When Do Voters Punish Corrupt Politicians? Experimental Evidence from Brazil*

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Abstract

While there is a vast literature about the consequences of corruption, research focused on the causes of non-corrupt governments is still nascent. Electoral accountability is one important means of changing existing corruption dynamics in government, and one potential way of punishing corrupt elected officials is to give voters information about the corrupt behavior. In a randomized field experiment in a Brazilian election in 2008, we take advantage of a situation where both the incumbent and challenger had corruption convictions in order to examine whether informing voters about their convictions has an effect on voting behavior. We inform voters by distributing 187,177 fliers to individual households in the vicinity of 200 voting locations that detail the corruption convictions of both candidates in a run-off election. One hundred locations received the flier of a candidate from a center-right party, accused of using public funds to take out ads in newspapers while he was under investigation, and another one hundred locations received the flier of a left-party candidate, accused of giving a no-bid contract of R$2 million (approximately US$1 million) to a non-governmental organization (NGO) she founded. A control group of 200 polling locations received no flier. The flier for the center-right candidate had no effect on vote choice, spoiled ballots, or turnout. The flier for the other candidate, by contrast, moved 2.6 percent of the votes on average relative to the control group, had no effect on spoiled ballots, and a negative 1.2 percent average treatment effect on voter turnout. The turnout results are surprising given that Brazil has mandatory voting. The effect of the treatment also shows the issue-salience of corruption for voters, in contrast to some previous studies. In order to understand the mechanisms that lead to these different results, we conduct a survey experiment in which we obtain pre- and post-treatment attitudes toward the candidates, and show respondents the fliers. The survey experiment, along with descriptive survey results from the treatment and control group of the field experiment give insight into factors that motivated voting behavior in the election. The results shed light on the effects of negative campaigning, the conditions under which increased information can lead to lower voter turnout, and on varied reactions to corruption by voters.

1 Introduction

When do voters punish corrupt politicians? The question has important implications for institutions intended to keep politicians accountable. While there is a vast literature about the consequences of corruption (Johnston, 1986; Mauro, 1995; Olken, 2005), the literature focused on the causes of non-corrupt governments is still nascent. As Adsera, Boix and Payne (2003, p. 446) succinctly state: "In contrast to the mounting scholarly research on the consequences of good governance, our knowledge about what causes governments to be clean and efficient is still at its infancy."

Electoral accountability is one important means of changing existing corruption dynamics in government. This paper demonstrates that information about candidate corruption given to voters can enhance electoral accountability, but that there can be deleterious effects as well, including

decreased voter turnout. Negative turnout effects can take place even in the presence of mandatory voting, and thus in some cases, voters are willing to bear costs not to vote. Additionally, despite a number of papers that have shown that corruption is not a salient issue in the consciousness of many voters in the developing world (Renno, 2007; Almeida, 2008), we find at least in a recent election that it still remains an important determinant of voting behavior. Finally, a number of non-governmental organizations (NGOs), international organizations, and governments have initiated various efforts to increase transparency and government accountability in elections. Yet, few have analyzed the impact of these initiatives in terms of their effect on electoral behavior in a manner that allows one to make valid causal inferences. Our study presents a first step in accomplishing such a goal.

One important means of punishing corrupt politicians is to give voters information about the corrupt behavior allowing them to vote against such candidates. A theoretical literature focused on the effects of information on voting behavior concludes that under certain conditions, information improves accountability to mass publics (Alvarez, 1998; Lupia and McCubbins, 1998; Przeworski, Stokes and Manin, 1999; Besley and Burgess, 2002). However, the empirical literature is still relatively scant on understanding the conditions under which information about corruption results in electoral accountability.[1] Making valid causal inferences from information is difficult, in large part because information about the corruption of politicians is rarely randomly assigned to voters. A number of studies with non-experimental data that attempt to examine the effects of corruption charges on electoral performance find only modest effects (Peters and Welch, 1980; McCann and Dominguez, 1998).[2] In a recent study of municipal governments in Brazil, Ferraz and Finan (2008), exploiting randomized corruption audits, find relatively large effects that ultimately decrease the probability of incumbent politicians being reelected.

Field experiments that examine the effects of corruption on voting behavior have only recently emerged. To the best of our knowledge, our experiment conducted in October 2008; Banerjee,

[1]Notable exceptions include Adsera, Boix and Payne (2003); Chang (2005); Reinikka and Svensson (2005); Olken (2007); Ferraz and Finan (2008); Banerjee, Green, Green and Pande (2010); Banerjee, Kumar, Pande and Su (2010), and Chong et al. (2010).

[2]One observational study that is an exception is Pereira, Melo and Figueiredo (2009), who find large negative effects on the probability of reelection when examining the effect of state corruption audits in the state of Pernambuco, located in northeast Brazil.

Green, Green and Pande (2010)'s and Banerjee, Kumar, Pande and Su (2010)'s studies in India, conducted in March-April 2007 and December 2008, respectively; and Chong et al. (2010)'s work, conducted in Mexico in June and October 2009, are among the first field experiments that attempt to randomize informing voters about politicians' performance in order to examine the effects on voting behavior. Banerjee, Green, Green and Pande (2010), primed voters in rural India not to vote along ethnic lines in a first treatment, and not to vote for corrupt candidates in a second treatment. While the ethnic treatment increased voter turnout, the corruption treatment had no effect on turnout or incumbent vote share, contrasting with the results of a study done in Delhi roughly one and a half years later. In that study, Banerjee, Kumar, Pande and Su (2010) distributed newspapers with report cards on legislator attributes and performance in Delhi prior to the December 2008 elections. The report card included performance and qualification measures such as attendance at legislative and committee sessions, discretionary spending performance, education levels, and pending criminal charges. The treatment resulted in an average treatment effect of 3.6 percentage point increase in voter turnout, no effect on incumbent vote share, and a 19 percentage point decrease in cash bribes in treatment precincts. In a similar study in three states in Mexico (Jalisco, Morelos, and Tabasco), Chong et al. (2010) informed voters in three separate treatments by flier of overall municipal spending, redistribution to the poor, and corruption reported in audit reports produced by the federal government's audit office prior to July and October 2009 congressional and local elections. In contrast with Banerjee, Kumar, Pande and Su (2010), they find in Jalisco that the corruption treatment resulted in an 11 percentage point decrease in voter turnout, after controlling for covariates.[3]

The contrasting results of these studies motivates important questions about the mechanisms that explain variation in the voting behavior in these different contexts. First, varied results might be due to differing degrees in the strength of support that candidates maintain. All else equal, an incumbent with stronger core support would likely lose less vote share than a candidate backed with more swing voters when faced with a salient corruption accusation prior to an election. Second, variation in the nature and degree of the candidate's corruption offense(s) may also explain

[3]The results cited are from a preliminary working paper. The authors had not presented and analyzed the results from Morelos and Tabesco during this iteration of the working paper.

the conditions under which voters punish the politician. These expectations by the voter may be shaped by societal norms and/or individual expectations that establish thresholds for "punishable" corruption. Finally, candidate-specific attributes – including gender, race, and class – also may play an important role in the extent to which voters punish a politician determined to be corrupt.

In contrast to much of the theoretical literature on accountability, political scientists who have done work on negative campaigning, mainly in American politics, have found in some cases that negative information about candidates can suppress turnout, and also benefit the candidate making the accusation.[4] However, a number of other scholars have found that negative campaigning does not necessarily have such effects.[5] For example, Lau, Sigelman and Rovner (2007, p. 1185) find that:

> [t]here is no consistent evidence in the research literature that negative political campaigning "works" in achieving the electoral results that attackers desire. Although attacks probably do undermine evaluations of the candidates they target they usually bring evaluations of the attackers down even more, and the net effect on vote choice is nil. . . .Nor have we uncovered evidence that negative campaigning tends to demobilize the electorate.

The authors remain skeptical as to the effects of negative campaigning on voter turnout, but feel that there is a strong corrosive effect of negative campaigning on the attitudes supporting the political system (Lau, Sigelman and Rovner, 2007, p. 1184). To our knowledge, this project is also one of the first field experiments that tests the effects of negative advertising. The effect of negative campaigning outside the United States has largely gone untested, and if the attitudinal findings travel internationally, they could have a particularly adverse effect on newer democracies, where lack of confidence in government institutions can undermine democratic governance.

In this study, we conduct a field experiment during the 2008 mayoral run-off election in São Paulo, Brazil, the seventh largest city in the world. We exploit the fact that both candidates in the

[4]Examples include Ansolabehere and Iyengar (1995); Goldstein (1997); Ansolabehere, Iyengar and Simon (1999); Freedman, Wood and Lawton (1999); Houston and Doan (1999); Lemert, Wanta and Lee (1999); Garand and Graddy (2001); Lawton and Freedman (2001).

[5]Freedman and Goldstein (1999); Djupe and Peterson (2002); Clinton and Lapinski (2004); Kahn and Kenney (2004); Arceneaux and Nickerson (2005); Brader (2005); Brooks (2006); Geer and Lau (2006); Jackson and Sides (2006).

run-off election had corruption convictions, and distribute fliers informing voters of the corruption convictions to households in the vicinity of individual polling locations. We randomly assign a candidate's flier to every household within the vicinity of a polling location. The experimental design allows us to make strong causal inferences about the effect of information on voting behavior, and unlike previous studies, we are able to examine the effects not only of the incumbent, but also of the challenger.

Specifically, we take advantage of a unique set of events that took place during the election period. The Brazilian Magistrates Association (*Associação dos Magistrados Brasileiros*, or AMB) published a document called the "Dirty List" (*Lista Suja*), which listed politicians running in the 2008 elections who had convictions involving impropriety while in government office. Both candidates running in the election for mayor of São Paulo – Gilberto Kassab of the Democratic Party (DEM) and Marta Suplicy of the Worker's Party (PT) – appeared on the AMB's Dirty List. During the week prior to the elections, we administered two treatments; the first was a flier informing voters that Kassab appeared on the Dirty List and gave information about the nature of his conviction, and a second was a flier that did the same for Suplicy. We then randomly assigned voting precincts that would receive the Kassab or Suplicy flier, and also had a control group of precincts that did not receive the flier. In all, households in the vicinity of 100 precincts received the Kassab flier, another set of households in the vicinity of 100 precincts received the Suplicy flier, and 200 precincts were in the control group. In the week prior to the election, we hired a direct marketing firm that distributed a total of 187,177 fliers to the mailboxes of individual households.[6] We obtained the official electoral results for each polling location from the Regional Electoral Tribunal (*Tribunal Regional Eleitoral*, or TRE) to see if the treatments had an effect.

Our results varied by individual candidate. The Kassab flier had no effect on vote choice, or on spoiled ballots, or on turnout. The Suplicy flier, by contrast, moved 2.6 percent of the votes on average relative to the control group, had no effect on spoiled ballots, and a negative 1.2 percent average treatment effect on voter turnout. The turnout results are particularly surprising given that Brazil has mandatory voting. We expected, ex-ante, not to see an effect on turnout for ei-

[6]Unlike the United States, in Brazil, direct marketing firms are allowed by law to deliver fliers to individual mailboxes.

ther candidate, because we thought mandatory voting laws would create sufficient incentives for turnout, and that the fliers would have a mobilizing effect. We believe the results of our study, and Chong et al. (2010)'s place scope conditions on previous theories positing that more informed voters are more likely to turn out (Wolfinger and Rosenstone, 1980; Palfrey and Poole, 1987; Feddersen and Pesendorfer, 1996). In addition, we offer some preliminary evidence from a survey that we conducted for what might explain the causal mechanisms the effectiveness of the two fliers.

2 The Brazilian Electoral Context

2.1 Brazil's 2008 Municipal Elections and the AMB's *Lista Suja*

On October 26, 2008, Kassab and Suplicy ran against each other in the run-off election for mayor of São Paulo. Kassab, the incumbent mayor, assumed the position in 2006, upon the resignation of José Serra, who became governor of the state of São Paulo. Kassab's Democratic Party is a center-right party that formerly was the the PFL or *Partido da Frente Liberal*, one of parties that splintered from ARENA, the official party of the military regime that held power in Brazil from 1964 until 1985. Suplicy, who was mayor of São Paulo from 2001 until 2004, served as the Minister of Tourism in the federal government for a year starting in 2007, before resigning to run for mayor. At the time of the election, President Luiz Inácio da Silva (Lula), a co-partisan of Suplicy, enjoyed widespread popularity; however, other PT candidates did not maintain the same level of support.

The AMB, the main trade association for Brazilian judges, established the Dirty List in order to publicize the corruption proceedings of candidates seeking political office. The list has generated controversy in Brazil, in terms of the criteria that one must meet to be on it and for selectively ignoring proceedings against politicians (Barros de Mello and Bragon, 2008). For example, including candidates that have been absolved by a court drew criticism from a number of judges and legal scholars. Gilmar Mendes, the president of the Federal Supreme Court (*Supremo Tribunal Federal*, or STF), for instance, declared the list as populist and politicized (D'Agostino, 2008).

The AMB included Kassab on the list because a court convicted him of "administrative impropriety" in 1997. At the time, Kassab served as the Secretary of Planning for the City of São Paulo.

The case, launched by public prosecutors in São Paulo, accused Celso Pitta, mayor at the time, and his staff, which included Kassab, of taking out an advertisement paid for with municipal funds in which they allegedly defended their own personal interests in newspapers. A lower court held that Kassab was guilty, but the decision was overturned on appeal. Despite objections from the Kassab campaign, the AMB kept him on the Dirty List.

Suplicy's conviction had more serious implications. In 2005, a São Paulo court convicted her of inappropriately giving a R$2 million (approximately US$840,000) no-bid contract to the Sexual Orientation Research Work Group (*Grupo de Trabalho e Pesquisa em Orientação Sexual*, or GTPOS), an NGO focused on advocacy for and increasing awareness of sexual orientation issues. The municipality awarded the contract to GTPOS to train São Paulo school teachers in issues pertaining to sexual orientation. Suplicy founded the NGO in 1990 and served as its honorary chairman until 2000 (MercoPress 2005). At the time of the election, the decision was under appeal.

2.2 Mandatory Voting in Brazil

In addition to the context-specific factors that took place during the 2008 municipal elections, mandatory voting also plays an important role in the electoral behavior of Brazilian voters. Although Brazil maintains a system of mandatory voting, absenteeism rates in recent elections have hovered around 15 to 20 percent nationally.[7] Specifically, citizens are required to vote from age 18 to 70, with some exceptions. Voting is voluntary from ages 16 to 18, and for those 70 or older. There are two conditions under which votes are not counted toward an individual candidate. First, a voter may cast a "blank vote" (*voto em branco*), where the voter actively chooses not to vote for any candidate – in other words, a protest vote. Second, Brazil's electronic voting system requires voters to enter an individual number for each candidate. If a voter enters the number incorrectly after a few attempts, his or her vote may be counted as invalid (*voto nulo*). While it is possible for voters to intentionally enter the numbers incorrectly, the combination of a high correlation between low education and high invalid votes cast and the non-existence of a correlation between education levels and blank votes cast offers some evidence that these votes are likely not to be

[7]These rates contrast with a number of other countries that maintain mandatory voting including countries like Argentina, Australia, Belgium, and New Zealand, all of which have voter absenteeism rates in single-digit percentages.

protest votes.[8] Those who fail to vote without justifying their absence within 60 days are required to pay a small fine ranging from R$1.05 to R$3.51 (approximately US$0.44 to US$1.47). A judge may fine the voter up to ten times the amount of the fine if he or she determines that the voter is in a good financial position; alternatively, if a judge determines that the voter is impoverished, he or she may not be required to pay the fine. Non-pecuniary costs of absenteeism borne by the voter include the time involved in a three-step process to pay a fine in which the voter typically must: (1) go to the local electoral notary (*cartorio eleitoral*) and obtain a paper stating they are fined, (2) go to a bank to pay the fine, and (3) return to the electoral notary showing that he or she paid the fine. Until the fine is paid, citizens are barred from applying for government jobs and other services, such as receiving or renewing their passport or driver's licenses, or requesting loans with public funds.[9] A voter is not penalized for not voting if he or she is out of town on election day (Brazil does not have absentee voting); voters may also file a form with a judge giving the reason why they did not vote in the election within 60 days. Electoral judges have discretion to determine whether the excuse is legitimate or not.

Despite these exceptions, absenteeism is still costly, especially for middle and upper class voters. In 1990, a survey showed that some 45 percent of Brazilian voters would not vote if voting were not mandatory (Elkins, 2000; Lapp, 2008), suggesting that the electoral rules create incentives for increased turnout. While these results are suggestive, a research design testing the counterfactual of similar voters where mandatory voting is "as if" random has yet to be carried out. In addition to the time required to pay the fine for not voting, voters who wish to justify their absence must also incur the costs of pleading their excuse with the TRE.

3 Research Design

We carried out a three-part design to understand the causal effects and mechanisms of candidate corruption information on voting behavior. Specifically, the design consists of a field experiment, a survey experiment, and a post-election survey. First, we do a field experiment to make causal

[8] We use the term "spoiled ballots" to refer to protest votes cast in the election.

[9] It is important to note that welfare payments are not suspended as a result of absenteeism.

inferences about the effect of informing voters of politicians' corruption convictions on the voting behavior and the perception of politicians. Field experiments are advantageous because they permit valid causal inferences to be made about a treatment. Second, we discuss the pre-treatment attitudes of the respondents prior to discussing the field experiment in order to provide the reader with some important context. In that same survey, we also have an embedded experiment where after obtaining pre-treatment attitudes, we show voters the fliers used in the field experiment, and ask a series of questions related to their post-treatment attitudes. Third, we conduct a survey on treatment precincts to shed light on the mechanisms that drove the voting behavior of those who received the fliers, and to make descriptive comparisons between the treatment and control groups in the field experiment.

We conducted the research in São Paulo for a number of reasons. First, it was the only city in which both candidates in the run-off election appeared on the Dirty List. We received funding from non-profit U.S. universities, and U.S. law prohibits political advocacy of candidates in elections by non-profit (501(c)(3)) organizations.[10] As a result, we treated the same number of precincts and produced the same flier design for both candidates. Second, São Paulo is the financial center of Brazil, and the city's mayor carries significant weight in Brazilian politics. The 2008 election had an ex-governor of the state of São Paulo and the runner-up presidential candidate in the 2006 election; in addition, Brazil's most recently elected democratic presidents (Fernando Henrique Cardoso and Luiz Inácio da Silva (Lula)) maintain strong ties to the city. Finally, as a result of São Paulo's immense size – it is the largest city in Brazil and the seventh largest in the world with an estimated population of 11 million and 8,198,282 voters in 2008 within the municipality itself – the city offers considerable heterogeneity in the education and socioeconomic status of individual voters.

3.1 Public Opinion

In the week after the election, we conducted a small survey (N=200) of São Paulo residents living near polling stations in the control group with the partial aim of obtaining information on voters'

[10] For a more in-depth treatment of this issue, please see the discussion of legal and ethical issues in Appendix I.

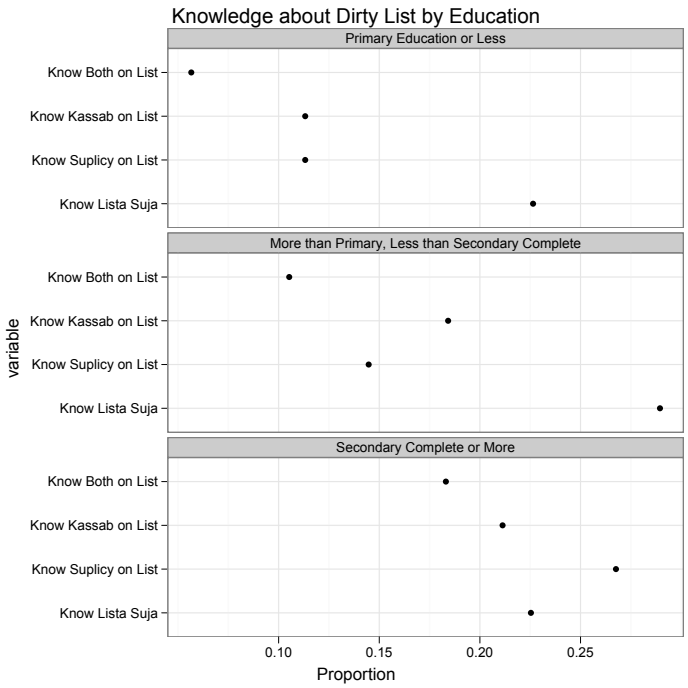
pre-treatment knowledge of the Dirty List, as well their opinions related to corruption in government. We relied on cluster sampling, in which we chose 20 control group precincts, and then randomly sampled ten households with the vicinity of the precinct. Even though the Dirty List was widely discussed in the local press, just 25% of respondents answered that they had heard of the list. Furthermore, 18% of respondents identified either Kassab or Suplicy as being on the list. Only 12% correctly identified both politicians as being on the list. These aggregate figures suggest that the vast majority of voters went to the polls unaware of the Dirty List controversy.

Knowledge of the Dirty List correlated with socioeconomic status. Figure 1(a) shows that awareness of the list was positively correlated with educational achievement: less than 5% of respondents who had not received more than a primary education named both Suplicy and Kassab as being on the Dirty List, while more than 20% of respondents with a secondary education did. A similar pattern is found when examining different income groups (Figure 1(b)), as higher income respondents evince greater awareness of the list.

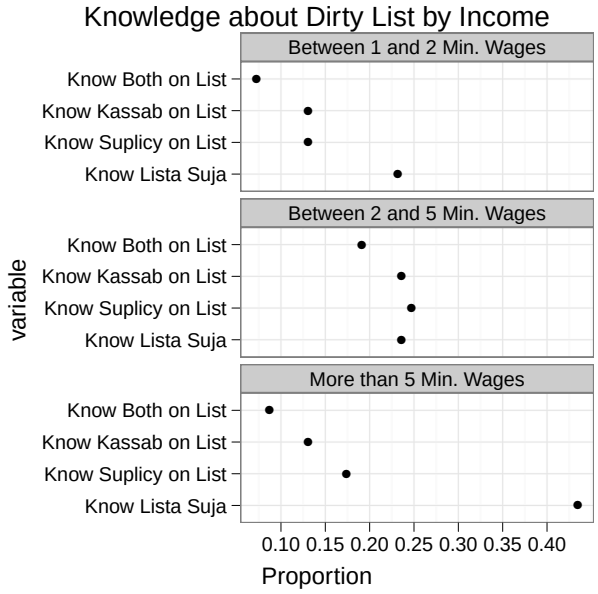
We also asked voters which candidate they believed to be more corrupt. Suplicy was named by 29% as the most corrupt, Kassab by 20%, and 20% of respondents said both were equally corrupt.[11] Perceptions of corruption were also strongly correlated with socioeconomic variables, particularly income, as shown in Figure 2. For respondents with self-reported incomes between 0 and twice the minimum wage, each candidate was named by roughly an equal number of respondents as the most corrupt. In the higher income categories, however, Suplicy was consistently ranked by many more voters as the most corrupt. In sum, poorly educated and lower income respondents were less likely to know about the list, as well as more likely to rank the PT candidate as less corrupt.

[11] About 30% responded "do not know."

Figure 1: Knowledge by Socio-Economic Status

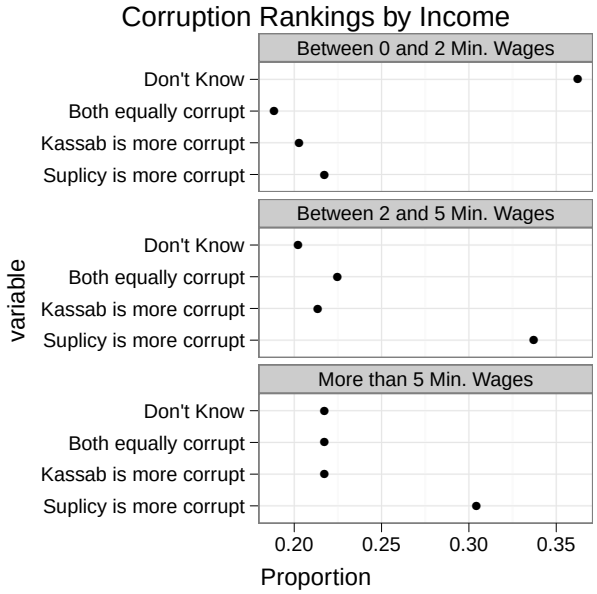


(a) Education



(b) Income

Figure 2: Ranking Candidates on Perceived Corruption by Income



4 Field Experiment

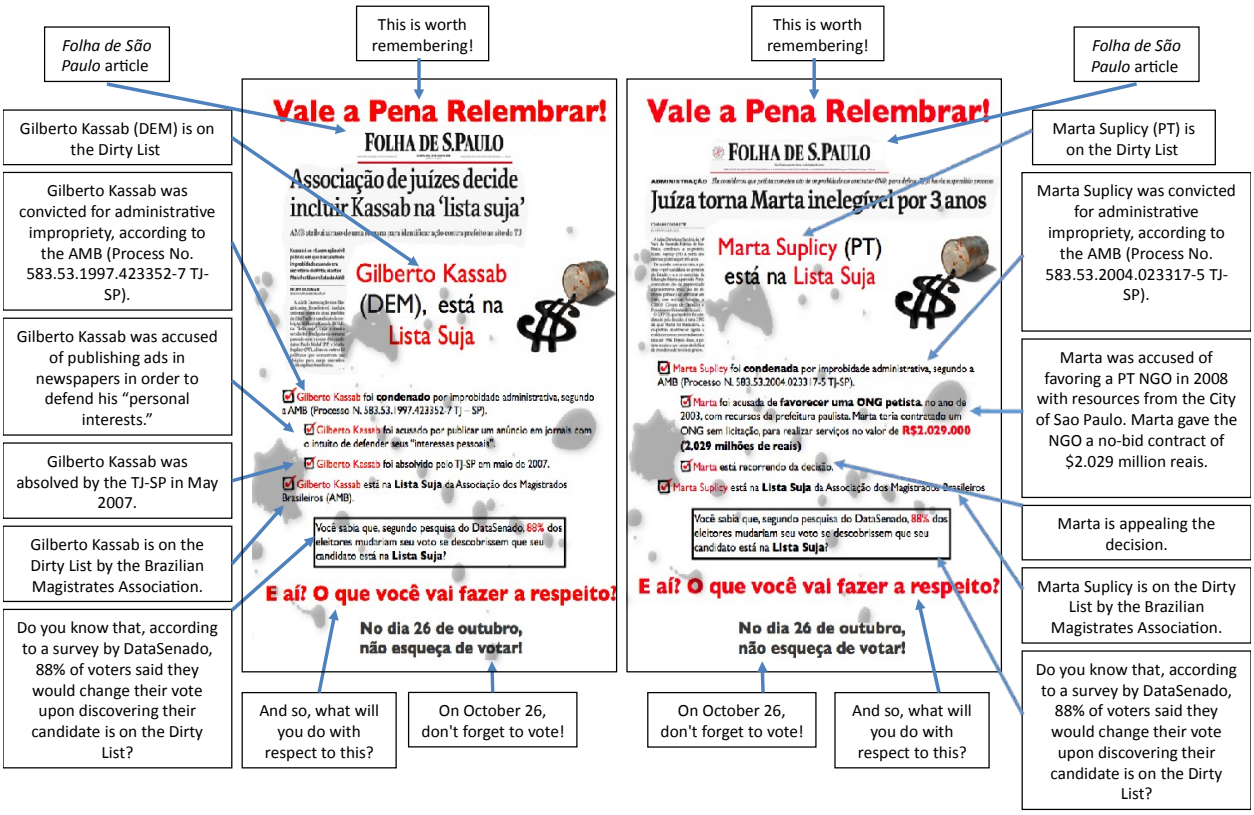
4.1 The Treatments

To inform voters of the corruption convictions of politicians, we designed two fliers – one for each candidate in the run-off election. The fliers, printed on white A4 sized paper, are pictured in Figure 3, with their respective translations.[12]

The flier design incorporates aspects of political propaganda that are similar to other political marketing material in Brazil, while also intending to have credibility in the information it is conveying. Both fliers have newspaper articles from *Folha de São Paulo*, one of the country's most respected periodicals, detailing the corruption allegations of each candidate. We also included the case numbers of each court case to increase the credibility of the information in the fliers.

[12]The fliers were designed in consultation with a local graphics designer, with reference to a large sample of electoral propaganda. We also consulted with experts in constructing the design of the flier. Prior to launching the field experiment, we informally conducted semi-structured interviews with 12 people in a working class area of the south zone of São Paulo, asking their opinions of four design prototypes (two for each candidate). Based on the responses of these individuals, we made minor modifications and determined the finalized versions of the fliers that would be used in the field and survey experiments.

Figure 3: The Fliers



4.2 The Unit of Analysis and the Randomization Group

The unit of analysis for the experiment is the *local de votação*, or voting precinct. Voting precincts are the smallest units for which we could administer a treatment, while obtaining vote share data for individual candidates and turnout data for voters. In selecting the group of precincts in the randomization group, we made a number of decisions based on our substantive interests and logistical constraints. We chose 400 of São Paulo's 1,759 precincts utilizing a constraint optimization algorithm that did the following:

(1) selected a relatively even mix of precincts based on the vote choice in previous elections.

The specific covariates are discussed in greater detail in Section 5.2

(2) chose precincts to maintain a relatively even mix of poor, lower middle class, and middle class precincts.

(3) maximized the distance between the treatment and control groups in order to minimize the potential for cross-over violations.

(4) selected the smallest polling locations in order to maximize statistical power.

(5) limited the geographic areas of polling locations to the north, east, and south zones of São Paulo. Due to budget constraints, the delivery company we used to deliver the fliers limited us to three geographic zones in São Paulo. These three zones best satisfied the other criteria on which we selected the precincts in the randomization group.

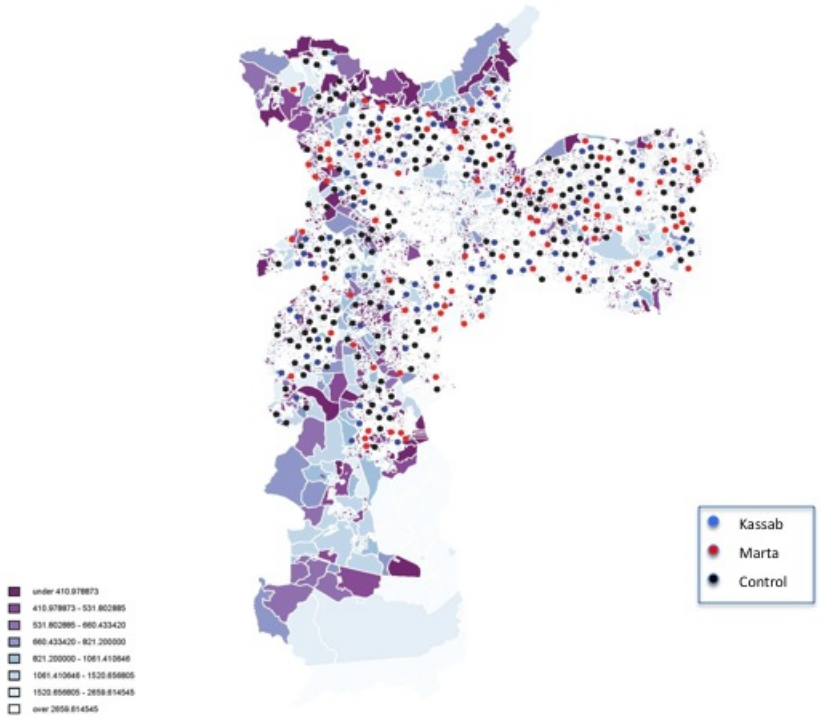
(6) included precincts in areas with a high penetration of individual household units with individual mailboxes. We intentionally avoided areas with a high percentage of high-rise and mid-rise apartment buildings, because of the high likelihood of fliers not being delivered by doormen or other personnel who would control access to the buildings.

To reduce the risk of interference across experimental units, we ensured that precincts in the study were not closer than half a mile from other precincts in the study. After ensuring some amount of distance between the experimental precincts, we grouped them into blocks of two based on longitude, latitude, PT vote share in the 2004 mayoral elections, and PT vote share in the 2006 presidential elections. More specifically, we matched precincts to their nearest neighbor on a mahnalobis distance metric. Within blocks, each precinct had an equal probability of being selected into treatment. Figure 4 shows a map of São Paulo with the distribution of precincts in the treatment and control groups.

4.3 Flier Delivery

In order to deliver the fliers, we hired a very reputable direct marketing firm. The São Paulo-based firm had more than a decade of experience delivering marketing and political propaganda for prominent multinational and local retailers and political candidates. To respect the desire of

Figure 4: Distribution of Voter Precincts



the firm's owner, we have intentionally withheld their name. The firm delivered the fliers from October 22-25, 2008 (over the four days prior to the election), and had a number of enforcement measures in place to make sure that the correct fliers were delivered to households.[13]

Unlike in the United States, Brazilian voters are allowed to choose any voting precinct within an electoral zone located where he or she resides. In 2008, the municipality of São Paulo had 1,759 precincts located in 57 electoral zones. Unfortunately, in Brazil, data is not publicly available for the precincts to which voters are zoned. We spoke to political consultants and experts in voting

[13]First, the overwhelming majority of deliverers had worked with the firm previously, and had thus established a working relationship with the firm. Second, supervisors monitored deliverers and also performed random checks of mailboxes to ensure that the proper fliers were delivered. Third, delivery personnel carried hand radios and were monitored by a supervisor based at the office of the direct marketing firm. This supervisor had himself been a deliverer and had good local knowledge of the appropriate time it would take to complete a delivery route. Finally, the firm gave our research team unfettered access to monitor their work. We therefore conducted our own random checks of mailboxes to make sure the correct fliers were delivered and also accompanied the supervisors during the delivery.

behavior who stated that approximately 70 to 95 percent of voters vote at the location closest to their house in São Paulo.[14] As a result, we were unable to determine the precise households that belonged to the voting precinct. In determining the appropriate number of households to deliver fliers for a given precinct, we knew the number of voters that were registered to vote at the precinct. We knew that the average number of voters per household in São Paulo at the time of the election was 3.1. In order to be conservative in our estimate of households for a given precinct, we took the number of voters in the precinct, and divided the number by 2.8 to obtain the number of households within a precinct to which we would deliver fliers. We also delivered an additional ten percent of fliers because of the high likelihood of dilution in the immediate area of the precinct. The direct marketing firm maintained a current database with the number of individual houses per city block. The delivery firm located the 200 precincts in the treatment group, and gave maps to the deliverers so that they would "spiral out" from the precinct delivering all of the fliers with the precinct as the center of a radius. Supervisors dropped off delivery personnel at the voting precinct (which almost always was a school). In the weeks after the election, we also asked respondents in the treatment group the distance they lived from their voting precinct, and 63.9% stated that they lived 1 kilometer or less from their polling location, and 77.5% reported living less than 2 kilometers away from their voting precinct.

As a result of the imprecision with which we were able to deliver the treatment, we believe that our treatment effects most likely underestimate the impact of the treatment. There is a good possibility that we treated voters who voted in precincts in the control group, because they are allowed to choose any precinct in the electoral zone and some voters vote close to their workplace or previous residence. There is also a smaller chance that voters in the treatment group may have communicated with those in the control group after they received a flier. We delivered the fliers as close to the date of the election as possible in order to minimize this possibility, along with any potential strategic reaction to the experiment by the candidates, parties, or the media. The location

[14]Specifically, we interviewed Marcus Figueiredo, professor of political science at Instituto Universitário de Pesquisas do Rio de Janeiro (IUPERJ) and former political consultant for ex-president Fernando Henrique Cardoso; Antônio Lavareda, head of MCI Estratégia and political consultant for former São Paulo governor and 2010 presidential candidate José Serra; Jairo Nicolau, professor of political science at IUPERJ; Lúcio Rennó, professor of political science at Universidade de Brasilia; and Haroldo Torres, senior researcher at Centro Brasileiro de Análise e Planejamento (Cebrap).

of the precincts in the treatment and control groups was held in confidence – only our research team knew the locations of the treatment and control precincts, and only the delivery firm knew the locations of the treatment precincts. We also acknowledge the possibility that "treated" voters in the control group – either through directly receiving a flier or by communicating with treated voters – may have informed voters in the treatment group who otherwise would not responded to the treatment, but think that this is less likely to have a large effect on the results given the short time before the election when the fliers were delivered.

5 Analysis

5.1 Data

Box plots showing the distributions of the data used in the analyses below are presented in Figure 5. Consistent with the overall election results though with a smaller spread between the two candidates, the center-right candidate, Gilberto Kassab, received about 14% more votes than the center-left candidate from the PT.[15] Furthermore, turnout is high, with an average of 83% of registered voters casting a ballot. To check baseline balance on observables, as well as to improve precision in some of our estimates, we also use election data from the most recent past elections.

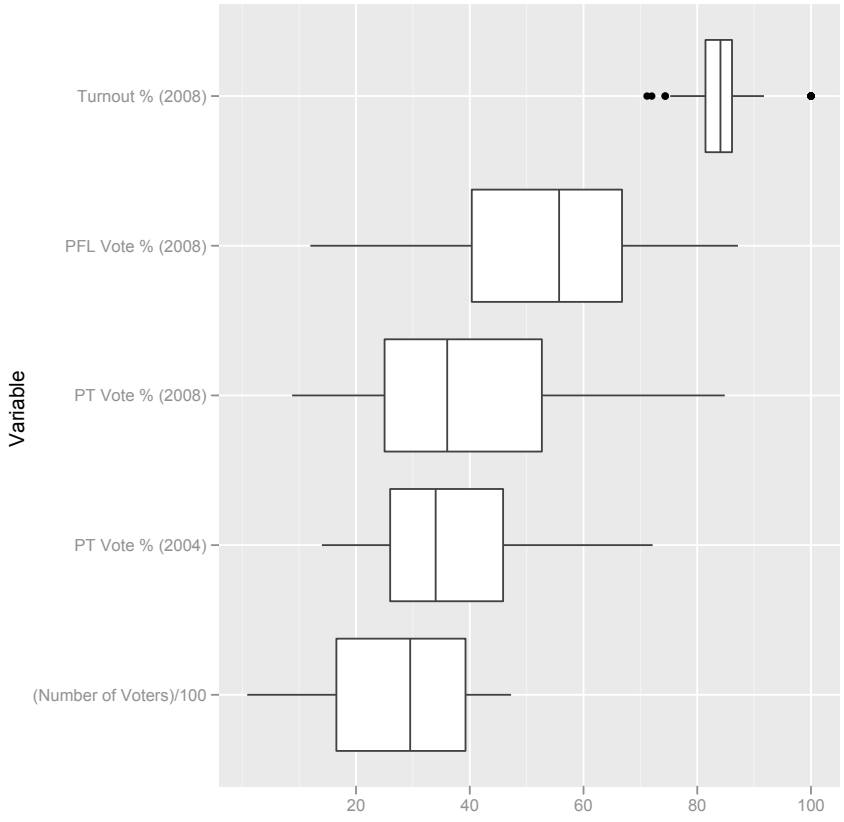
5.2 Baseline Balance

To check if our randomization procedure was successful, we examined whether pre-existing differences existed across treatment and control precincts. In expectation, no differences across treatment assignment should remain, but in practice, some differences are possible. To check baseline balance, we conducted simple difference in means tests across five baseline covariates. Furthermore, we use an omnibus test found in Hansen and Bowers (2008) that jointly appraises balance on each covariate, as well as their linear combinations.[16] Table 1 shows the results for each separate variable, reporting "standardized differences," which is simply the average within-block

[15] In the actual election, Kassab received 60.7% of the vote, while Suplicy received 39.3% of the vote.

[16] The omnibus statistic, called as d^2 in Hansen and Bowers (2008), is a weighted sum of squares of differences in means, though in our application, the weights are constant. This statistic has a large sample χ^2 distribution.

Figure 5: Descriptive statistics for the field experiment



Data obtained from the São Paulo TRE (Regional Electoral Tribunal); N=400

differences in means, scaled by the pooled standard deviation, and the z-score. On the four voting behavior variables, we find no substantial imbalances. The number of voters variable, however, exhibits some imbalance, with a 0.2 standardized difference across treatment and control. In some of our analyses below, we check the robustness of our findings to adjust for this imbalance. The omnibus test which tests the hypothesis of no difference on any of the baseline variables, as well their linear combinations, has a p-value of 0.26. Thus, while we find some imbalance on the number of registered voters, on all other variables, treatment and control are statistically indistinguishable.

Table 1: Balance on Baseline Variables. Standardized difference is the difference in means of treatment and control units scaled by their pooled standard deviation. There is some imbalance on the number of voters, but all other variables show no substantial difference across treatment and control precincts. N=400 precincts.

Baseline Variable	Standard Diff.	Z-Score
# of Voters	-0.23	-2.2
PT Pres. Vote Share (2006)	0.005	0.06
PT Mayor Vote Share (2004)	-0.03	-0.3
PT Congress Vote Share (2004)	-0.007	-0.09
PSDB Congress Vote Share (2004)	0.04	0.5

5.3 Results

We present two sets of results for each of our three dependent variables: vote share, turnout, and spoiled ballots. Our quantity of interest is the average treatment effect on precincts, not individual voters, as individual level data is unavailable. The first estimator is the simple "intent-to-treat" estimator, which is the average within-block difference in treatment and control precinct means. Our second set of estimates are from a simple linear regression of the outcome variable on a treatment indicator, a vector of covariates, and block dummy variables. We adjust for two covariates: PT vote share in the 2004 mayoral election and the number of registered voters in the precinct. 2004 PT vote share is an important covariate because it is highly predictive of our outcome variables and can potentially increase the precision of our estimates. We also adjust for number of voters because we detected some imbalance in this covariate after randomization, as discussed in Section 5.2.

Table 2 presents the effect of the distribution of the fliers with information on the corruption convictions of the PT mayoral candidate on the vote share of the candidate, turnout, and spoiled ballots.[17] For vote share, we find a negative effect of about 2.6%. The 95% confidence interval of the unadjusted estimate overlaps with 0, but the adjusted estimate is statistically significant at conventional levels. For turnout, we also find a negative effect. The unadjusted estimate is -1.9%

[17]Spoiled ballots in all presentations of results are measured by the blank votes cast in the election. We also looked for treatment effects on invalid votes and the sum of invalid votes and blank votes, and found that all estimates were statistically indistinguishable from 0.

Table 2: The effect of distributing information on corruption convictions involving Marta Suplicy, the PT mayoral candidate, on election outcomes. N=200 precincts, with 100 treated units. Estimates without covariates are from the simple ITT estimator. Estimates with covariates are from a linear model, including a treatment indicator, PT vote share in 2004, total number of registered voters, and block fixed effects. All confidence intervals are bootstrapped.

	Vote Share (%)		Turnout (%)		Spoiled Ballots (%)	
Estimate	-2.6	-2.6	-1.9	-1.2	0.1	0.1
Standard Error	1.99	1.01	0.65	0.66	0.2	0.2
95% Conf. Int.	[-6.5, 1.3]	[-4.5, -0.6]	[-3.2, -0.7]	[-2.5, 0.1]	[-0.3, 0.5]	[-0.2, 0.5]
Covariates		X		X		X

and statistically significant. The turnout results, however, are somewhat sensitive to covariate adjustment. After adjustment, the point-estimate falls to -1.2% and the 95% confidence interval crosses 0, but the result does not cross 0 at the 90% confidence interval. We believe that precinct size is likely to be driving the difference between these two results. For spoiled ballots, we find a small positive effect, but both estimates are statistically indistinguishable from 0.

Table 3: The effect of distributing information on corruption convictions involving Gilberto Kassab, the PFL/DEM mayoral candidate, on election outcomes. N=200 precincts, with 100 treated units. Estimates without covariates are from the simple ITT estimator. Estimates with covariates are from a linear model, including a treatment indicator, PT vote share in 2004, total number of registered voters, and block fixed effects. All confidence intervals are bootstrapped.

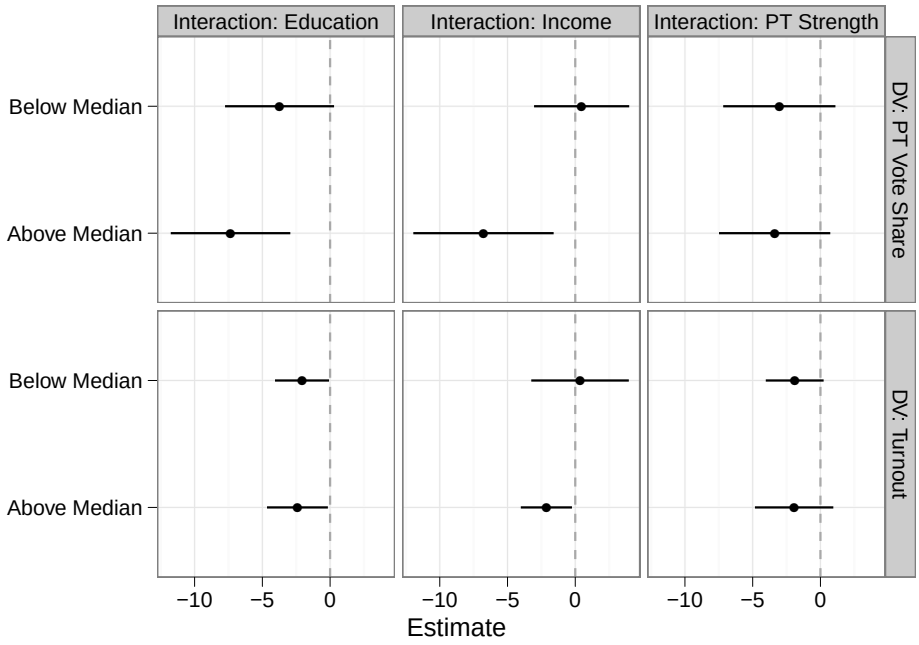
	Vote Share (%)		Turnout (%)		Spoiled Ballots (%)	
Estimate	1.9	1.5	0.1	-0.1	-0.2	-0.2
Standard Error	1.87	0.95	0.5	0.47	0.15	0.15
95% Conf. Int.	[-1.8, 5.5]	[-0.4, 3.3]	[-0.8, 1.1]	[-1, 0.8]	[-0.5, 0.2]	[-0.5, 0.1]
Covariates		X		X		X

The estimated effects of the distribution of fliers with information on the center-right candidate of the DEM/PFL are found in Table 3. Surprisingly, the point estimate on the DEM/PFL candidate's vote share is positive at about 1.5-1.9%, depending on the specification. This result, however, is estimated with a great deal of uncertainty and consequently not statistically significant. Furthermore, the estimate appears to be somewhat sensitive to covariate adjustment. The estimates for the other two outcome variables – turnout and spoiled ballots – are small and statis-

tically insignificant.[18]

5.4 Subgroup Effects

Figure 6: Subgroup effects for the Suplicy (PT) flier. Estimates are from a linear model, including a treatment indicator, PT vote share in 2004, total number of registered voters, and block fixed effects. Bars represent 95% bootstrapped confidence intervals. Dots are the point estimates.



In addition to the average treatment effect estimates presented above, we also estimated treatment effects in subgroups defined by education, income, and political history. We matched precincts to census tracts from the 2000 census and examined two socioeconomic variables: average household income and percentage of households whose head had completed primary school.[19] Our

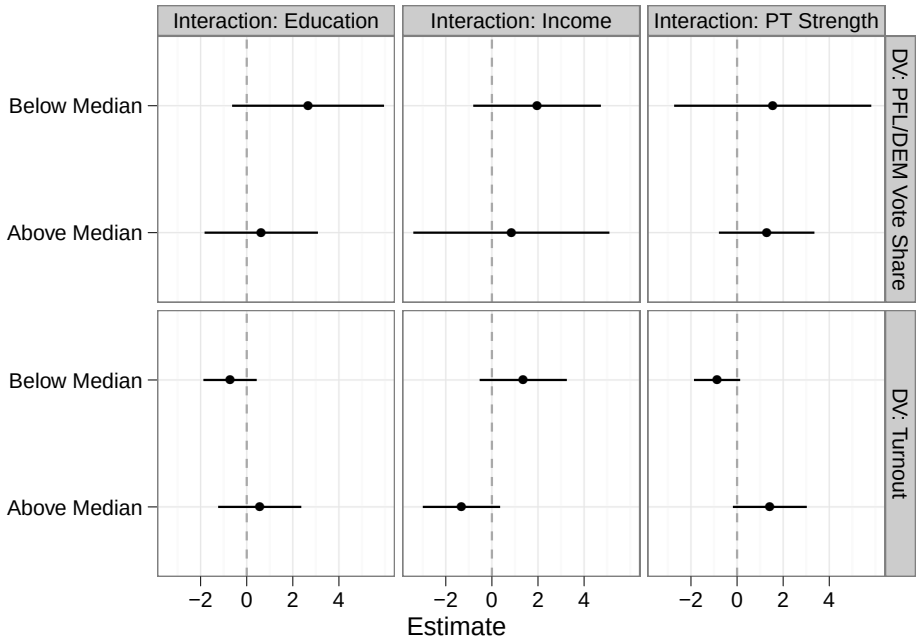
[18] We also pool the data from the Suplicy and Kassab experiments and find that the differences between the two fliers are statistically significant at conventional levels. The point estimate for the difference between the two fliers without covariates in terms of vote share is 4.4%, and the bootstrapped confidence interval is (0.45, 7.92), which is statistically significant at conventional levels. Similarly, the point estimate for the difference in turnout between the Suplicy and Kassab fliers is 2.8%, and the bootstrapped confidence interval for the difference between the two fliers is (0.97, 3.29), which is statistically significant at conventional levels. We obtain similar results when covariates are added.

[19] To match precincts to census tracts, we calculated the longitude and latitude of the centroid of each tract with mapping data provided by IBGE, the Brazilian government agency that conducts the census. We then computed the pairwise distances between all precincts and all tracts and used the corresponding distance matrix to match.

third subgroup variable is the vote share of the PT candidate in the 2004 mayoral election. We defined each subgroup simply as being above or below the median of that variable in our experimental sample. Within each subgroup, we estimated treatment effects using ordinary least squares, including the covariates used in the results presented above.

Our subgroup effects for the PT candidate flier are presented in Figure 6. Generally, we find somewhat larger (more negative) effects on Suplicy's vote share and turnout in the more highly educated and wealthier precincts in our sample, but the difference between the coefficients in the high and low subgroups is not statistically significant at conventional levels. The magnitude of the treatment effect in PT strongholds (as defined by 2004 PT vote share) appears to be the same as in areas where the PT was relatively weak. The subgroup effects for the Kassab flier mirror our main findings (see Figure 7): the flier had no statistically detectable effects on vote share or turnout.

Figure 7: Subgroup effects for the Kassab (DEM/PFL) flier. Estimates are from a linear model, including a treatment indicator, PT vote share in 2004, total number of registered voters, and block fixed effects. Bars represent 95% bootstrapped confidence intervals. Dots are the point estimates.



6 Survey Experiment

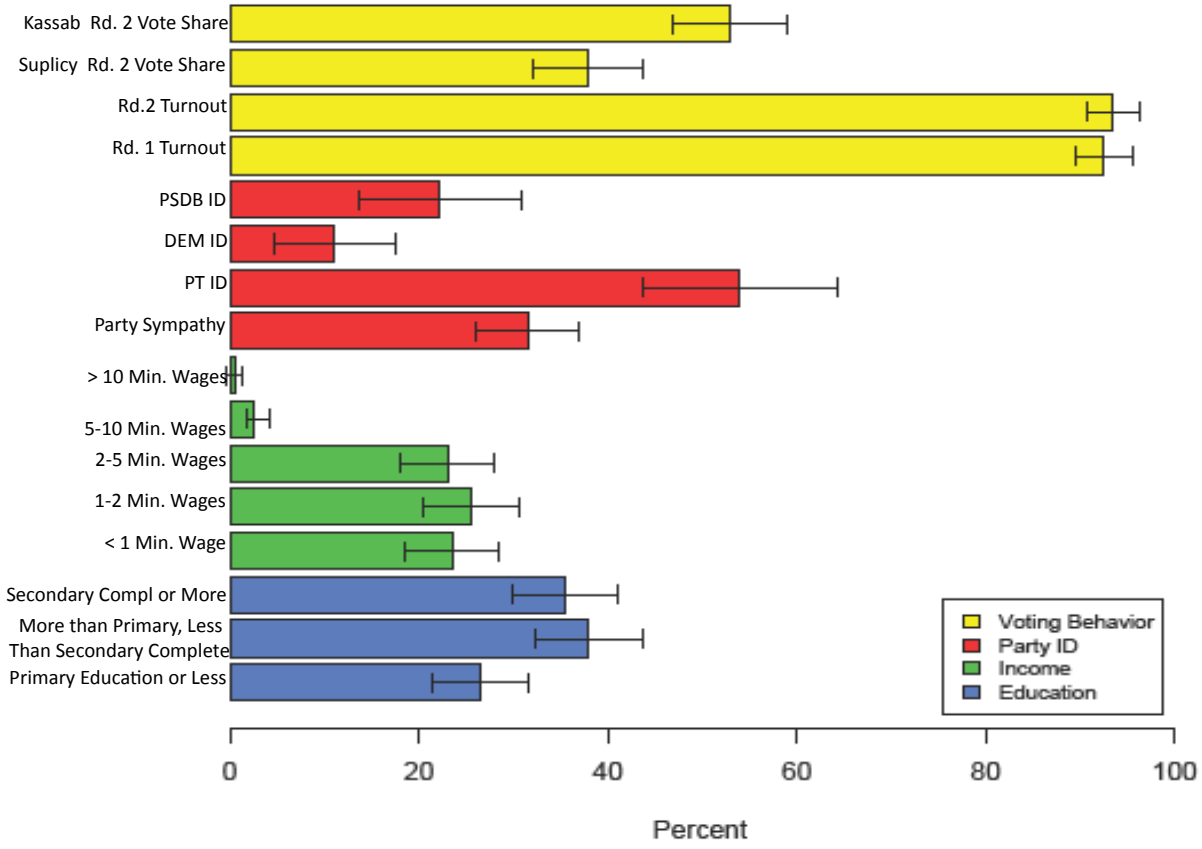
The week after the election, we conducted a survey experiment on precincts within the control group. Sampling and interviews were conducted by a reputable São Paulo-based survey firm with extensive experience in conducting surveys throughout the city. For the survey experiment, we used a cluster sampling approach, in which we randomly sampled twenty precincts within the control group, and then ten households were randomly selected within each precinct area for face-to-face interviews. The treatments involved showing subjects the Kassab and Suplicy fliers shown in Figure 3, or a placebo flier shown in Appendix II. We had 200 subjects for the survey experiment; 67 subjects were shown the Kassab flier, another 67 were shown the Suplicy flier, and 66 were shown the placebo flier. In expectation, randomized assignment of the treatments and placebo to the survey respondents assured that the treatment and control groups were the same in all observed and unobserved characteristics uncorrelated with the treatment. Conducting the survey experiment allows us to probe micro-level determinants of voting behavior and responses to the treatment with individual voters. The design also contributes to a nascent literature (Barabas and Jerit, 2010) that examines the external validity of field experiments through its pairing of a field experiment with a survey experiment.

6.1 Sampling, Treatments, and Covariate Balance

Prior to exposing subjects to the treatment, interviewers obtained pre-treatment attitudes towards the candidates in general, about their corruption relative to each other, while also asking information about individuals' socioeconomic backgrounds and previous voting behavior. These attitudes are discussed in Section 3.1. Figure 8 displays descriptive statistics of the sample with 95% confidence intervals. The reported voting behavior roughly maps to the overall results in the election. Some 53% stated they voted for Kassab while another 38% said they voted for Suplicy, in comparison to a roughly 60-40% split between the candidates. The absenteeism rates in the sample (7.5% in the first round and 6.5% in the second round) are roughly half of what they were in the actual election. Under-reporting of absenteeism, however, is to be expected in a country with compulsory voting. While only 31.5% of the respondents stated that they identify with a particular party,

respondents who did state a party (54%) overwhelmingly identified with Suplicy's PT. The education levels of those in the sample are roughly balanced among the different categories, and our intention of focusing on poor, lower middle class, and middle class voters is reflected in the incomes of this sample, with some two thirds reportedly making less than 5 times the minimum wage.

Figure 8: Descriptive Statistics for the Survey Experiment. Yellow, red, green, and blue bars are the percentages of survey respondents who gave the response. Black bars represent 95% confidence intervals.



Like with the field experiment, we checked to see if the randomization procedure worked by examining if differences existed on covariates between respondents in the treatment and control

groups. The sample is balanced on all of the observable covariates that appear in Figure 8 on simple difference in means tests. The results are robust using the Hansen and Bowers (2008) omnibus test that jointly appraises covariate balance and their linear combinations. We similarly find no covariate imbalance when testing for standardized differences that average within-block (voting precinct) differences in means scaled by the pooled standard deviation and the z-score. The results suggest that the treatment and control groups are statistically indistinguishable on the observed covariates.

After being shown the flier, survey respondents were asked a series of questions related to their political attitudes and voting behavior. Specifically, respondents were asked to "grade" Kassab and Suplicy on a scale from 0 to 10, where 0 indicated being strongly against the candidate and 10 indicated that the respondent was strongly in favor of the candidate. We also asked whether, if the respondent received the flier on October 26 (election day), how important it would have been in their voting decision (with "very important, important, in some form important, or irrelevant") as possible responses. Finally, we asked interviewees if the flier would have changed their vote choice or turnout decision if they received the flier prior to the election.

6.2 Results

Generally, we find somewhat consistent results with the field experiment. The results in Table 4 rely on randomization inference, and reveal the average within-block difference of respondents in the treatment and control groups.

Table 4: Survey experiment results for the Suplicy (PT) and Kassab (DEM/PFL) fliers. The dependent variable is the post-treatment minus pre-treatment candidate evaluation on feeling thermometer on a scale of 0 to 10 (thus the range for the difference is from -10 to 10). Estimates are from randomization inference (and consequently do not have standard errors). N=200 individuals (67 were shown the Kassab flier, 67 were shown the Suplicy flier, and 66 were shown a placebo flier).

	Suplicy (PT) Flier	Kassab Flier (DEM/PFL)
Estimate	-0.85	-0.45
95% Conf. Int.	[-1.63, -0.15]	[-1.27, 0.10]
p-value	0.02	0.10

After being exposed to the Suplicy flier, respondents in the treatment group on average adjusted their evaluations downward by an estimated 0.85 points on a 10-point scale. The point estimate is statistically significant at the 95% confidence interval. The Kassab flier also resulted in a more negative evaluation among respondents, although the magnitude was not as strong as with the Suplicy treatment. The point estimate for the Kassab flier was -0.45 – almost half of the point estimate for the Suplicy treatment – and the result is statistically significant at the 90% confidence interval, but overlaps with 0 at the 95% confidence interval.

We also examine the fliers' effects on vote choice and turnout, asking respondents if they would have changed their voting behavior had they received the flier prior to the election. The results are presented in Appendix III. We only obtain statistically significant results for turnout and voter attitudes when both fliers are pooled together as a treatment. The absenteeism effects for the Kassab flier are stronger than for the Suplicy flier (the point estimates are -0.07 and -0.04, with p-values of 0.17 and 0.24 respectively), but both results are statistically indistinguishable from 0 at conventional levels.

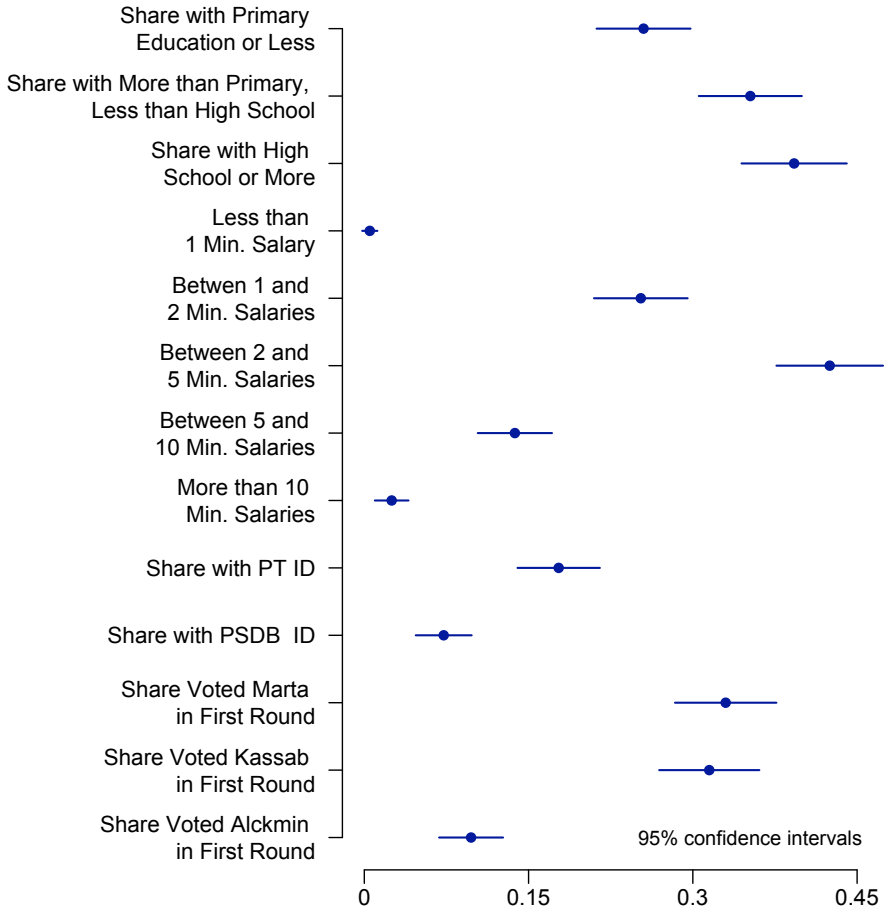
7 Survey

7.1 Descriptive Statistics and Sampling

In addition to the field and survey experiments, we also conducted a survey of the treatment and control groups to obtain descriptive data that might shed light on the mechanisms that determined the voting behavior of those in the randomization group. The survey was conducted in the weeks following the election, and involved face-to-face interviews at households that received the fliers. A cluster sampling strategy was used in which we randomly sampled 40 precincts from the randomization group of the field experiment, and then sampled 10 households within the vicinity of each precinct (N=400). The sample from the control group is the identical sample on which we conducted the survey experiment. Figure 8 presents descriptive statistics for the sample for the survey with 95% confidence intervals. The sample is relatively evenly distributed in terms of those who have only a primary education or less; those who have more than a primary education,

but less than a high school education; and those who have more than a high school education. In terms of income, roughly half of the sample is middle class and approximately one fourth of the sample consists of lower middle class voters.

Figure 9: Descriptive Statistics for the Survey



The sample is mixed in terms of it reflecting city-wide electoral trends. In the second round of the election, of those who voted, 50.6% of the survey respondents stated they voted for Kassab, 40% stated they voted for Suplicy, 9.4% stated they cast blank or invalid votes. These figures are roughly in line with the actual electoral results where Kassab garnered 60.7% of the vote and Suplicy earned 39.3% of the vote. Brazil's mandatory voting rules result in a high likelihood of underreporting of absenteeism; consequently it is likely that more than the 9.5% that stated they

did not turn out to vote. The second round of the election had a 17.5% absenteeism rate. For the first round of the election, 28% stated they voted for Kassab, 33% for Suplicy, and only 11% said they voted for the third place contender, former 2006 PSDB presidential candidate and ex-governor Geraldo Alckmin, compared to 33%, 32%, and 22% for Kassab, Suplicy, and Alckmin respectively in the actual election. In comparison to the 15.6% absenteeism rate in the actual election, 9% of the respondents said they did not vote in the first round. Perhaps surprising is that of those who reported being absent in the second round, only 26.3% were under 18 or over 70 years old, when voting is voluntary; a similar percentage (27.8%) in the same age range reported not voting in the first round.

7.2 Intention-To-Treat Analysis

Comparing survey responses from the treatment group to the control group allows for the opportunity to see if differences exist from the "intention-to-treat" design. We present results that evaluate the impact of the Kassab and Suplicy fliers, and also include the results of both fliers in Appendix V. The survey focused on three primary categories of voter outcomes: attitudes towards the candidates; voting behavior; and perceptions of corruption, including the Dirty List.[20] We present the results of the simple "intent-to-treat" estimator with robust standard errors clustered at the precinct level. Unfortunately, the survey's relatively small sample (N=400) diminishes the probability of detecting differences between the treatment and control groups for the field experiment.

Table 5 presents the results of the simple "intent-to-treat" estimator for the Suplicy (PT) flier on a number of outcomes obtained in the survey. While the Suplicy flier had no effect on respondent perceptions of either candidate, nor on their stated voting behavior (whether vote choice or turnout), the treatment did raise the awareness of the Dirty List. The average effect of the Suplicy flier is a 10 percentage point increase in respondents being able to recognize that both candidates were on the Dirty List. The result is borderline in terms of its significance at the 95% confidence interval (p=0.054). In addition, when respondents were asked if they had heard of the Dirty List,

[20] Appendix IV contains a table with all of the outcomes studied in the survey.

the average effect increases to 12 percentage points that is statistically significant at conventional levels exists. If respondents initially stated that they had not heard of the Dirty List, interviewers then informed them by saying it was a list that contained the names of politicians accused of corruption. After being given that prompt, the average effect was 14 percentage points for those responding affirmatively that they had heard of the Dirty List, relative to those in the control group. While the result is statistically indistinguishable from 0 at the 95% confidence interval, it is borderline in terms of its significance at the 90% confidence interval (p=0.103). Respondents in the treatment and control groups, however, did not differ on average in terms of their beliefs about the corruption levels of politicians in São Paulo, nor specifically with Kassab and Suplicy. They also did not differ, on average, in terms of their beliefs about how corruption generally or the Dirty List factored into their voting behavior. Respondents in treatment and control did not have differences that were statistically indistinguishable from 0 in terms of their beliefs about the plausibility of the Dirty List allegations.

In contrast to those who received the Suplicy flier, the Kassab flier had more treatment effects on survey outcomes. The intention-to-treat effects were similar to those who had received the Suplicy flier. The average effect for those stating they had heard of the Dirty List and were able to identify that both Kassab and Suplicy were on the Dirty List was 13 percentage points.[21] One possible explanation for the stronger effect of 3 percentage points for those receiving the Kassab flier is that it appeared to be less known that he was on the Dirty List, and knowledge of his corruption allegations seemed to be less salient. While the Dirty List was made salient in the media, as was discussed in Section 3.1, few were aware of its existence, and respondents overwhelmingly identified Suplicy as being more corrupt. Unlike those who received the Suplicy flier, interviewees who received the Kassab flier also identified Kassab and Suplicy as being on the Dirty List on average at 10 and 9 percentage points higher respectively than those in the control group. Both results are statistically significant at conventional levels. Like with the Suplicy treatment group, we do not obtain results for outcomes related to attitudes towards the candidates and voting behavior. "Treated" interviewees also did not differ from those in the control group in terms of

[21] After being prompted, the average effect of the treatment was 16 percentage points, which was borderline in terms of being significant at the 90% confidence interval.

Table 5: Intention-To-Treat (ITT) Results of Survey Outcomes for the Suplicy (PT) Flier. The survey involved cluster sampling from 20 treatment group precincts, and another 20 control group precincts, with 400 individual subjects surveyed. Estimates are from the simple ITT estimator, including a treatment indicator with robust cluster standard errors accounting for the clustering of individuals within a voting precinct, which was the unit of random assignment. Variable definitions and ranges are available in Appendix IV.

	Estimate	Std. Error	95% Conf. Int.	N
Outcomes				
Suplicy Evaluation	-0.01	0.62	[-1.28, 1.26]	320
Kassab Evaluation	0.38	0.46	[-0.56, 1.32]	320
Vote for Suplicy in 2nd Round	0.08	0.09	[-0.10, 0.26]	293
Vote for Kassab in 2nd Round	-0.05	0.08	[-0.21, 0.12]	293
Spoiled Vote in 2nd Round	-0.03	0.04	[-0.10, 0.04]	293
Turnout in 2nd Round	0.04	0.04	[-0.04, 0.12]	318
Corruption in São Paulo	0.06	0.12	[-0.18, 0.31]	310
Suplicy Corruption Level	-0.04	0.14	[-0.25, 0.34]	292
Kassab Corruption Level	-0.06	0.16	[-0.39, 0.27]	278
Corruption Relevance in Vote Decision	-0.09	0.15	[-0.40, 0.21]	301
Heard of the Dirty List	-0.12	0.06	[-0.24, -0.01]	318
Heard of the Dirty List (Prompted)	0.14	0.08	[-0.03, 0.31]	221
Suplicy on Dirty List	-0.003	0.05	[-0.10, 0.09]	173
Kassab on Dirty List	-0.04	0.04	[-0.12, 0.04]	173
Both on Dirty List	-0.10	0.05	[-0.20, 0.002]	173
Neither is on Dirty List	0.08	0.07	[-0.06, 0.22]	173
Plausibility of Dirty List Accusations	0.20	0.14	[-0.08, 0.49]	61
Importance of Dirty List in Vote Decision	-0.13	0.27	[-0.68, .42]	65

perceived corruption levels of the candidates, and on the plausibility and importance of the Dirty List. However, when surveyors asked whether corruption was very important, important, not very important, or not at all important in their voting decision during the second round, there was an average effect of -0.4 points on a 4-point scale in terms voters identifying corruption as a salient issue in their voting decision. The scale ranged from 1 being very important to 4 being not all important, and the result was statistically significant at the 99% confidence interval. Thus, perhaps surprisingly, receiving the Kassab flier resulted in respondents stating that corruption was a

less salient issue for them in terms of their voting behavior.[22]

Table 6: Intention-To-Treat (ITT) Results of Survey Outcomes for the Kassab (PFL/DEM) Flier. The survey involved cluster sampling from 20 treatment group precincts, and another 20 control group precincts. N=40 precincts, with 400 individual subjects surveyed. Estimates are from the simple ITT estimator, including a treatment indicator with robust cluster standard errors accounting for the clustering of individuals within a voting precinct, which was the unit of random assignment. Variable definitions and ranges are available in Appendix IV.

	Estimate	Std. Error	95% Conf. Int.	N
Outcomes				
Suplicy Evaluation	-0.76	0.63	[-2.05, 0.544]	280
Kassab Evaluation	0.23	0.46	[-0.71, 1.17]	280
Vote for Suplicy in 2nd Round	-0.07	0.08	[-0.23, 0.95]	259
Vote for Kassab in 2nd Round	0.001	0.08	[-0.16, 0.16]	259
Spoiled Vote in 2nd Round	0.06	0.05	[-0.04, 0.16]	259
Turnout in 2nd Round	0.03	0.05	[-0.08, 0.13]	279
Corruption in São Paulo	0.07	0.12	[-0.18, 0.31]	270
Suplicy Corruption Level	-0.27	0.19	[-0.42, 0.36]	259
Kassab Corruption Level	0.15	0.12	[-0.08, 0.39]	244
Corruption Relevance in Vote Decision	-0.40	0.15	[-0.72, -0.09]	258
Heard of Dirty List	-0.13	0.06	[-0.26, -0.01]	278
Suplicy on Dirty List	-0.09	0.04	[-0.17, -0.01]	150
Kassab on Dirty List	-0.10	0.03	[-0.17, -0.04]	150
Both on Dirty List	-0.13	0.05	[-0.23, -0.03]	150
Neither is on Dirty List	0.12	0.08	[-0.05, 0.29]	150
Plausibility of Dirty List Accusations	-0.13	0.28	[-0.70, 0.45]	47
Importance of Dirty List in Vote Decision	0.07	0.48	[-0.92, 1.06]	51

[22]We also present results that pool both treatments in Appendix V. The results are similar to the results of the Kassab flier. We obtain statistically significant results at or close to the 95% confidence interval for the average effect of both fliers increasing the response of a responded answering affirmatively when questioned as to whether they heard of the Dirty List (either unprompted or prompted), and also identifying both Kassab and Suplicy as being on the Dirty List. Point estimates were respectively 0.13 (unprompted), 0.15 (prompted), and 0.11, with respective p-values of 0.01, 0.06, and 0.02. We obtain results that are at or close to being statistically distinguishable from 0 at the 90% confidence interval for Kassab being on the Dirty List, (perhaps oddly) neither being on the Dirty List, and for the relevance of corruption in the voting decision. The point estimates were respectively 0.06, 0.10, -0.21, with respective p-values of 0.07, 0.11, and 0.12.

7.3 Treatment Group Behavior

In addition, they were also asked about whether they thought the information in the flier was true or not; whether the crimes examined in the flier with "very serious, to some extent serious, not very serious, or untrue" as possible responses; and whether the flier changed the respondent's opinion as to how corrupt the politician was.

In seeking to understand the effect of the flier on voting behavior, we asked respondents in the treatment group a number of questions related to the distribution and impact of the flier. Only 6% stated they remembered receiving the flier, and 1% said they did not know. Of the 12 interviewees who said they remembered receiving the flier, five correctly stated they received the Suplicy flier; only one respondent correctly stated he received the Kassab flier, and only one interviewee who received the Suplicy flier incorrectly said he received a Kassab flier. After being prompted about the Dirty List, an additional 4% responded that they did recall receiving the flier. All of the remaining five who stated they did not know or did not remember who the flier discussed received the Kassab flier.[23] One important reason for the low rates of memory might be that the survey was conducted over a period of weeks following the election, in which a significant enough time lapse may have taken place from the election for a significant proportion of the respondents to remember the fliers.

We also asked respondents about the credibility and seriousness of these convictions. While we are well aware that the statistical power of the survey and that the number of responses within this subgroup who remembered the flier is relatively low, the responses are consistent with the field experiment results, suggesting that the Suplicy flier remained salient in the minds of voters relative to the Kassab flier. We also asked respondents the extent to which they felt the accusations in the flier were true. Of those who said they remembered the flier, four stated the information was completely true; two said it was in large part true; two said it was in large part false; one said it was completely false; and three said they did not know. Half of the 12 felt the convictions were a very serious serious issue, two stated said that they were in some form serious, one stated

[23] There were two respondents who stated they did not know if they received a flier, and one respondent who did not respond. All three of these respondents received the Suplicy flier.

that they were not that serious, one said they were not even a little bit serious, and two said they did not know. Those who were shown the Kassab flier during the survey thought the information was false, but the majority felt that were the information to be true, it would be incredibly serious. Of those surveyed in the Kassab treatment precincts (N=80), 46.3% thought the information about Kassab was either completely true or in large part true, whereas 22.5% thought the information was false or completely false, and an additional 30% stated they did not know. In Suplicy precincts (N=120), 55% of the respondents said the information was in large part or completely true, a difference of 9.7 percentage points, whereas slightly more (25.8%) thought the information was largely or completely false relative to Kassab. The simple difference in means between the two groups is borderline significant at the 95% confidence interval (p=0.054). The differences between the two groups provide preliminary descriptive evidence that varied beliefs voters held about the plausibility of the information in the flier – rather than perceptions about the level of the corruption offense – may at least partially explain the distinct responses voters had to the two fliers.

Another potential explanation for the differences in the impact of the fliers has to do with the strength of support among voters. We attempt to explore this possibility by looking at levels of support for the two candidates among those surveyed. Brazil traditionally has been characterized as having weak parties, and the country has considerable sub-national heterogeneity in the extent to which party systems are institutionalized (Mainwaring, 1995; Samuels, 1999). A number of authors have argued that the PT has started in the last few years to undergo a transformation leading it to have the characteristics of an institutionalized party (Samuels, 2004). While São Paulo has historically been an important base for the PT, the extent to which Lula's popularity has reached his co-partisans has varied.[24] In our survey, we try to obtain proxies for partisan and candidate support by asking respondents if they have a preferred party, and to rate candidates on a traditional feeling thermometer scale of 1 to 10. Roughly two thirds said they did not identify with a particular party, and some 31% said they did. Of those who identified with a party, respondents overwhelmingly identified with the PT (59%), compared to the PSDB (24%) and DEM (8%) par-

[24] In other work, de Figueiredo and Hidalgo (2010) attempt to shed light on this question, and find that under certain conditions, Lula's co-partisans have not benefitted to the extent that some scholars have argued.

ties. Of those who identified with the PT, only 51% stated they voted for Suplicy, while some 46% responded that they voted for Kassab. The literature on party identification in Brazil is heavily contested, but what is known is that there is a negative correlation between party id and income. Since the sample largely consists of middle class, lower middle class, and poor voters, the party tie is likely to be weaker, yet we acknowledge the need for a research design where stronger causal inferences can be made on this relationship.

Finally, one potential explanation for the difference in turnout between the two candidates that should not go unmentioned was that Suplicy trailed Kassab by a significant margin. The polls closest to the election showed a twenty percentage point difference between them. Thus, the projected landslide in combination with the flier may have resulted in a cynicism about the political process that may have led voters who may have otherwise voted to stay away from the voting booth. Unfortunately, interventions of this sort in closer elections run the risk of affecting the overall outcome, which may be problematic from an ethical perspective.

8 Conclusions

We suggest some possible explanations for the varied reactions to the fliers that we only begin to explore in this paper. First, varied reactions may be driven by differences in the degree and nature of the corruption convictions of the politicians. Second, the differences may be explained by the level of core versus swing support among individual candidates and parties. Third, the vote margin in the election may be particularly important in affecting turnout and consequently, candidate vote shares. Fourth, candidate-specific attributes, including gender, may offer insight into how male or female voters and candidate punish and receive punishment in different ways. Fifth, the plausibility of the allegations (which may be related to or independent from candidate support) may also play an important role in explaining differences in voting behavior. Future work could study these mechanisms explicitly by experimentally manipulating the gravity of the convictions, either in a laboratory setting, and where possible, examine the results with a field or natural experiment.

We believe that the field experiment demonstrates that corruption remains a salient issue in

the decision making of Brazilian voters. Our results differ from recent studies that have largely shown that corruption scandals did not have a major impact on electoral returns. These studies have primarily focused on the 2006 presidential elections, in which Lula was a candidate. The causal evidence we offer of votes moving from the candidate with the more egregious conviction to a candidate with a relatively minor conviction in comparison offers promise to those who believe information plays an important role in achieving democratic accountability. However the causal evidence showing that increased information can decrease turnout also suggests that such information campaigns may reduce accountability under certain conditions. Although we offer some preliminary descriptive evidence for the mechanisms that create this result, understanding the conditions under which information decreases turnout requires additional testing in a variety of settings.

Appendix I: Legal and Ethical Issues

We faced a number of legal and ethical issues in carrying out this project, and responded by having a number of safeguards in place. The concerns involved legal and ethical issues not only in Brazil, but also in the United States.

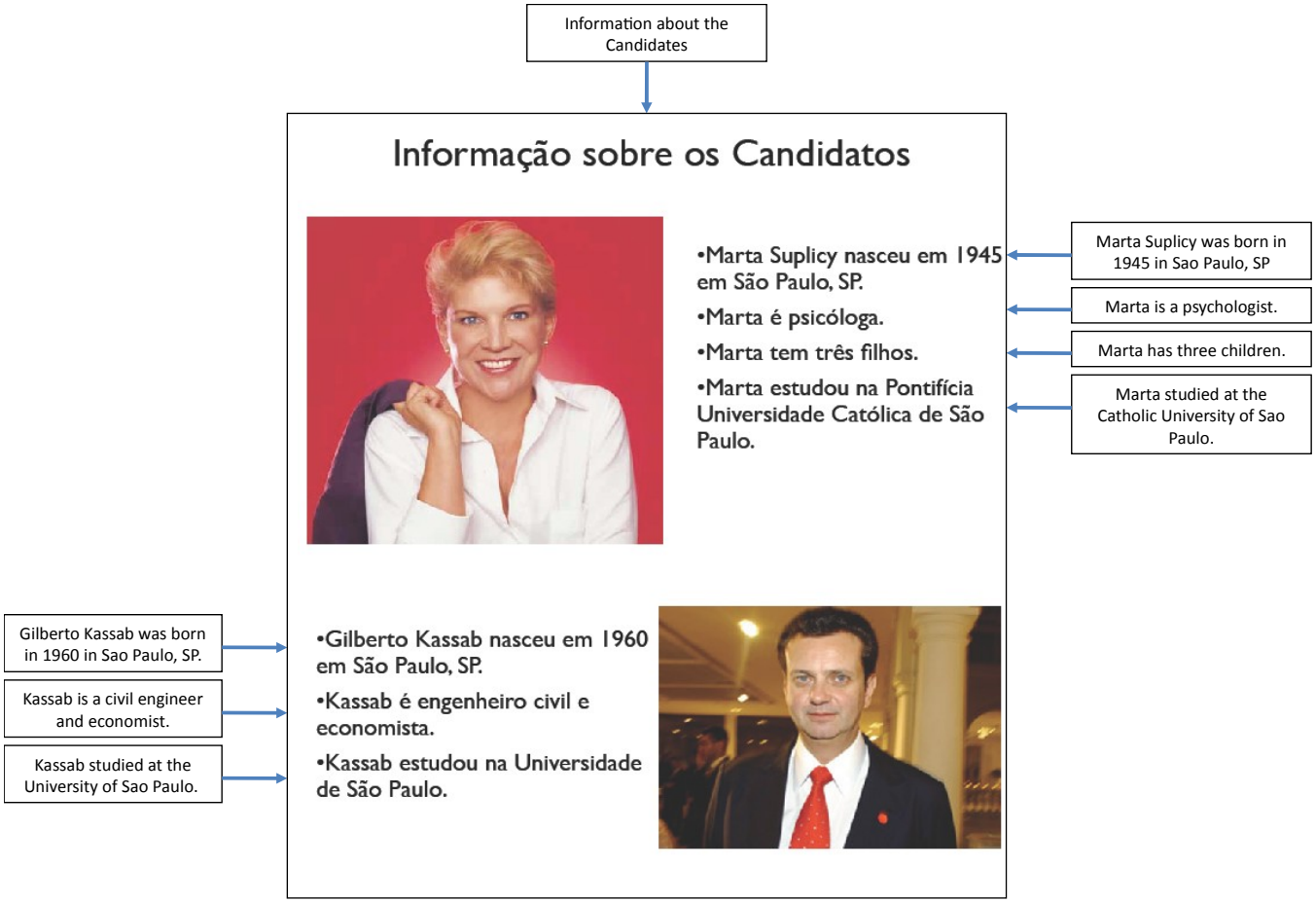
We received funding from the University of California, Berkeley, and Yale University to carry out the project. Both are non-profit (501(c)(3)) institutions that are prohibited from engaging in political advocacy. We inquired with Yale Law School's Non-Profit Organizations Clinic to make sure that we complied with this restriction, and drew on the experience of previous electoral field experiments done in the United States as a precedent for complying with this prohibition. This prohibition partly factored into our choice of São Paulo as the site where we conducted the field experiment. We not only performed the intervention in a place where both candidates had corruption convictions, but we chose the run-off election so as not to have effects on the vote shares of other candidates that could affect the outcome of the election. We also obtained approval from human subjects committees at Berkeley and Yale.

Polls immediately prior to the election from prominent organizations such as Datafolha and Ibope showed that Kassab had roughly a twenty percentage point lead over Suplicy. Our treatment of 187,177 households reached an estimated six to seven percent of the electorate of São Paulo. Even if every voter responded to the treatment, we believe the likelihood of us affecting the overall outcome was extremely unlikely. Though to our knowledge there were no prior electoral field experiments of this sort conducted in Latin America, we examined the findings of electoral field experiments conducted in other regions. The largest treatment effect for this sort of project that we found was slightly above eight percentage points (Gerber, Green and Larimer, 2008; Green and Gerber, 2008). In addition, we delivered the fliers immediately prior to the election (from October 22 until October 25, 2008) to minimize the likelihood of the information spreading to other areas, and also to decrease the chances of the parties reacting strategically to the experiment.

While in São Paulo, we sought counsel from an election lawyer to make sure we were in compliance with Brazilian electoral laws. The lawyer assured us that so long as we were not affiliated with any candidate or party, we would be in compliance with the Brazilian Electoral Code. We

also sought the opinion of a former electoral judge, who felt that the study was in compliance with local laws. Finally, we informed an electoral judge of the research design and also gave him the fliers prior to the launch of the field experiment.

Appendix II: Placebo Flier for the Survey Experiment



Appendix III: Additional Survey Experiment Results

Survey experiment results for the Suplicy (PT) and Kassab (DEM/PFL) fliers with additional dependent variables. For vote choice and turnout, we ask, "If you had received this flier before the election, would you have voted for the same candidate you voted for on Sunday, would you have changed your vote, or would you have not voted?" Estimates are from randomization inference. N=200 individuals (67 were shown the Kassab flier, 67 were shown the Suplicy flier, and 66 were shown a placebo flier).

	Estimate	95% Conf. Int.	p-value
Outcomes			
Feeling Thermometer			
Both Fliers	-0.78	[-1.51, -0.06]	0.03
Vote Choice			
Suplicy Flier (PT)	0.02	[-0.03, 0.07]	0.30
Kassab Flier (DEM/PFL)	0.01	[-0.05, 0.09]	-0.49
Both Fliers	0.01	[-0.07, 0.07]	0.42
Turnout			
Suplicy Flier (PT)	-0.04	[-0.25, 0.13]	0.24
Kassab Flier (DEM/PFL)	-0.07	[-0.26, 0.15]	0.17
Both Fliers	-0.08	[-0.17, 0.00]	0.08

Appendix IV: Outcome Variables for Intention-to-Treat Results

(for Tables 5, 6, and Appendix V)

Table Label	Survey Question	Range
Suplicy Evaluation Kassab Evaluation	Please give a grade to Marta Suplicy/Gilberto Kassab on a scale of 0 to 10, where 0 indicates that you are strongly against the politician and 10 indicates that you are strongly in favor of the politician.	0 to 10
Vote for Suplicy in 2nd Round Vote for Kassab in 2nd Round Spoiled Vote in 2nd Round	Who did you vote for in the second round of the elections this year?	1 Marta Suplicy (PT) 2 Gilberto Kassab (DEM) 3 Spoiled ballot 4 I do not know
Turnout in 2nd Round	Did you vote for mayor in the second round of the elections this year?	1 Yes 2 No 3 I do not remember 4 I do not know
Corruption in São Paulo	In general, among the politicians in São Paulo, do you believe that all are corrupt, the majority are corrupt, some are corrupt, very few are corrupt, or none are corrupt?	1 All are corrupt 2 The majority are corrupt 3 Some are corrupt 4 Very few are corrupt 5 None are corrupt 6 I do not know
Suplicy Corruption Level Kassab Corruption Level	Compared to other politicians, do you believe that Suplicy is very corrupt, in some form corrupt, equally corrupt as the majority of other politicians, less corrupt than other politicians, or not corrupt?	1 Very corrupt 2 In some form corrupt 3 Equally corrupt 4 Less corrupt 5 Not corrupt 6 I do not know
Corruption Relevance in Vote Decision	When you were deciding who to vote for in the second round of the election this year, the issue of corruption was very important, important, not very important, or not at all important in your decision?	1 Very important 2 Important 3 Not very important 4 Not at all important 5 I do not know
Heard of Dirty List	Have you heard of the Dirty List?	1 Yes 2 No 3 I do not know
Heard of Dirty List (Prompted)	The Dirty List is a list that contains the names of politicians accused of corruption. Have you heard of the Dirty List?	1 Yes 2 No 3 I do not know
Suplicy on Dirty List Kassab on Dirty List Both on Dirty List Neither is on Dirty List	Do you know if Kassab or Suplicy is on the Dirty List? If so, which of the two?	1 Suplicy 2 Kassab 3 Both 4 Neither 5 I do not remember
Plausibility of Dirty List Accusations	Do you believe that the accusations contained in the Dirty List are true, in large part true, not in large part true, or are not even a little true? (for those who said they heard of the Dirty List)	1 True 2 In large part true 3 Not in large part true 4 Not even a little true 5 I do not know
Importance of Dirty List in Vote Decision	The information in the Dirty List was very important, important, not very important, or not important at all in your voting decision?	1 Very important 2 Important 3 Not very important 4 Not important at all

Appendix V: Intention-To-Treat Results Combining Both Fliers

Intention-To-Treat (ITT) Results of Survey Outcomes for Both Fliers. The survey involved cluster sampling from 20 treatment group precincts, and another 20 control group precincts, with 400 individual subjects surveyed. Estimates are from the simple ITT estimator, including a treatment indicator with robust cluster standard errors. Variable definitions and ranges are available in Appendix IV.

Outcomes	Estimate	Std. Error	95% Conf. Int.	N
Suplicy Evaluation	-0.31	0.53	[-1.37, 0.76]	400
Kassab Evaluation	0.32	0.39	[-0.46, 1.10]	400
Vote for Suplicy in 2nd Round	0.02	0.07	[-0.13, 0.17]	366
Vote for Kassab in 2nd Round	-0.03	0.07	[-0.16, 0.11]	366
Spoiled Vote in 2nd Round	0.01	0.04	[-0.06, 0.08]	366
Turnout in 2nd Round	0.03	0.04	[-0.04, 0.11]	398
Corruption in São Paulo	0.07	0.09	[-0.13, 0.26]	388
Suplicy Corruption Level	0.01	0.14	[-0.26, 0.29]	369
Kassab Corruption Level	0.03	0.13	[-0.23, 0.29]	352
Corruption Relevance in Vote Decision	-0.21	0.14	[-0.49, 0.06]	372
Heard of the Dirty List	-0.13	0.05	[-0.22, -0.03]	398
Suplicy on Dirty List	-0.04	0.04	[-0.12, 0.04]	215
Kassab on Dirty List	-0.06	0.03	[-0.14, 0.01]	215
Both on Dirty List	-0.11	0.04	[-0.20, -0.02]	215
Neither is on Dirty List	0.10	0.06	[-0.24, 0.21]	215
Plausibility of Dirty List Accusations	0.14	0.14	[-0.14, 0.42]	65
Importance of Dirty List in Vote Decision	-0.09	0.25	[-0.60, 0.43]	70

References

Adsera, Alicia, Carles Boix and Mark Payne. 2003. "Are You Being Served? Political Accountability and Quality of Government." *Journal of Law, Economics and Organization* 19(2):445–490.

Almeida, Alberto Carlos. 2008. *A Cabeca do eleitor: Estrategia de campanha, pesquisa e vitoria eleitoral*. Editor Record.

Alvarez, R. Michael. 1998. *Information and Elections*. Ann Arbor, MI: University of Michigan Press.

Ansolabehere, Stephen and Shanto Iyengar. 1995. *Going Negative: How Attack Ads Shrink and Polarize the Electorate*. New York: The Free Press.

Ansolabehere, Stephen, Shanto Iyengar and Adam Simon. 1999. "Replicating Experiments Using Aggregate and Survey Data: The Case of Negative Advertising and Turnout." *American Political Science Review* 93(4):901–909.

Arceneaux, Kevin and David W. Nickerson. 2005. "Two Field Experiments Testing Negative Campaign Tactics." Presented at the Annual Meeting of the American Political Science Association.

Banerjee, Abhijit, Donald Green, Jennifer Green and Rohini Pande. 2010. "Can Voters be Primed to Choose Better Legislators? Experimental Evidence from Rural India." Working Paper.

Banerjee, Abhijit, Selvan Kumar, Rohini Pande and Felix Su. 2010. "Do Informed Voters Make Better Choices? Experimental Evidence from Urban India." Working Paper.

Barabas, Jason and Jennifer Jerit. 2010. "Are Survey Experiments Externally Valid?" *American Political Science Review* 104(2):226–242.

Barros de Mello, Fernando and Ranier Bragon. 2008. "'Lista suja' da AMB ignora 7 procesos contra Marta." *Folha de Sao Paulo* August 15.

Besley, Timothy and Robin Burgess. 2002. "The Political Economy of Government Responsiveness: Theory and Evidence from India." *Quarterly Journal of Economics* 117(4):1415–1451.

Brader, Ted. 2005. "Striking a Responsive Chord: How Political Ads Motivate and Persuade Voters by Appealing to Emotions." *American Journal of Political Science* 49(2):388–405.

Brooks, Deborah J. 2006. "The Resilient Voter: Moving Toward Closure in the Debate over Negative Campaigning and Turnout." *Journal of Politics* 68(3):684–696.

Chang, Eric C. C. 2005. "Electoral Incentives for Political Corruption under Open-List Proportional Representation." *Journal of Politics* 67(3):716–730.

Chong, Alberto, Ana L. De La O, Dean Karlan and Leonard Wantchekon. 2010. "Information Dissemination and Local Governments' Electoral Returns, Evidence from a Field Experiment in Mexico." Working Paper.

Clinton, Joshua D. and John S. Lapinski. 2004. "'Targeted' Advertising and Voter Turnout: An Experimental Study of the 2000 Presidential Election." *Journal of Politics* 66(1):69–96.

D'Agostino, Rosanne. 2008. "AMB Divulga 'Lista Suja'; Sao Paulo tem Maluf e Marta." *UOL* July 22.

de Figueiredo, Miguel F. P. and F. Daniel Hidalgo. 2010. "Does Targeted Redistribution Create Partisans? Evidence from Brazil." Working Paper.

Djupe, Paul A. and David A. M. Peterson. 2002. "The Timing and Impact of Negative Campaigning: Evidence from the 1998 Senatorial Primaries." *Political Research Quarterly* 55(4):845–860.

Elkins, Zachary. 2000. "Quem Votaria? As Consequências do Voto Obrigatrio." *Opinão Pública* 6(1):111–137.

Feddersen, Thomas J. and Wolfgang Pesendorfer. 1996. "The Swing Voter's Curse." *American Economic Review* 86(3):408–424.

Ferraz, Claudio and Frederico Finan. 2008. "Exposing Corrupt Politicians: The Effects of Brazil's Publicly Released Audits on Electoral Outcomes." *Quarterly Journal of Economics* 123(2):703–745.

Freedman, Paul and Kenneth M. Goldstein. 1999. "Measuring Media Exposure and the Effects of Negative Campaign Ads." *American Journal of Political Science* 43(4):1189–1208.

Freedman, Paul, William Wood and Dale Lawton. 1999. "Do's and Dont's of Negative Ads: What Voters Say." *Campaigns and Elections* 20(9):20–36.

Garand, James C. and Kristy L. Graddy. 2001. "Explaining the Mediated Effects of Negative Campaign Advertising on Voter Turnout." Presented at the Annual Meeting of the Midwest Political Science Association.

Geer, John G. and Richard R. Lau. 2006. "Filling in the Blanks: A New Approach for Estimating Campaign Effects." *British Journal of Political Science* 36(2):269–290.

Gerber, Alan S., Donald P. Green and Christopher W. Larimer. 2008. "Social Pressure and Voter Turnout: Evidence from a Large-Scale Field Experiment." *American Political Science Review* 102(1):33–48.

Goldstein, Kenneth M. 1997. "Political Advertising and Political Persuasion in the 1996 Presidential Campaign." Presented at the Annual Meeting of the American Political Science Association.

Green, Donald P. and Alan S. Gerber. 2008. *Get Out the Vote: How to Increase Voter Turnout*. 2nd ed. Brookings Institution Press.

Hansen, Ben B. and Jake Bowers. 2008. "Covariate Balance in Simple, Stratified and Clustered Comparative Studies." *Statistical Science* 23(2):219–236.

Houston, David A. and Kelly Doan. 1999. "Negative Political Advertising and Choice Conflict." *Journal of Experimental Psychology: Applied* 5(1):3–16.

Jackson, Robert A. and Jason C. Sides. 2006. "Revisiting the Influence of Campaign Tone in Senate Elections." *Political Analysis* 14(2):206–218.

Johnston, Michael. 1986. "The Political Consequences of Corruption: A Reassessment." *Comparative Politics* 18(4):459–477.

Kahn, Kim and Patrick J. Kenney. 2004. *No Holds Barred: Negativity in U.S. Senate Campaigns*. Upper Saddle River, NJ: Pearson Prentice Hall.

Lapp, Nancy D. 2008. "Selecting Who Votes? Compulsory Voting in Brazil." Presented at the Annual Meeting of the American Political Science Association.

Lau, Richard R., Lee Sigelman and Ivy Brown Rovner. 2007. "The Effects of Negative Campaigning: A Meta-Analytic Reassessment." *Journal of Politics* 69(4):1176–1209.

Lawton, L. Dale and Paul Freedman. 2001. "Beyond Negativity: Advertising Effects in the 2000 Virginia Senate Race." Presented at the Annual Meeting of the Midwest Political Science Association.

Lemert, J, W. Wanta and T-T Lee. 1999. "Party Identification and Negative Advertising in a U.S. Senate Election." *Journal of Communication* 49(2):123–136.

Lupia, Arthur and Mathew D. McCubbins. 1998. *The Democratic Dilemma: Can Citizens Learn What They Need To Know?* New York: Cambridge University Press.

Mainwaring, Scott. 1995. "Brazil: Weak Parties, Feckless Democracy". In *Building Democratic Institutions: Party Systems in Latin America*, ed. Scott Mainwaring and Timothy Scully. Stanford, CA: Stanford University Press pp. 354–398.

Mauro, Paolo. 1995. "Corruption and Growth." *Quarterly Journal of Economics* 110(3):681–712.

McCann, James A. and Jorge I. Dominguez. 1998. "Mexicans React to Electoral Fraud and Political Corruption: An Assessment of Public Opinion and Voting Behavior." *Electoral Studies* 17(4):483–503.

Olken, Benjamin A. 2005. "Corruption and the Costs of Redistribution: Micro Evidence from Indonesia." National Bureau of Economic Research.

Olken, Benjamin A. 2007. "Monitoring Corruption: Evidence from a Field Experiment in Indonesia." *Journal of Political Economy* 115(2):200–249.

Palfrey, Thomas R. and Keith T. Poole. 1987. "The Relationship between Information, Ideology, and Voting Behavior." *American Journal of Political Science* 31(3):511–530.

Pereira, Carlos, Marcus Andre Melo and Carlos Mauricio Figueiredo. 2009. "The Corruption-Enhancing Role of Re-Election Incentives? Counterintuitive Evidence from Brazil's Audit Reports." *Political Research Quarterly* 62(4):731–744.

Peters, John and Susan Welch. 1980. "The Effects of Charges of Corruption on Voting Behavior in Congressional Elections." *American Political Science Review* 74(3):697–708.

Przeworski, Adam, Susan C. Stokes and Bernard Manin, eds. 1999. *Democracy, Accountability, and Representation*. New York: Cambridge University Press.

Reinikka, Ritva and Jakob Svensson. 2005. "Fighting Corruption to Improve Schooling: Evidence from a Newspaper Campaign in Uganda." *Journal of the European Economic Association* 3(2):259–267.

Renno, Lucio R. 2007. "Escandalos e voto: as eleicoes presidenciais brasileiras de 2006." *Opinão Pública* 13(2):260–282.

Samuels, David J. 1999. "Incentives to Cultivate a Party Vote in Candidate-Centric Electoral Systems: Evidence from Brazil." *Comparative Political Studies* 32(4):487–518.

Samuels, David J. 2004. "From Socialism to Social Democracy: Party Organization and the Transformation of the Workers' Party in Brazil." *Comparative Political Studies* 37(9):999–1024.

Wolfinger, Raymond E. and Steven J. Rosenstone. 1980. *Who Votes?* New Haven, CT: Yale University Press.