is 7% on average for the eight states. This significant difference between the total number of candidates and the number of elected candidates occurs because the electoral system is proportional.

With respect to coalitions, only 25% of the parties in our sample that contested the 2006 election belonged to a coalition. Furthermore, of the eight states evaluated, all of the government parties participated in electoral coalitions. The results show a high spread of parties, and only a few parties could contest the elections with strategies that aligned parties to form an agenda after the election.

In terms of campaign contributions, a few donor firms made contributions in more than one state, but the number and the contribution amounts were not significant. The candidates in the state of São Paulo received donations from 54% of the total number of firms that made donations, and Alagoas was the state with the fewest donor firms. Furthermore, Alagoas also exhibited the lowest ratio of donor firms to candidates with donations (this ratio was approximately two), and this finding indicates that each firm on average donated funds to approximately two candidates. The average number of candidates supported by firms is 38% of the entire field, and the states of São Paulo and Espírito Santo exhibit the highest rates of donation: 48% and 49%, respectively. Therefore, a reasonable number of candidates received donations from businesses to fund their campaigns in all states. This finding reinforces the concept of dependence in the relationship between candidates and donor firms.

Of all the candidates who were elected, 90% received contributions. This result may suggest that donations play an important role in determining the winning candidate in an election. In São Paulo, for example, almost all of the candidates who were elected (i.e., 97%) received donations from firms. In contrast, in Rio Grande do Norte, the percentage of financing

was lower, at 79%. Moreover, of the candidates who were not elected, only 34% received donations.

The high concentration of firms with contracts in São Paulo is evident when it is compared to the corresponding concentrations in other states. This phenomenon is reflected in the number of candidates in São Paulo who received donations and obtained contracts during their terms.

From eight states investigated in 2006, three parties have elected governor for two states (PSDB elected governors in Alagoas and São Paulo; PSB in Rio Grande do Norte and Pernambuco; PMDB in Rio de Janeiro and Espirito Santo) and another two parties elected governors in one state (PFL/DEM in Federal District; PP in Goias).

Our measure of Traditional Electoral Parties is built up in two ways. First, we use a measure which depends on knowledge of the mechanisms for obtaining PC advantage. As traditional party candidates, we consider those parties, the candidates of which were elected to the State Legislative on at least two consecutive occasions, in 1998 and 2002. Participation in the legislative after 2006 may represent bargaining beyond knowledge. In our measure, the parties classified as "Traditional Electoral Party 1" are: in Alagoas State (PFL/DEM, PSB, PSDB, PSL, PT, PT do B, and PTB), Rio Grande do Norte State (PDT, PFL/DEM, PL, PMDB, PSB, PT, and PTB), Rio de Janeiro State (PCdoB, PDT, PFL/DEM, PL, PMDB, PPS, PSB, PSC, PSDB, PT, PT do B, PTB, and PV), São Paulo State (PCdoB, PDT, PFL/DEM, PL, PMDB, PPS, PRP,PSB, PSDB,PT, PTB, and PV), Federal District(PFL/DEM, PL, PMDB, PPS, PSB, PSD, PSDB, PT, and PTB), Goias (PCdoB, PDT, PFL/DEM, PL, PMDB, PSB, PSC, PSDB, PSL, PT, and PTB), Pernambuco State (PCdoB, PDT, PFL/DEM, PL, PMDB, PSB, PSC, PSDB, PSL, PT, and PTB), and Espirito Santo State (PDT, PFL/DEM, PMDB, PMN, PPS, PSB, PSD, PSDB, PT and PTB).[8]

Our second measure tries to capture knowledge with some possibility of bargaining. For this measure we consider party candidates who in at least two state legislative mandates (2002 and

[8] PFL/DEM: Democrats Party;PSB:Brazilian Socialist Party;PT:Worker´s Party;PMDB:Brazilian Democratic Movement Party;PCdoB:Comunist Party of Brazil;PDT:Democratic Labour Party;PL:Liberal Party;PSC:Social Christian Party;PSDB: Brazilian Social Democracy Party; PTB: Brazilian Labour Party;PV:Green Party; PPS:Socialist People´s Party; PMN:Party of National Mobilization: PSTU: United Socialist Worker´s Party; PP: Progressive Party;PSL: Social Liberal Party;PRP: Progressive Republican Party;PRONA:National Renovation Party;PTdo B:Labour Party of Brazil;PSC:Social Christian Party;PSD:Social Democratic Party.

2006) are the parties which participate as the majority parties (51%).[9] The parties classified as "Traditional Electoral Party 2" are: Alagoas State (PFL/DEM, PSB, and PT), Rio Grande do Norte State (PFL/DEM, PMDB, and PT), Rio de Janeiro State (PCdoB, PDT, PFL/DEM, PL, PMDB, PSB, PSC, PSDB, PT, and PTB), São Paulo State (PDT, PFL/DEM, PL, PMDB, PSB, PSDB,PT, PTB, and PV), Federal District(PL, PMDB, PPS, PSDB, PT, and PTB), Goias (PFL/DEM, PL, PMDB, PSDB, and PT), Pernambuco State (PDT, PFL/DEM, PMDB, PSB, PSDB, PT, and PTB), and Espirito Santo State (PDT, PFL/DEM, PMDB, PMN, PSB, PSDB, PT and PTB).[10]

Although the classification of Coopedge (1997) for Latin American political parties is from the 1990s, we use this classification because it is the most exogenous classification of political parties for us. There is one party that he did not classify and we consider it to be left-wing: PSTU. The left-wing parties considered here are: PT, PDT, PSDB, PSB, PCdoB, and PSTU. The right-wing parties are: PP, PSL, PL, PFL/DEM, PRP, and PRONA.

Following the definition of the variables, we have three variables to capture the schooling of candidates. One dummy, with a value equal to 1 if the state candidate deputy has an elementary school diploma and zero otherwise. We use another dummy for high school and another for higher education. Moreover, we used candidate age to capture the candidate's level of experience. The age of a state deputy candidate is a good proxy for professional experience (i.e., working in other areas or professions). Finally, we capture the gender difference with the percentage of women candidates. All of the political variables come from the TSE (Superior Electoral Court).

Table 1 shows the data statistics used in our main development by different sub-samples. We will show only the data of the variables used in measure 1 and given that the second measure was not validity on experiment procedures as it will clear on the exposition.

Insert Table 1 here

The sub-samples are between -30% and +30% of the margin of victory for state candidates: All Traditional Parties, Non- Traditional Parties, Traditional Left-Wing Parties,

[9] We did the same measure using four elections (1994, 1998, 2002, and 2006) and the group of parties is the same.
[10] PFL/DEM: Democrats Party;PSB:Brazilian Socialist Party;PT:Worker´s Party;PMDB:Brazilian Democratic Movement Party;PCdoB:Comunist Party of Brazil;PDT:Democratic Labour Party;PL:Liberal Party;PSC:Social Christian Party;PSDB: Brazilian Social Democracy Party; PTB: Brazilian Labour Party;PV:Green Party; PPS:Socialist People´s Party; PMN:Party of National Mobilization: PSTU: United Socialist Worker´s Party; PP: Progressive Party;PSL: Social Liberal Party;PRP: Progressive Republican Party;PRONA:National Renovation Party.

Traditional Parties supporting the Government Coalition, and Traditional Left-Wing Parties supporting the Government Coalition.

Observing the statistical difference (stars in the non-elected column), there is a set of variables which can justify the difference in contracts received between elected and non-elected candidates unconditionally. The number of observations of each group (elected and non-elected) is in parenthesis.

4. Empirical Strategy

4.1. The empirical strategy to calculate net expected returns

The strategy developed by Lee (2008) and adapted by Boas, Hidalgo, and Richardson (2014) to estimate the difference between contracts that donor firms received in return for investing in winning and in losing federal candidates provides an appropriate measure to calculate the net expected returns in state elections. Although the Regression Discontinuous Design (RDD) provides a Local Average Treatment Effect (LATE), it is a good measure because it allows one to establish a causal relationship between election and public contracts by providing an exogenous variation between elected and non-elected candidate deputies. The causal effect is identified by comparing individuals near the point of discontinuity in the treatment variable. If this effect is not considered, the relationship will be subject to the effects of both reverse causality (Levitt, 1994; Bronas and Lott, 1997; Gerber, 1998; Rekkas, 2007; Milligan and Rekkas, 2008) and omitted variables.

To implement such empirical strategy is necessary to compare the contracts received by donor firms for elected and non-elected candidates who won or lost by a small margin of votes. This is important because individuals who are far from the point of discontinuity tend to have different characteristics that may influence the values of the contracts.

A small margin of victory allows us to observe if there were any differences in the post-electoral contracts received by donor firms who made contributions to elected and non-elected candidates and to calculate the probability that a candidate will be a winner or a loser. The same process that allows us to distinguish the discontinuity between the contracts received by firms from elected and non-elected candidates also permits us to consider whether the probability associated with winning or losing an election depends on other variables because these contracts are not different if there is a small margin of victory.

Note that when a discontinuity does not exist, donor firms cannot calculate their expected returns because there is no difference in the contracts between elected and non-elected candidates beyond the usual, unobserved causality that RDD permits (however, there are problems related to the simultaneous omission of variables). Moreover, the probability used does not depend on other characteristics in these circumstances, i.e., it is unconditional.

We validate the empirical design by testing whether there is manipulation of the electoral process; whether the discussed characteristics of voters and politicians (i.e., education and age) have an impact on donor firm´s returns; and whether campaign financing differs between the elected and non-elected state deputies.

The measure of the percentage of the margin of votes is discussed below. First, we compute the percentage of votes for each candidate by dividing the quantity of votes by the total votes of the coalition to which the candidate belonged. Second, we calculated the marginal percentage of the votes. For elected candidates, this margin is the difference in the percentage of votes between the winning candidate and the runner-up. For candidates who were not elected, this margin is the difference in the percentage of votes between a given candidate and the candidate who was elected in the last place. Thus, whereas candidates who have a margin of votes above zero were elected, candidates with a negative margin were not elected. As a result, the treatment variable, namely, elected or unelected, is determined at the cutoff where the margin of votes is equal to zero. Table 2 illustrates how the percentage margin of votes was determined.

Table 2: Calculation of the percentage margin of votes in a coalition

	Candidates	Number of votes	% Votes	Percentage Margin of Votes
	A	1,000	19	6
	B	900	17	4
The last elected candidate	C	800	15	2
The first non-elected candidate	D	700	13	-2
	E	600	11	-4
	F	500	9	-6
	G	400	7	-7
	H	300	6	-9
	I	200	4	-11
	Total of the coalition	5,400	100	

Boas, Hidalgo, and Richardson (2014) use the raw vote margin rather than the margin of victory as a measure because the margin of victory is influenced by the district's (i.e., the state's) size in their federal measure. Thus, they avoid both overrepresentation and underrepresentation. Differently, we can use percentage margin of votes since we are comparing margin of candidates of candidates competing for deputy seats in the same state.

To evaluate the influence of state deputies on direct government spending, we measure the average value of contracts. These TSE data contain information on all of the candidates and their donor firms, which were identified by the CNPJ (*Cadastro Nacional de Pessoa Juridica* - Corporate Taxpayer's Registry) code. Using these data, we computed the values of contracts using the CNPJ on Transparency Brazil. Because there are differences in contract length between states and because some firms only have contracts for specific years, the values of the contracts were aggregated to an annual average value using the CNPJ. The values of contracts according to the CNPJ were summed to obtain the total value of these contracts from donor firms for each state candidate deputy. Therefore, each point of estimation represented one candidate with his/her percentage margin of votes and the aggregated value of contracts obtained by his/her donors firms.

We then run the following regression:

$$VCE_{t+1,i} = \beta_0 + \beta_M * Elected_{,t,i} + \theta(Margin_{t,i}) + \beta_X' X_{t,i} + \varepsilon_{t,i} \qquad (1)$$

where $VCE_{t+1,i}$ is an outcome of interest (i.e., the mean value of state contracts with donor firms after the election); $Elected_{t,i}$ is a dummy variable that indicates whether the state deputy was elected (this variable's value is one if the candidate was elected and zero otherwise); $Margin_{t,i}$ is the margin of votes for each candidate; $X_{t,i}$ stands for observable variables (i.e., the candidate's educational level, reelection success, age, percentage of women candidates and campaign financing); and $\varepsilon_{t,i}$ are unobservable characteristics. The calculation of the margin of votes for each state candidate *(i)* is described above.

The parameters are the *beta*s, and the parameter of interest is β_M. The function $\theta(.)$ is a flexible function of the margin of victory. We use several specifications, including non-parametric ones (local linear regressions), and for the parametric cases, we adopt polynomials

can oscillate between the positive and negative parts of the margin of victory. Finally, to ensure that we would obtain effects close to the discontinuity point (where the margin is zero), for the parametric cases we restricted the sample to between 10 and 5 percentage points of the cutoff at zero.

We examined the election data according to a narrow margin of votes because the treatment variable can behave randomly. For this behavior to occur, the treatment variable $Elected_{,i}$ must be independent of both $Margin_{t,i}$ and $\varepsilon_{t,i}$. Otherwise, part of the causal relationship between an electoral victory and a contract's value will be subject to bias in the estimation.

In the above estimation, we focus on the coefficient that determines the relationship between an electoral victory, which is represented by the binary variable, and the corresponding contracts' value, which is represented by $VCE_{t+1,i}$. To make the treatment variable is independent, and to establish the causal relationship between a victory and contracts, two conditions must be satisfied: the principle of continuity and the balancing of variables' covariates.

4. 2. The Net Expected Return

This work aims to build a measure of net expected return for donor firms when the experiment indicates difference of return between loser and winner candidates. Without this difference obtained on experiment, the measure may be endogenous. For the sake of simplicity, we assume that donor firms are risk-neutral and their expected payoff in the donation-public contracts business is:

$$E(NR)_i = [p_w \times R_W + (1 - p_w) \times R_L] - C_i \qquad (2)$$

where $E(NR)_i$ is the expected net return of donor firm *i*; p_w is the probability that the firm's chosen state candidate is elected; R_W is the return received by the donor firm in public contracts if the financed candidate is elected; $(1 - p_w)$ is the probability that the candidate is not elected; R_L is the return received by the donor firm in public contracts if the financed candidate is not elected; lastly, C_i is the donation made by the donor firm to a candidate to obtain a return after the election. If a donor firm invested in more than one state candidate, we aggregated the equation for the set of candidates.

5. Results

5.1 Validity of the Research Design

We show two validity tests for our research design (Imbens and Lemieux, 2007; Eggers, Folke, Fowler, Hainmueller, Hall, and Snyder, 2013). First, histograms with different densities of the margin of victory for state deputies, considering the possible types of sub-sample used in our development. Second, graphs with covariates to demonstrate that anyone of them can influence the electoral results. In other words, the graphs show that there is no discontinuity in the threshold equal to zero (margin zero of victory) using the same empirical strategy to observe our main results: characteristics of state deputy candidates (i.e., education level, age, the percentage of women candidates, and campaign finance per donor firm). The validity results for measure 2 – with party expertise and the possibility of some bargaining - of the research design are found in the appendix.

Figure A1 shows different bins [??] (2 pp, 1 pp, and 0.5 pp) that the number of non-elected state deputy candidates (left of zero) is much higher than the number of elected candidates (right of zero) for the sub-sample in which we obtain results in the main results: Traditional and Non-Electoral Parties and Traditional and Non- Traditional Left-Wing Parties. Thus, there is no evidence that the election results were manipulated. In Figures A2 and A3, we present the behavior of the covariates around the cut-off; it should be noted that the margin of victory within a coalition is zero. Each "dot" in a panel corresponds to the average outcome of election *t*. The solid line in the figure represents the predicted values of a standard non-parametric kernel rectangular fit (right and left of the cutoff), as described in Equation 1 (without covariates), and the dashed lines identify the 95% confidence intervals. Visual inspection confirms that there are no significant discontinuities around the threshold for any of the variables: the education level of state deputies, these candidates' ages, the percentage of women candidates, and their campaign finances per donor firm.

With these results, one can guarantee that around the zero threshold margin of victory the only effect that affects the value of a state procurement contract for a donor firm is the fact that the state candidate is elected or not elected.

On the other hand, the results with the measure 1 – capturing only the expertise of parties - are not valid. In the same appendix, we show the variable that highlights the discontinuity. Unlike the results before (measure 2), figure A4 shows that elected state deputies may determine

the electoral result. The results of the histograms and for other covariates are found in the supplementary material (Figures S1, S2, and S3).[11]

5.2 Main Results

Figures 1 and 2 show the post-electoral contracts for donor firms associated with winning and losing state deputies. Figure 1 presents contracts for Non-Traditional Electoral Parties and Figure 2 highlights contracts with Traditional Electoral Parties. We investigated four sub-samples for each of these dimensions: those for all candidates, those for candidates from right-wing parties, those for candidates from left-wing parties, and those candidates who are trying for reelection (therefore, with legislative experience). In each figure, the left side corresponds to the losing state candidates; the right side of the figure corresponds to the winning state candidates.

Insert Figure 1 and 2 here

In Figure 1, there are no clear discontinuities around the cutoff. This is not good news for our investigation because there are no differences in contracts for donor firms associated with either a winning or losing candidate (in the definition of Boas, Hidalgo, and Richardson 2014, the spoils of victory) and, thus, it is impossible to measure the net expected return of donor firms by investment (campaign finance) in state deputies. In this situation, any affirmation may be biased (endogenous problem/omission of variables).

On the other hand, in Figure 2, there are clear discontinuities around the cutoff. When we use the sub-samples considering All Traditional Parties and Traditional Left-Wing Parties, the winning candidates receive more value in contracts than non-elected candidate, these are "the spoils of victory". Thus, it is possible to calculate the net return expected for both sub-samples because there is a difference in the value of contracts between losing and winning candidates (there is a difference in values in the experiment). Although it is possible to investigate the net expected return, we need to verify if these results are robust for different specifications (Imbens and Lemieux, 2007).

We observed a difference in the values of contracts between elected and non-elected state deputies (see Table 3; the variations in the estimations are shown in the footnote of the table, which includes the bandwidth established by Imbens and Kalyanaraman (2009), different windows of margins of victory for state deputies in coalitions - 5% and 10%, polynomials – cubic [??], the inclusion of covariates, etc.).

[11] The supplementary material is additional on line (C-Micro/Getulio Vargas Foundation).

Insert Table 3 here

The results are robust because they withstand the majority of differences in specification. All state deputies from Traditional Electoral Parties provide between 217% and 286% (depending on the specification) more value in contracts for their donor firms than non-elected deputies. The discrepancy between elected and non-elected deputies is slightly higher for candidates from traditional left-wing parties, which yielded an increased contract value of between 415% and 610%. Our most comparable result with the results of Boas, Hidalgo, and Richardson (2014) is the local linear estimation, although the bandwidth is not directly comparable because they worked with raw votes and do not reveal whether the candidates receive money exclusively from one donor firm or more. They obtained a 193% difference in contract values between elected and non-elected federal deputies financed by donor firms associated with the PT.

According to the literature (Levitt, 1994; Bronas and Lott, 1997; Gerber, 1998; Rekkas, 2007; Milligan and Rekkas, 2008), it is likely that different values in campaign finance have an influence on a candidate's margin of victory. However, we observe that there is no difference in campaign financing between winning and losing state deputies (observe the interval of confidence), but we did not perform an evaluation of this finding (see Figure A2 – Ln Campaign Finance per donor firm variable). So, this provides support for our RDD empirical strategy.

The Net Expected Return: Table 4 addresses the net expected returns for two sub-samples (all traditional and left-wing traditional). We opt to measure the return considering a deterministic measure initially without considering the standard deviation by simplicity.

Insert Table 4 here

Table 4 shows three columns: the average net expected returns for donor firms; the differences between these average expected returns for donor firms; and the average campaign finance. Because there is a difference between the candidates with respect to these dimensions, the expected results were calculated using Equation 2. There were three different margins of victory (30%, 10%, and 5%) because we observe the spoils of victory with different specifications (Imbens and Lemieux, 2007).

An interesting observation for all results is that higher levels of campaign finance are associated with lower margins of victory. We assume that campaign financing between

candidates is the same because our investigation of the covariates showed that there is no difference in financing per donor firm between winning and losing candidates.

What is surprising is that the average net expected return for donor firms from their PC is high. For traditional electoral parties, the money spent on financing campaigns is on average 1.93% of the net expected return. For traditional left-wing electoral parties it is a little lower: 1.56%. The return is fairly high. Thus, PCs are a great business for firms.

> *"Companies do not donate. They anticipate that the money obtained [donated??] will then be multiplied many times over through directed and targeted contracts," explains Judge Mario Reis, TV Globo's open channel, Fantástico (6/08/2014)*

Looking at our hypothesis, with our measure and methodology strategy we can state that the expertise of political parties exists but we do not know if it is higher or lower than when this party expertise did not exist because we are unable to measure the spoils of victory and the net expected return of non-traditional parties (Hypothesis 1). However, it is possible to observe that the measure of expertise causes a difference in the return on PC when these traditional parties are left-wing (Hypothesis 2). The net expected return is higher than all traditional parties when they are left-wing.

State Executive Heterogeneity

There is always the possibility of the observed results being eminently supported by the Executive. We can observe this because we are working with eight states (Boas, Hidalgo, and Richardson 2012 only worked with the federal government). We carried out different investigations into the same sub-sample for which we obtained results (candidates of all parties and candidates from left-wing parties).

We observed the results for each individual state. When it is possible to obtain observations to implement the RDD, we see that there is no discontinuity (see figures in the supplementary material from S4 to S8). We observed also that there is no discontinuity when we consider the governor´s parties (see figures in the supplementary material from S9 to S12 when it was possible to implement the RDD), if the candidates used in the experiment were in the governor's electoral coalition (see in supplementary material S13 that there is no discontinuity), and finally, if the candidates used in the experiment were in their second term (see in the supplementary material S14 that there is no discontinuity). [12]

[12] The supplementary material is additional on line (C-Micro/Getulio Vargas Foundation).

The only result in which we obtain discontinuity was when we used candidates who were in the electoral coalition and in the government coalition simultaneously. In order to avoid the self-classification of parties in the government coalition, we searched other works to obtain this classification (for instance, Ricci and Tomio, 2012a, b; Sandes-Freitas and Massonetto, 2012). However, the classification of state coalitions in Brazil is fairly limited. There is a classification for just a few states in case studies. Considering this limitation, we classify three states using the work of Centurione (2012): Goias, Federal District and São Paulo. Thus, our sample is much smaller and the final result may suffer problems of generality. Considering that we did not obtain results from electoral coalitions, the result for the three states may be coming from the government coalition.

Finally, we re-did the validity procedures of the experiment for this sub-sample (candidates from traditional electoral parties – measure 2 – and from electoral and government coalitions simultaneously). The histograms (Figure A5) and the results of the covariates without discontinuity (Figures A5 and A6) are in the appendix.

Following the investigation, Figure 3 shows that there is a difference in contracts between elected and non-elected state deputy candidates (the discontinuity in the experiment).

Insert Figure 3 here

Moreover, the same robustness procedures used before (with different specifications) show that for candidates from all parties, there is no robustness close to the threshold (Equation 1 in Table 5) but there is for other specifications.

Insert Table 5 here

The opposite is observed with candidates from traditional electoral parties in electoral and government coalitions. All specifications are robust. All state deputies from Traditional Electoral Parties provide between 445% and 573% (depending on the specification) more value in contracts for their donor firms than non-elected deputies. The discrepancy between elected and non-elected deputies is slightly higher for candidates from traditional left-wing parties, which provided an increased contract value of between 372% and 856%.

Table 5 shows the net expected return. The net values are higher than before: R$1 million (Brazilian currency) for all traditional candidates and R$ 1.5 million for traditional candidates from left-wing parties. However, the difference between the campaign investment and return is no different from the return obtained before: 1.93% for all candidates from traditional electoral

parties in electoral and government coalitions, when before it was 1.68%; and 1.56% for candidates from traditional electoral left-wing parties in electoral and government coalitions, when before it was 1.54%.

Thus, given the large number of non-results with different sub-samples, the result obtained only for three states (Goias, Federal District and São Paulo), non-robustness for all specifications for all candidates from traditional electoral parties in electoral and government coalitions, the tiny difference between campaign finance and the net expected return between the main results (from the party only) and when the parties considered are in electoral and government coalitions, does not allow us to state the influence of the Executive on determining the return on PC. We think that the PC comes much more from the party than from the government (Executive).

6. Conclusions and Final Remarks

This paper investigates how the accumulated expertise of traditional electoral parties helps the performance of the Political Connection (PC) between donor firms and politicians. The political science literature has explored the PC in different works (Großer, Reuben and Tymula, 2013; Boas, Hidalgo, and Richardson, 2014) and the importance of political expertise in a clientelistic structure (Baldwin, 2013). However, no work we know of investigates the importance of party expertise in PC.

In our understanding, the expertise of traditional electoral parties is important for party members because it has an accumulated knowledge about how things work in government with regard to the release of amendments.

We chose to develop our work with subnational data from Brazil for the following reasons:1) although there are rules in most states and the federal legislative body that establish the total number of deputy amendments and the share of resources destined for each deputy, several deputies receive this for carrying out their amendments, while others do not; 2) Brazil is a hostile environment for obtaining this kind of result because the 'enhanced knowledge of parties' dimension reveals that the parties are weak and their members are individualistic (Mainwaring). Therefore, if we observe the interference of parties in this question, we incorporate into literature a party dimension that has not been mentioned in the literature; 3) the work which explored PC in Brazil (Boas, Hidalgo, and Richardson, 2014) was carried out at the

federal level; therefore, no state dimensions were considered in the results; 4) we did not only calculate the spoils of victory between elected and non-elected candidates (Boas, Hidalgo, and Richardson, 2014), but the net expected return for donor firms by the average of candidates – a more appropriate PC measure for donor firms.

We recognize that our measures of expertise of political parties (named as traditional electoral parties) may not capture the precise measure of this expertise but we try to measure this as closely as possible. We used two measures. The first of which we assume to be pure knowledge (without bargaining, the biggest problem of any measure of expertise). We define a pure measure of knowledge - parties which were in the legislative with at least one seat for two terms - in our case, before 2006, our central point of investigation (1998 and 2002). The second which we assume involves knowledge and bargaining. Our measure includes parties that in the last three terms helped to define the majority of seats in the State Legislative (1998, 2002, and 2006): 50+1%.

We use a quasi-electoral experiment based on Lee (2008), Lee and Card (2008), Lee, Moretti and Butler (2004), and Hidalgo, Boas, Hidalgo, and Richardson (2014), considering the problems that this kind of investigation imposes on researchers, as Großer, Reuben and Tymula (2013) mentioned.

Despite the methodology used by us (the Regression Discontinuity Design - RDD) to establish LATE results, our investigation centers on eight representative and heterogeneous states from the twenty-seven that existed in Brazil in the 2006 election, because we were unable to obtain public information on contracts before.

Considering the experiment requirement (Imbens and Lemieux, 2007), we were unable to achieve available results for our first measure (candidates from traditional electoral parties or not) because the results from traditional parties may be conditional upon the level of campaign finance received (elected candidates receive more campaign finance per donor firm than non-elected candidates) and on the different sub-samples used by us (all candidates, candidates from left-wing parties, right-wing parties, and candidates who are trying to be reelected – personal experience), we did not observe any discontinuity to calculate the net expected return of donor firms on average per candidate.

On the other hand, in our second measure, we did not get discontinuity for the different sub-samples used by us for the group of candidates in non-traditional electoral measures. Thus,

our main results are centered on the second measure (knowledge with some bargaining) for traditional electoral parties (discontinuity was found for all candidates and candidates from left-wing parties).

An interesting observation for all results is that higher levels of campaign finance are associated with lower margins of victory. The average net expected return for donor firms from their PC is high. For traditional electoral parties, the money spent on campaign finance is on average 1.93% of the net expected return. For traditional left-wing electoral parties it is a little lower: 1.56%. The return is fairly high.

There is always the possibility of the results observed being eminently supported by the Executive. We observed the results for each individual state. When it is possible to obtain observations to implement the RDD, we see that there is no discontinuity. We observed also that there is no discontinuity when we consider the governor´s parties, whether the candidates used in the experiment were in the electoral governor's coalition, and finally, whether the candidates used in the experiment were in their second term. The only result in which we obtained discontinuity was when using candidates that were in electoral and government coalition simultaneously.

The net values are higher than before: R$1 million (Brazilian currency) for all traditional candidates and R$1.5 million for traditional candidates from left-wing parties. However, the difference between the campaign investment and return is no different from the return obtained before: 1.93% for all candidates from traditional electoral parties in an electoral and government coalition, while before it was 1.68%; and 1.56% for candidates from traditional electoral left-wing parties in an electoral and government coalition, while before it was 1.54%.

Thus, given the large number of non-results with different sub-samples, the result obtained only for three states (Goias, Federal District and São Paulo), and the non-robustness for all specifications for all candidates from traditional electoral parties in electoral and government coalitions, and the tiny difference between the campaign finance and net expected return between the main results (from the party only) and when the parties considered are electoral and government coalitions, do not allow us to state that there is any influence by the Executive on determining the return on PC. We think that the PC comes much more from the party than from the government (Executive).

Table 1: Descriptive Statistics

Tables and Figures

Variables	Full Sample	Elected	Non-Elected
Margin of Victory is -30% and 30%			
Traditional Electoral Parties			
Ln All Public Contracts btw State and Donor Firms(Nominal Reais)	3.22(754)	7.54(146)	2.19(608)***
Elementary School	0.07(754)	0.04(146)	0.07(608)
High School	0.21(754)	0.15(146)	0.23(608)**
Higher Education	0.71(754)	0.80(146)	0.69(608)**
Aging	47.80(754)	48.96(146)	47.52(608)
Percentage of Women Candidates	0.15(754)	0.15(146)	0.16(608)
Ln Campaign Finance Revenue by Donor Firms (Nominal Reais)	7.94(687)	9.17(136)	7.64(551)***
Non-Traditional Electoral Parties			
Ln All Public Contracts btw State and Donor Firms(Nominal Reais)	2.34(536)	5.22(46)	2.07(490)***
Elementary School	0.11(536)	0.06(46)	0.11(490)
High School	0.26(536)	0.17(46)	0.27(490)
Higher Education	0.61(536)	0.76(46)	0.60(490)**
Aging	46.28(536)	42.45(46)	46.64(490)**
Percentage of Women Candidates	0.11(536)	0.10(46)	0.11(490)
Ln Campaign Finance Revenue by Donor Firms (Nominal Reais)	7.35(454)	9.20(33)	7.20(421)***
Traditional Left-Wing Electoral Parties			
Ln All Public Contracts btw State and Donor Firms(Nominal Reais)	4.26(364)	9.69(69)	2.99(295)***
Elementary School	0.07(364)	0.04(69)	0.08(295)
High School	0.20(364)	0.08(69)	0.23(295)*
Higher Education	0.71(364)	0.86(69)	0.68(295)**
Aging	47.00(364)	48.43(69)	46.66(295)
Percentage of Women Candidates	0.15(364)	0.18(69)	0.14(295)
Ln Campaign Finance Revenue by Donor Firms (Nominal Reais)	7.93(332)	9.06(67)	7.65(265)***
Traditional Parties supporting the Government Coalition			
Ln All Public Contracts btw State and Donor Firms(Nominal Reais)	3.50(462)	9.49(79)	2.27(383)***
Elementary School	0.06(462)	0.02(79)	0.06(383)
High School	0.20(462)	0.13(79)	0.21(383)
Higher Education	0.73(462)	0.83(79)	0.71(383)**
Aging	47.70(462)	48.26(79)	47.59(383)
Percentage of Women Candidates	0.13(462)	0.13(79)	0.13(383)
Ln Campaign Finance Revenue by Donor Firms (Nominal Reais)	7.99(431)	9.18(74)	7.74(357)***
Traditional Left-Wing Parties supporting the Government Coalition			
Ln All Public Contracts btw State and Donor Firms(Nominal Reais)	4.68(235)	12.22(45)	2.89(190)***
Elementary School	0.06(235)	0.04(45)	0.06(190)
High School	0.18(235)	0.11(45)	0.2(190)
Higher Education	0.75(235)	0.84(45)	0.73(190)
Aging	47.39(235)	49.08(45)	46.98(190)
Percentage of Women Candidates	0.13(235)	0.17(45)	0.12(190)
Ln Campaign Finance Revenue by Donor Firms (Nominal Reais)	8.05(227)	9.33(45)	7.74(182)***

Note: Number of observations in parentheses; *** p<0.01, ** p<0.05, * p<0.1 . Reais is the Brazilian Currency

Figure 1: Contracts after Elections by Candidates - NON-Traditional Parties

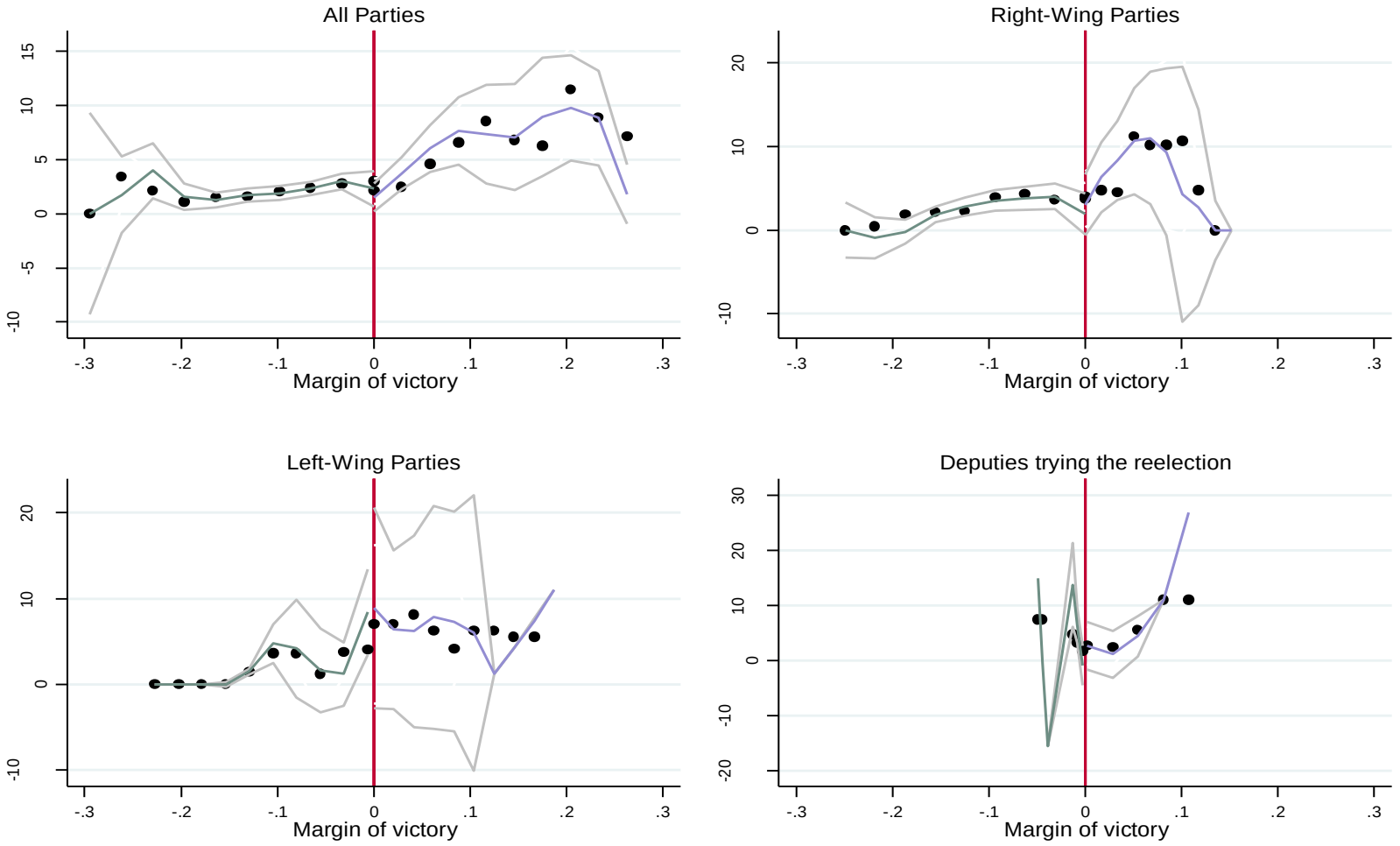


Figure 2: Contracts after Elections by Candidates - Traditional Parties

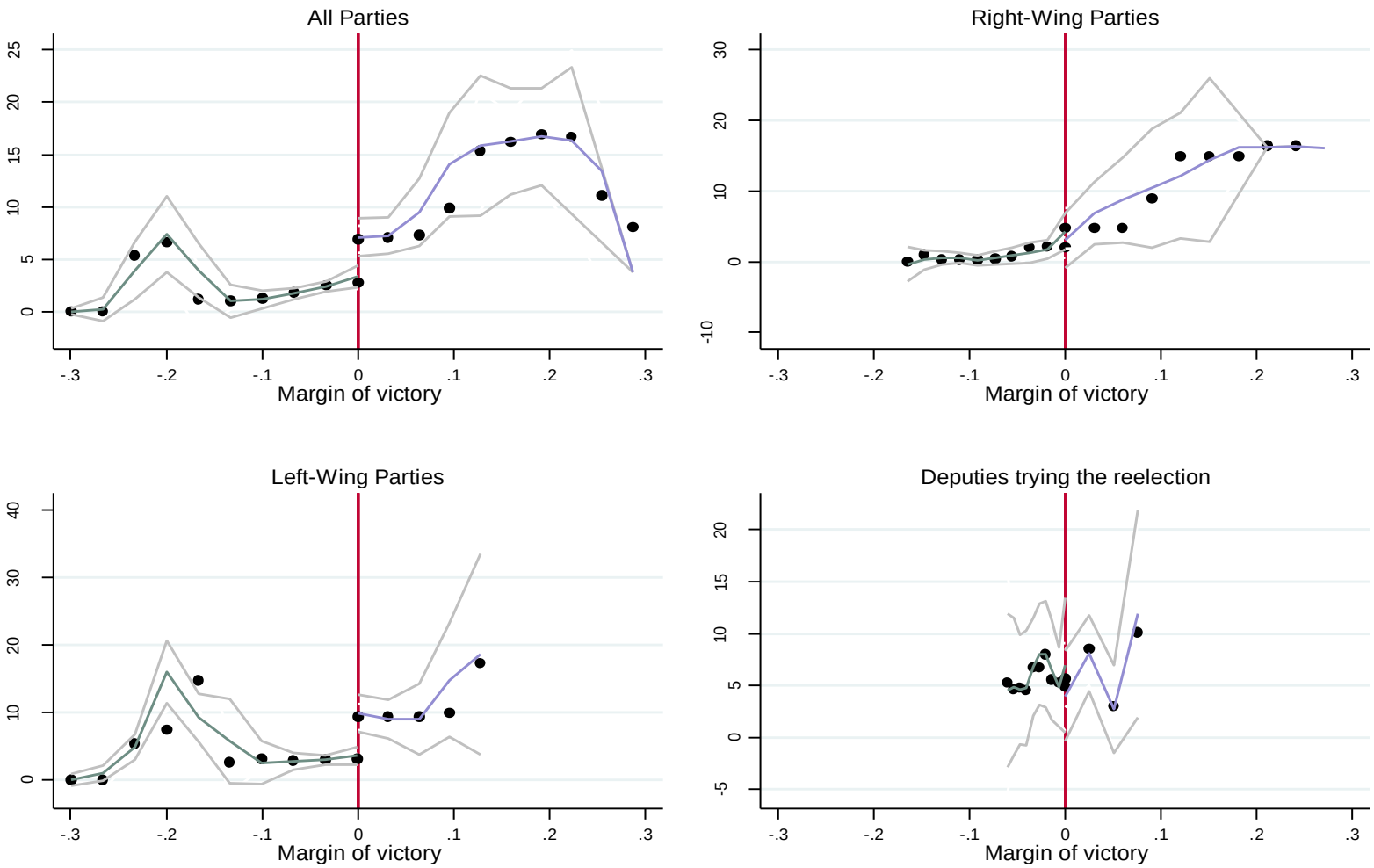


Table 3: Robustness

	Ln Contracts btw state deputies and donor firms									
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	All Traditional Parties					*Traditional Left-Wing Parties*				
Lwald	3.844***					5.153**				
	(1.034)					(2.112)				
lwald50	3.249**					2.941				
	(1.350)					(2.741)				
State Deputy Elected		3.866***	3.434***	3.934***	3.171***		5.381***	6.321***	7.109***	6.018***
		(0.978)	(0.794)	(0.673)	(0.713)		(1.395)	(1.161)	(1.048)	(1.092)
Constant		2.997***	3.244***	3.058***	-2.464		3.750***	3.246***	2.863***	-6.320***
		(0.547)	(0.415)	(0.374)	(1.550)		(0.747)	(0.601)	(0.559)	(2.414)
Observations	765	490	682	754	687	375	276	337	364	332
R-squared		0.094	0.126	0.139	0.172		0.179	0.163	0.162	0.228

Standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1 (1) Lwald is the estimate under the bandwidth that's selected using the Imbens and Kalyanaraman (2009) procedure. The RD program uses local linear estimates (using a triangular kernel) (2) OLS using margin of victory, margin of victory squares and with margin of victory between 5%(-5% and 5%); (3) with margin of victory between 10% (-10% and 10%); (4) including margin of victory cubic and margin of victory between 30%(-30% and 30%); (5) including covariates: percentage of women candidates, schooling of state deputies (primary, high school, and superior education), aging of state deputies, state deputies trying reelection, ln state deputies´ campaign finance per donor firms, and margin of victory between 30%(-30% and 30%)

Table 4: Average Net Expected Return

Margins of victory	Average Net Expected Return for donors firms(ER-CF)	Average Expected Return for donors firms (ER)	Average Campaign Finance(CF)
Contracts btw State and Donor Firm: All Traditional Parties			
30%	3,091,739	3,146,520	54,781.15
10%	3,002,938	3,061,065	58,127.14
5%	3,562,312	3,636,166	73,853.73
Contracts btw State and Donor Firm: Traditional Left-Wing Parties			
30%	4,598,532	4,663,438	64,950.83
10%	4,326,772	4,394,641	67,869.23
5%	4,919,566	4,997,062	77,496.67

Note: Values in Brazilian currency (Real)

Figure 3: Contracts after Elections by Candidates

Government Coalition

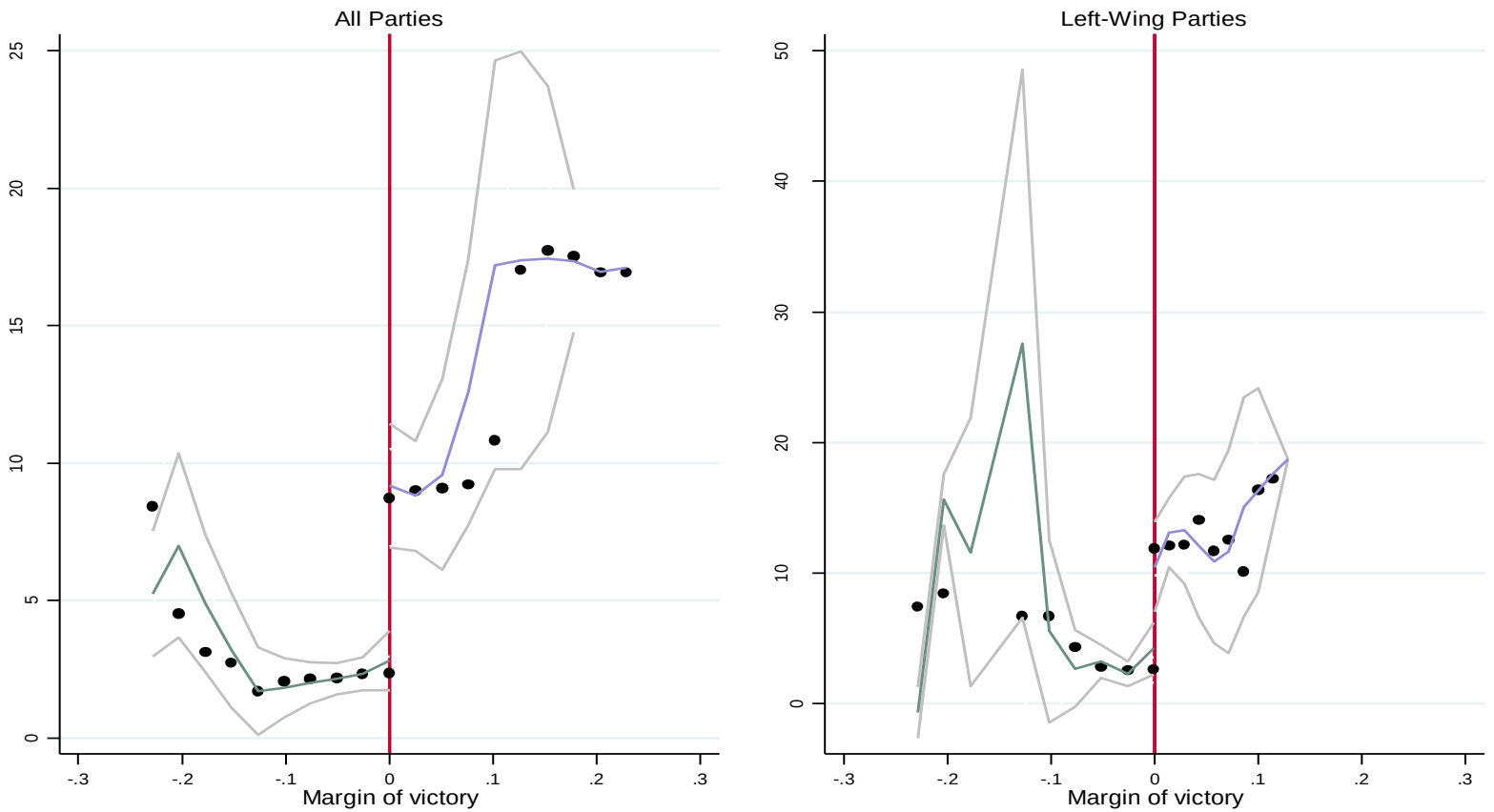


Table 5: Robustness considering parties from government coalition

	Ln Contracts btw state deputies and donor firms									
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
		All Traditional Parties					*Traditional Left-Wing Parties*			
Lwald	1.159					4.729*				
	(2.785)					(2.822)				
lwald50	-1.657					3.509				
	(3.984)					(4.083)				
State Deputy Elected		6.734***	5.947***	5.942***	5.457***		7.348***	9.231***	9.563***	8.204***
		(1.212)	(0.971)	(0.896)	(0.924)		(1.475)	(1.232)	(1.201)	(1.206)
Constant		2.414***	2.833***	2.821***	-4.610**		3.689***	2.566***	2.241***	-7.234**
		(0.672)	(0.501)	(0.492)	(2.084)		(0.787)	(0.636)	(0.648)	(3.014)
Observations	462	292	429	462	431	235	190	225	235	227
R-squared		0.187	0.202	0.215	0.276		0.363	0.308	0.312	0.395

Standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1 (1) Lwald is the estimate under the bandwidth that's selected using the Imbens and Kalyanaraman (2009) procedure. The RD program uses local linear estimates (using a triangular kernel) (2) OLS using margin of victory, margin of victory squares and with margin of victory between 5%(-5% and 5%); (3) with margin of victory between 10% (-10% and 10%); (4) including margin of victory cubic and margin of victory between 30%(-30% and 30%); (5) including covariates: percentage of women candidates, schooling of state deputies (primary, high school, and superior education), aging of state deputies, state deputies trying reelection, ln state deputies´ campaign finance per donor firms, and margin of victory between 30%(-30% and 30%)

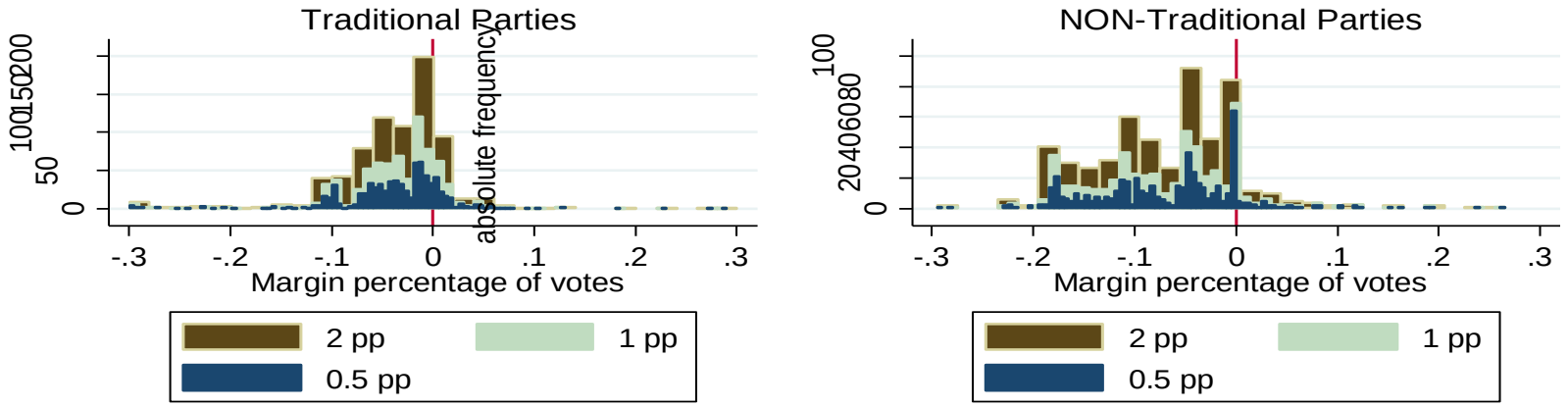
Table 5: Average Net Expected Return for parties from government coalition

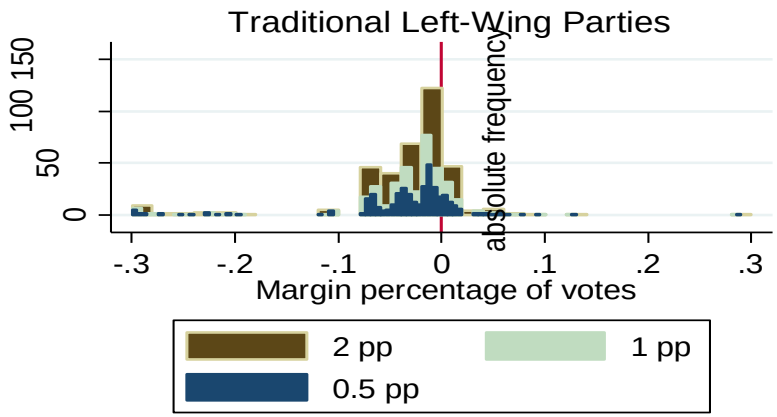
Margins of victory	Average Net Expected Return for donors firms(ER-CF)	Average Expected Return for donors firms (ER)	Average Campaign Finance(CF)
Contracts btw State and Donor Firm: All Traditional Parties			
30%	4,321,519	4,386,476	64,957.23
10%	4,002,009	4,069,282	67,273.53
5%	4,886,083	4,974,900	88,816.22
Contracts btw State and Donor Firm: Traditional Left-Wing Parties			
30%	6,139,552	6,222,234	82,681.84
10%	5,452,152	5,536,494	84,342.28
5%	5,971,989	6,066,341	94,352.34

Note: Values in Brazilian currency (Real)

Appendix

Figure A1:Frequency of margin of votes





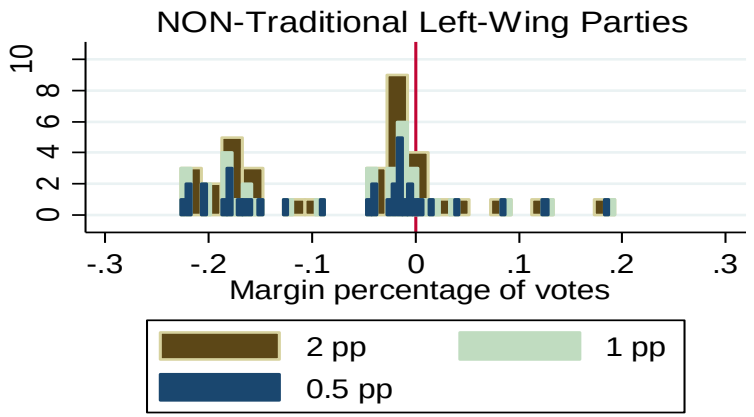


Figure A2:Covariates - Traditional Parties

Characteristics of Voters, Politicians, Campaign Finance per Donor Firms

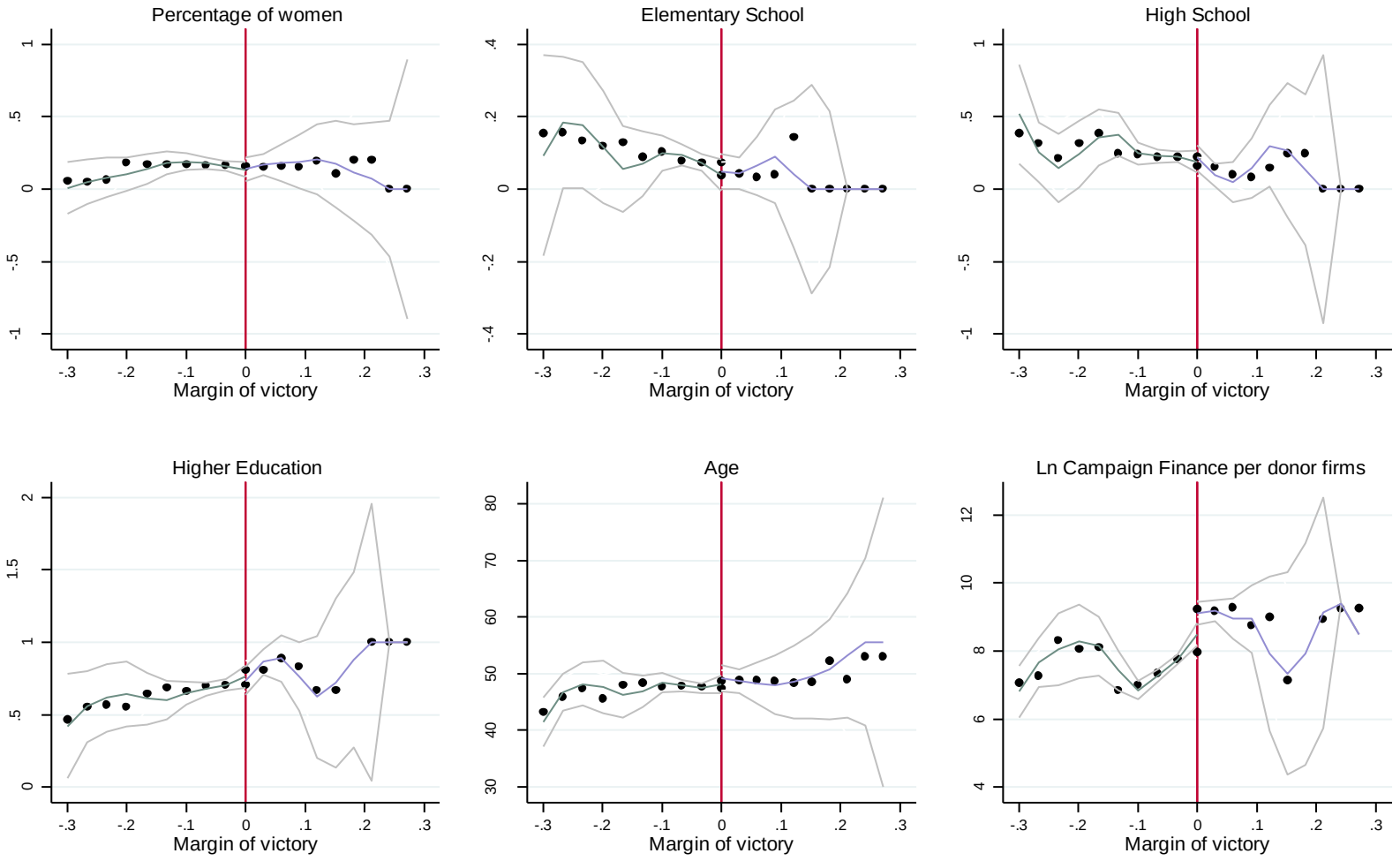


Figure A3:Covariates - NON-Traditional Parties

Characteristics of Voters, Politicians, Campaign Finance per Donor Firms

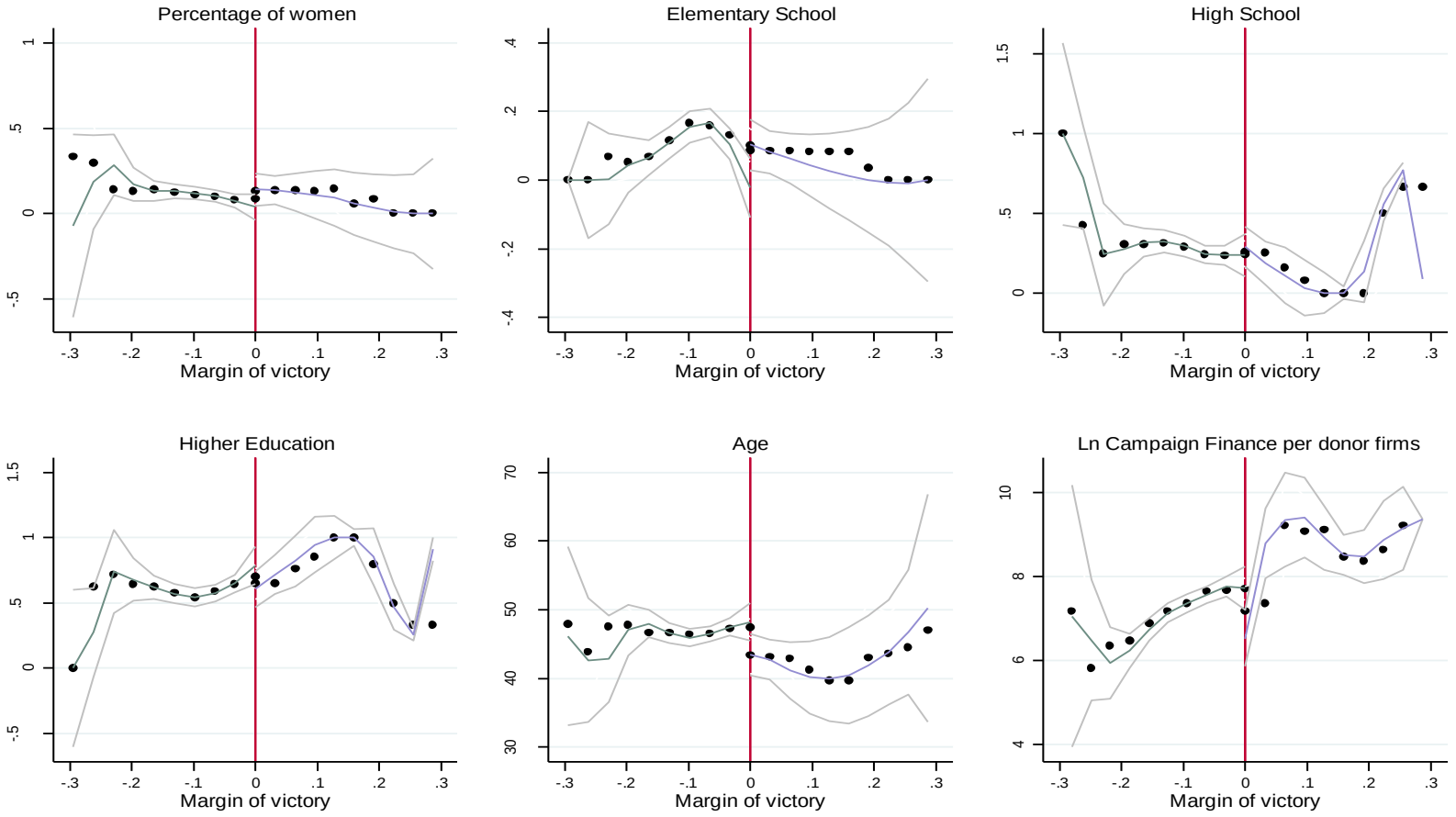


Figure A4: Ln Campaign Finance per donor firms
Measure 1

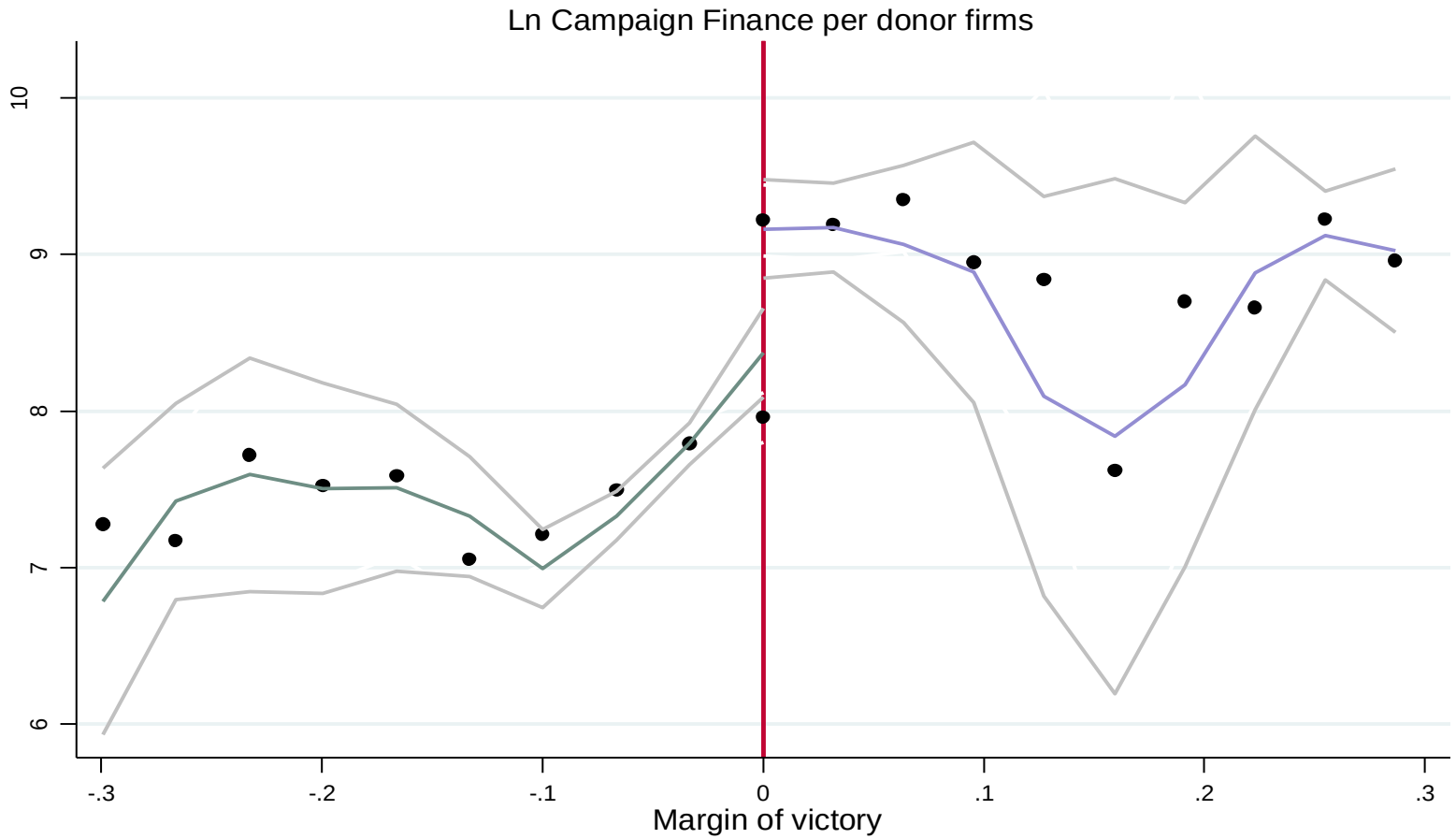


Figure A5:Frequency of margin of votes

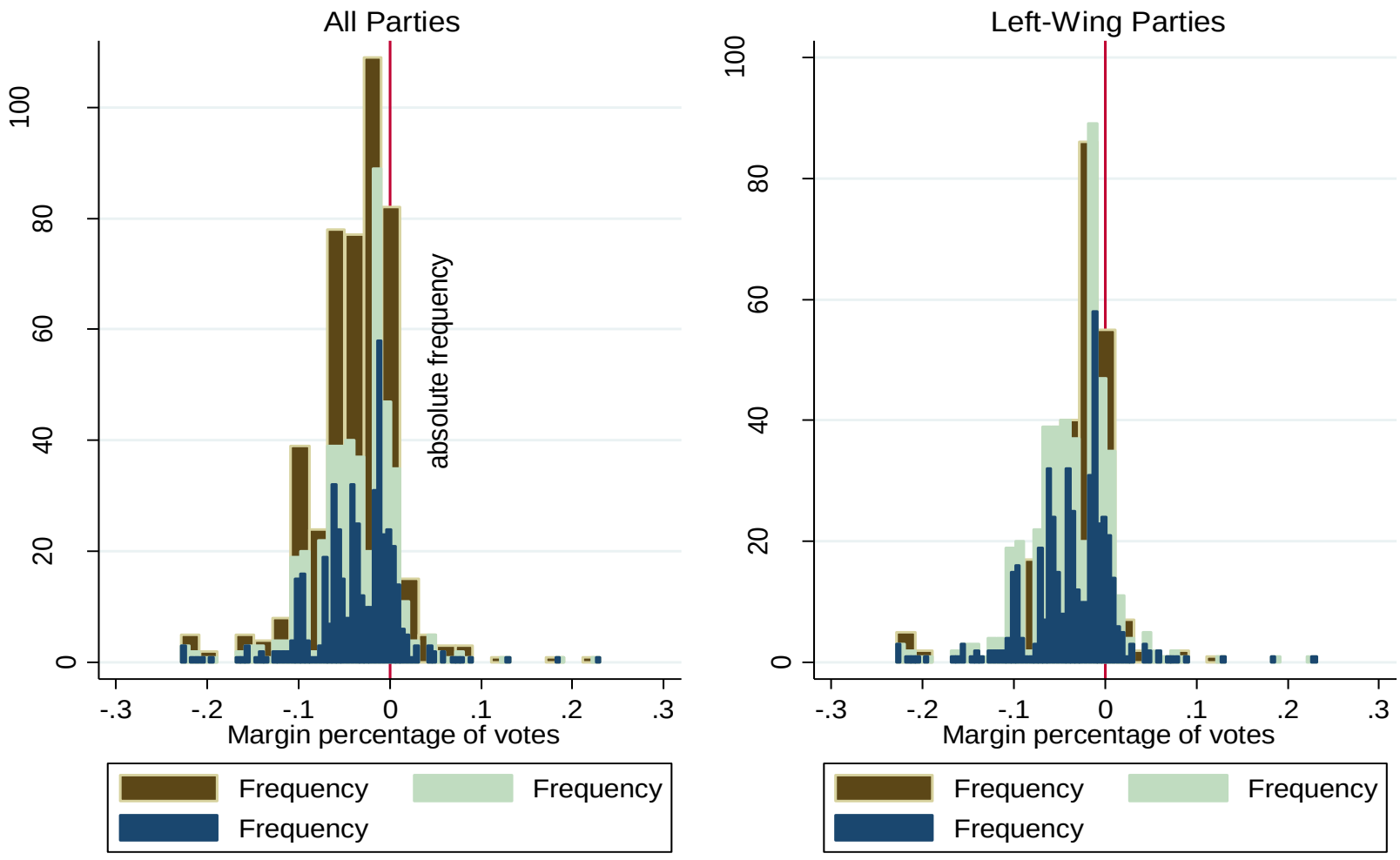


Figure A6:Covariates - Traditional Parties

Characteristics of Voters, Politicians, Campaign Finance per Donor Firms

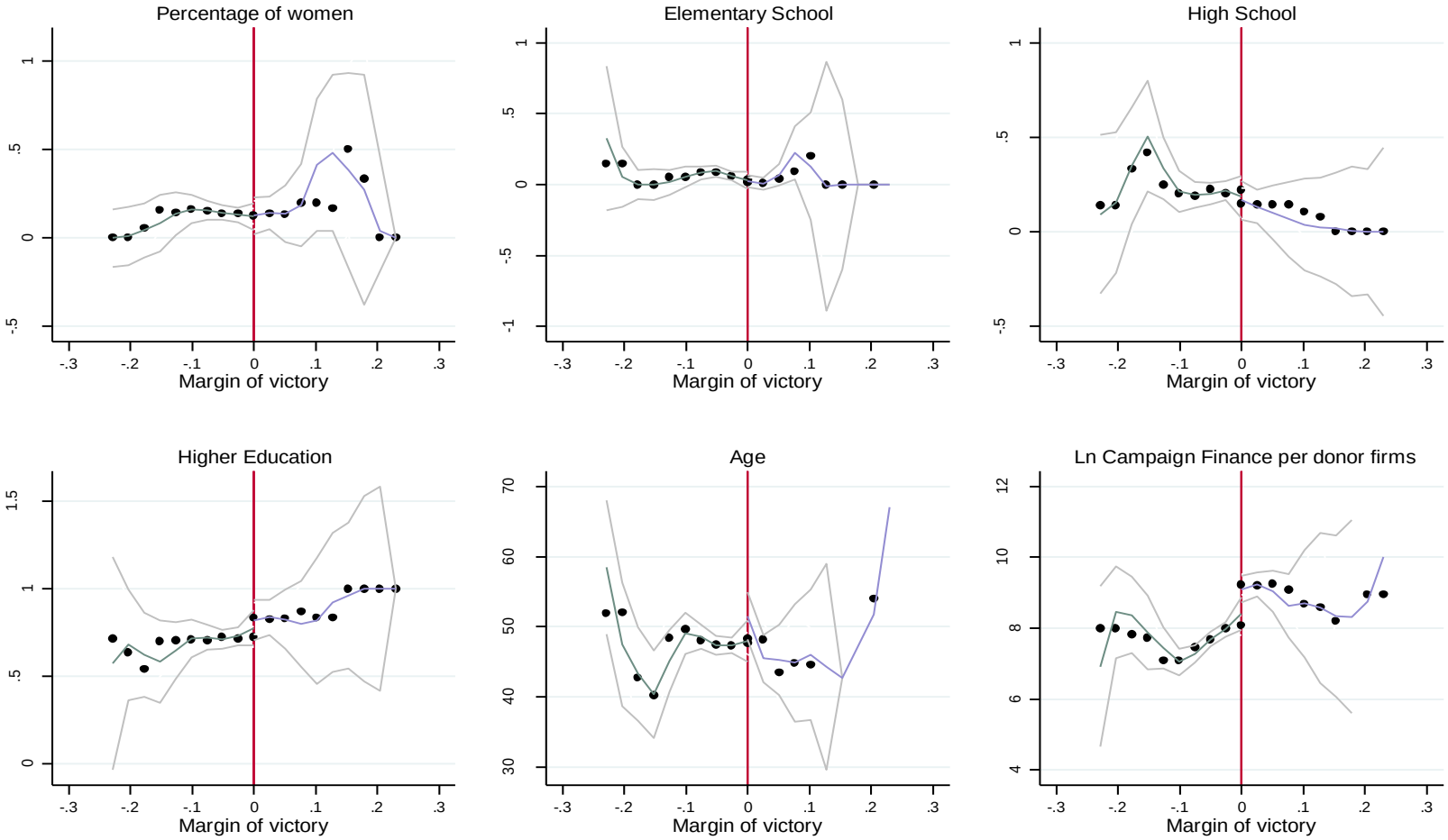
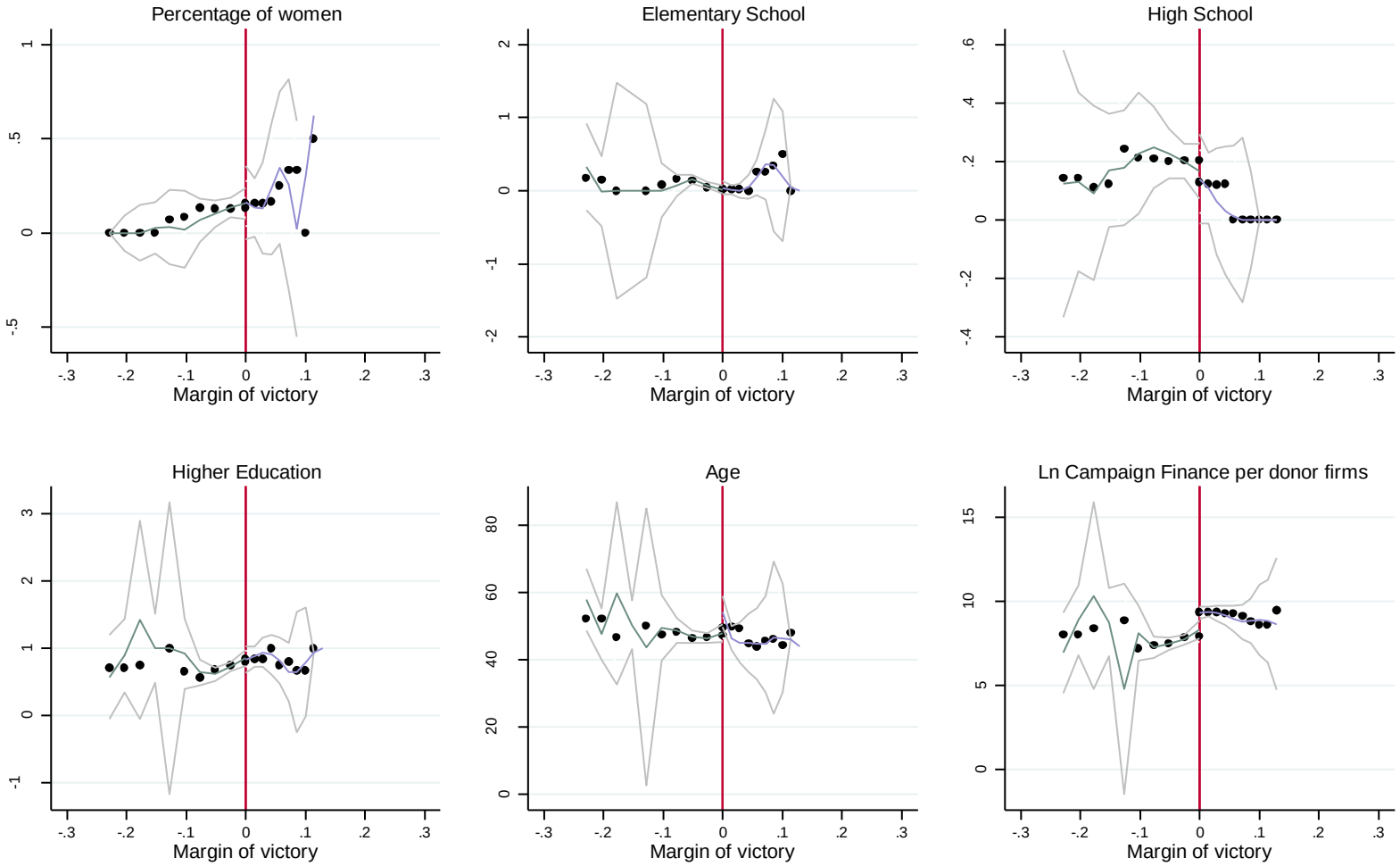


Figure A7:Covariates - Traditional Left-Wing Parties

Characteristics of Voters, Politicians, Campaign Finance per Donor Firms



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Supplementary Material

Figure S1:Frequency of margin of votes - Measure 1

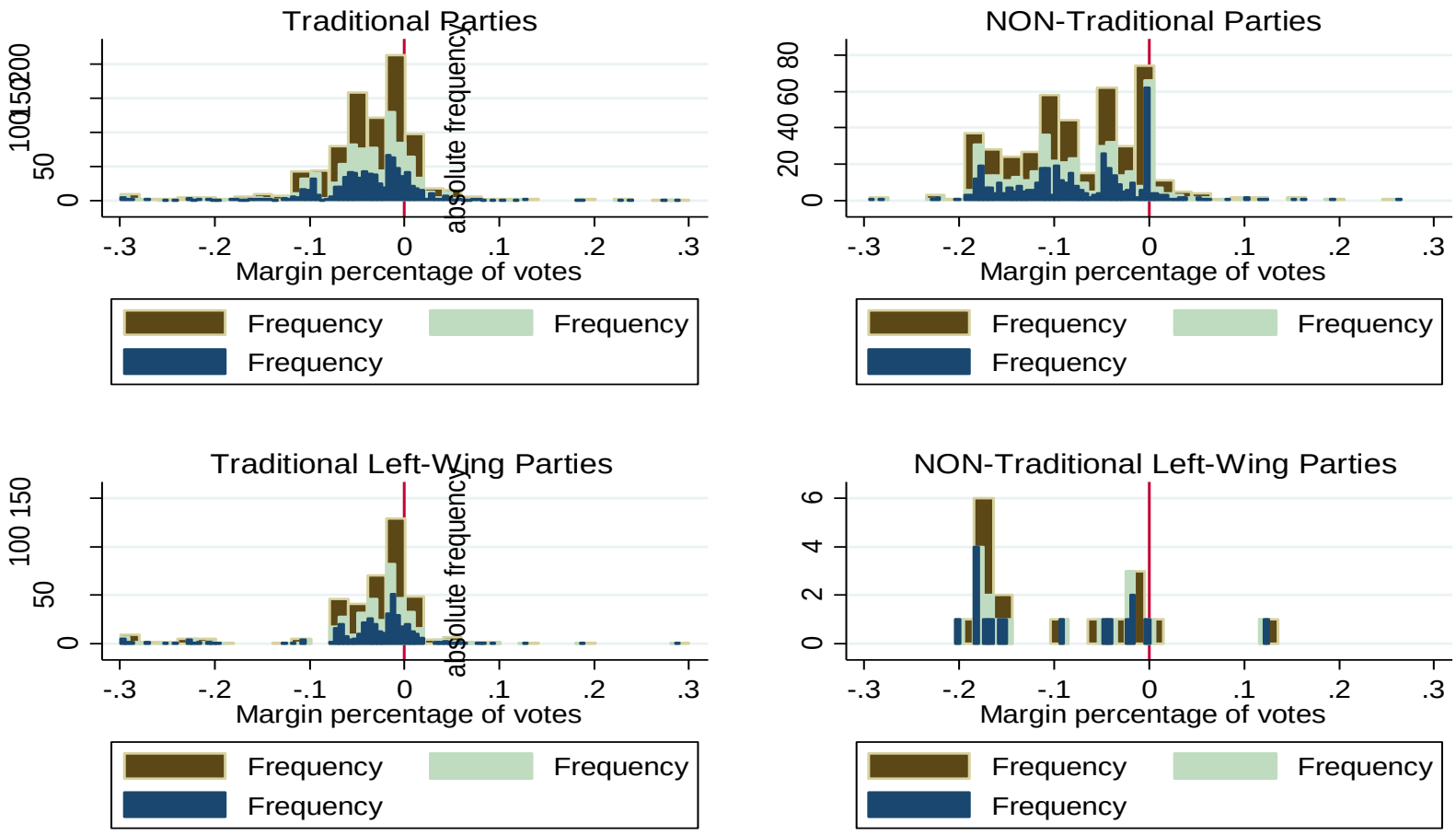

Figure S2:Covariates - Traditional Parties - Measure 1

Characteristics of Voters, Politicians, Campaign Finance per Donor Firms

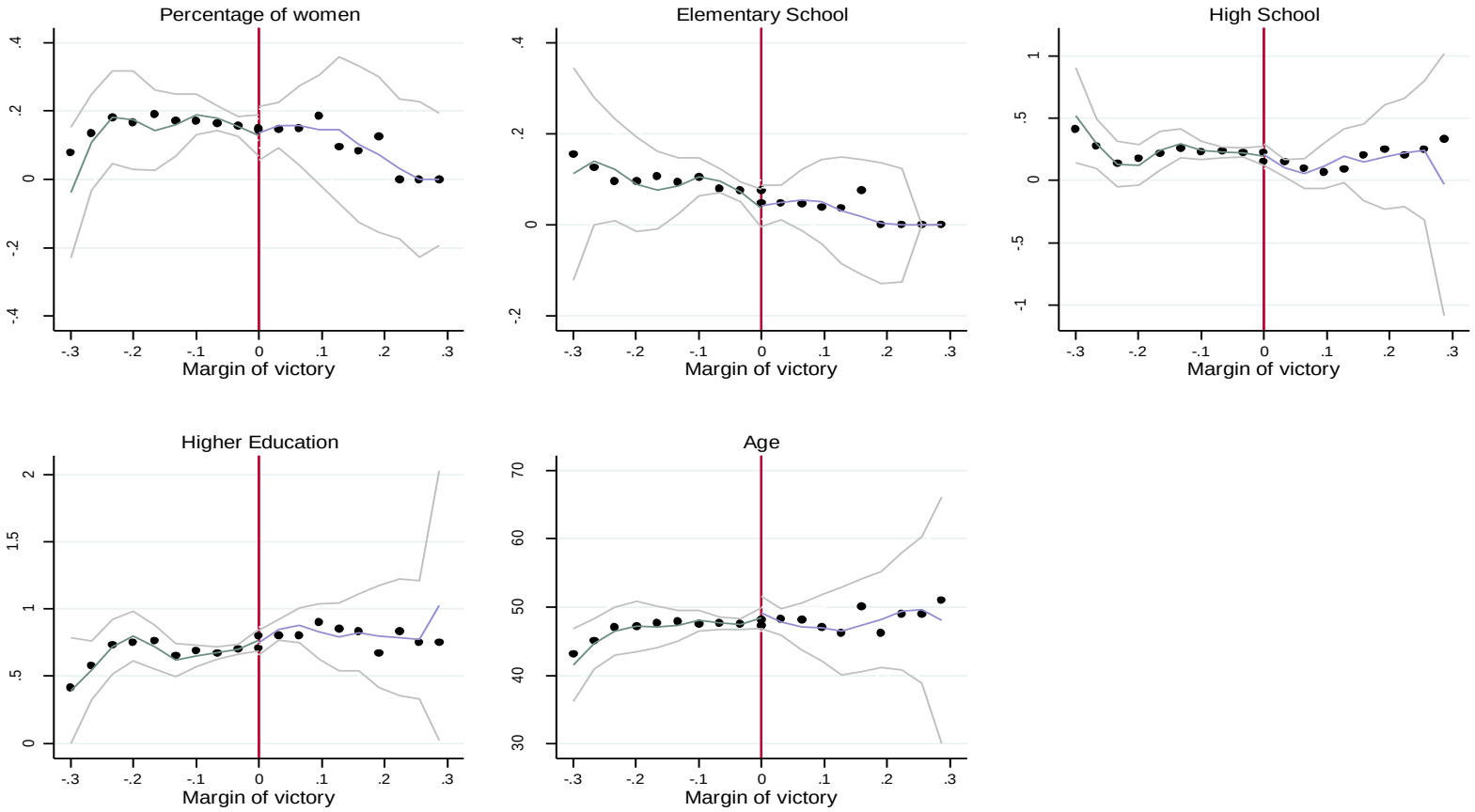

Figure S3:Covariates - NON-Traditional Parties - Measure 1

Characteristics of Voters, Politicians, Campaign Finance per Donor Firms

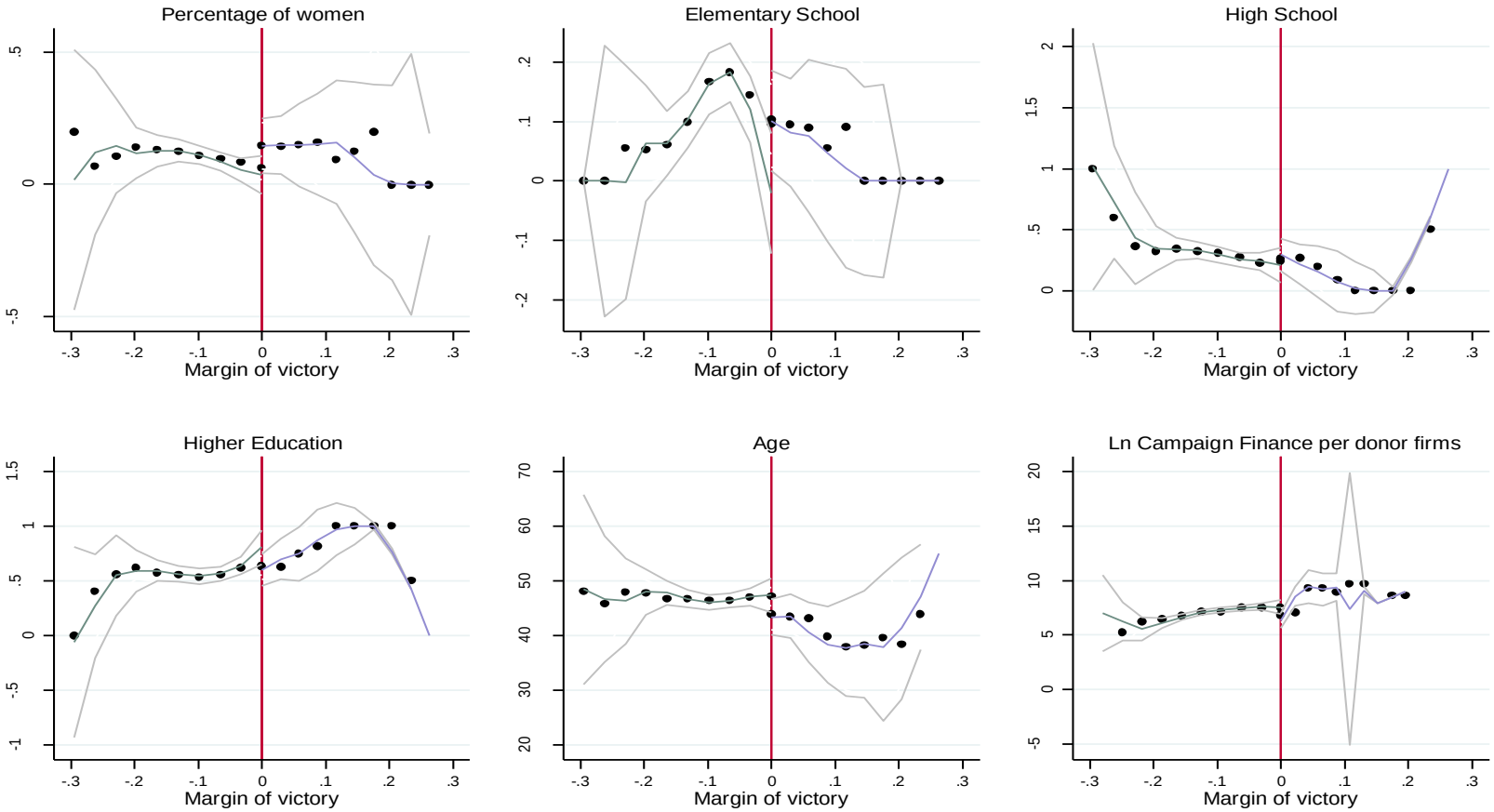

Figure S4 Contracts after Elections by Candidates

Federal District

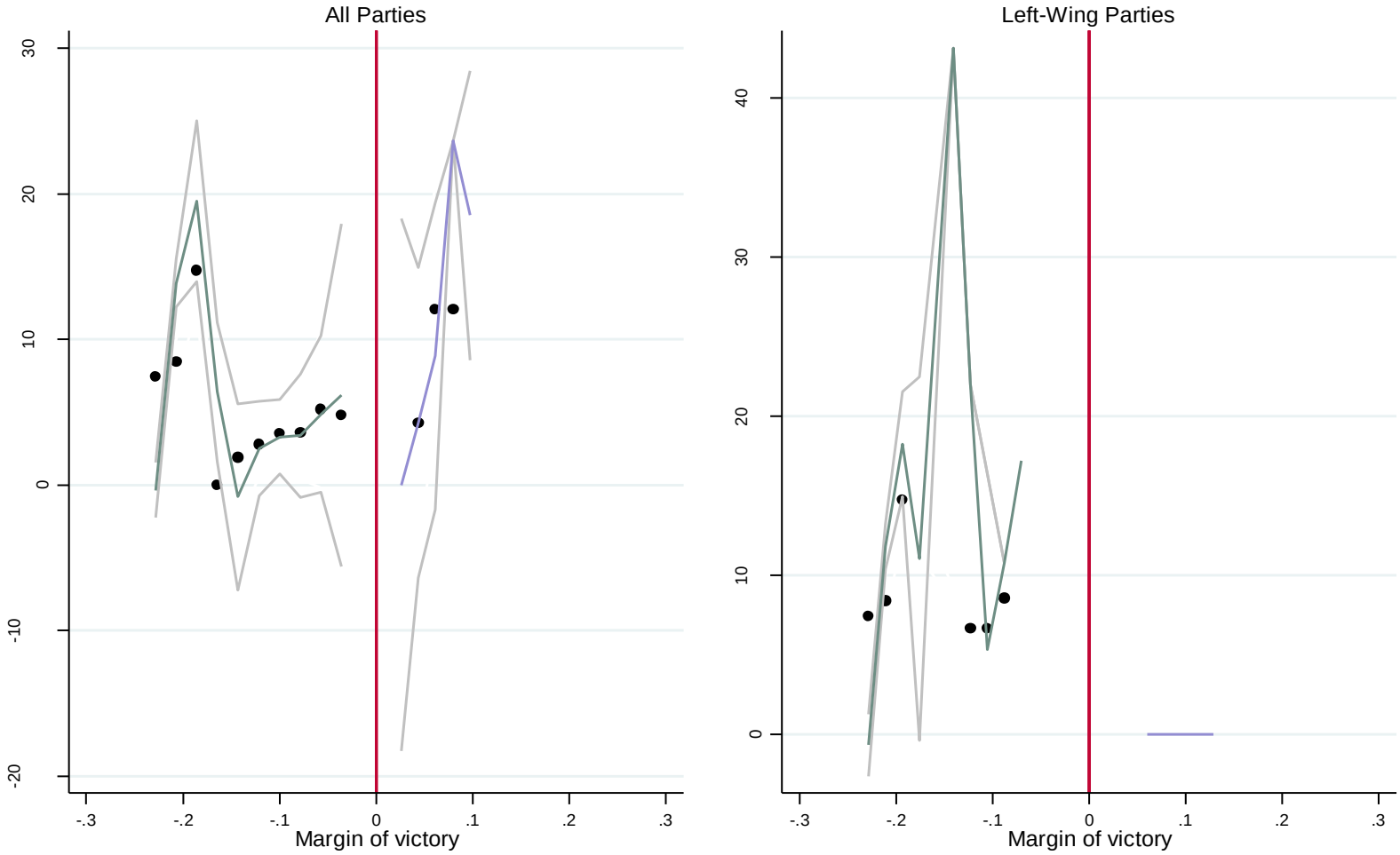

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Figure S5: Contracts after Elections by Candidates

Espirito Santo

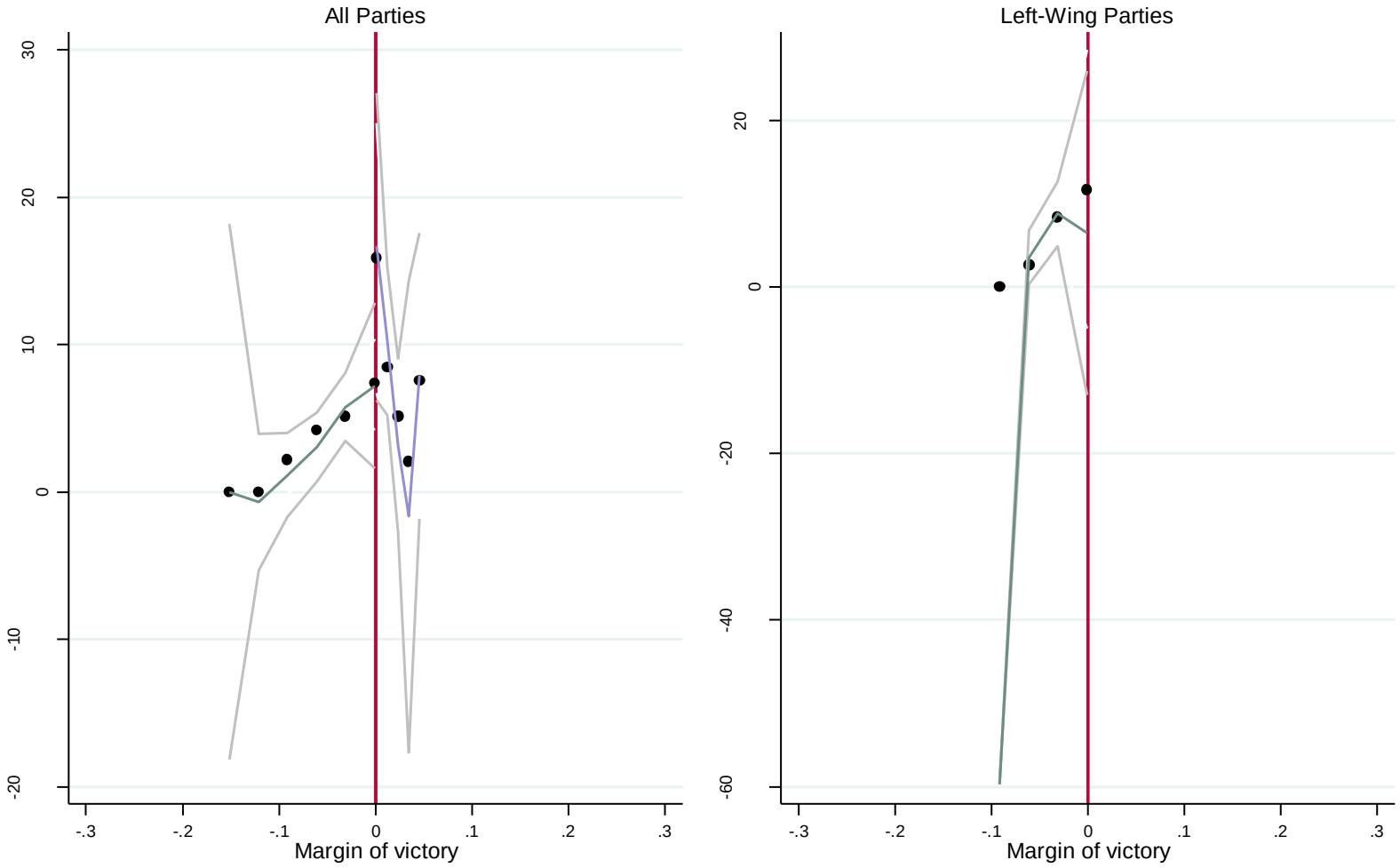

Figure S6: Contracts after Elections by Candidates

Pernambuco

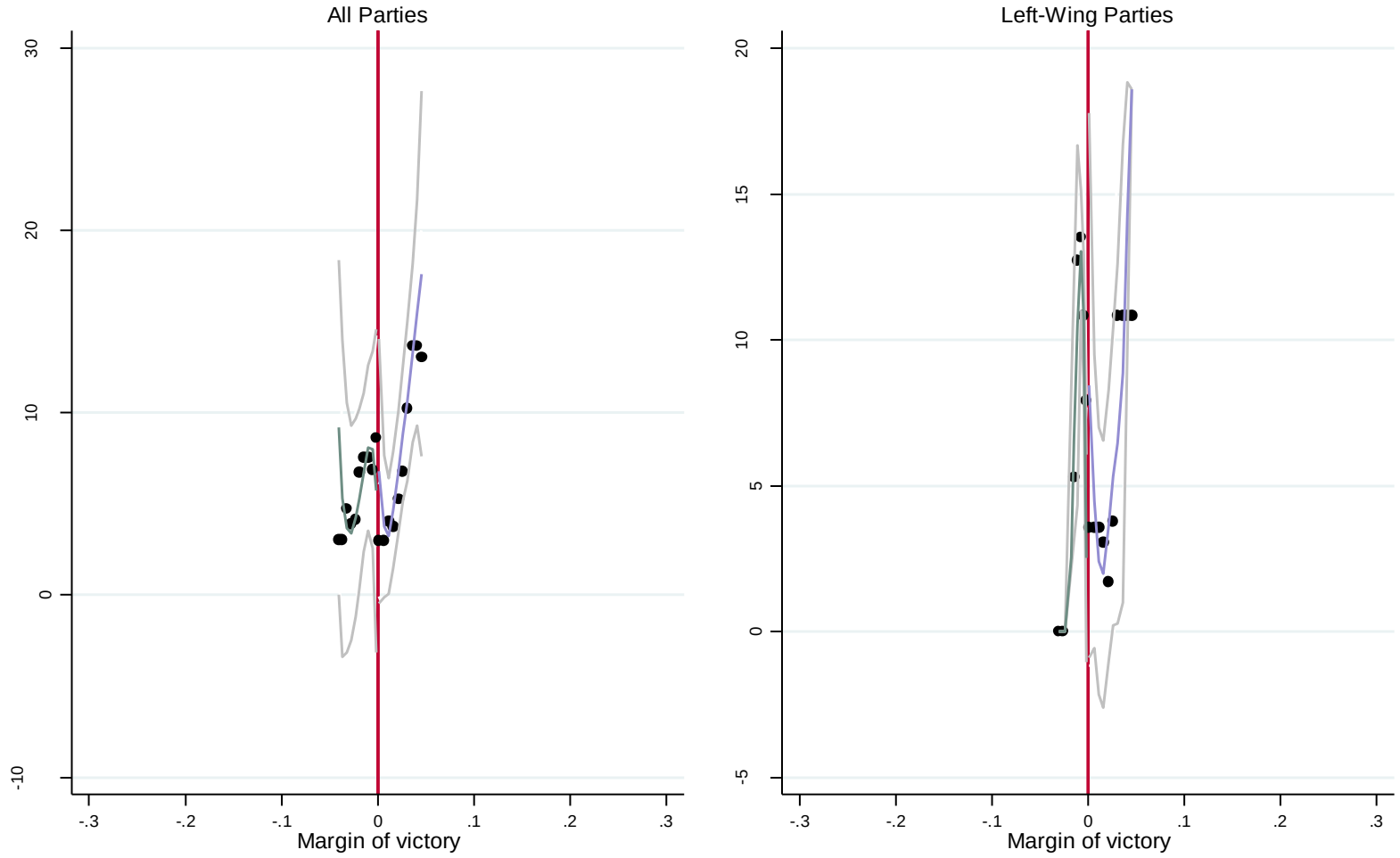

Figure S7: Contracts after Elections by Candidates

Rio de Janeiro

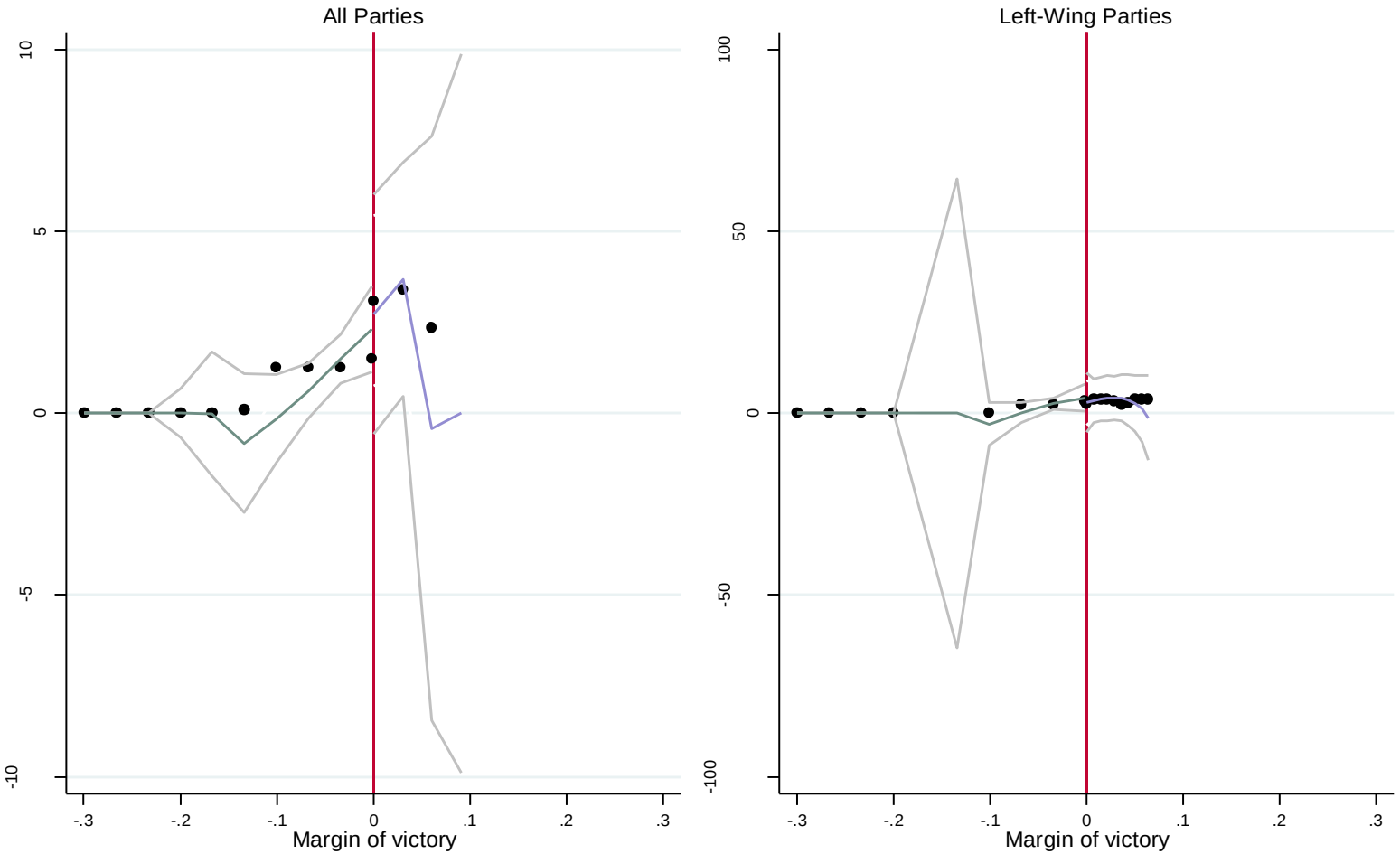

Figure S8:Contracts after Elections by Candidates

São Paulo

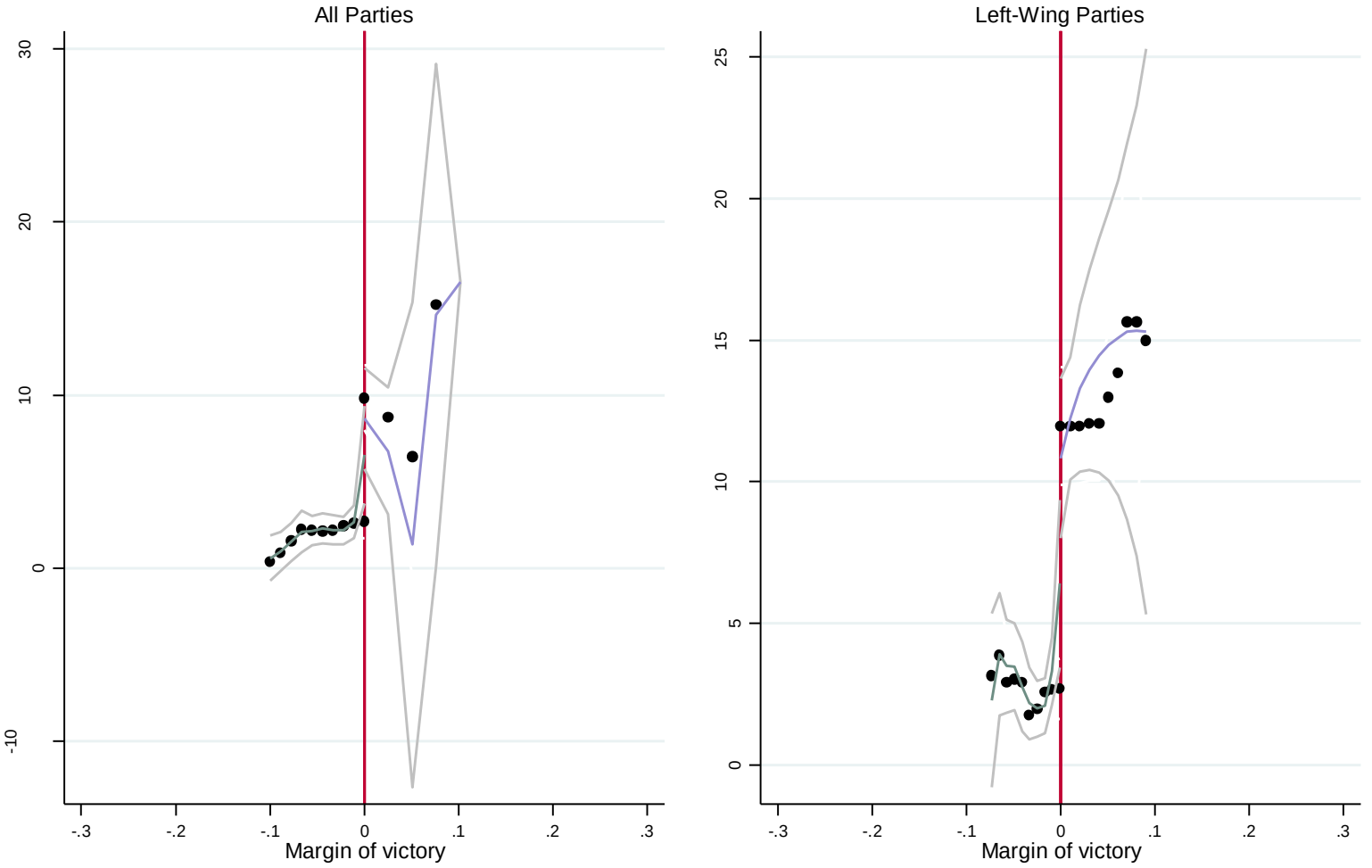

Figure S9:Contracts after Elections by Candidates

PSDB

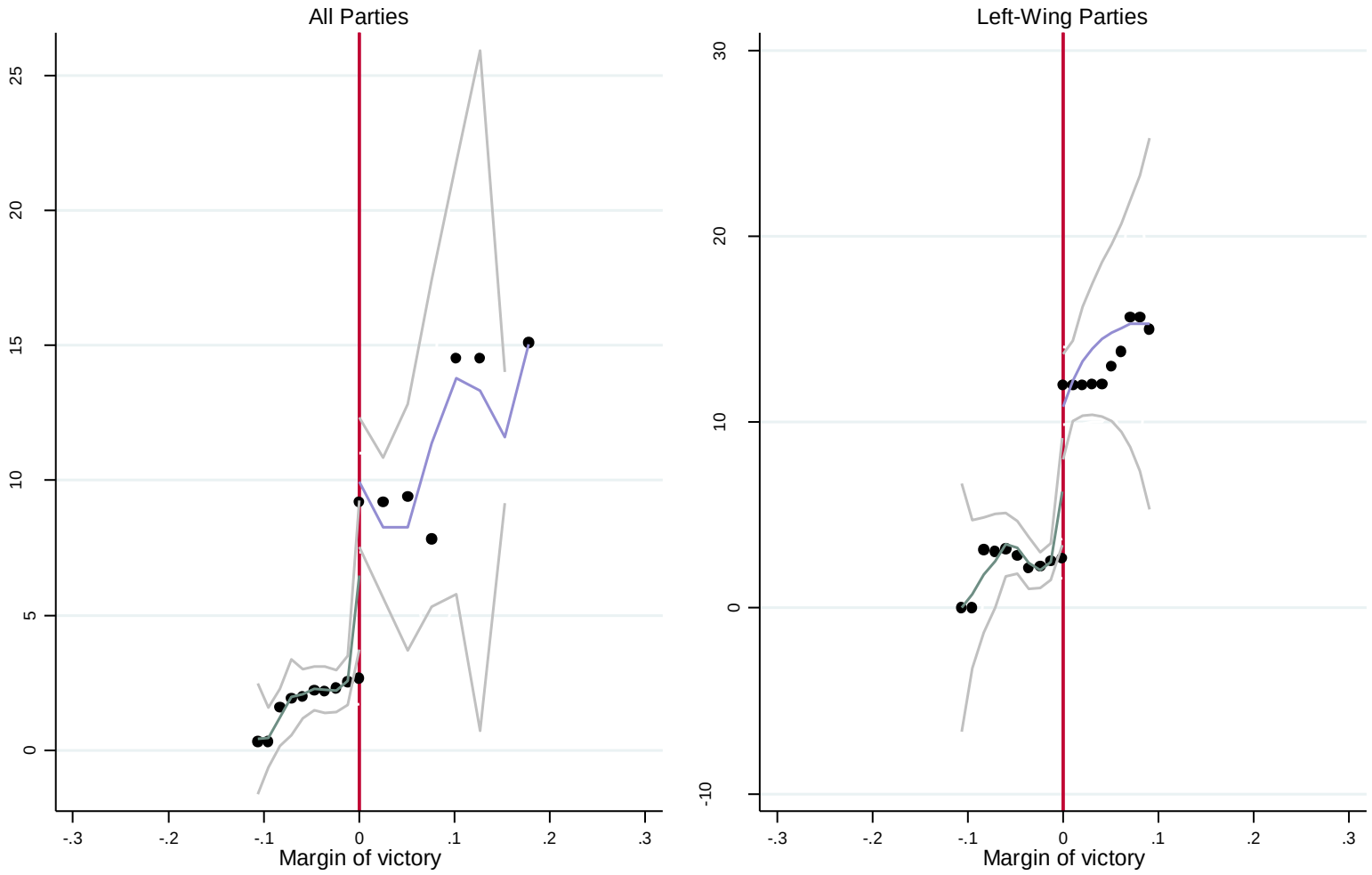

Figure S10: Contracts after Elections by Candidates

PSB

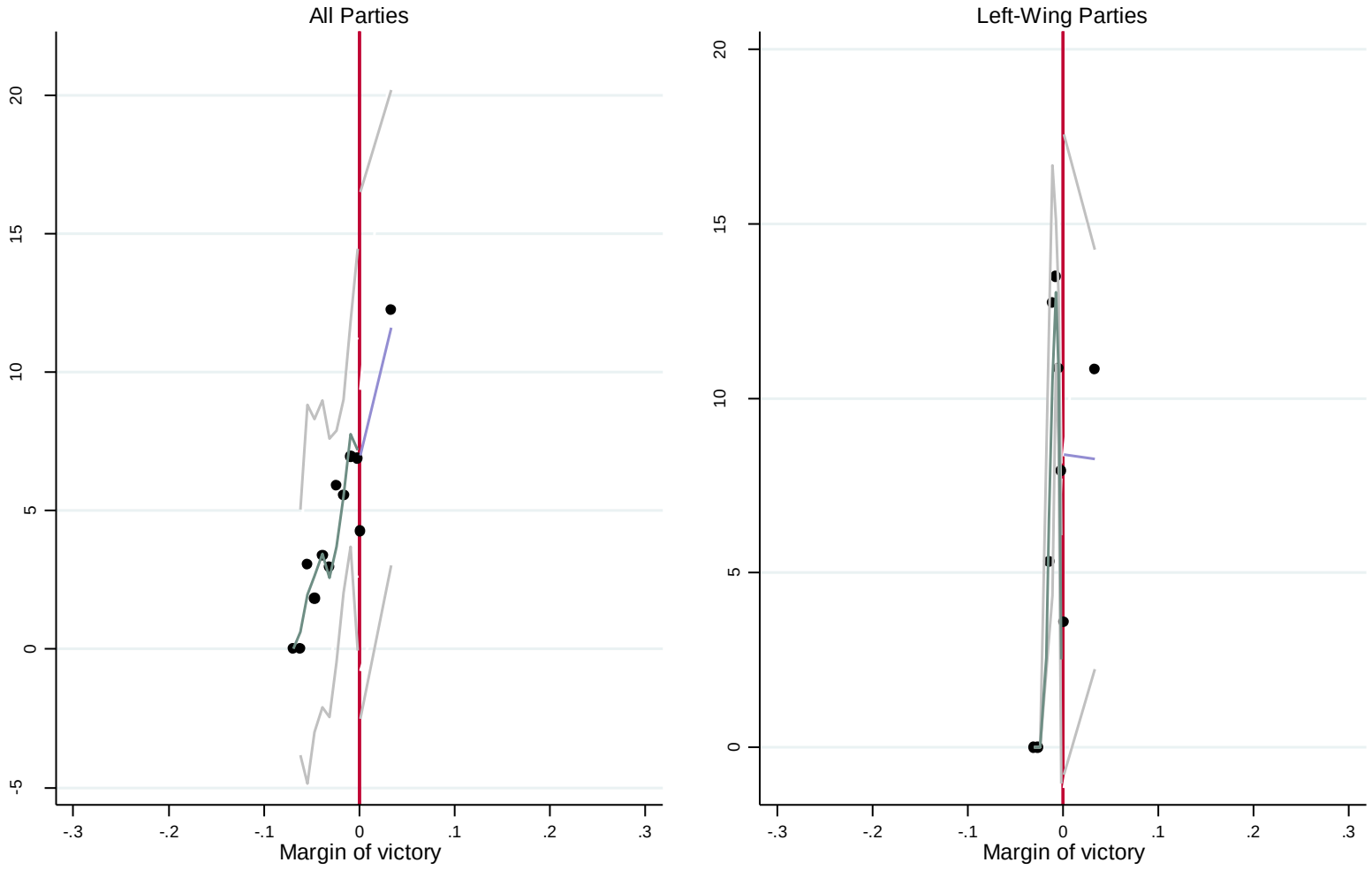

Figure S11: Contracts after Elections by Candidates

PMDB

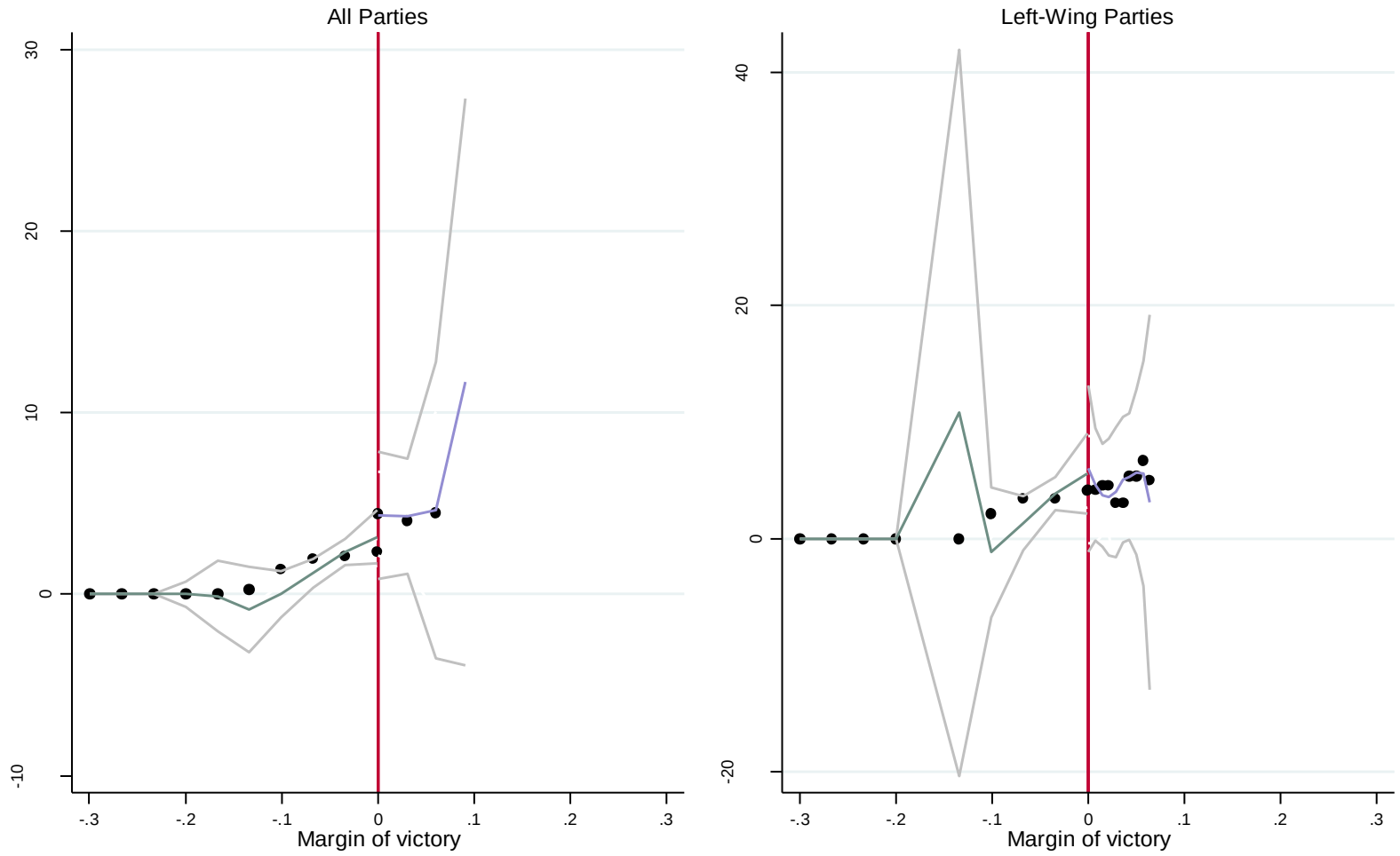

Figure S12: Contracts after Elections by Candidates

PFL

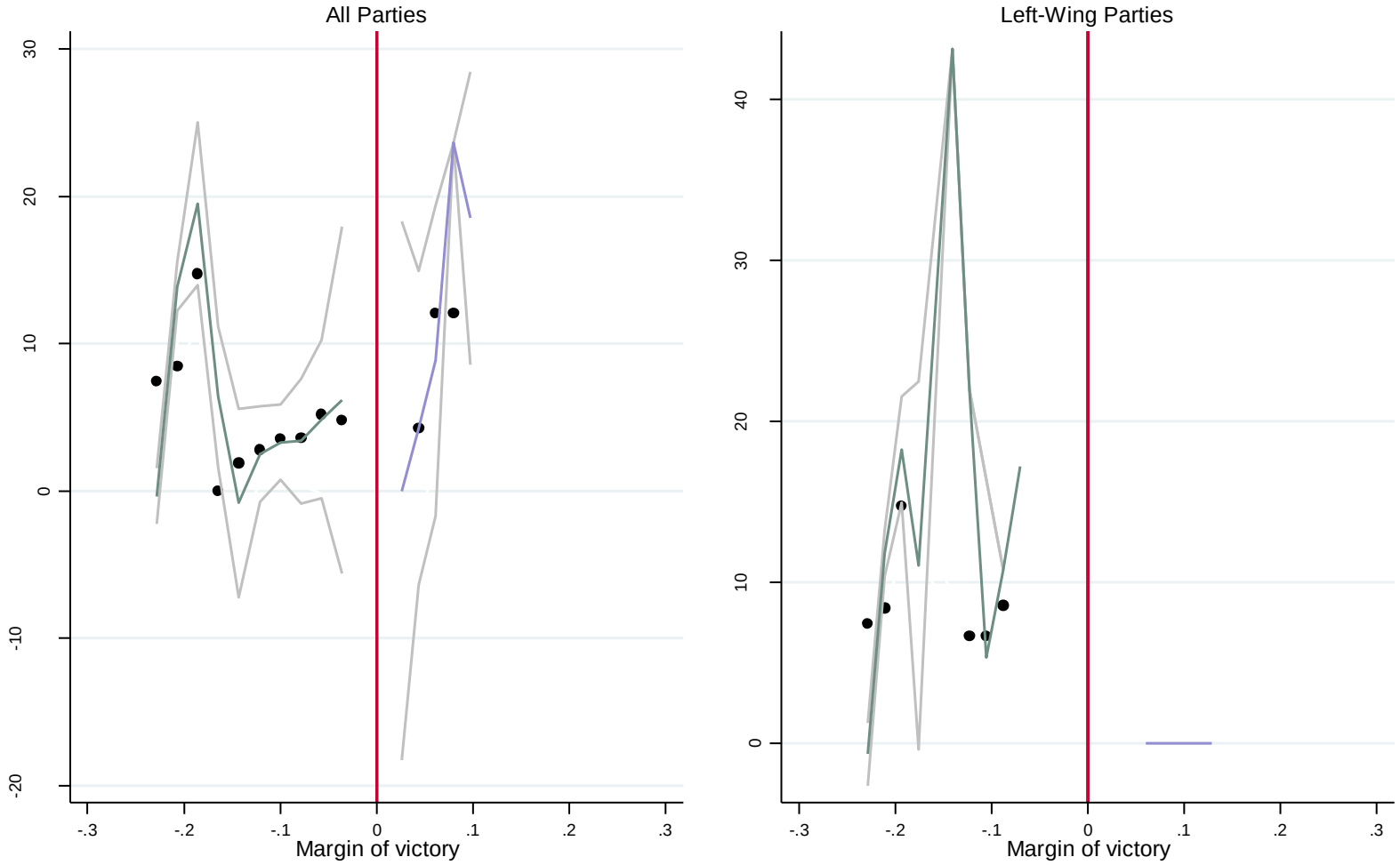

Figure S13:Contracts after Elections by Candidates

Electoral Governor Coalition

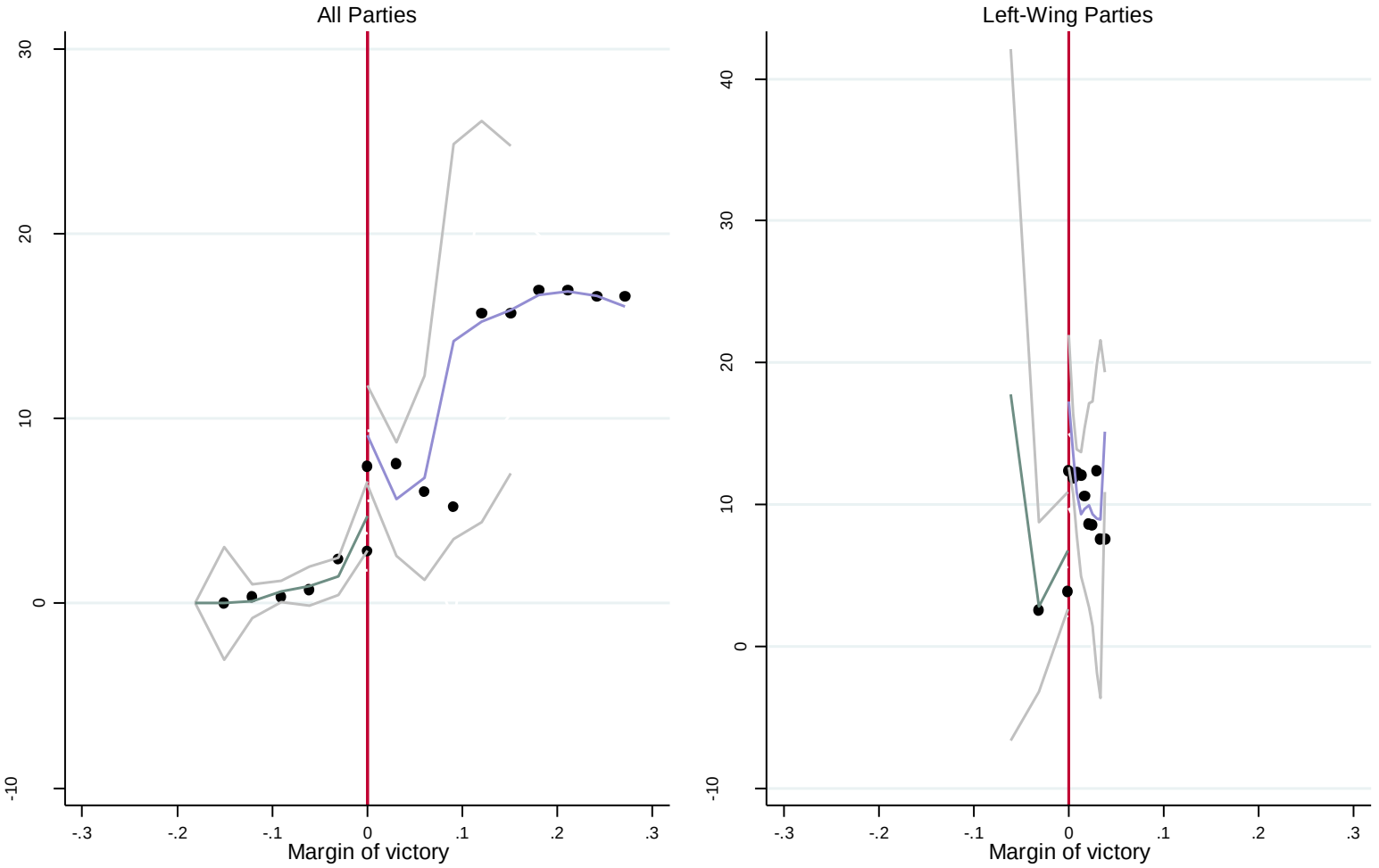

Figure S14:Contracts after Elections by Candidates

Second Term Governor