

Policy-based Abstention: An Application to Brazil's 2002 Presidential Election

Gabriel Katz¹

¹ Department of Politics, University of Exeter, UK

Correspondence: Gabriel Katz, University of Exeter, Amory Building, Rennes Drive, Exeter EX4 4QJ, UK.
Email: G.Katz@exeter.ac.uk

Received: March 30, 2018 Accepted: May 8, 2018 Online Published: May 30, 2018

doi:10.5539/res.v10n3p28 URL: <https://doi.org/10.5539/res.v10n3p28>

Abstract

This paper implements a unified model of individual abstention and vote choice, applying it to analyze policy-based alienation and indifference in Brazil's historical 2002 presidential election. The results indicate that both alienation and indifference have a negative impact on turnout, with indifference contributing slightly more to voter abstention. Also, the determinants of alienation and indifference differ considerably, the former being determined by structural factors such as voters' information and perceived efficacy levels, while the latter was related to short-term aspects such as parties' mobilization efforts. More importantly, the evidence shows that while alienation and indifference are strongly influenced by attitudinal and protest variables, they are also affected by citizens' evaluation of candidates' ideological locations. The main conclusion is that abstention in Brazil's 2002 election had a policy-driven component and that spatial considerations played a substantive role in citizens' electoral behavior, a fact that has been largely overlooked in previous research on the determinants of abstention in Latin America.

Keywords: Policy-based abstention, indifference, alienation, unified model

1. Introduction

The effect of candidates' ideological locations on the probability of voting is one of the most appealing and important implications of the spatial voting literature pioneered by Downs (1957). Voters perceive a benefit when their policy preferences are similar to those of the competing candidates, and will therefore vote for those candidates who offer policy platforms closer to their own. However, voters might choose not to vote if the perceived benefits from voting for either candidate is very small, or when different candidates offer approximately the same benefit. Consequently, different spatial voting models (Hinich & Ordeshook, 1969; Hinich, Ledyard, & Ordeshook, 1972; Enelow & Hinich, 1984) have distinguished between indifference-based abstention that occurs when candidates' platforms are too similar to justify the cost of voting, and alienation-based abstention that emerges when candidates' platforms are too distant from a voter to justify voting costs.

At the empirical level, however, few studies have analyzed the effect of policy-based indifference and alienation. Evidence provided by Zipp (1985), Plane and Gershtenson (2004) and Adams, Dow and Merrill (2006) for the U.S., and Thurner and Eymann (1997) for Germany, indicates that abstention has a substantive policy-based component. (Note 1) Nonetheless, as this review reveals, all empirical studies have been conducted so far in developed democracies with stable and consolidated party systems, and most of them have focused on two-candidate elections. Furthermore, empirical tests of hypotheses involving the impact of alienation and indifference on citizens' probabilities of voting have only been conducted for countries with voluntary voting. This paper presents the first analysis of policy-based indifference and alienation abstention in Latin America, using data on Brazil's historical 2002 presidential election. Brazil has the largest electorate in Latin America, representing 36% of the total electorate in the continent and the largest electorate in the world subject to compulsory voting (International IDEA, 2018; Katz and Levin, 2018a). In contrast to the homogeneous European party systems and the U.S. party machines, the party structure and political system in Brazil is highly fragmented and characterized by a low degree of party identification, weak institutionalization and persistent electoral volatility (Mois é, 1993; Mainwaring, 1998; Baker, Ames, & Renn ó 2006). These structural aspects were also present in the 2002 presidential election, marked by high preference volatility among voters, frequent changes in candidates' relative support during the campaign season, and a major realignment of Brazilian politics (Baker et al., 2006; Singer, 2012).

Hence, this paper offers two important contributions. First, it analyzes the effect of policy-based evaluations of candidates

on citizens' probabilities of voting in an emerging democracy whose party system and type of electoral competition differ markedly from those considered in earlier research. This allows assessing whether the empirical regularities found in advanced democracies hold for other polities.

Second, it examines the impact of policy-based indifference and alienation in an electorate subject to compulsory voting, an institutional arrangement not previously examined. While compulsory voting laws require citizens to show up at the polls, they do not force them to vote for any of the competing candidates: citizens can cast invalid votes, i.e., blank or null ballots, and thus their right not to vote remains intact (Lijphart, 1997). Also, illegal abstention constitutes a second form of non-voting (Katz & Levin, 2018a). Different theories emphasizing the role of socioeconomic, institutional, and protest variables have been proposed to account for invalid voting and electoral absenteeism in Latin America and in compulsory voting systems more generally (Power & Roberts, 1995; Lijphart, 1997). However, no work has analyzed the impact of voters' evaluations of competing candidates on these variables. Examining the role of alienation and indifference helps better understand the relative importance of policy-based abstention in compulsory voting systems and add to the long-standing debate surrounding compulsory voting provisions (Lijphart, 1997; Franklin, 1999).

In addition, this paper develops a new model to study alienation and indifference in multi-party electoral races. Among empirical studies on this topic, only Thurner and Eymann (1997) have considered multi-candidate races. (Note 2) However, in their model, only the positions of the two closest candidates affect voters' indifference and alienation thresholds, and they ignore the effect of non-spatial issues on citizens' electoral choices. The model implemented here assumes that both candidates' locations and non-spatial issues affect alienation and indifference, and citizens consider their utility for each of the competing candidates when deciding whether or not to vote.

The remainder of the paper is organized as follows. Section 2 presents the model implemented to analyze policy-based alienation and indifference in Brazil's 2002 presidential election. Section 3 describes the data and methodology used to estimate the model's parameters. Section 4 presents the most salient results. The main hypothesis of the paper is that abstention in the 2002 election had a policy-driven component, and that spatial considerations played a substantive role on citizens' decisions of whether or not to vote. In order to assess the validity of this claim, parameter estimates are used to address three central questions: a) What were the main determinants of alienation and indifference?; b) How did the incidence of alienation and indifference depend on citizens' perceived distance from the candidates?; c) What was the relative influence of citizens' policy-based assessments on their electoral choice, compared to socioeconomic, attitudinal and protest variables? Finally, Section 5 concludes.

2. Modeling Alienation and Indifference-based Abstention

In order to analyze policy-based alienation and indifference, I use a "unified model" (Merrill & Grofman, 1999) of abstention and candidate choice in which the decision whether to vote and the decision which candidate to vote for are both included simultaneously. The model specification is grounded in the spatial voting and random utility maximization literature and draws on Adams and Merrill (2003) and Adams et al. (2006), although it is modified and adapted to account for multi-candidate competition characterizing elections in Brazil.

Voters are assumed to have preferences defined over voting for each of the competing candidates and over abstaining. Following spatial theorists, the model assumes that the probability of voting is a function of the perceived distance between citizens' and candidates' ideological locations. Because the information requirements needed to evaluate the candidates on every possible policy dimension are overwhelming, most citizens rely on summary ideological assessments that provide them with "shortcuts" into the opinions and programs of candidates and allow them to cast votes that reflect their ideal issue positions (Downs, 1957; Ordeshook, 1970; Hinich & Munger, 1994). Hence, a citizen is more likely to vote for a candidate, the closer the candidate's ideological location is to her own position. In addition, non-spatial elements such as valence issues or partisanship also affect citizens' voting behavior (Enelow & Hinich, 1984; Shepsle, 1991). Therefore, citizen i 's utility for candidate j , denoted by $U^i(j)$, is

$$\begin{aligned} U^i(j) &= b_j^i - \beta(x_i - c_j)^2 + \varepsilon_j^i, & j=1,2,\dots,J \\ &= V_j^i + \varepsilon_j^i, & j=1,2,\dots,J \end{aligned} \quad (1)$$

where x_i is voter i 's ideological self-placement, c_j is candidate j 's ideological placement, β is a parameter indicating the salience of the ideological dimension, b_j^i is a party identification variable, $V_j^i = b_j^i - \beta(x_i - c_j)^2$ is the systematic component of i 's utility for candidate j , and ε_j^i is a random disturbance term.

Abstention in this model may stem from two different sources: a citizen may abstain if she perceives little benefit from either candidate (alienation) or if her utility for the different candidates is approximately the same (indifference). An individual is indifferent if she does not perceive one candidate's position to be significantly closer to her own ideological

stance than other candidates' locations (Plane & Gershtenson, 2004), i.e., if she does not perceive substantial differences in utility for the different candidates. Hence, the model assumes that individual i is indifferent if there is no candidate j such that the utility differential between j and all the other competing candidates is greater than a non-negative indifference threshold $T^i(j)$. That is, i is indifferent if there is no candidate j such that

$$U^i(j) - U^i(k) > T^i(I) \quad \forall k \neq j \quad (2)$$

where the indifference threshold is given by

$$\begin{aligned} T^i(I) &= \exp(\beta_i I_i) \\ &= V_i^i \end{aligned} \quad (3)$$

with I_i a vector of voter attributes expected to influence her turnout decision, and β_i a vector of parameters to be estimated.

Additionally, an individual may abstain if she feels that no candidate will represent her policy preferences; that is, when "even a favorite candidate leaves the voter cold" (Enelow & Hinich, 1984, p. 464). Hence, citizen i is alienated if none of the candidates provides her with a minimum level of utility; i.e., if her utility for all of the competing candidates is less than or equal to an alienation threshold $T^i(A)$:

$$U^i(j) \leq T^i(A) \quad j=1,2,\dots,J \quad (4)$$

This alienation threshold is given by:

$$\begin{aligned} T^i(A) &= \beta_A A_i + \varepsilon_A^i \\ &= V_A^i + \varepsilon_A^i \end{aligned} \quad (5)$$

where again A_i is a vector of variables expected to influence voter turnout, β_A are parameters to be estimated, $V_A^i = \beta_A A_i$ is the systematic component of utility, and ε_A^i is a random term. (Note 3)

From (1)-(5), citizen i votes for candidate j if

$$V_j^i + \varepsilon_j^i - V_k^i + \varepsilon_k^i > V_i^i \quad \text{and} \quad V_j^i + \varepsilon_j^i > V_A^i + \varepsilon_A^i \quad (6)$$

Assuming that the utility errors are distributed type-I extreme value (Kotz & Nadarajah, 2000) yields closed form solutions for the choice probabilities of citizen i :

$$P^i(\text{Vote for candidate } j) = \frac{\exp(V_j^i)}{\exp(V_j^i) + \exp(V_i^i) \left[\sum_{k \neq j} \exp(V_k^i) \right] + \exp(V_A^i)} \quad (7)$$

$$P^i(\text{Abstain}) = 1 - \sum_{j=1}^J P^i(\text{Vote for candidate } j) \quad (8)$$

$$P^i(\text{Indifferent}) = 1 - \sum_{j=1}^J \frac{\exp(V_j^i)}{\exp(V_j^i) + \exp(V_i^i) \left[\sum_{k \neq j} \exp(V_k^i) \right]} \quad (9)$$

$$P^i(\text{Alienated}) = \frac{\exp(V_A^i)}{\sum_{j=1}^J \exp(V_j^i) + \exp(V_A^i)} \quad (10)$$

Note that, although the error terms for the different candidates and for the alienation threshold are assumed to be independent, the choice probabilities do not exhibit the independent of irrelevant alternatives (IIA) property, since the denominators of each choice probability differ. (Note 4)

Estimation is performed through maximum likelihood. The log-likelihood function can be written as:

$$LL = \sum_{i=1}^n \left[\sum_{j=1}^J Y_j^i \log P^i(\text{Vote for candidate } j) + Y_A^i \log P(\text{Abstain}) \right] \quad (11)$$

where $P^i(\text{Vote for candidate } j)$ and $P(\text{Abstain})$ are given by equations (7) and (8) and Y_j^i, Y_A^i , equal one for an individual who votes for candidate j and abstains, respectively.

3. Data and Methodology

The 2002 presidential election provides an interesting case to examine the relative impact of policy-based indifference and alienation in Brazil. This historical election witnessed by the rise to power of Lula's Workers' Party (PT)—which also became the majority in Congress—and marked a major shift in Brazilian politics (Singer, 2012). Unlike in previous races, candidates' policy platforms seemed to play a key role on voters' electoral choice in 2002, probably at least in part due to an unprecedented media coverage that generated high levels of political interest among the electorate (Canelas, 2002; Carreirão, 2004). At the same time, popular dissatisfaction with the government and scandals involving some of the candidates reinforced the tendencies towards protest voting and vote switching among the electorate (Carreirão, 2004, Baker et al., 2006).

The data used in the analysis is drawn from the Comparative Study of Electoral Systems (CSES) post-election survey. To the author's knowledge, this is the only publicly available dataset that asks Brazilians to place candidates competing in the 2002 election on an ideological scale. Moreover, the CSES was designed specifically for cross-national application and covers other Latin-American and emerging democracies. Thus the results obtained here can be contrasted with those in other countries.

The dependent variable is based on respondents' self-report of voting, and indicates whether each individual abstained or voted for one of the three main candidates competing in the first-round presidential election: Luiz Inácio Lula da Silva, of the Workers' Party (PT), Jose Serra, of the Brazilian Social Democratic Party (PSDB), and Anthony Garotinho, of the Brazilian Socialist Party (PSB). (Note 5) Candidates whose ideological position was not asked in the survey were not considered in the analysis and respondents who voted for these candidates were deleted from the sample. Since illegal abstention and invalid voting can be thought of as "functional equivalents" of abstention in democracies with voluntary voting (Lavareda, 1991; Power & Roberts, 1995), all respondents admitting they did not vote and those reporting that they cast a blank or null ballot are treated as abstainers.

The squared distance between respondents' and candidates' ideological locations in equation (1) is computed using the item asking survey participants to place themselves and each of the major candidates on a 10-point left-right scale. Candidates' ideological locations are approximated using the mean of respondents' placements of the candidates (Rabinowitz, Macdonald, & Listhaug, 1991; Alvarez, 1998). Party identification is a dummy variable scored 1 if the voter identifies with the candidate's party and 0 otherwise. Table 1 below presents the sample vote share of the different electoral alternatives, including abstention, as well as the candidates' ideological locations and percentage of partisan voters.

Table 1. Candidates' sample vote share, ideological location and partisanship

Electoral Alternative	Voter share	Ideological locations	% of partisan voters
Lula (PT)	52.16	3.45	9.16
Serra (PSDB)	20.78	6.65	3.10
Garotinho (PSB)	12.77	5.89	0.29
Abstention	14.29		

Note. Values were computed by the author based on CSES survey data.

The alienation and indifference thresholds in equations (3) and (5) are modelled as functions of socioeconomic, attitudinal, political and protest variables that have figure prominently in the voter turnout literature (e.g., Franklin, 2004; Vowles, Katz & Stevens, 2017). The socioeconomic variables included in the model are: *Age*; *Gender*, a dichotomous variable

coded 1 for male and 0 for female; and *Education*, coded on an eight point-scale ranging from no education to completed university degree. The attitudinal variables are *Political information*, calculated as the number of correct answers provided by the respondent to the three political information items included in the CSES survey; and *Political efficacy*, captured by the respondent's agreement with the statement "Who people vote for makes a difference". I also include *Party contact*, a dummy variable scored at 1 if the respondent was contacted by any of the candidates or parties during the electoral campaign and at 0 otherwise. Based on available empirical evidence (Verba, Nie, & Kim, 1978; Wolfinger & Rosenstone, 1980; Zipp, 1985; Plane & Gershtenson, 2004), I expect these variables to negatively affect the probability of abstaining.

In addition, previous research (Power & Roberts, 2005; Katz & Levin, 2018a) suggests that popular dissatisfaction with the political system and party elites in Brazil tends to increase the percentage of blank and null ballots and illegal abstention. Hence, I include three "protest" variables aimed at capturing respondents' discontent with the political establishment: *Dissatisfaction with government*, measuring respondents' disapproval of government's performance; *Dissatisfaction with democracy*, capturing respondents' discontent with the democratic process; and *Corruption*, measuring perceived corruption levels among politicians. These variables are obtained from respondents' answers to three four-scale items included in the CSES survey. Since the relevant empirical literature does not distinguish between individual factors affecting indifference from those affecting alienation, I follow Adams et al. (2006) and include all the above mentioned variables in the alienation and indifference thresholds.

The following equations define the specification of respondents' utilities for the different candidates, their indifference thresholds, and their alienation thresholds:

$$U^i(j) = \beta_0 + \beta_1 \text{Party identification} + \beta_2 (\text{Ideological distance})^2 + \varepsilon_j^i \quad j=1,2,3 \quad (12)$$

$$T^i(I) = \exp \left[\begin{array}{l} \alpha_0 + \alpha_1 \text{Age} + \alpha_2 \text{Gender} + \alpha_3 \text{Education} + \alpha_4 \text{Information} + \alpha_5 \text{Efficacy} + \\ \alpha_6 \text{Party contact} + \alpha_7 \text{Dissatisfaction with government} + \\ \alpha_8 \text{Dissatisfaction with democracy} + \alpha_9 \text{Corruption} \end{array} \right] \quad (13)$$

$$T^i(A) = \gamma_1 \text{Age} + \gamma_2 \text{Gender} + \gamma_3 \text{Education} + \gamma_4 \text{Information} + \gamma_5 \text{Efficacy} + \\ \gamma_6 \text{Party contact} + \gamma_7 \text{Dissatisfaction with government} + \\ \gamma_8 \text{Dissatisfaction with democracy} + \gamma_9 \text{Corruption} + \varepsilon_A^i \quad (14)$$

The coefficients for party identification and squared ideological distance, β_1 and β_2 , are constrained to be the same across candidates. This corresponds to the assumption that the effect of these factors on citizens' evaluations of the different candidates is the same (Adams, Dow and Merrill, 2006). (Note 6) Also, it is necessary to normalize β_0 for one of the candidates (Garotinho). (Note 7).

Before presenting the estimation results, it is worth mentioning some of the limitations of the analysis. The main caveat stems from the construction of the dependent variable: as it has been widely recognized, self-reports of voting are affected by perceptions of socially accepted behavior, incorrect recall, and response biases (Silver, Abramson, & Anderson, 1986; Belli, Traugott, Young, & McGonagle, 1999). This is reflected in the fact that the percentage of abstainers in the sample (Table 1) is about half of that in the electorate, probably due to effects of social undesirability of non-voting. Although research in the U.S. has shown that substantive conclusions obtained from models estimated using self-reported data do not differ significantly from those using validated data (Katosh & Traugott, 1981; Sigelman, 1982), there is no way to confirm the validity of these findings for the case of Brazil.

Second, the model implemented in this study assumes that voters' electoral choice is mainly driven by their evaluation of the different candidates and their perceptions of how close the candidates' positions are relative to their own. This is in fact the central hypothesis of spatial voting models. However, as noted by Zipp (1985), it might be the case that the causality operates in the inverse direction, i.e., that voters first decide whether or not to vote and which candidate to choose, and then rationalize their decision by placing their chosen candidate closer to their own ideological position. While using the sample mean placement for the candidates as an approximation to their ideological location tends to attenuate the bias introduced by such post-decision rationalization, it is unlikely that this procedure completely eliminates its effect. Nonetheless, this approach has been shown to yield quite accurate estimates of the true position of the candidates (Markus

& Converse, 1978; Page, 1978; Aldrich, Sullivan, & Borgida, 1989), and available empirical evidence (e.g., Brody & Page, 1973) suggests that this ex-post rationalization is not important enough to reverse the direction of the causality in the choice process.

4. Empirical Results

Table 2 below reports the estimated parameters of the model and their standard errors for the 2002 presidential election in Brazil. Several of the parameters are statistically significant and exhibit signs that are in the expected direction, and a LR test of the joint significance of the variables included in the model indicates that they are significant at the 0.01 level. The goodness-of-fit indices imply a moderately high explanatory power of the variables. The coefficients for party identification and ideological distance are statistically significant at the 0.01 level. In line with the spatial model of voting, respondents' utilities for a candidate decreased with the (squared) ideological distance and increased when they identified with the candidate's party. (Note 8)

Table 2. Parameter estimates of the unified model of abstention and vote choice

Covariate	Candidate	Indifference	Alienation
Party identification	1.38*** (0.17)		
Ideological distance	-0.02*** (0.00)		
Age		-0.25 (0.19)	0.54*** (0.22)
Gender		0.20 (0.27)	-0.09 (0.39)
Education		-0.00 (0.07)	0.05 (0.09)
Information		0.15 (0.23)	-0.86*** (0.28)
Efficacy		-0.09 (0.11)	-0.27*** (0.13)
Party contact		-0.73** (0.36)	-0.30 (0.39)
Dissatisfaction with government		-0.01 (0.19)	0.26 (0.17)
Dissatisfaction with democracy		0.05 (0.15)	-0.19 (0.24)
Corruption		0.65*** (0.24)	0.41* (0.21)
Intercept		-0.04 (0.85)	0.54*** (0.22)
N = 1,386			
LR Statistic: 170.02*			
Pseudo-R ² =0.32			

Note. Standard errors in parenthesis. Significance levels (two tailed): *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

% Correctly predicted by alternative (vs. Null Model): da Silva: 53.38 (52.16);

Serra: 63.33 (0); Garotinho: 100 (0); Abstention: 38.89 (0).

The estimates reported in Table 2 also show that the determinants of alienation and indifference differ considerably. Older voters were more likely to be alienated in the 2002 presidential election; however, age had no statistically significant effect on the probability of being indifferent. Among the attitudinal variables, more informed respondents and those with higher perceived efficacy levels were less likely to be alienated; however, these variables had no systematic effect on the probability of being indifferent. The opposite is true for the effect of parties' mobilization campaigns: respondents who were contacted by parties or candidates during the electoral campaign were less likely to be indifferent, but this variable had no systematic effect on alienation. Hence, while alienation was closely related to structural, long-term factors such as respondents' information levels, perceived efficacy and political experience, indifference was more influenced by

short-term aspects such as candidates' mobilization efforts.

Among "protest variables", only the respondents' perceived level of political corruption is statistically significant at the usual confidence levels: higher perceived levels of corruption increased the probability of being both indifferent and alienated. This result is in line with previous evidence regarding the effect of political corruption on citizens' electoral behavior in Brazil (Moisés, 1993), and indicates that the widespread levels of political corruption perceived by the public opinion might lead some voters to disqualify all electoral alternatives and discredit democratic politics as a whole. This might entail potentially dangerous consequences for the consolidation of representative institutions and a republican political culture in an emerging democracy such Brazil's (Canache & Alison, 2005; Katz & Levin, 2018b).

Table 3 reports the rates of alienation, indifference and abstention for the whole sample, as well as discriminated by relevant socioeconomic, attitudinal and protest variables. The results indicate that both alienation and indifference depressed turnout in the 2002 presidential election, with indifference contributing slightly more to voter abstention. Also, the incidence of alienation and indifference varied considerably with the individual characteristics of the respondents. As expected, alienation and indifference were higher for respondents with lower levels of political efficacy and higher perceived levels of corruption, for those not contacted by the parties or candidates, and for those who expressed no partisan preference.

Table 3. Aggregate proportion of alienation, indifference and abstention

	Alienated Only	Indifferent only	Alienated and Indifferent	Abstention rate
Total	7.12 (3.96, 11.05)	8.36 (5.17, 12.44)	1.10 (0.80, 1.45)	16.58 (14.43, 19.10)
Age				
18-25	3.59 (0.94, 7.02)	11.64 (7.53, 16.50)	0.83 (0.43, 1.30)	16.05 (13.03, 19.84)
> 65	17.06 (10.38, 24.59)	5.08 (1.26, 10.76)	1.79 (0.72, 3.38)	23.94 (19.01, 29.58)
Education				
None	13.64 (9.00, 18.40)	5.50 (2.11, 10.10)	1.67 (0.75, 2.96)	20.81 (17.30, 24.44)
University	6.28 (2.71, 10.88)	7.90 (3.95, 12.74)	0.93 (0.50, 1.50)	15.11 (11.38, 19.37)
Information				
Lowest	16.04 (10.15, 22.63)	5.89 (1.71, 11.39)	2.10 (1.00, 3.55)	24.03 (19.82, 28.75)
Highest	2.68 (0.64, 5.44)	10.37 (7.40, 13.76)	0.56 (0.22, 1.01)	13.62 (10.99, 16.53)
Efficacy				
Lowest	14.14 (7.14, 21.70)	11.20 (4.82, 19.87)	3.06 (1.86, 4.48)	28.40 (23.01, 34.26)
Highest	6.37 (3.26, 10.01)	7.69 (4.59, 11.59)	0.82 (0.58, 1.09)	14.88 (12.68, 17.35)
Party contact				
No	7.70 (3.77, 12.31)	11.26 (7.02, 16.30)	1.61 (1.16, 2.14)	20.57 (17.87, 23.57)
Yes	6.48 (3.51, 9.80)	5.64 (2.75, 9.36)	0.60 (0.37, 0.90)	12.72 (10.48, 15.35)

Perceived corruption	Lowest	7.38 (3.44, 12.25)	1.71 (0.38, 3.55)	0.16 (0.04, 0.33)	9.26 (5.64, 13.64)
	Highest	8.26 (4.14, 13.17)	11.22 (6.86, 16.48)	1.65 (1.22, 2.15)	21.14 (18.41, 24.43)
Partisanship	Independents	7.61 (4.09, 12.04)	8.62 (5.13, 12.59)	1.15 (0.85, 1.50)	17.38 (15.12, 20.05)
	Partisans	6.03 (3.34, 9.34)	7.32 (4.45, 10.67)	0.84 (0.59, 1.11)	14.19 (12.20, 16.58)

Note. 90 percent confidence intervals reported in parentheses.

Two additional interesting results that emerge from Table 3 are the high incidence of indifference among more educated and informed respondents and the high rate of alienation among older respondents. As argued below, these findings are related to the fact that more educated and informed respondents in the sample exhibit moderate ideological positions, while the distribution of older respondents is skewed to the right of the ideological scale.

Next, I analyze the effect of the perceived ideological distance between respondents and candidates on alienation and indifference. Figure 1- (a) plots the abstention rate as a function of respondents' ideological self-placement in the left-right scale, decomposed by type of abstention: alienation-based only, indifference-based only, and both. Figure 1-(b) complements this information, plotting the incidence of alienation and indifference as a function of respondents' ideological self-placement. In both cases, candidates' ideological placements are also plotted.

Some interesting patterns emerge from these figures. First, abstention increases as respondents' ideological self-placement moves to the right of the most right-wing candidate (Serra) and to left of the most left-wing candidate (Lula). In fact, respondents located at the right-wing extreme of the ideological scale exhibit the highest propensities to abstain. However, abstention also rises among respondents situated towards the middle of the scale, especially among those whose ideological self-placement locates them between Lula and Garotinho. Figure 1-(b) shows that the relative incidence of alienation and indifference also varies according to respondents' self- placement.

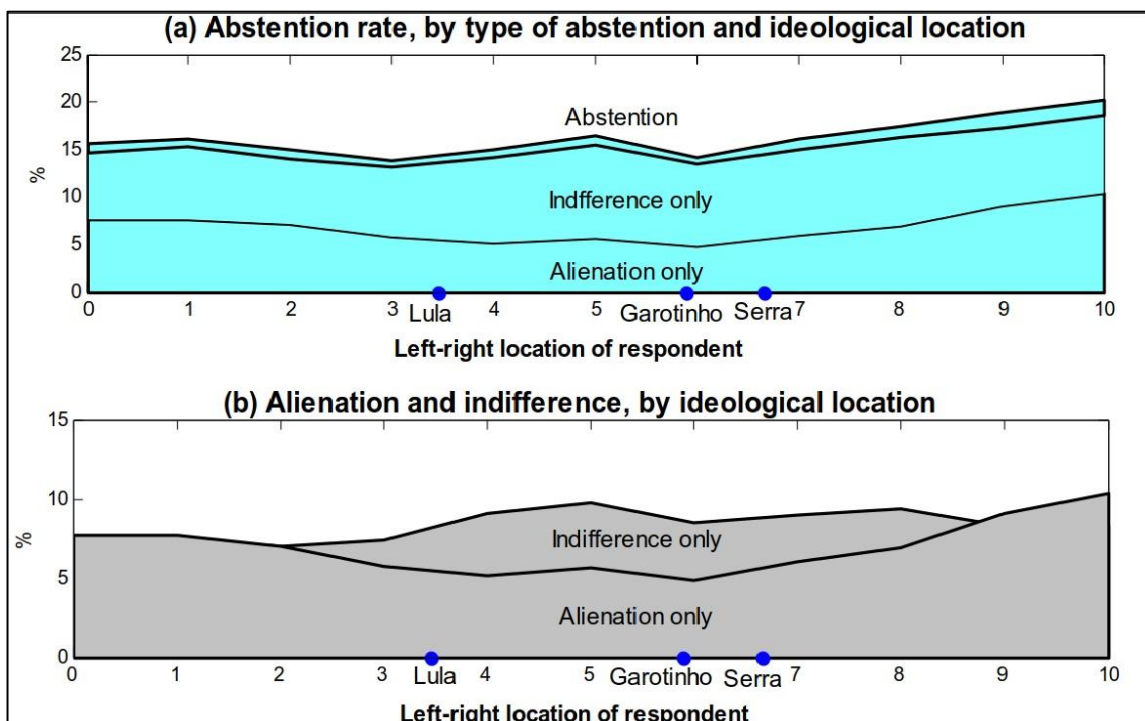


Figure 1. Abstention, Alienation and Indifference as a function of respondents' ideological distance to candidates

While the propensity to abstain for respondents situated at the extremes of the ideological scale was mainly driven by alienation and rose with the distance to the closest candidate, indifference was predominant among more "centrists" voters, and its incidence tended to increase the smaller the ideological difference distance between the respondents and the competing candidates. In this sense, the fact that a majority of respondents in the sample hold moderate positions explains the higher incidence of indifference vis-à-vis alienation reported in Table 3.

These results show that respondents' tendencies to abstain in the 2002 presidential election were clearly related to their perceived distances from the candidates. Figure 2 explores this issue further: Figure 2-(a) plots respondents' probabilities of being alienated as a function of their distance to the closest candidate, while Figure 2-(b) plots the probabilities of being indifferent as a function of the difference in the distance between respondents and the closest and most distant candidates.

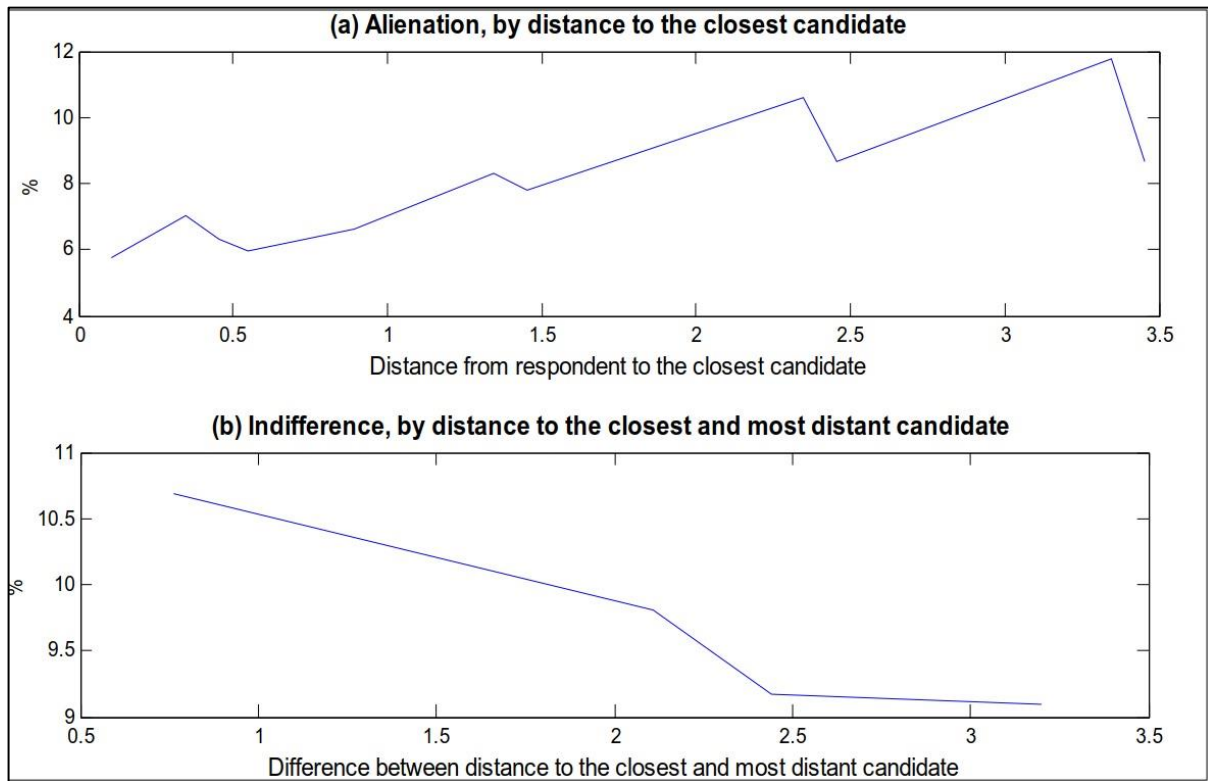


Figure 2. Alienation and Indifference, as a function of the difference in respondents' ideological distance to the closest and most distant candidates

Both figures confirm the substantive conclusions regarding the effect of the perceived ideological distance between respondents and candidates on alienation and indifference. Respondents' tendencies to abstain due to alienation rose with the distance between them and the closest candidate, while the predisposition to abstain due to indifference increased as the difference in the distance between respondents and the closest and most distant candidates declined. Using alternative indicators to measure the impact of ideological distance on indifference (e.g., taking the difference in the distance between the respondent and the two closest candidates) does not substantially alter the results presented in Figure 2-(b).

Hence, although the parameter estimates reported in Table 2 indicate that attitudinal, political and "protest" variables were all important determinants of alienation and indifference, the evidence in Figures 1 and 2 suggests that these variables do not account for the whole story. Respondents' evaluation of candidates' platforms also played a significant role on their decision to abstain in the 2002 presidential election in Brazil.

In order to quantify the relative impact on abstention of voter's policy-based assessments against alternative factors considered in the literature, I compute the change in the aggregate rate of abstention due to variations in respondents' socioeconomic, attitudinal and protest variables, as well as in their ideological distance from the candidates. For each respondent in the sample, the variable under study is shifted from one unit below to one unit above its actual value, holding all other variables at their observed levels. Table 4 reports the resulting changes in the rate of abstention. (Note 9)

The results indicate that changes in citizens' perceived distance from the candidates had relatively little influence on the probability of abstaining, compared to the impact of similar changes in socioeconomic, attitudinal and protest variables.

Moving the ideological distance from each candidate one percent below to one percent above its actual value for each respondent in the sample leads to an increase of 0.73 percentage points in the rate of abstention. Similar changes in the perceived levels of efficacy and corruption change the aggregate likelihood of abstaining by 6.12 and 8.81 percent, respectively. Hence, although the relatively low influence of policy-based assessments on abstention can in part be explained by the counterbalancing effect of ideological distance on alienation and indifference, evidence indicates that abstention was mainly influenced by citizens' levels of political information and perceived efficacy, by their dissatisfaction with the political elites, and by parties' canvassing efforts.

Table 4. Effect of changes in different variables on the rate of abstention

Independent variable	Change in abstention rate (in percentage points)
Age	2.52
Gender	1.21
Education	0.58
Information	-6.12
Efficacy	-2.75
Party contact	-6.96
Dissatisfaction with government	2.74
Dissatisfaction with democracy	0.24
Corruption	8.81
Ideological distance	0.73

However, spatial issues did have a substantial impact on citizens' electoral behavior on the 2002 election. Including the ideological distance variables in the unified model of abstention and candidate choice significantly increases the explanatory power of the model: a LR-test leads to rejection of the hypothesis that the coefficients of ideological distance are all zero at the 0.01 level. Moreover, both the Akaike (AIC) and the Bayesian (BIC) information criteria indicate that a specification containing only the ideological distance measures should be preferred to models containing only socioeconomic, attitudinal or protest variables (Table 5).

Table 5. Comparison of alternative unified models of abstention and candidate choice

Model	AIC	BIC
Only socioeconomic variables	-1651.75	-1656.89
Only attitudinal variables	-1643.71	-1648.85
Only protest variables	-1636.27	-1641.41
Only ideological distance variables	-1630.56	-1632.84

Note. All models contain party identification variables.

The role played by ideological considerations on citizens' decisions of whether to vote and for which candidate to vote was in fact reflected in Lula's successful 2002 campaign. One of the most salient features of the campaign was its emphasis on conveying an image of political moderation and the adoption of more "centrist" political stances that contributed to his electoral success (Carreira, 2004; Samuels, 2004). Although it is not possible to formally test this hypothesis with the available data, a simple exercise of shifting the ideological location of Lula 1 unit to the left while keeping the position of the other candidates constant leads to an increase in the rate of abstention of 2.11 percent and a decline in Lula's vote share of almost 2 percentage points, suggesting that this "move to the center" resulted in non-negligible electoral payoffs for the PT.

5. Concluding Remarks

Although the spatial voting literature has long ago distinguished between policy-based alienation and indifference as potential causes for abstention, empirical tests of alienation and indifference have been scarce and have focused exclusively on developed democracies. This paper presents the first empirical study of the determinants of indifference and alienation and their relative incidence on abstention in an emerging democracy, analyzing the historical 2002 presidential election in Brazil.

The results of the empirical analysis indicate that both indifference and alienation contributed to increase abstention in the 2002 election, with indifference accounting for slightly more than 50% of the rate of abstention. There are significant differences between the determinants of alienation and indifference, though. Alienation was primarily linked to structural, long-term phenomenon factors, such as citizens' information levels, perceived efficacy and political experience. Indifference, in turn, was strongly related to short-term factors such as candidates' mobilization strategies. Among the "protest" variables, only the perceived level of corruption had a positive and statistically significant impact on alienation- and indifference-based abstention.

Interestingly, although alienation and indifference were strongly influenced by attitudinal and – to a lesser extent – "protest" variables, they were also affected by citizens' evaluation of candidates' ideological locations. In the words of Plane and Gershtenson (2004), while some abstainers were simply uninformed, apathetic or expressed their discontentment with the political elite, others evaluated the different alternatives and took into account the relative benefits of voting for the competing candidates in their decision-making process. This result coincides with previous empirical evidence for developed democracies, and indicates that even in a context of weakly rooted parties and high preference volatility such as the one prevailing in Brazil, abstention had a policy-based component. In fact, ideological and policy considerations played a substantial role in explaining citizens' electoral behavior in the 2002 presidential election.

Underscoring the importance of citizens' evaluations of candidates' platforms in their probability of voting is another contribution of this paper. Virtually all previous research on the determinants of abstention in Latin America (e.g., Power & Roberts, 1995; Power & Garand, 2007; Katz & Levin, 2018) only considered the effect of socioeconomic, institutional and protest variables. Spatial considerations that have been proven central to the understanding of electoral politics in developed democracies, by contrast, have been typically neglected in the literature on electoral abstention in Latin America – and in emerging democracies more generally. In view of the evidence presented in this paper, such spatial considerations also play a relevant role in other political and institutional contexts.

References

- Adams, J., & Merrill, S. (2003). Voter Turnout and Candidate Strategies in American Elections. *Journal of Politics*, 65, 161-189. <https://doi.org/10.1111/1468-2508.t01-1-00008>
- Adams, J., Dow, J., & Merrill S. (2006). The Political Consequences of Alienation-based and Indifference-based Abstention: Applications to Presidential Elections. *Political Behavior*, 28, 65-86. <https://doi.org/10.1007/s11109-005-9002-1>
- Aldrich, J., Sullivan, J., & Borgida, E. (1989). Foreign Affairs and Issue Voting: Do Presidential Candidates 'Waltz Before a Blind Audience'? *American Political Science Review*, 83, 123-142. <https://doi.org/10.2307/1956437>
- Alvarez, R. M. (1998). *Information and Elections*. Ann Arbor, MI: The University of Michigan Press.
- Baker, L., Ames, B., & Rennó L. (2006). Social Context and Campaign Volatility in New Democracies: Networks and Neighborhoods in Brazil's 2002 Elections. *American Journal of Political Science*, 50, 382-399. <https://doi.org/10.1111/j.1540-5907.2006.00190.x>
- Belli, R., Traugott, M., Young, M., & McGonagle, K. (1999). Reducing Vote Overreporting in Surveys. *Public Opinion Quarterly*, 63, 90-108. <https://doi.org/10.1086/297704>
- Brody, R., & Page, B. (1973). Indifference, Alienation and Rational Decisions. *Public Choice*, 25, 1-17.
- Canache, D., & Allison, M. (2005). Perceptions of Political Corruption in Latin American Democracies. *Latin American Politics & Society*, 47, 91-111. <https://doi.org/10.1111/j.1548-2456.2005.tb00320.x>
- Canelas, A. (2002). Das Visibilidades das Eleições de 2002: Uma Reflexão Acerca dos Enlaces entre Política, Mídia e Cultura. *Comunicação & Política*, 9, 189-207.
- Carreirão, Y. (2004). A Eleição Presidencial de 2002: Uma Análise Preliminar do Processo e dos Resultados Eleitorais. *Revista de Sociologia e Política*, 16, 179-194.
- Downs, A. (1957). *An economic theory of democracy*. New York, NY: Harper and Row.

- Enelow, J., & Hinich, M. (1984). *The spatial theory of voting*. New York, NY: Cambridge University Press.
- Franklin, M. N. (1999). Electoral Engineering and Cross-National Turnout Differences. What role for Compulsory Voting? *British Journal of Political Science*, 29, 205–224. <https://doi.org/10.1017/S0007123499210095>
- Franklin, M. N. (2004). *Voter turnout and the dynamics of electoral competition in established democracies since 1945*. Cambridge: Cambridge University Press.
- Hinich, M., Ledyard, J., & Ordeshook, P. (1972). Nonvoting and the Existence of Equilibrium under Majority Rule. *Journal of Economic Theory*, 4, 144-153. [https://doi.org/10.1016/0022-0531\(72\)90145-7](https://doi.org/10.1016/0022-0531(72)90145-7)
- Hinich, M., & Ordeshook, P. (1969). Abstentions and Equilibrium in the Electoral Process. *Public Choice*, 7, 81-106.
- Hinich, M., & Munger, M. (1994). *Ideology and the theory of political choice*. Ann Arbor, MI: The University of Michigan Press.
- International IDEA Voter Turnout Database. 2018. Retrieved from <http://www.idea.int/vt/index.cfm>.
- Katosh, J., & Traugott, M. (1981). The Consequences of Validated and Self-reported Voting Measures. *Public Opinion Quarterly*, 45, 519–535. <https://doi.org/10.1086/268685>
- Katz, G., & Levin, I. 2018a. A General Model of Abstention under Compulsory Voting. *Political Science Research and Methods*, 6, 489-508. <https://doi.org/10.1017/psrm.2016.49>
- Katz, G., & Levin, I. (2018b). Varieties of Political Support in Emerging Democracies: a Cross-National Analysis. *Social Science Research*, 70, 55-70. <https://doi.org/10.1016/j.ssresearch.2017.11.002>
- Kotz, S., & Nadarajah, S. (2000). *Extreme value distributions - Theory and applications*. London: Imperial College Press.
- Lacey, D., & Burden, B. (1999). The Vote-Stealing and Turnout Effects of Ross Perot in the 1992 U.S. Presidential Election. *American Journal of Political Science*, 4, 233-255. <https://doi.org/10.2307/2991792>
- Laverda, A. (1991) *A democracia nas Urnas: O Processo Partidario Eleitoral Brasileiro*. Rio de Janeiro: Rio Fundo Editora.
- Lijphart, A. (1997). Unequal Participation: Democracy's Unresolved Dilemma. *American Political Science Review*, 91, 1-14. <https://doi.org/10.2307/2952255>
- Macdonald, S., & Rabinowitz, G. (1997). Comment on Merrill and Grofman on “Correcting” for Rationalization. *Journal of Theoretical Politics*, 9, 49– 55.
- Mainwaring, S. 1995. Review: Political Parties and Democratization in Brazil. *Latin American Research Review*, 30, 177-187.
- Mainwaring, S. (1998). Electoral Volatility in Brazil. *Party Politics*, 4, 523-545. <https://doi.org/10.1177/1354068898004004006>
- Markus, G., & Converse, P. (1979). A Dynamic Simultaneous Equation Model of Electoral Choice. *American Political Science Review*, 73, 1055–1070. <https://doi.org/10.2307/1953989>
- Merril, S., & Grofman, B. (1999). *A unified theory of voting*. Cambridge: Cambridge University Press.
- Mois é, A. (1993). Elections, Political Parties and Political Culture in Brazil: Changes and Continuities. *Journal of Latin American Studies*, 25, 575-611. <https://doi.org/10.1017/S0022216X00006672>
- Ordeshook, P. (1970). Extensions to a Model of the Electoral Process and Implications for the Theory of Responsible Parties. *Midwest Journal of Political Science*, 14, 43-70. <https://doi.org/10.2307/2110392>
- Page, B. (1978). *Choices and echoes in presidential elections*. Chicago, IL: University of Chicago Press.
- Plane, D., & Gershtenson, J. (2004). Candidates' Ideological Locations, Abstention and Turnout in U.S. Midterm Senate Elections. *Political Behavior*, 26, 69-93. <https://doi.org/10.1023/B:POBE.0000022344.05382.b4>
- Power, T., & Garand, J. (2007). Determinants of Invalid Voting in Latin America. *Electoral Studies*, 26, 432-444. <https://doi.org/10.1016/j.electstud.2006.11.001>
- Power, T., & Roberts, T. (1995). Compulsory Voting, Invalid Ballots, and Abstention in Brazil. *Political Research Quarterly*, 48, 795-826. <https://doi.org/10.2307/448975>
- Rabinowitz, G., Macdonald, S., & Listhaug, O. (1991). New Players in an Old Game: Party Strategy in Multiparty Systems. *Comparative Political Studies*, 24, 147–185. <https://doi.org/10.1177/0010414091024002001>
- Samuels, D. (2004). From Socialism to Social Democracy? The Evolution of the Workers' Party in Brazil. *Comparative Political Studies*, 37, 999-1024. <https://doi.org/10.1177/0010414004268856>

- Sanders, M. S. (1998): Unified Models of Turnout and Vote Choice for Two-Candidate and Three-Candidate Elections. *Political Analysis*, 7, 89-115. <https://doi.org/10.1093/pan/7.1.89>
- Shepsle, K. (1991). *Models of multiparty electoral competition*. New York, NY: Harwood Academic Publishers.
- Sigelman, L. (1982). The Nonvoting Voter in Voting Research. *American Journal of Political Science*, 26, 47-56. <https://doi.org/10.2307/2110838>
- Silver, B., Abramson, P., & Anderson, B. (1986). Who Overreports Voting? *American Political Science Review*, 80, 613-624. <https://doi.org/10.2307/1958277>
- Singer, A. (2012). *Os sentidos do Lulismo: Reforma gradual e pacto conservador*. Sao Paulo: Companhia das Letras.
- Thurner, P., & Eymann, A. (2000). Policy-Specific Alienation and Indifference in the Calculus of Voting: A Simultaneous model of party Choice and Abstention. *Public Choice*, 102, 51-77. <https://doi.org/10.1023/A:1005046024214>
- Verba, S., Nie, N., & Kim, J. (1978). *Participation and political equality: A seven nation comparison*. New York, NY: Cambridge Univ. Press.
- Vowles, J., Katz, G., & Stevens, D. (2017). Electoral Competitiveness and Turnout in British Elections, 1964–2010. *Political Science Research and Methods*, 5, 775–794. <https://doi.org/10.1017/psrm.2015.67>
- Wolfinger, R., & Rosenstone, S. 1980. *Who Votes?* New Heaven, CT: Yale University Press.
- Zipp, J. F. (1985). Perceived representativeness and voting: an assessment of the impact of 'choices' vs. 'echoes'. *American Political Science Review*, 79, 50-61. <https://doi.org/10.2307/1956118>

Notes

Note 1. Other studies (e.g., Brody & Page, 1973; Lacey & Burden, 1999) have examined the effect of indifference and/or alienation on voter turnout, but none of them uses spatial measures of these variables.

Note 2. While Sanders (1998) analyzes the case of three candidates, he only considers indifference-based abstention, and his definition of indifference and the decision-rule followed by citizens differ from the ones adopted in this paper.

Note 3. In order to obtain closed form solutions for the choice probabilities of each individual, the number of error terms in the model cannot exceed $J+1$. Following Sanders (1998) and Adams and Merrill (2003), I omit the error term in the specification of the indifference threshold.

Note 4. IIA holds, however, if $\exp(V_j^i) = \exp(V_k^i) \quad \forall j, k, j \neq k$ (Sanders, 1998).

Note 5. A second-round run-off between Lula and Serra was conducted 3 weeks after the first round, and Lula became President of the country.

Note 6. Relaxing this assumption does not significantly change the parameter estimates.

Note 7. The code used to estimate the model is available from the author upon request.

Note 8. The strong and significant effects of ideological distance and party identification hold even if these coefficients are not constrained to be the same across candidates.

Note 9. In the case of the two binary variables, gender and mobilization, the effect is measured as a change from 0 to 1 for each respondent in the sample.

Copyrights

Copyright for this article is retained by the author(s), with first publication rights granted to the journal.

This is an open-access article distributed under the terms and conditions of the Creative Commons Attribution license (<http://creativecommons.org/licenses/by/4.0/>).