

## 2 Campaign Contribution and Access to Credit

### 2.1. Introduction

While in the first essay I show evidences of aggregated lending from public federal banks favoring politically aligned areas, little has been discussed so far about the profile of borrowers who benefited from these changes in lending behavior. In this essay, I approach an important possible channel of favored lending: loans granted as rewards for campaign donations. I am particularly interested in investigating whether giving funds to aligned party campaigns may result in better credit access to those donors.

The role of campaign financing in a democracy is controversial in both the academic literature and amongst political analysts. While candidates with higher ability to raise funds may face better chances of victory, potentially harming electoral competition, the relation between politicians and interest groups - fostered by campaign contributions - may result in the diversion of public policies from the socially desirable ones. Such concerns motivate many proposals to regulate the amount of money involved in electoral campaigns around the world, such as public financing and mandatory spending limits<sup>10</sup>. On the other hand, contributions may be a legitimate way to influence the political process and to express individuals' preferences, as in the successful fund-raising effort by Barack Obama in 2007-2008<sup>11</sup>. Although a large literature has addressed the relationship between campaign spending, fund-raising ability and election prospects in political science and political economy literature (Snyder, 1990; Levitt, 1994; Erikson & Palfrey, 2000), surprisingly, little empirical work has succeeded in investigating whether campaign contribution may be seen as an investment (where a private return on that contribution is expected) or a consumption (expressing engagement in the political process) decision from the donor's perspective.

Ansolabehere *et al* (2003), based on a survey in economics and political science literature, points out the failure in identifying robust correlations between campaign contribution

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<sup>10</sup> See Stratmann (2005) for a review of the campaign finance literature

<sup>11</sup> According to the Federal Election Commission (<http://www.fec.gov/disclosure/pnational.do>) Barack Obama raised U\$659 million from individuals in the 2008 Presidential election, more than twice the amount obtained by his opponent John McCain who faced an expenditure cap limit imposed by accepting public funds.

and congressional voting behavior. They also reinforce the Tullocks' (1972) Puzzle<sup>12</sup> in order to defend the consumption theory against the investment theory of campaign donation. According to them, as the amount of money involved in electoral campaigns is too small compared to total federal government spending, contributions cannot be motivated by rent-seeking behavior. On the other hand, Baron (1989) and Snyder (1990) support the investment theory on campaign giving. They claim that politicians may use their ability to provide some sort of "services" in exchange for electoral funds, such as special tax exemptions, contracts to provide goods or services for the government, or giving help dealing with regulatory agencies.

In line with Baron (1989) and Snyder (1990), I provide evidence that access to credit might be a favor negotiated in exchange for campaign contributions. In a country like Brazil, with a small credit-to-GDP ratio (46% at the end of 2010<sup>13</sup>) and a large presence of government-owned banks (41% of total lending at the end of 2010<sup>14</sup>), I claim that local candidates from presidential coalition parties may use their influence over their party structures in order to relax credit restrictions from public federal banks in favor of supporters, especially the ones that donate to electoral campaigns.

The results are based on the 2004 and 2008 Brazil mayoral elections. I combine data from firm level campaign contributions with bank lending information. The dataset allows us to compare the amount of loan outstanding, due and overdue, by firm and type of bank. Restricting analysis to firms operating along these two electoral periods, I explore within-firm variation in order to test whether donating to aligned parties results in a larger credit access. Moreover, I test whether increased credit to aligned parties campaign contributors in a post election year is mainly due to lending from public federal banks.

Results indicate that campaign contributors to aligned parties borrow 20% more than firms that donate to nonaligned parties after the elections and that this difference may be explained by a larger lending share from public federal banks for those firms that donate to aligned party.

My main contribution is providing evidence to the investment motivation theory of campaign giving, showing that preferential access to credit from government-owned banks may be a favor negotiated in exchange for electoral funds. As there is a lack of reward mechanism evidences, other studies have approached this issue in an indirect way. Roberts (1990) was the first that documented stock market reactions to exogenous changes in political connections built

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<sup>12</sup> The puzzle is: "Why is there so little money in US politics?"

<sup>13</sup> BCB (2011b)

<sup>14</sup> BCB (2011a)

on campaign contribution relationships. Recent research by Cooper *et al* (2010) provides a comprehensive analysis on the relation of legislative U.S campaign contributions and firm future stock returns. Gordon *et al* (2007) show evidence from a sample of American companies whose executives contribute more to electoral campaigns when their compensation varies directly with corporate earnings. Closer to my work, Claessens *et al* (2008) evaluate the impact of campaign contribution to federal deputies candidates in Brazil employing an event study methodology and, also, identify a growth in banking leverage for the connected firms. My research rests on a distinct dataset, has more accurate credit access measures and identifies a clearer channel of favored lending to campaign contributors coming from public federal banks. I also innovate in exploring the role of campaign contributions in local elections, while most studies focus on legislative or central government elections.

This paper is related to the empirical literature dealing with the impact of political influences on the lending process, especially through state-owned banks. Khwaja & Mian (2005) is the closest predecessor of my investigation. Using loan-level data for Pakistan, they document that politically connected firms, the ones with a politician in the board, receive preferential treatment in their borrowing from state-owned banks. They find that favored lending occurs through a larger amount borrowed (politically connected firms borrow 45% more) and higher default rates (those firms default 50% more). Similar to their work, I exploit *within* firm variation in order to estimate the impact of campaign contribution on favored lending measures. My approach differs in documenting preferential treatment from state-owned banks as a reward mechanism of campaign giving, while, in Pakistan, politicians extract rents for themselves or for their own firms by borrowing from government banks and not repaying their loans.

Also related to my work, there are four other papers from this empirical literature. Cole (2009) examines the allocation of agricultural credit from state-owned banks in order to influence electoral outcomes in India. He finds that state-owned banks track the electoral cycles and target districts where election races are particularly close. Sapienza (2004) investigates the behavior of government bank in Italy and shows evidence that firms borrowing from both types of banks (private and state-owned) are charged lower interest rates from the state-owned bank with a local politician affiliated. Li *et al* (2008) shows evidence that firms politically connected to the Communist Party in China are benefited with better access to initial loans from banks or other state-owned institutions. Finally, Carvalho (2010) finds that the federal government targets directed credit in favor of aligned governors running for reelection and facing higher electoral competition in Brazil.

This essay is also related to a series of papers that document the role of political connection in adding firm value (Faccio, 2006; Fisman, 2001; Goldman et al, 2009), especially the ones that identify the channels through which companies are benefited from political connections. In addition to Khwaja & Mian (2005), Faccio *et al* (2006) show in a cross-country study that politically connected firms are much more likely to be bailed out, while Goldman *et al* (2010) documents that companies connected to the winning party in 1994 and 2000 U.S. elections were significantly more likely to experience an increase in the value of procurement contracts awarded to them. Cingano & Pinotti (*forthcoming*) also document a revenue increase for politically connected firms in Italy and find that connections matter mainly for upper stream producers for the public administration.

The paper is organized as follows. The next section outlines the empirical work and briefly discusses the mechanisms of campaign giving rewards. Section 2 describes the data and provides summary statistics. Section 3 discusses the empirical strategy and presents the main results. Section 4 exploits the data heterogeneity in order to test additional hypotheses related to favored lending rewards for electoral funds. Section 5 concludes.

## 2.2. Data

### 2.2.1. Data Sources

I draw on two sources of data. Electoral and campaign contribution data come from the *Tribunal Superior Eleitoral (TSE)*, while credit data is from the SCR (Credit Information System), a public credit registry managed by the Central Bank of Brazil (BCB). From the first data source, I have for the 2004 and 2008 mayoral elections: incumbent mayors, a list of candidates with voting records of candidates and other relevant characteristics, and campaign contribution records at the firm level. SCR collects detailed information about any individual loan contracts over R\$ 5 thousand granted by banks to any customer.

The credit information at the firm level is divided in two main datasets: loan level information on a monthly basis and banking relationships. Regarding the loans, I have the amount outstanding, due and overdue, by type of loan, maturity, risk classification and origin of funding (directed versus non-directed credit). I calculate the nonperforming ratio based on the proportion of loans rated as “D” or worse<sup>15</sup>. The last dataset contains the beginning of the

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<sup>15</sup> According to National Monetary Council (CMN) Act 2682/99, loans over 60 days past due must be classified as D or worse. The same resolution obliges a bank provision at a minimum of 10% of the loan to prevent delinquency. Therefore, we consider loans rated at D or worse as non-performing.

relationship date per bank. A credit analysis is performed on aggregate data per year and type of bank at firm level. The loan maturity is aggregated by the weighted average loan amount.

### 2.2.2.Descriptive Statistics

The sample departs from all firms that contributed to local (mayoral and city council) electoral campaigns in 2004 and 2008: 26.5 thousand firms in 2004 and 54.4 thousand firms in 2008. Contributions were given to candidates (mayor or city counselor) and to parties. As I argue that the influence on credit repayment comes from a party influence over federal government, I aggregate contribution by party in each election. I consider a party as aligned to federal government if it has at least one member in the Presidential Cabinet. Therefore, the aligned parties in 2004 are PT (Worker's Party), PSB (Brazilian Socialist Party), PMDB (Brazilian Democratic Movement Party), PV (Green Party), PC do B (Communist Party of Brazil), PL (Liberal Party) and PTB (Brazilian Labor Party). In 2008, the aligned ones are: PT (Worker's Party), PSB (Brazilian Socialist Party), PMDB (Brazilian Democratic Movement Party), PP (Progressive Party), PV (Green Party), PC do B (Communist Party of Brazil), PDT (Democratic Labor Party), PR (Republic Party), PTB (Brazilian Labor Party) and PRB (Brazilian Republican Party).

The median of campaign contribution by firm is R\$ 3 thousand in both years. Firms that donate to both parties represent 8% of the number of firms in 2004 and 11% in 2008. Those firms contribute a higher amount: the median varies from R\$12 thousand in 2004 to R\$ 7 thousand in 2008.

In order to attend to confidential requirements of the credit data base, the merger of credit and campaign contribution datasets was done in the Central Bank of Brazil and the identification of a firm was replaced by a random key in a way that the firm identities could not be restored from the original campaign contributor data. In this process, most of the continuous and detailed contribution attributes information was excluded to avoid that a record in the original database could be identified when compared to the matched data<sup>16</sup>. On the other hand, I can explore the comprehensive credit dataset in the analysis. Description of matched electoral variables is presented in the appendix.

The campaign contribution list has 75491 firms, 5429 giving electoral funds in both years. When merging to the credit database, I find matches for 55200 firms with loan

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<sup>16</sup> Although we kept the campaign contribution information, we lost electoral information and geographic information for 2279 firms in 2004 and 2130 firms in 2008.

information registered in SCR in December of one of the years since 2003 to 2010. This amount accounts for 73% of the original data. Of those firms, 35513 have loans registered both in the periods 2003-2006 and 2008-2010. With these criteria, I keep firms operating around both election periods, discarding entry and exit between the electoral races.

Table 2.1 presents summary statistics for the variables of interest for the SCR database. Columns (1) and (2) show a sharp increase in the mean of total lending between 2005 and 2009. The mean of total lending in 2009 is more than twice the value in 2005. As discussed in the prior essay, Brazil has experienced a high credit growth in the last decade. This increase had its effects both in extensive margin (more individuals and firms borrowing) and intensive margin (individuals and firms borrowing larger amounts), which is in line with the increase of the amount borrowed for the firms in the sample.

Descriptive statistics show also increase of lending share from public federal banks (2.6 percentage points), on the proportion of loans maturing after one year (6.8 percentage points), default rate (1.6 percentage points), risky credit ratio (3.1 percentage point) and in the share of default from public federal banks (1.9 percentage points). It's worth noting that our measure of default rate and risky credit ratio are very similar. Both refer to the proportion of non-performing loans and those with a risk classification equal or worse than "D" in total lending. The difference is that the risky credit ratio refers to this proportion at the end of the prior year, while the default rate is measured at the end of the next year. The first measure captures the borrower credit worthiness, since when the credit is granted, the lender has access to this information on the SCR – Credit Information System. I also use the same measure one year after the observed lending to evaluate whether loans performed or not. According to the National Monetary Council Act 2682/99, when a loan is overdue, the bank must downgrade its risk classification according to the time of observed delay. Following this criteria, loans past due after 60 days<sup>17</sup> must have a minimum risk classification of "D", and the bank must make a provision of at least 10% of the loan size in order to account for expected losses.

Although the confidential requirements to use credit information resulted in a loss of firm attributes, I recover firm age using the maximum relationship term of the firm with the banking system as a proxy. Since the initiation of a banking relationship frequently follows the start of a firm operation, it seems to be a good measure for age. The sample mean age in 2005 is 156 months or 13 years.

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<sup>17</sup> Or 120 days when the loan maturity is higher than 36 months.

Columns (3)-(7) show mean values for variables of interest for years 2005 and 2009. In a descriptive analyses of the sample, one can note that firms that donate to both parties have more than 10 times the amount of loans outstanding than firms that donate to aligned parties. As observed for the value of campaign contributions (the average of their contributions is 8 times in 2004 and 16 times in 2008 the average amount of the aligned party campaign contributor group), this sharp difference in the amount of loans suggests that those firms are much larger than the others of the sample. They also borrow with a larger maturity and default less than other firms. Worth noting, however, is that their share of borrowing from public federal banks is not higher than the other groups.

Table 2.1 also allows comparison of the other groups of firms. Those donating to aligned party have a larger amount of loans than those giving funds to non-aligned party. Also this last group borrows more than those firms not contributing to any party. Comparing just those firms that donate, the borrowing share from public federal banks is 2.5 percentage points higher and proportion of loans maturing after one year is 2.3 percentage points higher for firms donating to aligned parties. There are no mean difference in default rate, risky credit ratio or share of default from public federal banks for the two groups of firms that fund only aligned or not aligned electoral campaigns.

The results of descriptive analysis suggest that firms that donate to an aligned party may have favored access to credit from public federal banks and may end with a higher amount of bank debt. In the next section, I develop a proper empirical analysis in a more controlled environment to test for favored lending.

## 2.3. Empirical Analysis

### 2.3.1. Do campaign contributors to aligned parties have preferential access to banking finance?

The challenge to identification of the effect of favored lending rests on the scarcity of control variables available due to the database confidential requirements. One should be concerned that the choice of finance for an electoral campaign may be associated with some unobservable firm characteristics that may determine the level of firm credit demand. Larger firms are more likely to be approached by candidates to contribute to their campaigns<sup>18</sup>, and their

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<sup>18</sup> Cooper et al (2010) document that the average capitalization of contribution from firms in 2004 would occupy the top 8% of NYSE market cap. According to *Ansolabehere et al (2003)*, “researchers in political science and sociology have documented that income is by far the strongest predictor of giving to political campaigns”.

absolute credit demand is expected to be higher than from a similar one with smaller revenue, because of scale issues. Moreover, firms planning new investment may be more concerned with the political scenario and, therefore, likely to contribute in order to favor the prospects of their preferred candidates<sup>19</sup>. As bank debt may fund these new investments, a correlation between campaign contribution and loan size might reflect this channel instead of favored lending.

In order to address these issues, I exploit the panel structure of the data analyzing whether a firm receives preferential lending when it makes a campaign contribution. Departing from the firms that make a campaign contribution in the 2004 or 2008 mayoral elections, I exploit the variation that arises when a firm changes its contribution status from one year to the other: a firm may have made a contribution in 2004 but not in 2008 or the same firm may have changed their contribution from an aligned party in one election to a nonaligned party in another. This strategy aims to control for all firm characteristics invariant in time that could bias the results in cross-section estimation. This methodology resembles a *differences-in-differences* estimation with three distinct groups: firms that donate to aligned parties, firms that donate to nonaligned parties and firms that donate to both parties. I test whether aggregated bank lending terms improve after the election when a firm makes a campaign contribution. Moreover, I test whether giving funds to aligned parties results in a firm receiving preferential access to credit from banks, when compared to firms that donate to nonaligned parties. While other reasons mentioned above may predict an increase in bank lending for those giving funds to an electoral campaign, independent of which party receives the money, the favored lending hypothesis predicts that only aligned party candidates may have influence on public federal bank lending in order to reward their campaign contributors.

The estimated equation for a firm  $i$  in a year related to the mayoral election  $t$ , which can be 2004 or 2008, is thus:

$$y_{it} = \beta_1 \cdot \text{donate\_nonaligned}_{it} + \beta_2 \cdot \text{donate\_aligned}_{it} + \beta_3 \cdot \text{donate\_both}_{it} + \alpha_i + \delta_t + X_{it} \cdot \gamma_{it} + \varepsilon_{ijt} \quad (1)$$

where dependent variable  $y_{it}$  is one measure of lending terms in the year after the election,  $\text{donate\_nonaligned}_{it}$  shows whether a firm  $i$  gives electoral funds only to a nonaligned party in the election  $t$ ,  $\text{donate\_aligned}_{it}$  is a dummy indicating whether a firm caters only to an aligned party in that election  $t$ , and  $\text{donate\_both}_{it}$  is an indicator variable for whether a firm donates to both aligned and nonaligned parties in an election year  $t$ . As dependent variables I employ total

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<sup>19</sup> See a discussion on electoral motives in Grossman & Helpman (1996)



lending size, the proportion of lending maturing after one year and the default rate at the end of the next year to evaluate the performance of the loans granted after elections.

$X_{it}$  is the vector of time-varying firm level controls such as the quality of firm debt measured by the ratio of risky and overdue debt over total lending and size of the firm measured by the log of total firm lending the year before the election.  $\alpha_i$  is firm fixed effect and  $\delta_t$  controls for macroeconomics shocks that impact the credit market.

The parameters of interest in equation (1) are the  $\beta$ 's. While  $\beta_1$  captures the impact of giving funds to a nonaligned party,  $\beta_2$  identifies preferential treatment in the credit measures to firms that donate to aligned parties and  $\beta_3$  for the firms that donate to both parties. Assuming that all relevant characteristics associated to credit demand and correlated to firm propensity to make a campaign contribution are controlled for, the hypothesis of preferential treatment as retribution to aligned party campaign giving predicts that  $\beta_1=0$  while  $\beta_2>0$  and  $\beta_3\geq 0$ . Moreover one should expect  $\beta_2>\beta_1$ , because only aligned parties may have political influence on public federal banks.

Table 2.2 reports the results of equation (1) for the three dimensions of preferential lending analyzed: total lending size, the proportion of lending maturing after one year and the default rate. Columns (1)-(3) presents evidence for total lending size. Without adding any time-varying control, column (1) shows that firms donating to an electoral campaign have higher bank debt than those that don't give funds to any party. All the coefficients are significant at the 1% level. Results also indicate that campaign contributors to aligned parties borrow 20% more than firms that donate to nonaligned parties. Also, donating to both parties results in even a higher amount of credit: 35% more than donating only to an aligned party. Adding controls, while the difference between donating to both and donating to only an aligned one decreases to 22% in the column (3), the distance between donating to both an aligned party and to a non-aligned party is kept almost constant, reaching 18% in column (3). The coefficients of risky credit ratio and log of total lending in the year before indicate the expected result. The worst the borrower credit worthiness, measured by a higher risky credit ratio, the more difficult it is for the firm to obtain credit in the financial system. In this case, the firm faces credit restriction due to their own characteristics. The measure of firm size indicates that the larger the firm, the higher their total lending. Moreover, adding this control reduces the difference in total lending between the group that donates to both parties and the group donating to aligned parties, as expected if an increase of the firm size should be associated with a higher credit demand and to a higher chance to make a campaign contribution. Nevertheless, it doesn't change the distance in total lending between the group that donates to an aligned and the one that donates to a nonaligned party.

There is a technical issue associated with the proxy of size for the first measure of preferential lending analyzed. As I employ the lag of the dependent variable for a proxy of size, one may be concerned about problems of serial correlation that might affect the residuals of the regression estimated in a panel setting with fixed effects. It's important to mention that the panel structure compares firm information in the years 2005 and 2009, and, in this case, the values of the lag of the dependent variable are related to 2004 and 2008. Therefore, unless the serial correlation persists for four years, it should not be a relevant source of bias, in my estimation.

Columns (4)-(6) show results for another measure of preferential lending: proportion of lending maturing after one year. Increasing credit maturity may be an important dimension in lending. Firms that rely on short term debt are subject to liquidity shocks and to the banks' bargaining power every time they need to renew their loans (Rajan, 2002). Therefore, for small and medium firms, with no access to the capital market, a longer maturity term should be desirable, keeping other lending terms constant. Donating to a nonaligned party has a positive and statistically significant coefficient except in column (6). Controlling for firm size reduces to zero the magnitude of the impact on the proportion of lending maturing after one year to this group. On the other hand, all specifications give the same difference between firms donating to aligned and nonaligned parties. The difference of 0.5 percentage point, although small economically, is statistically significant at 10%. Again, donating to both parties has a higher and statistically significant impact than all the other groups. The risky credit ratio and the proxy size show the expected coefficient: higher risk has a negative and larger size has a positive impact on the proportion of lending maturing after one year.

Columns (7)-(8) report the results for the default rate. The first specification shows a positive impact on the default rate for those firms that contribute to an electoral campaign. When controlling for firm size, column (8), these impacts disappear, except for those firms that donate to a nonaligned party. Nevertheless, the difference between the group that donates to aligned and the group donating to a nonaligned party is not statistically different at 10% in any specification. Therefore, one cannot reject the hypothesis that firms donating to aligned and nonaligned parties have the same performance of credit two years after the elections.

Despite controlling for firm-fixed and time-varying characteristics associated with size and credit worthiness, one could still claim that the results presented so far may not represent rewards for campaign giving. Instead, an alternative explanation would be that firms donating to an aligned party have built a political connection with aligned parties prior to the election periods and the results are explained by these relations. Another explanation would be that firms that

donate to aligned and to both parties for some reason are more productive and therefore obtain more credit.

To rule out these alternative explanations, I run the same specifications for the electoral years (2004 and 2005). There is only one change: I evaluate the default rate at the end of the electoral year (instead of the next one) to prevent this measure being contaminated by loans granted after the election. Both explanations mentioned above predict that the effect measured after the election will be same in the electoral years. Table 2.3 shows the results.

Columns (1)-(3) of Table 2.3 report positive and statistically significant effect on total lending size for firms donating to aligned, nonaligned and both, when compared to firms that don't make any contribution. Nevertheless, there is no economically and statistically significant difference between firms that donate to aligned parties and firms that donate to nonaligned parties. There is no difference between these groups for the proportion of lending maturing after one year or for the default rate. Only firms than give funds to both parties are statistically different from the other groups when the dependent variable is the log of total lending. This makes it clear that, before the election, firms that donate to an aligned party and that donate to nonaligned parties are similar in demand and access to credit. The difference between these firms and those that don't donate, especially for those that contribute to both parties, may be driven by some time-varying unobservable such as the actual size of the firm (recall that the coefficients are reduced when I control for the log of total lending in the last year in column (3)). Therefore, as there is no difference in total lending for firms that donate to aligned and firms that donate to nonaligned parties in the election year, the difference of 20 percent between these groups in the next year should be attributed to favored lending conditions offered as a reward for campaign donations to an aligned party.

This results suggest a different mechanism from the one documented by Khwaja&Mian (2005). While in Pakistan politicians obtain more credit for their companies and don't repay their loans, in Brazil this behavior is less likely to occur, since a non-performing loan must be registered in SCR (System of Credit Information), reducing the chances of the firm obtaining any other source of banking finance in the next five years. On the other hand, preferential access to public federal banks may be important to avoid incurring with non-performing loans and therefore assuring that a firm may have access to funding to finance their positive net value projects.

### 2.3.2. Do campaign contributors to aligned parties have preferential access to public federal bank lending?

So far, I have provided evidence that contributors to aligned party increase their bank debt and have a longer lending maturity than firms that donate to nonaligned parties after the local elections. The next goal is to investigate the mechanism of this differential lending increase. Then I ask whether better terms of credit to aligned party campaign contributors are due to better access to credit from public federal banks. In order to test this hypothesis, I estimate equation (1) using the lending share from public federal banks as dependent variable. I also test, using this same specification, whether aligned party campaign contributors default more on their public federal bank loans.

Columns (1)-(3) in Table 2.4 report the results of estimating equation (1) using lending share from public federal banks in the post-election years as the dependent variable. The *donate to aligned party* coefficient is statistically significant at the 1% level in all specifications and also statistically different from the coefficient of *donate to nonaligned party* at the 5% level. Firms donating to aligned parties have a lending share from public federal banks 1.2 percentage points higher than firms that donate to nonaligned parties. This figure accounts for 4% of the mean lending share from public federal banks. There is also no statistical difference between campaign contributors to aligned parties and campaign contributors to both parties.

Columns (4)-(5) shows the regression results for the share of default from public federal banks. Although the results indicate that firms donating to aligned and firms donating to nonaligned parties have a larger share of default from public federal banks than non-contributing firms, there is no economically and statistically significant difference in the share of default between these mentioned groups. Therefore, although firms that donate to aligned firms increase their lending share from public federal banks when compared to contributors to nonaligned firms, they default with the same frequency as this type of bank.

Since private banks are supposed to maximize profit and therefore invest in screening and offering credit in a competitive way, when an aligned party campaign contribution firm borrows more from public federal banks, it should be in response to receiving preferential treatment. As the methodology controls for firm fixed effect, firm size and firm recent credit history, I am confident that the estimates captures solely a campaign contribution response from a public federal bank credit offer. This privileged treatment may come through relaxing the ceiling limit of loans available to an individual firm, lowering interest rates or offering higher maturity loans in ways that private banks can't match.

In order to test whether preferential access to public federal banks occurs as retribution mechanism, I perform the same robustness check presented before: I run the same regressions for the years 2004 and 2008. Table 2.5 reports the results. Although campaign contributors have a larger lending share from public federal banks than non-contributors, those firms that donate to aligned parties don't borrow more from public federal banks than firms that donate to other parties in the electoral years. This result is similar to what was observed for total lending and complements it. The detected increase in total lending after the elections for firms that contribute to aligned parties is due to larger loans borrowed from public federal banks. Moreover, those firms don't borrow more than the others that make a campaign contribution in electoral years, which is evidence of public federal banks favoring credit as a campaign giving reward.

## 2.4. Extensions

The previous results show that firms catering to aligned parties are benefited on average to preferential lending from public federal banks. As there are other motives for contributing to an electoral campaign – influence and electoral motives (Grossman&Helpman, 2001) – I test some additional hypothesis related to a favor-selling theory, taking advantage of the data heterogeneity.

I investigate whether favor lending is more prevalent in regions where credit restriction is more likely to occur. The data allows comparing campaign contribution between two different Brazil macro regions, one comprising the states from the North, Northeast and Centre-West regions and the other joining the South and Southeast regions. The last macro region concentrates 56% of population, 73% of GDP, 80% of bank headquarters and 74% of bank branches. On the other hand, 68% of the municipalities without bank branches are located in the North macro region<sup>20</sup>. These figures indicated that the North macro region is significantly less financially and economically developed, and thus where credit restriction may be a higher concern. These regions are the ones where firms may assign a higher value to credit access and, therefore, are more likely to donate funds to political parties in order to receive favored lending. In addition, besides being less developed these regions also account for higher illiteracy rates and other lower education scores, which are frequently associated with a higher presence of uninformed voters. In such environments, campaign expenditures have a major role in

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<sup>20</sup> Ratios calculated from information available from IBGE and Central Bank of Brazil internet sites: <http://www.censo2010.ibge.gov.br/> and <http://www.bcb.gov.br/?QEVSFN201012>

influencing voting (Baron, 1994), and candidates have more incentives to sell favors in order to raise more electoral funds.

Table 2.6 presents the regression results for equation (1), breaking the sample into macro regions. In Column (1), I repeat the baseline results of Table 2.4. Column (2) shows respectively the results for the North and South macro regions. According to Table 2.6, there is no statistically difference in the magnitude of the coefficient between the macro regions, despite a slightly higher difference between firms that donate to aligned parties and firms that donate to nonaligned being observed for the North-Northeast-CentreWest macro region (column 2).

## 2.5. Conclusion

I examine in this essay the occurrence of favored lending at the firm level. I investigate whether firms have better access to credit due to political connections. Specifically, I focus on firms that donate to electoral campaigns and test whether those who give funds to aligned parties – defined as having at least one member in the President Cabinet – borrow more after elections than those who donate to other parties.

Results indicate that campaign contributors to aligned parties borrow 20% more after the elections than firms that donate to nonaligned parties. I show that this difference may be explained by a larger lending share from public federal banks for those firms that donate to aligned parties. Since in the election years those two groups don't show economically and statistically difference in the total amount borrowed and in the lending share from public federal banks, it suggests that campaign contributors to aligned parties are rewarded with better access to credit on public federal banks.

As discussed in chapter one, evidences of preferential access to credit raises the concern about a likely misallocation of capital among firms. In order to favor a political connected firm, a public federal bank restricts credit or increase interest rates charged to the others. Therefore, there may be social gains if credit were reallocated to attend those firms with a higher marginal product of capital, instead of to benefit those politically connected.

This essay provides a relevant contribution to the debate about whether campaign donations may be seen as an investment or a consumption choice. The theory of campaign giving as investment (Baron, 1989; Snyder, 1990) predicts some private return as a benefit for the money donated. On the other side, those who defend campaign giving as a consumption decision (Ansolabehere et al, 2003) point out that there is a lack of evidence showing that firms are rewarded for their campaign contributions and the amount of money in electoral campaigns is

small compared to total budgets that a politician may have influence on. Although there are evidences that political connection help improving credit access (Kwaja&Mian, 2005; Li et al, 2008), this essay is the first to document a mechanism for rewarding campaign finance, supporting the theory of campaign giving as an investment decision.

## 2.6. Appendix

### Description of Electoral Variables

Macroregion	The North macroregion comprises the North, Northeast and the Centre-West Brazilian regions. The South macroregion is formed by the South and Southeast regions
Electoral size	1 (1/50.000 electors), 2 (50.000 /200.000 electors) e 3 (more than 200.000 thousand)
Margin of Victory between the two most voted candidates	1 (0/5%), 2 (5.01% a 10%), 3 (higher than 10%)
Aligned	Donate to aligned parties (1 for until R\$ 10 thousand and for more than R\$ 10 thousand)
Non-aligned	Donate to nonaligned parties (1 for until R\$ 10 thousand and for more than R\$ 10 thousand)
Number of Municipalities	Number of municipalities receiving the donation: 1 (1 municipality), 2 (2/5 municipalities), 3 ( 6/10 municipalities) e 4 (more than 10 municipalities)
Reelect	Dummy for whether the incumbent was reelected in the city
Run for reelection	Dummy for whether the incumbent ran for reelection
Aligned candidate victory	Dummy for whether an aligned party was elected
Incumbent mayor from aligned party	Dummy for whether the incumbent mayor belongs to an aligned party
Run for reelection from an aligned party	Dummy for whether the incumbent running for reelection belongs to an aligned party
Year of Contribution	2004 or 2008



Table 2.1 - Summary Statistics

<u>Variables</u>	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	2005	2009	2005-2009	2005-2009 Firms that donate to aligned party	2005-2009 Firms that donate to non- aligned party	2005-2009 Firms that donate to both parties	2005-2009 Firms that don't donate
total lending (R\$ thousand)	2,529 (34,373)	5,875 (94,798)	4,202 (71,322)	3,208 (39,832)	2,469 (27,220)	30,613 (239,185)	2,144 (48,928)
lending share from public federal banks	0.302 (0.400)	0.328 (0.393)	0.315 (0.397)	0.338 (0.396)	0.313 (0.393)	0.303 (0.367)	0.302 (0.402)
proportion of lending maturing after one year	0.164 (0.228)	0.232 (0.231)	0.198 (0.232)	0.218 (0.229)	0.195 (0.227)	0.259 (0.246)	0.179 (0.232)
default rate	0.006 (0.148)	0.022 (0.238)	0.014 (0.198)	0.021 (0.206)	0.019 (0.195)	0.015 (0.185)	0.006 (0.196)
share of default from public federal banks	0.019 (0.132)	0.038 (0.181)	0.028 (0.159)	0.032 (0.167)	0.032 (0.169)	0.032 (0.168)	0.023 (0.146)
risky credit ratio	0.020 (0.121)	0.051 (0.203)	0.036 (0.168)	0.031 (0.154)	0.031 (0.152)	0.030 (0.145)	0.041 (0.185)
donate to nonaligned party	0.209 (0.407)	0.202 (0.402)					
donate to aligned party	0.177 (0.382)	0.413 (0.492)					
donate to aligned and nonaligned party	0.039 (0.194)	0.079 (0.269)					
Observations	35,513	35,513	71,026	20,980	14,606	4,183	31,257

Note: This table reports mean values of each variable and standard deviations are given in parentheses. Total lending is the total amount of loans outstanding at the end of the year. Default rate is the proportion of nonperforming loans and the loans renegotiated with a risk classification equal or worse than D (which are required by the Central Bank as a provision for delinquency of at least 10%) on the total lending. Default rate is measured at the end of the next year (t+1). Risky credit ratio is the same as default rate, but measured at end of the last year (t-1). The data is at the firm level from SCR - Credit Information System.

Table 2.2 - Do Campaign Contributors Borrow More After Elections? - Exploiting Within Firm Variation

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<u>Dependent Variable:</u>	log(total lending)	log(total lending)	log(total lending)	proportion of lending maturing after one year	proportion of lending maturing after one year	proportion of lending maturing after one year	default rate	default rate
donate to nonaligned party	0.706*** (0.050)	0.605*** (0.049)	0.265*** (0.045)	0.009*** (0.002)	0.008*** (0.002)	0.001 (0.002)	0.010*** (0.002)	0.006** (0.002)
donate to aligned party	0.914*** (0.045)	0.801*** (0.044)	0.446*** (0.040)	0.015*** (0.002)	0.014*** (0.002)	0.007*** (0.002)	0.008*** (0.002)	0.003 (0.002)
donate to aligned and nonaligned party	1.260*** (0.091)	1.133*** (0.089)	0.672*** (0.083)	0.031*** (0.005)	0.030*** (0.005)	0.021*** (0.005)	0.009** (0.004)	0.002 (0.004)
risky credit ratio		-5.389*** (0.160)	-6.085*** (0.146)		-0.053*** (0.007)	-0.067*** (0.007)		
log(total lending <sub>t-1</sub> )			0.356*** (0.006)			0.007*** (0.000)		0.007*** (0.000)
Observations	71,026	71,026	71,026	71,026	71,026	71,026	71,026	71,026
R-squared	0.050	0.094	0.222	0.054	0.056	0.075	0.011	0.032
Number of observ	35,513	35,513	35,513	35,513	35,513	35,513	35,513	35,513
Firm FE	YES	YES	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES	YES	YES
donate to aligned party - donate to nonaligned party	0.208	0.196	0.181	0.00576	0.00564	0.00535	-0.00148	-0.00293
p-value	0.000969	0.00145	0.00144	0.0711	0.0769	0.0901	0.606	0.302

Note: I compare the total amount of loans granted to the same firm in 2005 and 2009 by all banks. Total lending is the total amount of loans outstanding at the end of the year. Default rate is the proportion of nonperforming loans and the loans renegotiated with a risk classification equal or worse than D (which are required by the Central Bank as a provision for delinquency of at least 10%) on the total lending. The default rate is measured at the end of the next year (t+1). Risky credit ratio is the same as default rate, but measured at end of the last year (t-1). The data is at the firm level. Robust standard errors are reported in parentheses.

\*\*\* significant at 1% \*\* significant at 5% \* significant at 10%

Table 2.3 - Do Campaign Contributors Borrow More in Electoral Years?

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<u>Dependent Variable:</u>	log(total lending)	log(total lending)	log(total lending)	proportion of lending maturing after one year	proportion of lending maturing after one year	proportion of lending maturing after one year	default rate	default rate
donate to nonaligned party	1.028*** (0.052)	0.939*** (0.051)	0.644*** (0.046)	0.017*** (0.002)	0.016*** (0.002)	0.011*** (0.002)	-0.019*** (0.002)	-0.021*** (0.002)
donate to aligned party	1.063*** (0.047)	0.964*** (0.046)	0.664*** (0.042)	0.022*** (0.002)	0.021*** (0.002)	0.016*** (0.002)	-0.021*** (0.002)	-0.023*** (0.002)
donate to aligned and nonaligned party	1.380*** (0.097)	1.238*** (0.096)	0.916*** (0.086)	0.027*** (0.005)	0.025*** (0.005)	0.019*** (0.005)	-0.024*** (0.004)	-0.026*** (0.004)
risky credit ratio		-4.394*** (0.174)	-5.368*** (0.155)		-0.047*** (0.007)	-0.065*** (0.007)		
log(total lending <sub>t-1</sub> )			0.414*** (0.006)			0.007*** (0.000)		0.003*** (0.000)
Observations	71,026	71,026	71,026	71,026	71,026	71,026	71,026	71,026
R-squared	0.121	0.144	0.295	0.108	0.109	0.130	0.026	0.033
Number of observ	35,513	35,513	35,513	35,513	35,513	35,513	35,513	35,513
Firm FE	YES	YES	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES	YES	YES
donate to aligned party - donate to nonaligned party	0.0352	0.0253	0.0199	0.00508	0.00497	0.00488	-0.00220	-0.00222
p-value	0.593	0.697	0.737	0.103	0.111	0.113	0.382	0.375

Note: I compare the total amount of loans granted to the same firm in 2004 and 2008 by all banks. Total lending is the total amount of loans outstanding at the end of the year. Default rate is the proportion of nonperforming loans and the loans renegotiated with a risk classification equal or worse than D (which are required by the Central Bank as a provision for delinquency of at least 10%) on the total lending. The default rate is measured at the end of the next year (t+1). The risky credit ratio is the same as the default rate, but measured at end of last year (t-1). The data is at the firm level. Robust standard errors are reported in parentheses.

\*\*\* significant at 1% \*\* significant at 5% \* significant at 10%

Table 2.4 - Do Campaign Contributors Borrow More from Public Federal Banks after Elections?

	(1)	(2)	(3)	(4)	(5)
<u>Dependent Variable:</u>	lending share from public federal banks	lending share from public federal banks	lending share from public federal banks	share of default from public federal bank	share of default from public federal bank
donate to nonaligned party	0.011*** (0.004)	0.002 (0.004)	-0.002 (0.004)	0.008*** (0.002)	0.006*** (0.002)
donate to aligned party	0.023*** (0.003)	0.014*** (0.003)	0.010*** (0.003)	0.008*** (0.002)	0.005*** (0.002)
donate to aligned and nonaligned party	0.035*** (0.007)	0.022*** (0.007)	0.017** (0.007)	0.009*** (0.004)	0.005 (0.004)
log(total lending <sub>t-1</sub> )		0.010*** (0.000)	0.011*** (0.000)		0.004*** (0.000)
risky credit ratio			-0.152*** (0.010)		
Observations	71,026	71,026	71,026	71,026	71,026
R-squared	0.005	0.025	0.031	0.003	0.013
Number of observ	35,513	35,513	35,513	35,513	35,513
Firm FE	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES
donate to aligned party - donate to non aligned party	0.0123	0.0120	0.0116	-0.000504	-0.00132
p-value	0.0100	0.0117	0.0142	0.831	0.574

Note: I compare the share of public federal banks in the total lending and default to the same firm in 2005 and 2009. The data is at the firm level. Robust standard errors are reported in parentheses.

\*\*\* significant at 1% \*\* significant at 5% \* significant at 10%

Table 2.5 - Do Campaign Contributors Borrow More from Public Federal Banks in Election Years?

	(1)	(2)	(3)	(5)	(6)
<u>Dependent Variable:</u>	lending share from public federal banks	lending share from public federal banks	lending share from public federal banks	share of default from public federal bank	share of default from public federal bank
donate to nonaligned party	0.021*** (0.004)	0.013*** (0.004)	0.010** (0.004)	-0.002 (0.002)	-0.003* (0.002)
donate to aligned party	0.027*** (0.003)	0.019*** (0.003)	0.016*** (0.003)	-0.004*** (0.002)	-0.006*** (0.002)
donate to aligned and nonaligned party	0.027*** (0.007)	0.019*** (0.007)	0.014** (0.007)	-0.006* (0.003)	-0.007** (0.003)
log(total lending <sub>t-1</sub> )		0.012*** (0.000)	0.013*** (0.000)		0.002*** (0.000)
risky credit ratio			-0.135*** (0.010)		
Observations	71,026	71,026	71,026	71,026	71,026
R-squared	0.009	0.037	0.041	0.004	0.008
Number of observ	35,513	35,513	35,513	35,513	35,513
Firm FE	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES
donate to aligned party - donate to non aligned party	0.00656	0.00647	0.00616	-0.00274	-0.00275
p-value	0.172	0.173	0.193	0.198	0.194

Note: I compare the share of public federal banks in the total lending and default to the same firm in 2004 and 2008. The data is at the firm level. Robust standard errors are reported in parentheses.

\*\*\* significant at 1% \*\* significant at 5% \* significant at 1%

Table 2.6 - Does Preferential Treatment Differ Across Regions?

<u>Dependent Variable:</u>	lending share from public federal banks		
	All Regions	North Northeast Centre-West	South Southeast
	(1)	(2)	(3)
donate to nonaligned party	-0.002 (0.004)	-0.005 (0.007)	0.000 (0.005)
donate to aligned party	0.010*** (0.003)	0.010* (0.006)	0.012*** (0.004)
donate to aligned and nonaligned party	0.017** (0.007)	0.039* (0.021)	0.016 (0.013)
risky credit ratio	-0.152*** (0.010)	-0.205*** (0.019)	-0.130*** (0.014)
log(total lending <sub>t-1</sub> )	0.011*** (0.000)	0.013*** (0.001)	0.010*** (0.001)
Observations	71,026	22,397	39,379
R-squared	0.031	0.039	0.027
Number of observ	35,513	11,212	19,703
Firm FE	YES	YES	YES
Year FE	YES	YES	YES
donate to aligned party - donate to non aligned party	0.0116	0.0150	0.0114
p-value	0.0142	0.0923	0.0538

Note: I compare the share of public federal banks in the total lending to the same firm in 2005 and 2009. The data is at the firm level. Robust standard errors are reported in parentheses.

\*\*\* significant at 1% \*\* significant at 5% \* significant at 1%