

Money, Elections, and Candidates¹

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Abstract

This chapter uses candidates' reports to the Brazilian electoral court to examine the evolution of campaign spending during four elections between 2002 to 2014. Focusing on campaigns for federal representative, we show that campaign spending rose significantly in this period, albeit with significant variation across and within states. Our results suggest that both district magnitude and regional characteristics have limited influence on spending. Similarly, the aggregation of candidates by parties also reveals a complex picture that cannot be explained by the traditional dichotomy of government and opposition. Most importantly, campaign spending has remained concentrated on a few candidates, suggesting that electoral competition in Brazil is less intense than would be expected by observing the raw number of candidates per seat.

Introduction

Since mid-2013, Brazil has experienced a corruption scandal involving a large part of the political class. The scandal resulted from an investigation by the Federal Police, known as “Operação Lava-Jato” (Operation Car Wash), that uncovered one of the most significant corruption cases in modern history. Several accusations were related to the relationship between politicians and large corporations. With no legal restrictions on contributions, companies such as Odebrecht and JBS, two of Brazil’s biggest firms, poured money into various electoral campaigns in order to curry favor with politicians. These scandals pulled back the curtain on the importance of financial resources in Brazilian elections.

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Against this tide, Brazil is one of the few democracies where candidates are required by law to provide detailed reports on both campaign donations and spending. In substantive terms, and considering only general elections (statewide and national), nearly R\$ 3 billion and R\$ 5 billion were spent in the 2010 and 2014 campaigns, values that would translate to about US\$1.4 billion and US\$1.6 billion, respectively (Mancuso 2015) . ²

Although comparative data on the costs of elections are scarce, increases in campaign spending also seem to have occurred in other countries as well. For instance, the costs of US elections increased from US\$ 4.32 billion in 2000 to US\$6.4 billion in 2016 (Center for Responsive Politics 2017). Considering that US GDP per capita is roughly seven times larger, electoral costs are considerably higher in Brazil.

For a democratic system, costly campaigns can have multiple consequences. First, where parties have little control over electoral money, the most obvious consequence is that costly campaigns may select out only candidates able to build large campaign war chests. Second, as stressed by Mainwaring long ago,³ the inability of parties to control electoral money reinforces political individualism and weakens parties as organizations, with damaging consequences for electoral accountability.⁴ Third, in large districts (like those of Brazil)⁵ candidates who spend more can cover geographically distant areas, increasing their electoral chances. In short, an analysis of campaign spending in Brazilian elections can contribute to a broader understanding not only of the role performed by money but also of the electoral strategies employed by candidates.

This chapter undertakes a descriptive analysis of campaign spending in Brazilian elections by focusing on expenditures reported by candidates to the Federal Chamber of Deputies between 2002 and 2014. Corroborating previous research, our results show that campaign spending is an essential tool for candidates. Moreover, campaign spending rose

² Data from the TSE (<http://www.tse.jus.br/eleicoes/estatisticas/repositorio-de-dados-eleitorais>).

³ For example, see Mainwaring (1991).

⁴ From a different perspective, the damaging effects of electoral money on accountability have also been the subject of the literature on vote buying. See Mares & Young (2016) for a recent review of that literature.

⁵ For example, the state of Minas Gerais, the fourth largest state, is almost as large as France. Goiás, the seventh largest state, is about the size of Germany.

significantly in the period between 2002 and 2014. But we found significant variation across and within states, suggesting a limited influence of both district magnitude and regional characteristics. Likewise, aggregation of candidates by parties also suggests a complex picture that cannot be explained by the traditional government-opposition dichotomy. Most importantly, campaign spending remained concentrated on a few candidates, suggesting that electoral competition in Brazil is less intense than would be expected by the raw number of candidates per seat.

Interestingly, in September 2015 the Supreme Court banned corporate donations. Because of this ban, candidates in the 2018 elections are expected to spend much less than in previous elections. Also, at the time of this writing Congress approved a new public fund to finance electoral campaigns. Consequently, the picture portrayed in this chapter will serve as a baseline against which to assess candidates' spending reports for the next election. The concluding section speculates about the consequences of these changes.

The chapter is structured as follows: the next section discusses the Brazilian electoral system, exploring its characteristics and establishing the context. The third section scrutinizes campaign spending in Brazilian elections between 2002 and 2014. The final section summarizes and concludes.

Money and Candidates in the Brazilian Electoral System

Brazil has long been an interesting case due to its candidate-centered electoral system.⁶ Briefly, the Chamber of Deputies has 513 seats that are assigned to states according to their population, with a guaranteed minimum of 8 and maximum of 70 seats. Federal representatives are elected by a statewide open-list proportional representation system; within each state, candidates run on a party list.⁷ Voters cast a single ballot and can vote for either an

⁶ For a discussion of candidate-centered electoral systems, see Grofman (2005) and Shugart (2005).

⁷ Most parties run in electoral coalitions. In this case, all parties in an electoral coalition are considered as one party for the electoral court over the whole process: vote-counting, seat assignment, and the definition of the elected candidates.

individual candidate or the overall party list, with a majority (91 percent in 2014) voting for candidates.

When the polls close, votes are first totaled by party and seats are distributed to each party. Seats are distributed within each party following an order determined by the votes received by each candidate. As a result, candidates care about both their party list's collective electoral performance and their individual performance on the party list. This last aspect creates incentives for candidates to differentiate themselves from other co-partisan candidates; a "product differentiation problem" (Cox & Thies 1998) that may lead to overspending. These characteristics of the electoral system prompted Samuels (2006a) to classify Brazilian electoral campaigns as among the most expensive in the world.

Although agreeing on the importance of money, scholars are still uncertain about the nature and magnitude of its effects. The first studies to address the relationship between money and electoral outcomes in Brazil were those of David Samuels.⁸ He analyzed the impact of money on votes for the 1994 and 1998 elections (Samuels 2001c) and concluded that "money does indeed have a tremendous effect on the outcome of legislative elections" (Samuels 2001b, p.41).

In another work Samuels (2001c) explores the difference between Brazilian incumbents and challengers, following the research agenda inaugurated by Jacobson (1978). The author finds that in Brazil money has equal effects for both incumbents and challengers. This result is different from that observed in the United States, where money was considered more important to challengers – due to their lower level of name recognition – than incumbents. Samuels argues that Brazilian incumbents differ from their counterparts in the United States because they do not derive significant advantages from holding office.⁹ The lack of incumbency advantage in Brazil derives from various conditions: i) holding a seat provides little name recognition; ii) the best incumbents often choose not to run again; iii) challengers are often

⁸ As we explain in more detail below, at the time of Samuels' research only reports on campaign contributions were mandatory.

⁹ Recent research has suggested an incumbency disadvantage in Brazilian mayoral elections (Magalhaes 2015; Klačnja & Titiunik 2017).

more prominent than incumbents; and, iv) the electoral system undermines incumbents' self-promotional efforts (Samuels 2001d).

Figueiredo Filho (2009) also finds a positive correlation between money and electoral success. However, unlike Samuels (2001b), his results show that campaign spending matters more for challengers than incumbents. Those last findings are supported by Peixoto (2010) for the 2006 election. Finally, in a dissenting view, Silva (2011) finds that money has a stronger positive effect on incumbent's campaigns for the 2002 and 2006 elections.

In sum, the only consensus among scholars is that money matters in Brazilian elections for federal deputy seats: candidates who spend more are likely to receive more votes. Beyond this consensus, however, there is little agreement about which type of candidate or party benefits most from spending. A possible explanation for the literature's uncertainty may rest on the short span of data and the absence of comparisons over time or among regions. Our chapter is an effort to fill this gap by presenting some descriptive statistics exploring both temporal and spatial variation.

Electoral Spending: the Brazilian case

We define electoral spending as the financial value of resources employed by candidates and parties during electoral campaigns. This definition is similar to the one proposed by Speck (2006). As we explained in the introduction, we will analyze electoral spending for the four general elections between 2002 and 2014. All data are provided by the Brazilian Electoral Supreme Court (TSE), which has systematically recorded campaign spending since the 2002 election.¹⁰ The only modifications of the TSE data were to ensure comparability over time and to present them in US dollars. In a first step, we deflated all spending data (using the IBGE's

¹⁰ Data can be downloaded from <http://www.tse.jus.br/eleitor-e-eleicoes/estatisticas/repositorio-de-dados-eleitorais-1/repositorio-de-dados-eleitorais>. Reporting campaign contributions to the electoral court is mandatory since 1994, following a budget scandal in Brazilian Congress. Reports on campaign spending became mandatory only from the 2002 elections.

IPCA inflation index) to Brazilian Reais of December 2016; next, the values were converted to US dollars using the average exchange rate for the same month.¹¹

One obvious challenge in studying electoral spending is measurement error. Missing data, corruption, and lack of transparency are some of the problems that trouble researchers.¹² Despite those problems, there is no clear evidence of bias in the TSE data that would significantly affect variation in the values reported; the data still allow researchers to identify important patterns of candidates' electoral strategies (Samuels 2001b, 2001d).

The next subsection will describe the evolution of campaign expenses in general elections from 2002 until 2014 for candidates to all types of political office. As noted earlier, in all tables monetary values are expressed in US dollars, using the exchange rate of December 2016.

Evolution of Campaign Spending in Brazil from 2002 to 2014: General Trends

Table 1 below shows the evolution of average campaign spending for elected candidates. Although electoral spending grew considerably during the period, the growth rate was not uniform over elections or across types of political office. During the 2014 elections, for example, all campaign spending values seemed to stabilize with the notable exception of the presidential campaign of Dilma Rousseff, which almost doubled spending from its initial run in 2010.

In absolute values, the most expensive campaigns are naturally those for the presidency and state governors. Due to the number of seats – three per state – and the plurality electoral system, senatorial campaigns are more expensive than campaigns for legislative offices elected through a proportional system. When one compares the cost for those legislative offices, a seat in the Federal Congress is more expensive, even when considering the total number of seats in

¹¹ Values in US dollars based on the December 2016 average exchange rate (3.351 BR\$/1 US\$).

¹² Current corruption scandals are based on either corruption or spending not declared to the electoral court, known in Brazil as “Caixa 2.”

dispute for each office.¹³ This difference in campaign spending may result from the limited budgetary resources controlled by state governments.

Table 1: Average campaign spending of elected candidates: 2002-2014

Office	2002	2006	2010	2014	Variation in period
State Deputy	69,459	118,365	190,976	202,064	190.91%
Federal Deputy	157,252	264,626	503,416	513,866	226.78%
Senator	569,118	732,250	1,816,712	1,682,742	195.68%
Governor	3,027,207	4,116,845	6,827,961	6,913,910	128.39%
President	14,715,414	49,865,712	68,278,126	122,948,374	735.51%

Source: TSE

During this period, campaign spending for all seats, regardless of office, showed a remarkable increase, with particular attention to the presidential campaign, where spending increased by an incredible rate of 735 percent. Table 2 below gives a more nuanced picture of this last issue. It includes data collected by David Samuels from electoral contribution reports for the 1994 and 1998 elections.¹⁴ With this longer picture, one can observe that the growth rate over the 20-year period from Cardoso's to Rouseff's elections is down to a less impressive 128 percent. One possible explanation for increasing spending after 2002 is the inclusion of the PT as a target for the chief electoral donors. This inclusion enabled the PT to increase its spending for presidential elections, which in turn led the PSDB, the PT's nemesis, to match the increase, and vice-versa. Formally, this competition was similar to the arms race between the US and the Soviet Union during the cold war. Current political scandals suggest this game ended, of course, with the worst possible outcome, with losses to all players involved.

¹³ The number of seats for state and federal seats is 1059 and 513, respectively. Dividing the first term by the second results in a ratio of about 2.06, which is smaller than the ratio between the average of spending for each type of political office as expressed in Table 1 (which is about 2.48). In other words, the cost of a seat in the federal Congress, in relative terms, is about 20 percent higher than a seat in the state legislative assembly.

¹⁴ The correlation between values from contribution and spending reports was never below 0.98 for each of the four elections between 2002 and 2014. Thus if the 1994 and 1998 elections were not different from those other elections, using data from contribution reports to lengthen spending series should not be a problem.

Table 2: Average campaign spending of elected presidents: 1994 -2014¹⁵

	1994	1998	2002	2006	2010	2014	Variation in period
Elected President	F. Henrique Cardoso	F. Henrique Cardoso	Lula	Lula	Dilma Rousseff	Dilma Rousseff	
Party	PSDB	PSDB	PT	PT	PT	PT	
Expenditure	53,980,663	46,367,624	14,715,414	49,865,712	68,278,126	122,948,374	127.76%

Source: TSE

Let us return briefly to Table 1. Note that campaigns for other offices also show significant increases. This growth could have two possible explanations. The first is just that candidates had spent more during the period. The second is that candidates, motivated by the improvement of monitoring institutions, increased the transparency of their campaigns spending by including expenses that were formerly off the books. It is not possible to say, without further research, the importance of each reason in explaining the growth of campaign spending in Brazil. At this point, it is simply clear that money increased during the last four elections.

The next subsections concentrate on elected candidates. They explore the distribution of spending among elected candidates as a way to measure whether high spending favors particular candidate types across states.

Campaign spending: A closer look at Federal Representatives.

As we noted in the introduction, this chapter focuses on campaigns for federal representatives (also called federal deputies). Table 3 presents data about the evolution of the average spending of elected and non-elected candidates. Between 2002 and 2014, campaign spending for all candidates to federal representative grew 51.4 percent, a rate in stark contrast to the amount spent by winning

¹⁵ The data on campaign spending for the 1994 and 1998 elections are not available in the TSE data repository. The data on those years in Table 2 are from electoral contributions and were first presented by Samuels (2006).

Table 3: Average campaign spending of Federal Representative candidates, 2002 -2014

Electoral Result	2002	2006	2010	2014	Variation in period	02 - 06	06 - 10	10 - 14
Elected candidates average	157,252	264,626	503,416	513,866	226.78%	68.28%	90.24%	2.08%
Not elected average	24,521	26,901	39,543	31,264	27.50%	9.71%	47.00%	-20.94%
All Candidates average	50,040	59,517	93,516	75,768	51.41%	18.94%	57.12%	-18.98%

Source: TSE

candidates, as presented in Table 1, which increased by an impressive rate of almost 227 percent. As a consequence, the ratio of campaign spending between elected and non-elected candidates nearly tripled during the period, growing from 6.4 in 2002 to 16.4 in 2014.

Spending for elected candidates rose quickly from 2002 to the 2010 elections and stabilized in 2014; by contrast, spending from non-elected candidates decreased from 2010 to 2014. This evolution may be the result of two different processes. First, the ability to raise funds became more critical, leading other potential competitive candidates to avoid the race. Second, the average spending by all candidates may be biased downward by the decrease in underreporting from many new nonelected candidates, particularly those who did very poorly in the election.¹⁶

Table 4 clarifies the last issue. It compares campaign spending between the elected and a selected group of non-elected candidates (defined as candidates whose votes were no more than 10% less than the last winning candidate in their respective list). In more concrete terms, these are the almost-electeds; we can say that the table contains reports only high-quality candidates.

¹⁶ As expected, despite the increasing number of candidates, underreporting has decreased over elections. Additionally, underreporting is concentrated among candidates who did poorly in the elections or did not campaign at all. In the period, non-reporting and reporting candidates averaged 1,139 and 22,686 votes, respectively. The table below provides a more specific picture of the underreporting issue by election year.

	2002	2006	2010	2014
All Candidatures	4,902	5,659	6,015	7,137
Reported Expenditures	2,663	3,739	4,409	5,563
Not Reported Expenditures	2,239	1,920	1,606	1,574
% of non-reporting candidates	46%	34%	27%	22%

Table 4: Average campaign spending of Federal Representative, elected and selected non-elected candidates, 2002 -2014

Electoral Result	2002	2006	2010	2014	Variation in period	02 - 06	06 - 10	10 - 14
Elected candidates average	157,252	264,626	503,416	513,866	226.78%	68.28%	90.24%	2.08%
Selected candidates average	114,216	180,638	402,000	372,348	226.00%	58.16%	122.54%	-7.38%
All Candidates average	50,040	59,517	93,516	75,768	51.41%	18.94%	57.12%	-18.98%

Source: TSE

As Table 4 shows, campaign spending by both groups during the period grew at almost the same rate, 226 percent, thereby maintaining the between-groups ratio over elections. As in the case of presidential elections, this may reflect an “arms race” where an increase in spending by one group is matched by the other. All this reinforces the association between money and votes in Brazilian elections, because spending from both groups of high-quality candidates is well above other nonelected candidates. Finally, the number of high-quality but non-elected candidates averages to only 60 over these elections.¹⁷ This finding suggests that Brazilian elections for federal representatives are far less competitive than would be expected by the conventional wisdom, which has focused on the raw numbers of candidates per seat.¹⁸

Table 5 shows the Gini index of concentration of candidate spending. As we saw in earlier tables, campaign spending is very concentrated. Still, using only averages fails to give an appropriate picture of the issue. Clearly, there is significant spending concentration among elected candidates as well. This last aspect points to a variation worth exploring among both the high-quality and elected groups of candidates.

¹⁷ Specifically, the number of almost-elected candidates is 64 for the 2002 elections; 54 for 2006; 62 for 2010; and, 60 for the 2014 elections; adding the 513 elected candidates amounts to about 10 percent of all candidates in each election.

¹⁸ According to the TSE, the number of candidates per one of the 513 seats in the Chamber increased from about 8.4 in 2002 to almost 14 in 2014.

Table 5: Concentration of campaign spending of Federal Representative candidates, 2002 -2014

GINI Index	2002	2006	2010	2014	Variation in Period	02 - 06	06 - 10	10 - 14
	All candidates	0.765	0.805	0.841		0.865	13.12%	5.22%
Only elected candidates	0.459	0.433	0.440	0.455	-0.68%	-5.54%	1.63%	3.46%

Source: TSE

Finally, big spenders may concentrate on a small number of political parties. This is especially true for PT candidates, who may have benefited from their party occupying the Brazilian Presidency for the whole period. Table 6 tackles that issue, analyzing average campaign spending among the seven most traditional Brazilian parties.¹⁹ The table shows that PT elected candidates increased their spending the most. Moreover, candidates from the PSDB, the party that lost all four presidential elections to PT, decreased their spending.

A more extensive picture provides a nuanced perspective. First, though PT candidates increased their spending most, in absolute values they still lag behind candidates from some other parties, including the PSDB; for instance, the average spending of PT candidates is still less than 75 percent of PSDB candidates. Second, candidates from the PTB, a party that participated in the PT government coalitions, had decreased their spending more than the PSDB. Third, except for the PSDB and the PTB, candidates from other parties increased their spending above the average of all candidates, as demonstrated in the last line of the table. Fourth, the group of parties that increased spending includes the PFL/DEM, which was the most radical opposition party throughout all PT governments.

¹⁹ These are the usual parties analyzed by the Brazilian literature. See, for instance, Ames (1994); Carneiro & Almeida (2008); Guarnieri (2011), and Avelino, Biderman, and Barone (2012 and 2016).

Table 6: Average campaign spending of elected candidates by party

Party	2002	2006	2010	2014	Average in Period	Variation in Period	02 - 06	06 - 10	10 - 14
DEM/PFL	189,016	277,313	571,750	708,505	436,646	274.8%	46.7%	106.2%	23.9%
PDT	99,759	174,317	379,347	359,234	253,164	260.1%	74.7%	117.6%	-5.3%
PMDB	158,881	295,905	514,434	574,377	385,899	261.5%	86.2%	73.9%	11.7%
PP/PPB	204,432	213,720	571,671	769,056	439,720	276.2%	4.5%	167.5%	34.5%
PSDB	238,940	402,964	696,770	713,496	513,042	198.6%	68.6%	72.9%	2.4%
PT	100,194	245,887	582,747	533,825	365,663	432.8%	145.4%	137.0%	-8.4%
PTB	155,048	318,592	432,334	411,159	329,283	165.2%	105.5%	35.7%	-4.9%
All elected candidates average	157,252	264,626	503,416	513,866	359,790	226.8%	68.3%	90.2%	2.1%

Source: TSE

In sum, the table indicates that increasing campaign spending is not related to specific parties. In addition, the relationship between campaign spending for federal representative candidates and either winning presidential elections or being part of the federal government coalition is perhaps more complex than initially supposed.

The next subsection deals further with the concentration of campaign funds among elected candidates and brings in spatial variation by exploring differences among Brazilian states.

Exploring variation among Brazilian states

As we discussed earlier, Brazilian states vary in social and economic terms. They also show great variation in district magnitude, going from the minimum of eight representatives in the national Chamber to the maximum of 70, a value reached only by the state of São Paulo (SP). To ease comparability, in Tables 7 to 9 states were ordered according to their district magnitude (M).

Table 7 below compares the average spending of elected candidates across states. Unexpectedly, the state where elected candidates spent the most is not São Paulo, which has more than 30 million voters scattered over an area similar to the United Kingdom, but Goiás (GO), which has “only” 4 million voters.²⁰ In the 2014 election, São Paulo lagged behind some of the lowest magnitude states, such as Amazonas (AM), Mato Grosso (MT), and Mato Grosso do

²⁰ The surprise comes from the fact that the raw number of votes to get one seat in São Paulo (429,000) would be almost double the number of votes required in the state of Goiás (about 235,000 votes)

Sul (MS); and to Minas Gerais (MG), the state with the second largest district magnitude. These numbers seem to confirm Lemos, Marcelino, and Pederiva (2010), who find no correlation between larger electoral districts and higher spending.

Table 7: Average campaign spending of elected candidates by state

State	Magnitude					Average in Period	Variation in Period			
		2002	2006	2010	2014			02 - 06	06 - 10	10 - 14
AC	8	41,928	96,564	287,495	151,639	144,407	261.7%	130.3%	197.7%	-47.3%
AM	8	104,698	136,351	344,157	732,548	329,439	599.7%	30.2%	152.4%	112.9%
AP	8	27,180	92,986	104,306	141,089	91,390	419.1%	242.1%	12.2%	35.3%
DF	8	220,262	190,497	451,881	296,404	289,761	34.6%	-13.5%	137.2%	-34.4%
MS	8	156,274	286,084	733,234	728,619	476,053	366.2%	83.1%	156.3%	-0.6%
MT	8	203,912	290,435	805,004	756,615	513,991	271.0%	42.4%	177.2%	-6.0%
RN	8	135,839	229,641	532,188	430,935	332,151	217.2%	69.1%	131.7%	-19.0%
RO	8	90,894	112,570	265,754	317,548	196,692	249.4%	23.8%	136.1%	19.5%
RR	8	69,389	86,044	480,560	227,101	215,774	227.3%	24.0%	458.5%	-52.7%
SE	8	55,315	174,225	328,102	195,739	188,345	253.9%	215.0%	88.3%	-40.3%
TO	8	111,457	189,765	438,846	379,002	279,767	240.0%	70.3%	131.3%	-13.6%
AL	9	277,836	173,660	309,745	462,217	305,865	66.4%	-37.5%	78.4%	49.2%
ES	10	163,863	348,191	427,350	315,912	313,829	92.8%	112.5%	22.7%	-26.1%
PI	10	133,678	222,494	343,542	586,003	321,429	338.4%	66.4%	54.4%	70.6%
PB	12	72,128	135,698	173,682	327,248	177,189	353.7%	88.1%	28.0%	88.4%
SC	16	126,975	277,591	376,578	402,691	295,959	217.1%	118.6%	35.7%	6.9%
GO	17	278,532	420,470	1,082,016	883,737	666,189	217.3%	51.0%	157.3%	-18.3%
PA	17	134,026	216,549	277,955	196,890	206,355	46.9%	61.6%	28.4%	-29.2%
MA	18	114,913	140,336	205,391	182,524	160,791	58.8%	22.1%	46.4%	-11.1%
CE	22	124,288	199,056	270,299	355,072	237,179	185.7%	60.2%	35.8%	31.4%
PE	25	206,615	344,351	558,991	475,497	396,364	130.1%	66.7%	62.3%	-14.9%
PR	30	175,732	384,957	526,811	565,229	413,182	221.6%	119.1%	36.8%	7.3%
RS	31	151,977	198,777	411,756	447,748	302,565	194.6%	30.8%	107.1%	8.7%
BA	39	133,155	197,361	327,733	514,352	293,150	286.3%	48.2%	66.1%	56.9%
RJ	46	191,689	207,077	478,660	568,034	361,365	196.3%	8.0%	131.2%	18.7%
MG	53	154,935	290,669	724,129	750,057	479,948	384.1%	87.6%	149.1%	3.6%
SP	70	191,531	437,855	756,983	672,451	514,705	251.1%	128.6%	72.9%	-11.2%
Brazil elected candidates average	513	157,252	264,626	503,416	513,866	359,790	226.8%	68.3%	90.2%	2.1%

Source: TSE

Table 7 also shows variation among states with the same district magnitude. Among the eleven states with the minimum district magnitude, we observe that in the 2014 campaign, spending in Mato Grosso averaged more than \$500,000, a value that is more than five times larger than in Amapá (AP), where candidates' spending in 2014 averaged less than a \$100,000.

The table also shows a large within-state variation. Elected candidates increased their spending by less than 100 percent in only five states; moreover, the growth rate varied wildly along elections. Campaign spending increased more markedly during the beginning of the

period but somehow stabilized in 2014 when elected candidates in many states reduced their spending.

Table 8 provides a better idea about the share of the spending of elected candidates across states. More substantively, the table asks the following question: how much of the spending was done by elected candidates? It turns out that the country average was an astonishing 62 percent; that is, over the four elections during the period, elected candidates were responsible for almost two-thirds of all reported campaign spending. This finding reinforces our suspicion about the lower intensity of electoral competition in Brazil.

Looking at variation across states, we can identify a small, albeit not significant, positive correlation of 0.24 between district magnitudes and the average spending concentration. This correlation indicates that the share of elected candidate spending should be larger among states with higher magnitudes. The two largest states of the Northeast, Pernambuco (PE) and Bahia (BA), also show the largest averages of spending concentration. But two of the smallest states of the same region, Rio Grande do Norte (RN) and Piau  (PI), show similar concentration. To complicate matters more, we see similar averages of spending concentration in states at the extremes of district magnitudes, such as Acre (AC), and S o Paulo (SP). Clearly, a precise estimation of the impact of district magnitude requires more than a bivariate analysis.

Table 8: Spending Share of Elected Candidates over Spending of All Candidates by States, 2002 -2014

UF	Magnitude						Average in Period	Variation in Period	Variation in Period		
		2002	2006	2010	2014	02 - 06			06 - 10	10 - 14	
AC	8	36%	55%	77%	41%	52%	14.3%	53.3%	40.6%	-47.0%	
AM	8	55%	54%	52%	71%	58%	29.5%	-1.2%	-4.7%	37.6%	
AP	8	46%	47%	44%	37%	44%	-18.7%	3.1%	-5.3%	-16.7%	
DF	8	63%	27%	59%	34%	46%	-45.8%	-56.6%	113.5%	-41.5%	
MS	8	49%	63%	64%	56%	58%	16.1%	29.5%	1.6%	-11.8%	
MT	8	48%	41%	57%	59%	51%	22.8%	-15.7%	41.1%	3.2%	
RN	8	72%	75%	79%	69%	74%	-3.7%	4.7%	4.6%	-12.1%	
RO	8	36%	38%	46%	42%	41%	16.0%	3.1%	23.2%	-8.6%	
RR	8	66%	54%	64%	62%	61%	-6.7%	-19.0%	19.3%	-3.5%	
SE	8	64%	71%	80%	55%	67%	-13.2%	10.6%	12.9%	-30.5%	
TO	8	69%	53%	55%	55%	58%	-20.0%	-23.1%	3.0%	10.1%	
AL	9	63%	57%	57%	64%	60%	2.7%	-9.3%	-0.3%	13.6%	
ES	10	47%	65%	50%	46%	52%	-1.9%	38.0%	-23.0%	-7.7%	
PI	10	78%	73%	69%	67%	72%	-14.2%	-6.5%	-5.3%	-3.1%	
PB	12	51%	73%	58%	79%	65%	54.9%	43.0%	-20.7%	36.6%	
SC	16	51%	55%	50%	58%	54%	12.7%	7.6%	-8.5%	14.5%	
GO	17	72%	65%	74%	66%	69%	-9.0%	-9.5%	13.3%	-11.2%	
PA	17	70%	75%	71%	49%	66%	-29.3%	8.0%	-5.6%	-30.7%	
MA	18	72%	67%	54%	44%	59%	-38.8%	-6.2%	-19.8%	-18.6%	
CE	22	79%	72%	66%	64%	70%	-19.6%	-9.8%	-8.5%	-2.6%	
PE	25	69%	86%	86%	66%	77%	-4.8%	24.7%	0.4%	-24.0%	
PR	30	65%	70%	57%	69%	65%	6.9%	7.7%	-18.2%	21.4%	
RS	31	60%	58%	65%	69%	63%	14.2%	-3.9%	11.9%	6.1%	
BA	39	78%	80%	68%	80%	76%	1.9%	1.9%	-14.9%	17.6%	
RJ	46	54%	60%	60%	67%	60%	24.6%	12.8%	-1.0%	11.5%	
MG	53	68%	60%	70%	71%	67%	3.4%	-12.6%	17.6%	0.6%	
SP	70	52%	55%	56%	55%	54%	7.3%	6.2%	2.6%	-1.5%	
BRAZIL	513	60%	61%	63%	63%	62%	3.5%	1.0%	2.7%	-0.1%	

Source: TSE

Finally, the stability of national rates of concentration among elections conceals a high within-state variation from election to election. These numbers go from a positive 53.3 percent in Acre (AC) between the 2002 and 2006 elections to a negative 41.5 percent in Brasília (DF) between the 2010 and 2014 elections.

Table 9 deals more directly with the electoral performance of the most profligate candidates. It shows the share of the top M largest spenders over the M elected candidates. In other words, how many of the highest spenders get elected? First, taking into account all elections, the national average reinforces our assertion that spending matters in Brazilian elections. The average over elections for the whole country is an impressive 67 percent , meaning that about two-thirds of the highest spenders got elected during the period. The variation of this average over elections is low, suggesting that the effect of spending on national elections for federal representatives reached an equilibrium.

Table 9: Percentage of the top M (magnitude) Spender Candidates among the M Elected Candidates per state 2002 -2014

State	Magnitude					Average in Period	Variation in Period			
		2002	2006	2010	2014			02 - 06	06 - 10	10 - 14
AC	8	38%	75%	88%	50%	63%	33.3%	100.0%	16.7%	-42.9%
AM	8	75%	50%	50%	75%	63%	0.0%	-33.3%	0.0%	50.0%
AP	8	50%	63%	50%	25%	47%	-50.0%	25.0%	-20.0%	-50.0%
DF	8	75%	38%	88%	50%	63%	-33.3%	-50.0%	133.3%	-42.9%
MS	8	63%	75%	75%	75%	72%	20.0%	20.0%	0.0%	0.0%
MT	8	63%	50%	63%	63%	59%	0.0%	-20.0%	25.0%	0.0%
RN	8	75%	75%	75%	75%	75%	0.0%	0.0%	0.0%	0.0%
RO	8	50%	38%	63%	75%	56%	50.0%	-25.0%	66.7%	20.0%
RR	8	63%	63%	38%	63%	56%	0.0%	0.0%	-40.0%	66.7%
SE	8	63%	63%	88%	63%	69%	0.0%	0.0%	40.0%	-28.6%
TO	8	75%	75%	50%	75%	69%	0.0%	0.0%	-33.3%	50.0%
AL	9	56%	44%	78%	78%	64%	40.0%	-20.0%	75.0%	0.0%
ES	10	60%	80%	70%	50%	65%	-16.7%	33.3%	-12.5%	-28.6%
PI	10	80%	80%	90%	60%	78%	-25.0%	0.0%	12.5%	-33.3%
PB	12	58%	92%	67%	83%	75%	42.9%	57.1%	-27.3%	25.0%
SC	16	56%	69%	63%	63%	63%	11.1%	22.2%	-9.1%	0.0%
GO	17	76%	76%	82%	59%	74%	-23.1%	0.0%	7.7%	-28.6%
PA	17	71%	71%	82%	65%	72%	-8.3%	0.0%	16.7%	-21.4%
MA	18	83%	72%	67%	50%	68%	-40.0%	-13.3%	-7.7%	-25.0%
CE	22	77%	73%	77%	73%	75%	-5.9%	-5.9%	6.3%	-5.9%
PE	25	72%	88%	88%	68%	79%	-5.6%	22.2%	0.0%	-22.7%
PR	30	60%	83%	73%	77%	73%	27.8%	38.9%	-12.0%	4.5%
RS	31	58%	71%	74%	68%	68%	16.7%	22.2%	4.5%	-8.7%
BA	39	69%	82%	74%	74%	75%	7.4%	18.5%	-9.4%	0.0%
RJ	46	72%	74%	59%	67%	68%	-6.1%	3.0%	-20.6%	14.8%
MG	53	75%	68%	81%	75%	75%	0.0%	-10.0%	19.4%	-7.0%
SP	70	54%	70%	67%	61%	63%	13.2%	28.9%	-4.1%	-8.5%
BRAZIL	513	65%	68%	68%	66%	67%	2.7%	5.1%	0.3%	-2.6%

Source: TSE

In analyzing variation across states, we observe more differences, with minimum and maximum average values ranging from 47 percent in Amapá (AP) to an amazing 79 percent in Pernambuco (PE). As in the previous table, there is a non-significant 0.26 correlation between district magnitudes and the average percentage of top M spenders among the elected. Still, states at both extreme values of district magnitude, such as Amapá (AP) and São Paulo (SP) show similar shares. Similarly, states with the same magnitude, such as Amapá (AP) and Rondônia (RO), both in the Northern region, show quite different shares.

Regarding within-state variation, the share of the top M candidates follows the stability pattern established in the previous table, meaning that largest spenders tend to be the elected over multiple elections. In many states, such as Mato Grosso (MT), Rondônia (RO), and Minas Gerais (MG), there was no variation during the period. The stability champion is Rio Grande do Norte (RN), a small state in the Northeast, whose share of 75 percent was intact over all four elections considered here.

Conclusion

This chapter provided a brief portrait of electoral spending, a pressing issue in a country undergoing a series of political scandals involving politicians from both government and opposition parties and large corporations. The current political scandal, the “Lava-Jato,” follows a scandal from the middle of the 2000s, the “Mensalão.” Though there are differences between those scandals, the common root was money to finance politicians’ campaigns.

These scandals forced scholars to pay more attention to campaign costs, which are responsible for the growing demand for campaign financing. But why did campaign costs increase so much in such a short period of time? We speculate about two complementary explanations: the rise of the PT as a viable competitor in executive elections, and the parallel increase in party fragmentation and the number of candidates.

The rise of the PT as a viable competitor disorganized old patterns of political competition, installing a generalized “arms race.” In this game the dominant strategy for each competitor is to raise the stakes on the table to force other players to yield. The disorganization of political competition increased both transaction costs and political polarization, rendering unfeasible any credible commitment to stop the game, particularly for executive offices. As a result, the game got out of control and, eventually, led to political scandals and generalized losses.

The second explanation relates to the increasing number of parties and party competition. High levels of party fragmentation are not new in Brazil, as the country has always had the world's most fragmented party system. Still, using the traditional Laakso and Taagepera (1979) index, the effective number of parties between 2002 and 2014 grew from about 8.5 to 13.²¹ One consequence of the high level of party fragmentation is the excessive number of candidates in elections for federal representatives.²² By itself, the large number of parties and candidates would make the system unintelligible to voters. These characteristics make Brazilian elections very permeable to the influence of money. The dominant strategy for all candidates is

²¹ The effective number of parties in Brazil is the highest in the world and well above the average of other proportional systems, which is about 5. (Bormann & Golder 2013)

²² As shown above, between 2002 and 2014, the number of candidates for federal representative increased from 4902 to 7137.

to spend as much money as possible to differentiate themselves from other candidates, including candidates from their own party.

While the second explanation still provides a reasonable approximation of Brazilian elections, our results draw a more complicated picture. The influence of money on electoral performance was confirmed by the unquestionable relationship between the largest spenders and elected candidates. Though a high-spending campaign does not guarantee election, this seems to be a characteristic shared by high-quality candidates, as campaign spending concentrated in a small group of candidates throughout the whole period. These findings cast doubt on the assumption that a high number of candidates necessarily translates into a more intense electoral competition. More bluntly: Brazilian elections for federal representatives are less competitive than the traditional literature predicts.

The puzzle of having less electoral competition than expected with a large number of candidates may have a simple explanation. Candidates used their war chests as signals to scare off other potential high-quality candidates. In that case, the limited competition would be defined *ex-ante*, by the expected ability of candidates to raise funds. Unfortunately, a good test of this hypothesis would require electoral contributions dated before elections or in the first days of campaigning, when the costs of not running or quitting are still low.

Our findings open a new research agenda about the costs of Brazilian elections. First, district magnitude, the usual suspect in the explanation of variation among Brazilian states, shows no discernible impact on campaign spending, meaning that more comparative research is needed to tidy up the relationship between district size and campaign spending. Second, as argued by Samuels (2001c), candidates are stimulated to increase their campaign spending not by the raw number of competitors but by the high-quality competitors in their party list. How can we determine which candidates are competitive within party lists in each state? The selection rule used in this chapter to define high quality candidates – no more than 10 percent vote difference from the last winning candidate in their respective list – may be too extreme, possibly excluding some high-quality candidates. But even with a different selection rule, the issue of the real level of electoral competition in Brazilian proportional elections requires more research.

It is also essential to investigate whether challengers benefit more than incumbents from the increase in campaign spending (cf. the seminal work of Jacobson [1978] on vote return differentials) and whether expected vote returns from increasing spending are linear. The investigation of vote return differentials may shed new light on the existence and extent of incumbency advantage in Brazil.

Finally, throughout this chapter campaign spending was treated as an aggregate. But candidates' reports to the TSE allows detailed discrimination of spending types (see Heiler, Viana, and Dos Santos (2016)). For instance, these data may allow researchers to investigate whether some types of spending are more effective than others and in which context.

Before concluding, a word on the recent electoral reforms is in order. The Brazilian Supreme Court has banned corporate contributions that represented most of the electoral money. At the time of this writing, the Congress approved new rules of campaign finance. These rules created, among other things, a fund for financing electoral campaigns with public money. They also liberated self financing by candidates and set spending limits for each office. In the 2018 elections, the spending limit for Federal Deputies will be 2.5 million Brazilian Reais (roughly US\$ 750,000).²³ As we saw in Table 7, this limit is higher than the elected candidates' average of expenses in any state. In a context of greater scarcity due to the ban on corporations' money, the limit should have little impact on campaign spending. Finally, according to the approved rules, the distribution of the public fund, whose value is about US\$ 540 million, will be skewed toward the larger parties and distributed by party leaders, which may reinforce the concentration of electoral spending among few candidates.

Together, these new rules configure a different environment for the 2018 election campaign and a unique research opportunity to compare the changes to the picture presented in this chapter

²³ Using the same exchange rate, based on the December 2016 average exchange rate (3.351 BR\$/1 US\$), employed throughout this chapter.

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