

POLITICS AND FINANCE:

A STUDY ON THE IMPACT OF CAMPAIGN DONATIONS ON BRAZILIAN FIRMS

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Resumo: Este trabalho visa identificar possíveis vantagens que as empresas obtêm ao contribuir com campanhas políticas. Para isso, foi utilizada uma extensa base de dados com informações de doações a candidatos aos cargos de deputado, senador e presidente nas eleições de 2006 e 2010. As variáveis de interesse analisadas foram o retorno anormal cumulativo à época da divulgação do resultado das eleições e o retorno sobre o patrimônio líquido no ano posterior a cada eleição. Foram estimadas regressões de dados em painel através de mínimos quadrados ordinários, e incluídos efeitos fixos de ano e setor das empresas. Os resultados indicam que não apenas o mercado antecipa benefícios futuros para as empresas que contribuíram com campanhas – o que se reflete em retornos anormais cumulativos positivos à época da eleição – mas também estas empresas apresentam retornos sobre o patrimônio líquido superiores aos daquelas que não participaram do processo político. Além disso, doações a candidatos vencedores geram retorno superior aos de doações a candidatos perdedores; o que vai ao encontro da hipótese de retribuição de favores. De forma similar, contribuições a candidatos filiados à coligação do presidente eleito também apresentaram impacto superior quando comparadas com doações a candidatos da oposição.

Palavras-chave: Contribuições de campanha, Efeitos Fixos, Retorno Anormal Cumulativo, Retorno sobre Patrimônio Líquido

Abstract: This paper aims to identify potential benefits obtained by companies for their contributions to political campaigns. We used an extensive database with information on donations to House, Senate, and Presidency candidates in the 2006 and 2010 elections. The variables of interest analyzed were the cumulative abnormal return by the time the results of each election became known and the return on equity in the year following the elections. Panel regressions were estimated as ordinary least squares (OLS), and fixed effects of year and industry were included. The results indicate that not only does the market anticipate future benefits for companies that contributed to campaigns - which is reflected in positive cumulative abnormal returns at the announcement of the election results - but these companies also have higher returns on equity than those that were not involved in the political process. In addition, donations to winning candidates generate higher returns than donations to losing candidates, which supports the return of favors hypothesis. Similarly, contributions to candidates affiliated with the president's coalition's also had a higher impact when compared to donations to political opponents.

Keywords: Campaign Contributions, Fixed Effects, Cumulative Abnormal Return, Return on Equity

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1 INTRODUCTION

The interaction between markets and political systems has always awakened growing interest of scholars at large. As a matter of fact, mutual interest between the political class and the business sector has been widely discussed since the mid-1970s. At that time, the impact of this relationship on the political agenda was brought into sharp focus, with investigation being conducted into the extent to which the participation of firms, either directly or indirectly, in campaigns, elections, or political processes affected the final outcome. After some time, these connections were also looked into from the business perspective as an attempt to find some kind of compromise that prompted such action.

It seems reasonable to admit that having a good relationship with the business sector could be advantageous for politicians. Campaign donations tend to be more generous for those candidates with whom firms build up a longer and steadier relationship (Snyder, 1992; Kroszner and Stratmann, 1998). These contributions are seen by voters and by the market as a demonstration of candidates' power and live up to their reputation since, to a considerable extent, they end up showing the candidates' capacity to influence government decisions (Coate, 2004; Ansolabehere and Snyder, 1999). Analogously, those politicians who exert a more powerful influence and who are more likely to win tend to raise more funds (Grier and Munger, 1991; Romer and Snyder, 1994; Grossman and Helpman, 1996).

If a good relationship with the business sector leads to larger contributions to the campaigns and therefore increases the candidates' chances of winning the elections - i.e., they generate welfare to political agents -, it can be logically inferred that they must be profitable to firms as well. Actually, empirical evidence shows that keeping some sort of political connection proves advantageous for firms. Using data on more than 20,000 firms in 47 countries, Faccio (2006) observed a significant increase in market value when a large shareholder or board member went into politics. Likewise, abrupt deaths of politicians with some kind of connection with firms were followed by an average decrease of 2% in market value (Faccio and Parsley, 2009). Even the worth of a connection with the Nazi movement in the 1930s was considered to be positive. Firms that forged some kind of relationship with Hitler had 5 to 8% higher returns than those of their competitors (Ferguson and Voth, 2005).

Besides the direct participation of board members or shareholders, firms can also indirectly take part in processes by making donations to political campaigns. This literature, however, is still coming into its own. Again, with special regard to market value, it appears that having this kind of relationship is advantageous for firms. Roberts (1990), for instance, demonstrated that the death of U.S. senator Henry Jackson had a negative effect on the worth of firms that had made donations to his campaign. Along the same line, Jayachandran (2006) described the "Jeffords effect":³ for every US\$ 250,000,00 donated to the Republican Party, a firm's market value fell by approximately 0.8%, whereas contributions made to the Democratic Party pushed up stock prices, albeit at a lower rate.

In the controversial 2000 U.S. presidential elections, Shon (2006) found a positive (negative) relationship between the donations made to George Bush (Al Gore) and firms' returns. The same pattern was observed in political parties as a whole. In addition, the incremental effect of donations on individual firms has been examined compared with the effect on industries or sectors, supporting the assumption that contributions to campaigns are driven by the acquisition of political

³ In May of 2001, senator James Jeffords left the Republican Party, eventually handing the control of the U.S. Senate over to the Democrats.

power, and not only by ideological commitment. Attention should be devoted to some other factors, though. By analyzing an extensive database on corporate contributions made by U.S. firms between 1979 and 2004, Cooper, Gulen and Ovtchinnikov (2008) built political indices and demonstrated an incremental effect on the shares of firms that make donations to House candidates and Democrats or to those running for election in the same state where the firms are based.

Despite this body of evidence, no consensus agreement exists in the literature. Ansolabehere, Snyder and Ueda (2004) showed that there was no impact for firms that donated soft money⁴ compared to those which did not do so. As there was no limit on the amount of soft money donations, the existence of a mechanism that would be widely used by firms which wish to get political favors was hypothesized. Hence, when donations were banned, a decrease was expected in the stock returns of those firms that received them, but no significant results were found.

The level of institutional development of a country is a noteworthy aspect. While political involvement has provenly affected companies both in mature democracies and in economically unstable countries, the impact tends to be stronger on the latter (Campello, 2007). Financial instability and poor level of development of controlling institutions eventually lure companies into forging a relationship with the political class, so as to try and get some advantages over their competitors. With respect to developed countries, emerging countries are more prone to seek advantages that cannot be derived from competitive markets in the political process (Martinez and Santiso, 2003). In countries where markets are more efficient and where information is more widely disseminated, there is a higher cost associated with obtaining advantages from lobbying or participation in political processes.

Brazil is a country that tried to get around this problem by changing the financing model. In 2015, a new Electoral Reform was approved, placing a ban on corporate donations, with the aim of curbing the influence of economic power on politics and reducing potential risks of corruption, recurrently associated with the involvement of companies in the political process. It has been argued that corporate donations to political campaigns would, more often than not, be just currying future political favors, thereby increasing economic power over the democratic process.

This was not the first change in the Brazilian electoral system. In 1992, after corruption scandals, a bill that made corporate donations legal provided that they were fully disclosed to the Supreme Electoral Court, was approved. The mixed financing system was in place from 1993 to 2015, even though it constantly came under scathing criticism. On the other hand, although the ban was reintroduced, the uncertainty over the efficacy of this ban lingers on inasmuch as the use of slush fund was a widespread practice until 1993. Notwithstanding, the key point in this discussion is the financial advantage or not of donating companies: would they actually be getting advantages over those which do not participate in the political process?

Based on 1998 and 2002 elections data, Claessens, Feijen and Laeven (2008) observed that positive movements in the stock value of companies that contributed to House candidates could be explained, to some extent, by these donations. The authors assume that the market anticipates that these political connections will result in some sort of advantage; in this case, the hypothetical privileged access to financing. In Brazil, where interest rates rank amongst the highest ones around the globe, financial intermediation is one of the lowest, and institutional development is still lacking, this access becomes more valuable than that observed in developed countries. It should be noted that bank financing of companies that made donations to House candidates was higher compared with non-donating companies. The distribution of donations is of relevance, i.e., contributions to winning candidates, reelected candidates, and ruling party candidates (members of

⁴ Soft money refers to the money given directly to political parties, unregulated by the Federal Election Commission (FEC) on hard money donations. The political reform introduced in 2002 forbids soft money contributions.

the president's party and its coalitions) yielded larger returns to the firms. Although political connections in countries with weak legal and financial development may represent a socially desirable alternative, the analysis revealed that donating companies had lower return on assets (ROA), despite higher investment rates. The cost incurred by the grant of preferential loans to these less profitable firms was at least 0.2% of the GDP (Claessens, Feijen and Laeven, 2008).

Higher access to financing occurs mainly through a specific bank, the Brazilian Development Bank (BNDES). There is empirical evidence that companies which turned out to be the major financial supporters of winning candidates in the 2002 and 2006 elections were granted more credit (Lazzarini, Musacchio, Bandeira de Mello and Marcon, 2011; Sztutman and Aldrighi, 2013). By looking only at candidacy, the Brazilian committee and management office of the Workers' Party (PT), one observes that companies that received credit from BNDES between 2008 and 2010 were the major financial supporters of PT's presidential candidate in the 2010 elections (Rocha, 2011). It is hypothesized, though, that this is so because of the larger number of contracts, often including BNDES loans, negotiated by donating firms with the government. Moreover, the government can choose the companies that contributed to the campaigns of its party as "national champions," and their sectors of economic activity as targets for industrial policies. Anyway, financial supporters would have to qualify in order to receive more funds from the BNDES.

Boas, Hidalgo and Richardson (2011) studied the impact of granting larger contributions to candidates running for the 2010 elections on the number of the firm's contracts with the government. In the case of companies specialized in public works, if a PT candidate supported by them wins the elections, the price of their contracts soars, exceeding the donated amount by 8.5 times. Donations to candidates from coalition parties had no positive returns, suggesting that PT uses public works in favor of its members, but not to maintain the coalition. Interestingly enough, donating companies displayed a less oligopolistic behavior. Large companies that made donations on a regular basis enjoyed a friendly relationship with center-right parties which ruled Brazil between 1985 and 2002, but refrained from making any donations to PT, whose rhetoric of honesty and transparency and left-wing ideology suggested that the party would not accept paying them back with political favors. President Lula's first term demonstrated that this was a fallacious idea, and since PT did not have a history of steady relationship with firms, the political investment market became more competitive, and smaller companies also vied for the benefits derived from good political connections.

Bearing this scenario in mind, this paper investigates political connections with firms from the corporate and financial standpoint, extending the study of Claessens, Feijen and Laeven (2008) to the 2006 and 2010 elections and bringing the scope of analysis beyond the candidacies for the House, Senate, and Presidency elections. The goal is to detect possible advantages gained from these connections. If contributions to political parties do favor and empower economic groups, systematic evidence of this practice has to be provided. Accordingly, the aim is to assess whether open-capital Brazilian companies that made contributions to political campaigns in the 2006 and 2010 elections increased the value of their stocks compared with non-donating companies and whether this effect can actually be explained by these contributions. Above all, the objective is to check whether there was market anticipation and whether the connections built through donations led to higher operational profitability by means of return on equity disclosed by companies in their balance sheets.

From the period analyzed by Claessens, Feijen and Laeven (2008) to late 2010, there was a remarkable increase in campaign donations. In 2002, the total amount of contributions⁵ to candidates and parties hovered around R\$ 1.6 billion. In the 2010 campaign, the amount was

⁵ Including natural persons and legal entities. Source: Brazilian Supreme Electoral Court (TSE).

slightly higher than R\$ 4.6 billion,⁶ indicating a real increase of nearly 190%. As companies are the main source (accounting, historically, for over 80% of donations), one should expect them to have some kind of advantage from their support of political campaigns.

To achieve the goal above, panel data on listed companies and their donations to the 2006 and 2010 campaigns were assessed. The regressions were made using pooled OLS, including fixed effects for year and sector. Two variables of interest were analyzed: cumulative abnormal return, calculated using an event study, and return on equity, informed by companies in their fiscal statements. The first hypothesis is that stock price at the time of elections reflects market expectations about political connections of donating firms; in other words, if contributing to political campaigns is seen as something possibly advantageous to the market, systematic increases in firms' stock prices should be expected. The second hypothesis is that not only does the market identify these donations as positive, but also the donations play an important role in the political process yielding profitability to the firms.

Results indicate that those firms that contributed to political campaigns improved their stock value after the election results. More importantly, firms with political connections showed systematically higher profitability on own capital in the year following the elections, even after controlling for specific characteristics of the firms and including fixed effects for the sector and year in the regressions.

In addition, donations made to winning candidates or to those belonging to the president's coalitions had a positively higher impact relative to cumulative abnormal return, indicating investors' expectations, and to operational profitability. If positive results only indicated ideological principles, there would be less robust results and no systematic difference between donating to winning and/or losing candidates and to political allies and/or opponents.

The paper is structured as follows. Chapter 2 shows data on the Brazilian financing system and the statistics for the 2006 and 2010 elections. Chapter 3 describes the data and methodology used. Chapter 4 displays and discusses the results. Chapter 5 concludes and presents the final remarks.

2 CAMPAIGN DONATIONS IN BRAZIL AND THE 2006 AND 2010 ELECTIONS

The Brazilian electoral system has a cyclic pattern. The electoral system in force during the 2006 and 2010 elections was adopted in 1994 after the Congress passed Act 8.713 of 1993. Until then, campaign donations were not allowed. The change was made after two major political scandals,⁷ one of which led to the impeachment of Fernando Collor de Mello, the first president democratically elected after almost 30 years of a dictatorial regime (Samuels, 2001).

The new Act demanded that all candidates render account of the donations to the Supreme Electoral Court within two months after the elections. The limits on donations were generous: a company could contribute up to 2% of its annual revenue, and natural persons up to 10%. Later, Act 8713/93 was amended by Act 9.504 of 1997, which, along with the articles of the Political Parties Act dealing with the Campaign Fund, regulated the Brazilian electoral system until 2015, when the electoral reform was approved. In general, besides imposing limits on private funds, the Act forbade

⁶ Both values corrected by IPCA for July/2014.

⁷ The first one was the slush fund established by PC Farias, treasurer during president Collor's term, and the second one was the corruption scheme involving lawmakers from the congressional budget committee, known as "the Seven Dwarfs," and a gang of corrupt contractors.

donations from abroad and from public resources of any nature, which wound up affecting unions, considering that union dues cannot be allocated for political and partisan purposes. In practice, however, there existed a mixed system of public and private financing, if we take into account the financial resources from the Campaign Fund⁸ (Araújo, 2004).

The financing model adopted in Brazil attached some importance to economic power, for two special reasons: the first one concerns the open-list proportional representation⁹, under which the candidate competes directly with candidates from other parties and from his/her own party, too. The second reason has to do with the fact that the Brazilian states that elect House representatives are too big, which requires a large number of votes for them to be elected, benefitting those candidates who can afford to pay for campaign costs in several regions (Araújo, 2004).

Also, the organizational weakness of political parties and political platform inconsistency are factors that increase the costs of election campaigns (Samuels, 2001). As candidates cannot make use of partisan ideology to hunt for votes, they must rely more and more on personal marketing. This type of activity is, by definition, typically capital-intensive. Samuels (2001) analyzed 1994 and 1998 elections data and compared them with those of U.S. elections. The data are similar, but considering U.S. population and GDP, the cost is relatively higher in Brazil, even when not taking into account that disclosed values tend to be lower than the actual ones. With respect to the 2006 elections, the costs were also similar. The cost of Brazilian voters averaged US\$ 3.07 whereas that of Americans in the 2004 elections was US\$ 3.25.¹⁰ Note also that more than 50% of U.S. costs had to do with the purchase of airtime, which is paid by the federal government in Brazil.

The impact of expenditures and fundraising on the candidates' performance has been widely reported. Those with easier access to financing have more funds to invest in personal vote-seeking activities, such as marketing, hiring of campaign personnel, transportation, among others (Mancuso, 2012). Marcelino (2010) assessed the 2002 and 2006 House and Senate elections and found a positive and significant association between election costs and votes in the four election rounds, in the country as a whole and in each state. Likewise, Figueiredo Filho (2009), Peixoto (2010), and Figueiredo Filho et al. (2011) observed a positive and significant association between campaign costs and votes in the 2006 House elections. Figueiredo Filho (2009) and Peixoto (2010) gathered evidence in favor of the "Jacobson effect," according to which the impact of campaign costs is higher for challenging candidates than for those who are running for reelection. Peixoto (2010) also described a positive and significant association between expenditures and votes in the elections for state legislative assemblies in 2006. Thus, in practice, higher expenditures increase the chances of winning, and taking into consideration the Brazilian electoral system framework, it is possible to explain why political campaigns in Brazil are among the most expensive ones in the world.

Owing to high campaign costs, there is a huge demand for corporate contributions. The Act, however, also allowed for sizable supply. Because the donation limits are estimated based on annual revenues, contributions could involve large amounts, unlike in the USA, where firms can only make contributions indirectly through their political action committees (PACs), not exceeding US\$ 5,000 per candidate. Since unions and trade associations cannot contribute, natural persons are another important source of financing, being allowed to donate part of their annual revenues. In Brazil, differently from the USA, where donations from natural persons outnumber corporate contributions,

⁸ The federal government budget committee increased the transfer of funds to the Campaign Fund by 300%, which went up from R\$ 289 million to R\$ 867.5 million in 2015.

⁹ System according to which the number of seats for each party follows the proportion of votes obtained and the order of elected candidates is defined by the amount of votes each of them received.

¹⁰ Values adjusted by the purchasing power parity. Source: Folha de São Paulo, 2006.

campaigns are mainly financed through corporate donations. Table 1 shows the source of funds for the 2006 and 2010 elections. If added to the donations from committees and parties, whose funds are essentially obtained from corporate donations, contributions from legal entities accounted for around 80% of the total amount donated in 2006 and for almost 90% in 2010. Presidential elections are an exception, as they are mostly financially supported by the candidates' specific committees, i.e., indirectly financed by corporations as well.

Table 2 shows the types of corporate donations. The donations can be made directly to candidates or through specific committees (e.g., for president) and parties. In 2006, when parties did not have to render account of their revenues, the amount was split between direct donation to candidates (50.2%) and to committees (49.8%). In 2010, this practice was maintained (30.6% and 29.6%, respectively), but donations were found to have strongly favored political parties (39.8%). The biggest individual donation (R\$ 6,010,000.00) was to one of PT management offices in 2010.¹¹

The major donating companies are in those sectors exposed to greater government intervention or influence, namely the financial, civil construction, and heavy industry sectors (Samuels, 2001; Claessens et al, 2008, Mancuso, 2012). Table 3 displays the donations made by stock exchange-listed companies and the respective sectors. In 2006, the major contributions were made by the mining sector (24.2%), which was outranked by construction companies in 2010 (24%). This rate must have been overestimated, considering that several companies among the major sponsors of the 2006 and 2010 electoral campaigns are not listed on Bovespa and, therefore, are not included in this table.

Different public offices attract different industries. Presidential candidates raised relatively more funds from the financial and heavy industry sectors than did candidates for other public offices, as a president is more closely related to decisions on interest rates, tariffs, and taxes, which appeal to bankers and companies with overseas investment. The executive branch also wields great influence over the grant of subsidies and regulation of the economy (Boas, Hidalgo and Richardson, 2013).

¹¹ Donation made by Vale Manganês S/A.

Table 1 – Sources of donations for the 2006 and 2010 election campaigns (in R\$).

	Total		House Representative				Senator			President						
	2006	%	2010	%	2006	%	2010	%	2006	%	2010	%				
1. Total amount of donations	1,050,793,882		3,172,374,239		426,207,405		916,108,474		91,351,848		352,519,470		162,763,269		272,078,116	
1. Number of donations	103,558		178,905		81,440		132,512		9,232		11,651		1,767		3,670	
1. Average donation	10,147		17,732		5,233		6,913		9,895		30,257		92,113		74,136	
1. Candidates	3,920		4,672		3,750		4,374		163		286		7		12	
1. Average donation per candidate	268,060		679,018		113,655		209,444		560,441		1,232,586		23,251,896		22,673,176	
1.1 Donations from legal entities	554,782,759	52.8%	1,729,982,071	54.5%	234,167,225	54.9%	370,272,147	40.4%	41,448,858	45.4%	139,456,670	39.6%	2,846,010	1.7%	19,253,595	7.1%
1.1 Number of donations from legal entities	18,203		23,819		14,060		14,841		1,102		2,308		40		91	
1.1 Average donation from legal entities	30,478		72,630		16,655		24,949		37,612		60,423		71,150		211,578	
1.2. Donations from natural persons	114,021,704	10.9%	205,919,057	6.5%	65,597,108	15.4%	113,077,895	12.3%	12,808,179	14.0%	18,981,927	5.4%	489,205	0.3%	1,013,159	0.4%
1.2 Number of donations from natural persons	48,983		97,491		38,279		72,922		5,513		3,679		123		282	
1.2 Average donation from natural persons	2,328		2,112		1,714		1,551		2,323		5,160		3,977		3,593	
1.3 Donations from other candidates and committees	214,124,348	20.4%	517,640,568	16.3%	28,714,523	6.7%	123,185,915	13.4%	20,651,717	22.6%	68,694,702	19.5%	144,979,926	89.1%	249,178,251	91.6%
1.3 Number of donations from other candidates and committees	10,342		27,849		7,538		20,394		1,115		2,746		298		3,169	
1.3 Average donation from other candidates and committees	20,704		18,587		3,809		6,040		18,522		25,016		486,510		78,630	
1.4 Donations from political parties	74,769,056	7.1%	563,312,758	17.8%	17,828,548	4.2%	176,418,529	19.3%	5,466,455	6.0%	104,793,883	29.7%	13,862,639	8.5%	2,539,319	0.9%
1.4 Number of donations from political parties	2,616		6,302		1,632		4,167		209		603		315		100	
1.4 Average donation from political parties	28,581		89,386		10,924		42,337		26,155		173,788		44,008		25,393	
1.5 Other funds	93,096,016	8.9%	155,519,784	4.9%	79,900,002	18.7%	133,153,988	14.5%	10,976,639	12.0%	20,592,288	5.8%	585,489	0.4%	93,793	0.0%
1.5 Number of other funds	23,414		23,444		19,931		20,188		1,293		2,315		991		28	
1.5 Average	3,976		6,634		4,009		6,596		8,489		8,895		591		3,350	

Source: Data compiled by the authors

Table 2 – Source of donations for the 2006 and 2010 electoral campaigns. (in R\$).

Donations from legal entities	2006	%	2010	%
1. Total amount of donations from legal entities	554,782,758.82		1,729,982,071.49	
1. Number of donations from legal entities	18,203		23,819	
1. Average donation from legal entities	30,477.55		72,630.34	
1.1 Donations from legal entities to candidates	278,462,093.46	50.2%	528,982,411.60	30.6%
1.1 Number of donations from legal entities to candidates	15,202	83.5%	17,240	72.4%
1.1 Average donation from legal entities to candidates	18,317.46		30,683.43	
1.2 Donations from legal entities to committees	276,320,665.36	49.8%	512,748,173.50	29.6%
1.2 Number of donations from legal entities to committees	3,001	16.5%	3,516	14.8%
1.2 Average donation from legal entities to committees	92,076.20		145,832.81	
1.3 Donations from legal entities to parties	Not reported		688,251,486.39	39.8%
1.3 Number of donations from legal entities to parties	Not reported		3,063	12.9%
1.3 Average donation from legal entities to parties	Not reported		224,698.49	
1.1.1 Donations from legal entities to House representatives	234,167,225.43	42.2%	370,272,146.93	21.4%
1.1.1 Number of donations from legal entities to House representatives	14,060	77.2%	14,841	62.3%
1.1.1 Average donations from legal entities to House representatives	16,654.85		24,949.27	
1.1.2 Donations from legal entities to senators	41,448,858.06	7.5%	139,456,669.55	8.1%
1.1.2 Number of donations from legal entities to senators	1,102	6.1%	2,308	9.7%
1.1.2 Average donations from legal entities to senators	37,612.39		60,423.17	
1.1.3 Donations from legal entities to presidents	2,846,009.97	0.5%	19,253,595.12	1.1%
1.1.3 Number of donations from legal entities to presidents	40	0.2%	91	0.4%
1.1.3 Average donation from legal entities to presidents	71,150.25		211,577.97	

Source: Data compiled by the authors

Table 3 – Campaign donations per sector for the 2006 and 2010 elections (in R\$).

Sectors	Total donation - 2006	%	No. of donations 2006	Average contribution - 2006	Total donation - 2010	%	No. of donations 2010	Average contribution - 2010
Mineração	24,734,732.43	24.2%	97	254,997.24	24,710,000.00	7.0%	33	748,787.88
Finances and Insurances	17,145,487.29	16.7%	110	155,868.07	43,010,550.35	12.3%	222	193,741.22
Metallurgy and Steelmaking	16,743,069.92	16.3%	198	84,560.96	35,398,500.00	10.1%	272	130,141.54
Chemicals	9,066,783.82	8.9%	116	78,161.93	29,735,000.00	8.5%	127	234,133.86
Paper and Pulp	8,576,436.89	8.4%	175	49,008.21	9,741,802.34	2.8%	147	66,270.76
Vehicles and Spare Parts	5,591,596.21	5.5%	86	65,018.56	4,945,500.00	1.4%	128	38,636.72
Foods and Beverages	5,232,507.00	5.1%	18	290,694.83	65,894,385.80	18.8%	264	249,599.95
Oil and Gas	4,211,067.05	4.1%	76	55,408.78	0.00	-	-	0.00
Textiles	3,520,439.97	3.4%	39	90,267.69	7,525,000.00	2.1%	55	136,818.18
Other	3,385,814.13	3.3%	68	49,791.38	35,756,161.77	10.2%	126	283,779.06
Trade	2,468,639.88	2.4%	39	63,298.46	1,392,500.00	0.4%	46	30,271.74
Electroelectronics	604,170.31	0.6%	5	120,834.06	205,000.00	0.1%	5	41,000.00
Civil Construction	431,981.77	0.4%	9	47,997.97	86,098,020.00	24.6%	292	294,856.23
Industrial Machinery	428,960.92	0.4%	9	47,662.32	685,000.00	0.2%	15	45,666.67
Non-metallic Minerals	155,936.36	0.2%	9	17,326.26	1,675,000.10	0.5%	27	62,037.04
Software and Data	54,375.33	0.1%	2	27,187.66	0.00	-	-	0.00
Telecommunications	30,208.52	0.0%	1	30,208.52	0.00	-	-	0.00
Agriculture and Fisheries	22,354.30	0.0%	2	11,177.15	200,000.00	0.1%	4	50,000.00
Transportation and Services	0.00	-	-	-	3,707,405.00	1.1%	103	35,994.22
Total	102,404,562.08				350,679,825.36			

Source: Data compiled by the authors

Party loyalty was low in the 2006 and 2010 elections. On average, firms made contributions to more than two parties, seeking, probably, a political hedge. Despite the large number of parties, the three major parties concentrated 73% of donations in 2006 and 70% in 2010 (Table 4).

Table 4 – Contributions to political parties

Parties	Total received - 2006	%	No. of donations 2006	Total received - 2010	%	No. of donations 2010
PSDB	157,580,825.88	28.4%	3,549.0	426,494,420.22	24.7%	4170
PT	110,869,316.82	20.0%	2471	422,088,103.88	24.4%	4162
PMDB	79,408,730.50	14.3%	2336	291,601,052.50	16.9%	3041
PFL	60,278,997.62	10.9%	2202	-	-	-
PSB	26,931,060.64	4.9%	928	100,173,876.99	5.8%	1290
PP	23,392,341.33	4.2%	1137	72,409,027.31	4.2%	1683
PPS	23,195,896.00	4.2%	996	43,260,694.81	2.5%	881
PTB	18,555,715.76	3.3%	788	42,236,337.85	2.4%	868
PDT	17,443,038.75	3.1%	957	46,514,271.93	2.7%	1103
PL	13,427,271.12	2.4%	628	-	-	-
PV	9,474,111.66	1.7%	785	27,811,863.38	1.6%	982
PC do B	6,505,066.48	1.2%	374	23,038,975.57	1.3%	613
PSDC	1,811,970.95	0.3%	198	1,594,522.00	0.1%	57
PSC	1,798,352.51	0.3%	242	15,976,378.96	0.9%	496
PMN	832,229.74	0.2%	100	7,668,198.29	0.4%	192
PTC	578,433.51	0.1%	71	2,275,733.20	0.1%	112
PRONA	565,106.76	0.1%	71	-	-	-
PHS	438,996.31	0.1%	70	2,820,206.10	0.2%	163
PSL	345,762.53	0.1%	32	1,728,746.11	0.1%	120
PSOL	298,097.19	0.1%	55	273,092.07	0.0%	80
PAN	296,829.54	0.1%	54	-	-	-
PT do B	237,841.70	0.0%	75	1,841,932.56	0.1%	76
PRTB	232,672.00	0.0%	40	646,472.35	0.0%	102
PTN	143,065.58	0.0%	12	1,143,941.65	0.1%	37
PRP	103,659.94	0.0%	23	532,535.36	0.0%	64
PRB	24,218.00	0.0%	4	8,214,617.01	0.5%	142
PCB	12,210.00	0.0%	3	18,010.00	0.0%	7
PSTU	940.00	0.0%	2	14,000.00	0.0%	6
PR	-	-	-	71,977,640.17	4.2%	1054
DEM	-	-	-	117,627,421.22	6.8%	2318
Total	554,782,758.82			1,729,982,071.49		

Source: Data compiled by the authors

Table 5 summarizes the data on campaign donations for 2006 and 2010 according to three public offices (house representative, senator, and president).

Table 5 – Information on campaign donations – Donations from legal entities to all public offices (in R\$).

Variable	2006	2010
Contributions from legal entities		
Total amount of contributions (R\$)	554,782,758.82	1,729,982,071.49
Number of contributions	18203	23819
Average contribution (R\$)	30,477.55	72,630.34
Number of candidates	1990	1913
Average contribution per candidate (R\$)	278,785.31	904,329.36
Listed companies		
Number of companies	563	538
Total amount of contributions (R\$)	102,404,562.08	350,679,825.36
Number of contributions	1059	1866
Average contribution (R\$)	96,699.30	187,931.31
Number of donating firms	89	98
Mean number of contributions per firm	11.9	19.0
Average contribution per firm (R\$)	1,150,613.06	3,578,365.56
Sample		
Number of firms	105	173
Number of donating firms	45	86
Total amount of contributions (R\$)	57,972,267.36	297,437,322.55
Average contribution per firm (R\$)	1,288,272.61	3,458,573.52

Source: Data compiled by the authors

Even though the total amount of contributions rose between 2006 and 2010 (a nominal increase of nearly 200%), donations from legal entities surpassed this figure, reaching 212%. Regarding the source of donations, contributions from legal entities only had a smaller increase than those made by political parties (653%); however, as the revenues of party management offices could not be disclosed back in 2006, it is not possible to make a reliable comparison, since the revenues of political parties also include contributions from legal entities.

The average amount received by a candidate also increased significantly. In 2006, 1,990 candidates raised R\$ 554.8 million, which means, on average, R\$ 278,000 per candidate. In 2010, this average went up to R\$ 904,300, which exceeds the increase in donations made by legal entities, as a consequence of a decrease in the number of candidates.

Among House candidates, the total average amount of donations (including natural persons) rose from R\$ 113,655.31 to R\$ 209,444.10 – an 84% nominal increase. Among Senate candidates, the average went from R\$ 560,440.78 to R\$ 1,232,585.56, an increase of around 120%. The average contributions were lower only between 2006 and 2010 among presidential candidates, due to an increase in the number of candidates (from 7 in 2006 to 12 in 2010), as the total number of

donations grew 67%. Anyway, the average donations for presidential candidates exceeded those made to other candidates: R\$ 23,251,895.56 in 2006 and R\$ 22,673,176.37 in 2010.

The operation of open-capital companies also increased in number and worth, going from R\$ 102.4 million (accounting for almost 18% of the total donated by companies) in 2006 to R\$ 350.7 million (20% of the total). Of 563 firms listed in 2006, 89 made campaign donations, which averaged R\$ 1.2 million. In 2010, the number of donating firms rose significantly, and the amount given by companies grew, on average, more than 200%, reaching R\$ 3.6 million.

3 METHOD AND DATA

The following sections describe the method used, the finance and accounting data, and information on the donations made.

3.1 Method

If campaign donations are expected to add value to firms, their stock values are also expected to increase when the candidate they supported wins. If the winning candidate has some political ideology and if this is regarded as a source of stock price appreciation, the effects will be observed across different sectors or even in the economy as a whole. Thus, if the analyzed firms forged political connections and had abnormal positive returns at the time of election, compared with their competitors, according to the market, there could be specific benefits for the firms.

The first hypothesis concerns the expectations about the behavior of the Brazilian stock market. If investors deem political connections to be positive and if campaign donations are used as a proxy for the strength of such connections, the stock values of contributing firms are expected to increase, i.e., politically active firms (those which contributed to election campaigns) are more likely to be granted specific political favors, which implies an increase in their stock prices after the election results are announced.

H1: Firms that make donations to Presidency, Senate, and House candidates have higher returns on their stock prices when the election results are announced.

The second hypothesis is that not only do markets anticipate benefits to the donating firms, but these benefits actually help with the profitability of those firms. Hence:

H2: Firms that make donations to Presidency, Senate, and House candidates make larger profits after the elections.

The third hypothesis is formulated based on the profile of candidates. As benefits to the firms are closely related to the candidate's victory, the advantage of making contributions to winning candidates must be better than making haphazard contributions. Likewise, among House and Senate candidates, making contributions to those whose parties are included in the president's party coalitions must also yield larger returns. Therefore:

H3: Donations made to winning candidates yield larger returns than haphazard donations, and among House and Senate candidates, it is more advantageous to make donations to candidates affiliated with the president's party.

The third hypothesis helps find possible causal relationships between political connections (represented by contributions) and abnormal returns. If contributions involve future political favors, donations made to winning candidates or candidates from the ruling parties have a systematically stronger impact than contributions in general, as contributions to losing candidates lead to future benefits (Claessens, Feijen and Laeven, 2008). On the other hand, if firms make more donations simply because they have larger returns or profits, there should not be a systematic difference

between donations to winners or losers. Analogously, contributions yield returns, regardless of the candidates' political affiliation and, therefore, it is less likely that the donations are made in exchange for future benefits.

To test the hypotheses above, we used data on campaign donations made to House, Senate, and Presidency candidates in the 2006 and 2010 elections, in addition to financial and accounting data from stock exchange-listed companies during the same period. The explanatory variables included total amount of donations to all candidates (president, senator, and House representative) and to political parties, their committees, and their management offices. The analysis is extended to each of the elections individually, including a subdivision into winning and losing candidates and those belonging or not to the president's coalitions (from political allies or from political opponents).

The dependent variables consisted of cumulative abnormal return (CAR) at the time of the elections and return on equity (ROE) of the year immediately after the elections. CAR was calculated using the conventional event study proposed by MacKinlay (1997). The estimation window corresponded to period (τ_0, τ_1) and the event window included period (τ_1, τ_2) . The event takes place at $\tau = 0$, when the election result is announced and where $\tau_0 < \tau_1 < 0 < \tau_2$. The daily returns of Bovespa-listed companies were calculated as $R_{i,t} = \ln(P_{i,t}/P_{i,t-1})$, where $P_{i,t}$ is the stock price of firm i at t , and the abnormal returns were obtained through the use of a simple capital asset pricing model (CAPM). The procedure was repeated for the 2006 and 2010 elections, using the dates for the second round (October 29, 2006 and October 31, 2010) as events.

The second variable of interest is the ROE of firms in the year following the assessed election period. ROE is the measure of profitability that allows making inferences about the efficiency of firms in producing results using their own capital. The average ROE of the four years that followed the analyzed election period was used as an alternative measure.

Regarding CAR, the following model was estimated:

$$y_{it} = \beta'x_{it-1} + \gamma z_{it} + \theta_t + \eta_j + \varepsilon_{it} \quad (1)$$

Where y_{it} is the CAR of firm i at the time of elections in year t , x_{it-1} is a vector of control variables, z_{it} is one of the measures of campaign donations made by firm i at the start of the election cycle in year t , θ_t is the election year fixed effect, η_j is the fixed effect of sector j in which firm i operates, and ε_{it} is the error term.

Similarly, the following model was estimated for ROE:

$$w_{it+1} = \delta'x_{it-1} + \phi z_{it} + \theta_t + \eta_j + \varepsilon_{it} \quad (2)$$

Where w_{it+1} is the ROE of firm i in the year after the election, $\delta'x_{it-1}$ is a vector of control variables, z_{it} is one of the measures of campaign donations made by firm i at the start of the election cycle in year t , θ_t is the election year fixed effect, η_j is a fixed effect of sector j in which i operates, and ε_{it} is the error term. Models (1) and (2) were estimated using pooled OLS with robust standard errors clustered by firm.

Vector x_{it-1} contains five control variables with different characteristics of the firms that might affect the results. The log of total assets was included as proxy for firm size; the ratio between fixed and total assets was used for asset tangibility; and the liabilities to assets ratio was included for leveraging. Finally, the ratio between EBIT and total assets and growth of operational revenues, respectively, were used for control of operational profitability and of growth opportunities. All control variables are lagged averages of the four years from the previous election cycle.

For H1, one expects coefficient γ to be positive and significant, both economically and statistically. H2 is equivalent to affirming that coefficient ϕ is also positive and significant. For H3, when variable z_{it} refers to contributions made exclusively to winning candidates or to those

belonging to the president's coalition parties, coefficients γ and ϕ have to be higher than when z_{it} includes the total donations to candidates.

3.2 Data

This section shows the political and financial data used and some descriptive statistics. Table A2 defines the sources of each variable and provides information on each one.

3.2.1 Data on donations and election results

The data on the contributions received by candidates, parties or committees are provided by the Supreme Electoral Court. The revenues and expenses of Presidency, House, and Senate candidates, in addition to general data on committees and parties, which are not necessarily linked to a specific candidate, are displayed for the 2006 and 2010 elections. The contributions are classified into seven categories: donations from legal entities, donations from natural persons, own funds, revenues from assets and events, financial applications, financial resources from the party, financial resources from other candidates and committees, and undisclosed resources.

Campaign donations can be made directly to candidates or to party committees and party management offices. So, for example, a presidential candidate from a given party may receive donations under his/her name or in the name of the party's "National Finance Committee for Presidency Candidates." These donations can only be made during the electoral period.

Furthermore, campaigns can also be financed by party management offices, which obtain funds from both public coffers and private donations. In this case, donations do not have to observe the electoral timetable, i.e., they can be made at any time. Only in 2010 did the Supreme Electoral Court start to disclose the revenues of party management offices received during the election period.

The different mechanisms whereby private donations are distributed to election campaigns hinder the identification and allocation of resources. A specific procedure was then adopted. Donations made directly to candidates (president, House representative, or senator) were naturally made in their names. Donations to the "National Finance Committees for Presidency Candidates" were allocated to presidential candidates. Donations to "District/State Finance Committees for Senate Candidates" were allocated to Senate candidates. However, donations to "District/State Finance Committees for House Candidates" cannot be allocated directly to the respective candidates, because the passthrough was unrestricted and could therefore be distributed unevenly among candidates. Hence, an additional group was formed, including the amounts donated to "Single Finance Committees" as contributions to party committees. As there is no direct connection between these resources and specific candidates, the analysis of contributions to winners and/or losers could not be made for this group.

Information on whether a candidate had won or lost the election was obtained from TSE and included in the campaign donation database using name of candidate, state, and CPF (individual taxpayer registry). In 2006, PT candidate Luis Inácio Lula da Silva was the winner in the presidential race and his coalition included PRB and PC do B, in addition to his own party, of course. Thus, House and Senate candidates affiliated with those parties were categorized as "political allies" while the remainder were categorized as "political opponents." In 2010, the coalition of newly elected president Dilma Rousseff was far more extensive, including PRB, PDT, PMDB, PTN, PSC, PR, PTC, PSB, and PC do B, in addition to PT. All candidates affiliated with those parties were categorized as "political allies" in 2010.

The main objective of this paper is to associate donations to political campaigns with the returns obtained from stock exchange-listed companies. Therefore, it was necessary to identify the donations made by open-capital firms among the contributions received from legal entities. To do that, a match was obtained from CNPJ (corporate taxpayer registration number). Some corrections were necessary in the case of firms without CNPJ or which made donations using a CNPJ different from that disclosed to Bovespa or through subsidiary companies. The company names informed in the donations were checked later in order to reduce possible bias towards the results. Donations made in 2006 were converted to 2010 currency values (denominated in Brazilian reais), based on the IPCA.

3.2.2 Finance and accounting data

Information on economically active firms in each of the election years was obtained from Economatica. A trading of at least 90% was established for CAR calculation for the event study, i.e., between the estimation window start date and the event window end date, the firm should have been traded in at least 90% of the trading days. This caused a significant reduction in sampled stocks (from 563 to 105 in 2006 and from 538 to 173 in 2010), but some caution was taken so that CAPM estimation would not be hindered by firms with liquidity constraints. Additionally, stocks of state-owned companies were removed from the sample, as these companies were not allowed to make donations.

The event study was based on an estimation window of 150 days and an event window of 10 days before and 10 after the event in each year, represented by the date at which the results of the second round were announced. To avoid overlapping events, the window was closed 10 days before the first round of each election.

In those tests in which the vector of control variables was included, the sample size was reduced, given the lack of complete information about all firms, and those stocks with incorrect accounting data were removed from the sample. The number of observations dropped to 195, including 155 different firms. Likewise, when ROE was the dependent variable, sample size decreased to 246 observations, including 196 firms in both years.

The classification of economic sectors was based on the 20 groups available from Economatica: vehicles and spare parts, metallurgy and steelmaking, chemicals, foods and beverages, paper and pulp, finances and insurances, mining, textiles, software and data, agriculture and fisheries, oil and gas, trade, telecommunications, civil construction, electroelectronics, non-metallic minerals, industrial machinery, transportation and services, among others. A few firms did not provide information about their sector of activity.

Table 6 shows the descriptive statistics with the dependent, independent, and control variables for the whole sample period (2006 to 2010).

The final sample consisted of 278 observations, of which 105 refer to 2006, and 173 to 2010. Section 1 displays the statistics for the political variables. Systematically, the average amount of contributions to winning candidates is higher than that of losing candidates. The smallest difference, however, is seen in the presidential race, for which the average of winners is not significantly higher (R\$ 159,000 x R\$ 135,000). The average amount of donations to political allies is also higher than that of political opponents, except for House representatives, in which opponents receive, on average, more than the double (R\$ 198,800 x R\$ 91,700). These data are in line with Hypothesis 3.

Section 2 shows the statistics for the variables of interest. A 150-day window was chosen for CAR estimation and a 21-day window for the event, i.e. $(\tau_0, \tau_1, \tau_2) = (-160, -10, 10)$. The average CAR both for the first and second rounds was negative, but not statistically different from

zero. The average was positive for ROE and ROA, but not statistically different from zero either, showing a high level of dispersion.

Table 6 – Descriptive statistics for political, finance, and control variables

Variable	No. of observations	Mean	Standard Deviation	Minimum	Maximum
1. Political contributions (2006 and 2010)					
(in R\$ 100,000)					
Contributions to all candidates	278	17.673	66.099	0.000	798.489
Contributions to winners	278	4.625	19.872	0.000	255.900
Contributions to losers	278	2.794	11.764	0.000	136.768
Contributions to political allies	278	9.266	39.073	0.000	502.811
Contributions to opponents	278	8.408	28.555	0.000	295.678
Contributions to House representatives	278	2.905	11.667	0.000	123.650
Contributions to winning House representatives	278	2.120	8.492	0.000	80.650
Contributions to losing House representatives	278	0.785	3.337	0.000	43.000
Contributions to coalition House representatives	278	0.917	3.787	0.000	39.650
Contributions to opposition House representatives	278	1.988	8.194	0.000	84.000
Contributions to senators	278	1.571	10.307	0.000	154.018
Contributions to winning senators	278	0.913	6.093	0.000	90.250
Contributions to losing senators	278	0.658	4.235	0.000	63.768
Contributions to coalition senators	278	0.868	8.012	0.000	130.268
Contributions to opposition senators	278	0.703	3.309	0.000	25.000
Contributions to presidents	278	4.134	14.753	0.000	125.000
Contributions to winning presidents	278	1.591	7.037	0.000	85.000
Contributions to losing presidents	278	1.351	5.733	0.000	50.000
Total amount of contributions - Committee	278	9.062	41.222	0.000	395.821
2. Dependent variables					
(%)					
CAR 1st round	278	-1.087	10.049	-47.849	40.973
CAR 2nd round	278	-0.046	10.637	-44.036	66.153
ROE _{t+1}	246	14.753	23.124	-100.700	127.500
ROE _(mean)	246	79.908	1131.161	-256.700	17740.633
ROA _{t+1}	265	0.266	41.672	-507.000	37.700
ROA _(mean)	265	5.120	123.119	-641.900	1839.325
3. Control variables					
(%)					
EBIT/Total assets	195	0.069	0.291	-3.512	0.721
Fixed assets/Total assets	195	0.550	0.203	0.017	0.994
Liabilities/Total assets	195	2.129	17.617	0.125	245.202
Log total assets (in R\$)	195	9.609	0.781	7.200	11.810
Revenue Growth	195	0.343	1.070	-0.558	12.132

Source: Data compiled by the authors

4 EMPIRICAL RESULTS

The following sections show the results for CAR and ROE.

4.1 Cumulative Abnormal Return

Table 7 shows the regressions that tentatively support the assumption that political favors are expected in exchange for campaign contributions. CAR is used as the dependent variable for all firms that comply with the 90% trading criterion between the estimation window start date and the event window end date. The tests are repeated using the total amount donated to all candidates, individual donations to House representatives, senators, and presidents, and to committees. Year and sector fixed effects are included in all regressions, but are not reported. Heteroskedasticity-robust standard errors are displayed in brackets.

Regressions (1), (4), (7) and (10) confirm H1, as the coefficients are positive and significant in all cases. Curiously enough, there appears to be a higher return for donations made to House representatives compared to the other public offices. Regression (7) shows a coefficient of 0.075 for donations made to House representatives, but a fivefold higher coefficient for haphazard donations (0.014). This figure is relevant due to the high standard deviation obtained from the political variables. An increase of one standard deviation in donations to House representatives (equivalent to R\$ 1,166,700.00) increases CAR by 0.9% ($0.075 * 11.66$). This has a substantial effect considering that the average CAR for the first round was -1.087% and -0.046% for the second round. Positive effects were observed in the mining, non-metallic minerals, chemicals, and paper and pulp sectors.

Hypothesis 3 is tested in the remaining regressions. The effect of donations to winning candidates is higher than that which is obtained when losers are included in all public offices and in the general case. Note that, while the effect of donations to House representatives is higher than for other positions in the general case when the distinction between losers and winners is used, the highest coefficient is for winning presidential candidates (0.126), more than twice as high as the coefficient for presidential candidates (0.061) and almost nine times the coefficient for general donations to all public offices. In this case, a standard deviation of the variation in donations to presidential candidates (corresponding to R\$ 1.5 million) yields an increase of 0.89% ($0.126 * 7.037$). Tests were performed by including donations to losing candidates separately in regressions (1), (4), (7) and (10), but the result was basically the same and, therefore, they are not shown.

Still regarding H3, regressions (3), (6) and (9) test whether donations to the elected president's coalition parties have significant effects on abnormal return. In the three cases, making donations to political allies produces additional returns. The result is quite impressive in the case of House representatives: the highest coefficient is obtained when donations are made to House representatives belonging to the president's coalition (0.232). A standard deviation of the increase (corresponding to approximately R\$ 380,000) produces a variation of 0.88% in the CAR of firms that donated to political allies, an economically relevant rate given that the average CAR in the second round was relatively low. In this case, tests used donations to political opponents as control, and the results were, once again, virtually the same.

The tests for general donations were repeated, including a vector with control variables. The sample size was reduced because not all stocks had complete and correct accounting data, yielding 195 observations, 61 of which referred to 2006 and 134 to 2010. Thus, even though the coefficient was slightly lower than that of previous regressions, tests (13), (14) and (15) support hypotheses 1 and 3, even with the inclusion of controls for specific characteristics of the firms. This makes the

result less vulnerable to criticisms that it was being influenced by market expectations about future opportunities for growth and investment.

4.2 Return on Equity

Although the market anticipates future benefits for those companies that contribute to political campaigns, this does not necessarily lead to some kind of favor. Hence, ROE was used to check whether the profit of donating companies after the elections was significantly higher than that of their non-donating counterparts. The results are displayed in Table 8.

For the sake of simplicity, the results for the control of donations to losing candidates and to political opponents were included, but they were not strikingly different for the case in which that control was not performed. Regression (1) assesses the effect of general donations (president, senator, and house representative) on the ROE of the year that followed the elections. In this case, although the coefficient of donations to winning candidates is positive, it is not statistically significant. In the case of political allies, the coefficient was positive and significant at 10%, indicating that donations to political allies brings future benefits in terms of profits obtained from own capital.

When analyzed separately, though, the results for the different election periods are more elucidative. In all cases, the coefficients for winning candidates were significantly higher than those obtained for losers, and donations to political allies yielded a higher return than those made to political opponents. And they were not just higher, as the data actually indicate that donations to losing candidates or political opponents reduce firms' profitability, in a similar way to what occurs with any non-profitable investment. This is consistent with hypothesis 3 and reinforces the belief that there must be some kind of advantage, albeit indirect, derived from campaign donations.

The coefficients in the table show that donations to senators imply better profitability in the future (1.797), but also that this is the riskiest investment if the senators are not elected (-2.979). A standard deviation of the increase in donations to winning senators (average increase of R\$ 91,300.00) improves profitability in the year following the elections by 10.9% ($1.797 * 6.093$) whereas in the case of donations to losing candidates, a standard deviation may lead to a 12% lower ROE.

Likewise, donations to House representatives imply better benefits than haphazard donations. A standard deviation of the increase in donations (equivalent to R\$ 850,000.00) would lead to a positive variation of 7% ($0.830 * 8.492$) in ROE in the year after the elections, a relevant result when the average ROE (approximately 14%) is taken into consideration.

In the case of presidential candidates, even though the return is still higher for winning candidates, this return is significant only at 20%, and of the three public offices analyzed, "president" had the lowest coefficient.

Taken together, these findings support H2: forging political connections through campaign donations has a positive and economically significant impact on firms' ROE.

Table 7 – Impact of campaign donations on cumulative abnormal return

Regressions (1) take the form $y_{it} = \beta'x_{it-1} + \gamma z_{it} + \theta_t + \eta_j + \varepsilon_{it}$, where y_{it} is the cumulative abnormal return of firm i at the time of election in year t , x_{it-1} is a vector of control variables, z_{it} is one of the measures of campaign donations made by firm i at the start of the election cycle in year t , θ_t is the election year fixed effect, η_j is fixed effect of sector j in which firm i operates, and ε_{it} is the error term. The equations were estimated by pooled OLS, with robust standard errors clustered by firm. The 2006 and 2010 elections were included, in addition to an estimation window of 150 days for CAR and an event window of 10 days before and 10 days after the event.

	Cumulative Abnormal Return (CAR)														
	All Candidates			House Representative			Senator			President		Committees	All Candidates		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
Total contributions (γ)	0.014 **** (0.005)			0.075 **** (0.023)			0.062 *** (0.025)				0.061 **** (0.019)		0.018 **** (0.006)	0.010 *** (0.003)	
Contributions to winners (γ)		0.043 **** (0.015)			0.106 **** (0.031)			0.101 *** (0.039)				0.126 **** (0.047)			0.034 **** (0.013)
Contributions to political allies (γ)			0.021 *** (0.008)			0.232 **** (0.062)			0.064 **** (0.026)						0.015 *** (0.018)
EBIT/Total assets													-1.411 (6.733)	-1.364 (6.725)	-1.411 (6.720)
Fixed assets/Total assets													4.141 (6.429)	4.148 (6.418)	4.684 (6.353)
Liabilities/Total assets													0.016 (0.103)	0.017 (0.103)	0.016 (0.103)
Log total assets													0.553 (1.168)	0.582 (1.170)	0.724 (1.165)
Revenue Growth													0.049 (0.565)	0.027 (0.545)	-0.035 (0.536)
Year fixed effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sector fixed effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No. of observations	278	278	278	278	278	278	278	278	278	278	278	278	195	195	195
No. of firms	225	225	225	225	225	225	225	225	225	225	225	225	155	155	155
R ²	0.13	0.13	0.13	0.13	0.13	0.13	0.12	0.12	0.12	0.13	0.13	0.12	0.15	0.15	0.15

* p < 0.20, ** p < 0.10, *** p < 0.05, **** p < 0.01

Source: Data compiled by the authors

Table 8 – Impact of campaign donations on return on equity

Regressions (2) take the form $w_{it+1} = \delta'x_{it-1} + \phi z_{it} + \theta_t + \eta_j + \varepsilon_{it}$, where w_{it+1} is the ROE of firm i in the year that followed the elections, $\delta'x_{it-1}$ is a vector of control variables, z_{it} is one of the measures of campaign donations made by firm i to candidates at the start of the election cycle in year t , θ_t is the election year fixed effect, η_j is the fixed effect of sector j in which the firm i operates, and ε_{it} is the error term. The equations were estimated using pooled OLS, with standard errors clustered by firm. The 2006 and 2010 elections were included, and an estimation window of 150 days for CAR and an event window of 10 days before and 10 days after the event were used.

	Return on Equity (ROE)						
	All Candidates		House Representative		Senator		President
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Contributions to winners (ϕ)	0.067 (0.236)		0.830 **** (0.242)		1.797 ** (0.920)		0.454 * (0.300)
Contributions to losers	0.038 (0.359)		-0.236 **** (0.541)		-2.979 *** (1.372)		0.389 (0.340)
Contributions to political allies (ϕ)		0.086 ** (0.046)		0.457 *** (0.209)		1.226 **** (0.463)	
Contributions to political opponents		-0.018 (0.022)		-0.152 (0.133)		-0.181 *** (0.081)	
Year fixed effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sector fixed effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No. of observations	246	246	246	246	246	246	246
No. of firms	196	196	196	196	196	196	196
R ²	0.21	0.21	0.22	0.21	0.22	0.22	0.21

* p < 0.20, ** p < 0.10, *** p < 0.05, **** p < 0.01

Source: Data compiled by the authors

5 FINAL REMARKS

The aim of this paper was to shed further light upon the reasons why firms make donations to political campaigns. An investigation was then conducted to find higher returns for companies that made contributions to Presidency, Senate, and House candidates in the 2006 and 2010 Brazilian elections. By using a large database, we gathered empirical evidence that open-capital companies which made campaign donations increased their stock values at the time of the announcement of election results and had higher ROE in the year that followed the elections. This finding was corroborated when donations made to the three public offices were assessed together, combined with donations made to party committees. However, the results were more impressive when the donations were analyzed separately.

The first hypothesis was built upon market expectations: firms that contributed to political campaigns must have higher CAR than those which refrained from participating in the campaigns. The tests run for general donations (including direct donations to candidates and to party committees) and individual donations in each election, using the CAR estimated via an event study as dependent variable, suggest that the market actually contemplates some kind of future advantage for these firms.

Donations made directly to House candidates seem to have had a larger impact on market assessment, being five times higher than the impact of haphazard donations. By looking at the distribution of donations between winning and losing candidates, the larger effect is observed for

the winning presidential candidate, more than twice than that observed for donations to presidential candidates without the categorization into winners and losers. The effects of donations to House and Senate candidates belonging to the elected president's coalition were also assessed: in all cases, donations to political allies are financially larger than haphazard donations.

While the market anticipates benefits for donating firms, the increase in their stock values when the election result is announced does not necessarily lead to operational profitability. So, the ROE of the year following each election was tested in order to find whether donating firms had a higher profit than non-donating ones.

By analyzing the donations made to each election separately, we found evidence of a positive relationship between campaign donations and returns to the donating firms. In this case, it was advantageous to donate to winning candidates and to political allies. The data show that donations to winning Senate candidates were the ones with the highest impact on ROE; on the other hand, donations to losing candidates turned out to be the worst investment. Making the wrong decision about donations is similar to choosing between a 10.9% increase or a 12% decrease in ROE.

In all cases, there was evidence that donations to winning candidates is always more profitable, as well as donations to candidates (senators and House representatives) whose party belongs to the elected president's coalition. Taken together, these findings indicate that there must be some kind of benefit in the future from the politicians who received the donations; otherwise, there would not be significant differences between donations to winners and losers or between political allies and opponents. The results do not change when control variables are included for growth opportunities (increase in revenues), size (total assets), tangibility (fixed assets/total assets), operational profitability (EBIT/total assets), and leveraging (liabilities/total assets). The inclusion of fixed effects minimizes a possible omitted variable bias.

Although it may be concluded that donating firms receive benefits, the analysis was limited to verifying the existence or not of these benefits without making any type of inference about the mechanism whereby these benefits are provided. Regardless of whether access to financing or bidding processes, or to any other type of possible benefits, is easier, evidence suggests that participation in political campaigns is actually an investment with a positive return. The common sense here seems to apply: *"there's no such thing as a free lunch."*

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APPENDIX

Table A1 – Contributions of listed companies to political parties

Parties	Total received 2006	%	No. of donations 2006	Average contribution 2006	Total received 2010	%	No. of donations 2010	Average contribution 2010
PT	31,696,971.69	31.0%	177	179,078.94	112,243,200.01	32.0%	364	308,360.44
PSDB	31,539,771.10	30.8%	246	128,210.45	85,565,985.89	24.4%	397	215,531.45
PMDB	11,471,588.42	11.2%	118	97,216.85	47,157,305.00	13.4%	285	165,464.23
PFL	9,321,137.66	9.1%	163	57,184.89	-	-	-	-
PP	5,066,739.20	4.9%	114	44,445.08	8,945,020.00	2.6%	114	78,465.09
PDT	3,032,110.80	3.0%	59	51,391.71	7,963,280.00	2.3%	89	89,475.06
PSB	2,376,601.40	2.3%	30	79,220.05	13,346,210.34	3.8%	52	256,657.89
PTB	2,222,691.92	2.2%	36	61,741.44	11,544,000.00	3.3%	71	162,591.55
PC do B	1,752,093.89	1.7%	21	83,433.04	3,865,300.00	1.1%	52	74,332.69
PPS	1,575,071.99	1.5%	39	40,386.46	4,432,860.60	1.3%	50	88,657.21
PL	967,600.17	0.9%	17	56,917.66	-	-	-	-
PV	767,659.92	0.7%	23	33,376.52	6,983,000.00	2.0%	58	120,396.55
PSDC	220,522.16	0.2%	4	55,130.54	80,000.00	0.0%	3	26,666.67
PSC	170,458.74	0.2%	6	28,409.79	7,490,000.00	2.1%	23	325,652.17
PTC	163,125.98	0.2%	3	54,375.33	1,160,000.00	0.3%	6	193,333.33
PRP	48,333.62	0.0%	2	24,166.81	10,000.00	0.0%	1	10,000.00
PRONA	12,083.41	0.0%	1	12,083.41	-	-	-	-
PMN	-	-	-	-	1,160,000.00	0.3%	10	116,000.00
DEM	-	-	-	-	29,437,113.17	8.4%	233	126,339.54
PR	-	-	-	-	5,636,500.00	1.6%	44	128,102.27
PRB	-	-	-	-	2,030,000.00	0.6%	5	406,000.00
PTN	-	-	-	-	1,030,000.00	0.3%	3	343,333.33
PRTB	-	-	-	-	50.35	0.0%	1	50.35
PT do B	-	-	-	-	500,000.00	0.1%	4	125,000.00
PHS	-	-	-	-	100,000.00	0.0%	1	100,000.00
Total	102,404,562.08				350,679,825.36			

Table A2 – Sources and definition of the variables used

Variables	Source	Description
Contributions to all candidates	TSE	Total contribution to a candidates (and to majority candidate's committees)
Contributions to winners	TSE	Total contribution to elected candidates (and to majority candidate's committees)
Contributions to losers	TSE	Total contribution to non-elected (and to majority candidate's committees) belonging to the President's coalition parties
Contributions to political allies	TSE	Total contribution to candidates (and to majority candidate's committees) not belonging to the President's coalition parties
Contributions to political opponents	TSE	Total contribution to House candidates
Contributions to House representatives	TSE	Total contribution to elected House candidates
Contributions to winning House representatives	TSE	Total contribution to non-elected House candidates
Contributions to losing House representatives	TSE	Total contribution to House candidates belonging to the elected president's coalition
Contributions to coalition House representatives	TSE	Total contribution to House candidates not belonging to the elected president's coalition
Contributions to opposition House representatives	TSE	Total contribution to Senate candidates (and Senate candidates' committees)
Contributions to senators	TSE	Total contribution to elected Senate candidates (and Senate candidates' committees)
Contributions to winning senators	TSE	Total contribution to non-elected Senate candidates (and Senate candidates' committees)
Contributions to losing senators	TSE	Total contribution to Senate candidates (and Senate candidates' committees) belonging to the elected president's coalition
Contributions to coalition senators	TSE	Total contribution to Senate candidates (and Senate candidates' committees) not belonging to the elected president's coalition
Contributions to opposition senators	TSE	Total contribution to Presidency candidates
Contributions to presidents	TSE	Total contribution to elected Presidency candidates
Contributions to winning presidents	TSE	Total contribution to non-elected Presidency candidates
Contributions to losing presidents	TSE	Total contribution to finance committees, management offices, and Cumulative abnormal return (%) 10 days before and 10 days after the 1st round of the elections
Total amount of contributions - CAR 1st round	Economatica	Cumulative abnormal return (%) 10 days before and 10 days after the 2nd round of the elections
CAR 2nd round	Economatica	Return on equity of the year following the elections (2007 and 2011)
ROE $t+1$	Economatica	Average return on equity of the four subsequent years after the elections (2007 to 2010 and 2011 to 2014)
ROE (mean)	Economatica	Return on assets of the year following the elections (2007 and 2011)
ROA $t+1$	Economatica	Average return on assets of the four subsequent years after the elections (2007 to 2010 and 2011 to 2014)
ROA (mean)	Economatica	Average ratio between EBIT and total assets in the four years that preceded the elections
EBIT/Total assets	Economatica	Average ratio between fixed assets and total assets in the four years that preceded the elections
Fixed assets/Total assets	Economatica	Average ratio between liabilities and total assets in the four years that preceded the elections
Liabilities/Total assets	Economatica	Average log of total assets in the four years that preceded the elections
Log total assets	Economatica	Average revenue growth in the four years that preceded the elections
Revenue Growth	Economatica	