Do citizens have a choice? A study on the impacts of corruption on voter turnout in Brazil

Leite Sommer, Luiza

Luiza Sommer

S2753588

Bachelor Project (BAP): Thesis

Thesis supervisor: Dr Joshua Robison

Do citizens have a choice? A study on the impacts of corruption on voter turnout in Brazil

December 2022

Words: 7391

Table of Contents

Introduction

As more countries made the switch to a democratic system, the issue of corruption has become more salient, especially in newer and growing democracies (Stockemer, 2009). Corruption can be defined as the "public spending with some form of irregularity such as over invoicing, fake receipts, diverting resources, fraud, and so on" (Chong et al., 2015, p. 56). Such phenomenon can occur both at a local or national level, hence it can create negative spillovers affecting the entirety of a nation. These negative effects include a decrease in economic growth and business operations, quality and quantity of investments, and income distribution and societal inequality (Chêne, 2014). This severity thus leads to corruption being a concern of not only politicians but of society as a whole.

The issue of corruption has been closely studied in relation to electoral behavior given the nature of the democratic system being reliant on citizen participation and engagement (Chong et al., 2015, Giommoni, 2021, Karahan, Coats and Shughart, 2006 and Stockemer, 2009). Such scientific literature has a focus on the impacts of corruption on voter turnout but also expand their research in other electoral behavior aspects such as vote choice and preferences and ideological effects to corruption exposure. Their findings raise competing claims, on one side arguing that corruption leads to a decrease in voter turnout (Chong et al., 2015, Giommoni, 2021 and Stockemer, 2009), while on the other, the opposite, corruption leads to an increase in voter turnout (Karahan, Coats and Shughart, 2006). Given that voter turnout is the common focal point of such literature, it is clear the relevance of such issue area.

Although most studies focus on non-compulsory voting systems, there are other cases around the world in which voting is indeed compulsory. Such system is most prevalent among Latin American democracies, but not exclusive to the area (Dumdei, 2022). Furthermore, Dumdei

(2022) argues that this voting system is implemented as a way to bring political stability and sanction electoral fraud and other destabilizing illegal political activities. Corruption, an illegal political activity, can then be better controlled and avoided in given compulsory voting system. However, interestingly enough, those Latin American democracies which adopt the compulsory voting system also have some of the highest rates of political corruption, especially electoral fraud, in the world (Dumdei, 2022). This generates skepticism regarding the efficiency of such system and whether citizens are aware of such illegal activities. Ultimately, this raises the research question; *what is the effect of corruption on voter turnout in a compulsory voting system?*

While Hooghe, Marien and Pauwels (2011) conduct a study in Belgium focused on voter turnout in, they do not focus on the influence of corruption on such. Although, the country adopts a compulsory voting system, it is small and does not play a significant role in the world's economic and political sphere. However, one of the fastest growing global economies and the fourth-largest democracy in the world (Lawton, 2016), Brazil, also makes use of such compulsory voting system. Additionally, Boas et al. (2019) find that on average, Brazil has the highest rates of popular concern with corruption and that in 2017, corruption was tied with the economy as the most cited problem by Brazilians. This makes up for an interesting case regarding corruption and voter turnout in compulsory voting systems and deserves to be further explored.

Such voting system imposes a legal obligation on citizens to vote. This prevents voters to take the 'exit' route as they must cast a vote, even if against their will. It can then be assumed that voter turnout would remain at a stable level, meaning that studying this further would lead to insignificant results. However, I argue that although voters do not have the option of simply not voting, such intention can still be expressed by casting a 'blank/null' ballot. Therefore, within a

democracy with a compulsory voting system, the impacts of corruption can be studied through the number of 'blank/null' votes opposed to voter turnout.

This hypothesis is thus tested using data from the public opinion survey, AmericasBarometer 2016/17 Survey. In so doing, I model the probability of the influence of perceived corruption on individuals casting a 'null/blank' ballot. With this I find that those with a higher perception of corruption do indeed have a higher probability of casting a 'null/blank' vote. Furthermore, less educated younger women have a higher probability of invalidating their vote.

Therefore, due to the novelty of this research, said conclusion is relevant for current political scientists as corruption debates and discussions continue to gain significance in today's politics. Furthermore, this research also provides more in-depth knowledge on such issue area and contributes to overall scientific literature on corruption effects on electoral behavior. Further implications of this research and discussion on possible future work is highlighted in the concluding remarks section of this paper.

Theories

Corruption and voter turnout

Although corruption and voter turnout have already been previously studied (Chong et al., 2015, Giommoni, 2021, Karahan, Coats and Shughart, 2006 and Stockemer, 2009), there are key competing claims that have been found and should be discussed. On one hand, some scholars argue that an increase in corruption is negatively correlated to voter turnout (Chong et al., 2015, Giommoni, 2021 and Stockemer, 2009). While, on the other hand, Karahan, Coats and Shughart (2006) find that higher levels of corruption do indeed cause an increase in voter turnout.

In terms of the first claim, scholars argue that the exposure of corruption leads to less turnout as it affects the extent of trust citizens have on their government (Chong et al., 2015,

Giommoni, 2021 and Stockemer, 2009). They argue that corruption has both economic and social negative spillover effects (Giommoni, 2021) and impact voter perceptions. Therefore, a higher perception of corruption ultimately leads to a decrease in voter turnout (Chong et al., 2015 and Giommoni, 2021). Such perceptions can be enhanced either through the exposure of incumbent corruption (Chong et al., 2015) or of corrupt scandals (Giommoni, 2012). Morevover, Stockemer (2009) explains that the decrease in turnout is because corruption can lead to citizens becoming disgruntled with the political system and have a loss of trust in their political representatives. Additionally, as corruption exposure increases, so do citizen's perception that the government is dishonest (Chong et al., 2015). Hence, corruption exposure impacts electoral trust and beliefs in both their governments and representatives. As citizens perceive the democratic system to be corrupt, they also distrust that their votes can sanction such illegal activities. Thus, instead of corruption leading to more anti-incumbent voting, it leads to overall increase in vote abstention. This is because citizens believe that sanctioning a specific corrupt politician is useless given the overall dishonest and corrupt democratic institution.

Such conclusion is reached through different methods, firstly, Chong et al. (2015) conduct a field experiment in Mexico with the goal of exposing incumbent corruption. They provide citizens with incumbent corruption information, presented in flyers, to conceptualize corruption exposure. Secondly, Giommoni (2021) studies the impact of the exposure of corrupt scandals in Italy, on other regions in which the scandals did not originate from, on voter turnout of such region's municipal elections. Additionally, he creates a unique corruption index considering corruption scandals involving local politicians in the period of 1999-2014 gathered by a local newspaper agency, ANSA. This index is then applied to regions in which the scandals have not originated from to create a non-local treatment but apply it to locally (specific municipalities). This

allows for the interpretation of the treatment as a pure exposure to corruption. Thirdly, Stockemer (2009) uses a cross-national comparative study to also measure corruption exposure effects, gathered by a measure of Control of Corruption adopted by the World Bank for all countries available for all years since 1996, on voter turnout across 75 democracies around the world. With this said, the corruption indicators are measured against voter turnout and reach the same conclusion; as corruption levels increase, voter turnout decreases (Chong et al., 2015, Giommoni, 2021 & Stockemer, 2009).

In regard to the competing claim, Karahan, Coats and Shughart (2006) argue that an increase in corruption also leads to an increase in voter turnout. The authors use a theoretical model based on the rational voting and rent seeking to explain this relationship. The theory of rational voting explains how candidates running in elections can be classified as "group leaders" who strive to mobilize voters. This is done with the purpose of gaining more votes in the hopes of winning elections. Therefore, electorates feel motivated by the "group leader" to vote. Furthermore, the theory of rent seeking suggests that when elective office provides its holder extraordinary returns (higher payoffs achieved through corruption) this will incentivize candidate competition. So, the theory implies that candidates will have greater incentive to run for and win elections, ultimately increasing their efforts to mobilize citizens to vote. Hence, candidates will exhaust resources to attract voters, increasing voter turnout. In sum, rational voting explains how candidates can drive voter turnout, while rent seeking illustrates why candidates are motivated to win elections.

Consequently, the combination of both theories helps to demonstrate the overall effect of corruption on voter turnout. The study conducted by Karahan, Coats and Shughart (2006) reveal the effect of a higher perception of corruption can have on individuals. This is done by analyzing the results of the 1987 county supervisor elections in the state of Mississippi, USA. Out of 82

counties, in 26 of them, one or more supervisors had been convicted of corruption charges. Thus, results are acquired by holding constant average voter turnout in the preceding American Presidential elections and controlling for supervisor races competitiveness (Karahan, Coats & Shughart, 2006). If the certain individual is a potential political candidate, the higher corruption perception will spark an incentive, explained by rent seeking theory, for given individual to mobilize others to engage with voting. Candidates are then able to drive turnout by acting as 'group leaders'. Thus, such increase in voter turnout will ultimately be driven by candidates with higher corruption perceptions and their efforts to mobilize their community.

Having said that, the study was conducted at a local scale as it considered the 1987 county supervisor elections in the State of Mississippi, United Sates. Therefore, such findings cannot be generalized to a national level without the support of other relevant evidence and studies. This, however, still poses the possibility for further research to be made within the scope of corruption and voter turnout as competing claims regarding the topic remain.

Corruption and voter turnout in compulsory voting systems

As mentioned priorly, there has been little focus on research regarding the relationship between corruption and voter turnout in a democracy with a compulsory voting system. This is of relevance as previous studies have been conducted in countries where people have the choice of simply not participating in elections. However, this is not representative of all democracies as many democracies around the world impose legal obligations regarding electoral participation on its citizens. Those democracies which adopt the compulsory voting system, ultimately eliminate the exit option, of simply not voting, for its citizens. This means that if a government is exposed for its corrupt nature, voters are obliged to take a stance in the polls.

However, there are no studies focused directly on such relationship. On the one hand, Hooghe, Marien and Pauwels (2011) investigated the consequences of political distrust on electoral turnout within the Belgian political context. The measure of blank/invalid votes is used to measure overall turnout levels. This is done because Belgian citizens do not get the option of opting from voting due to its compulsory voting system. Hence, to conceptualize voter turnout, they make use of official electoral, using the measure of total blank and invalid voting against total (candidate) votes. Political distrust may arise due to poor economic and political performance. Thus, when governments and representatives fail to deliver on policies, meet expected goals and follow prescribed norms, trust declines (Citrin & Stoker, 2018). Trust and voter turnout are positively associated (Hooghe, Marien & Pauwels, 2011 & Kapsa, 2020). Countries which have higher political trust also display higher electoral turnout (Kapsa, 2020). Less trust can also be interpreted as more distrust. Hooghe, Marien and Pauwels (2011) find that political distrust and blank/invalid votes are positively correlated. This supports the claim that trust and voter turnout are positively associated as more trust leads to more turnout (Kapsa, 2011) and less trust (more distrust) leads to less turnout (more blank/invalid votes) (Hooghe, Marien & Pauwels 2011).

On the other hand, such study does not make explicit the connection between political trust and corruption. Kubbe (2014) argues that a lack of interpersonal trust enhances perceived political corruption. In turn, political corruption lowers trust in the government and other political institutions (Kubbe, 2014). Therefore, corruption and trust are inversely related. This is also supported by Anderson and Tverdova (2003) that states that citizens in countries with higher levels of corruption report lower levels of government trust. This is because, higher levels of corruption lead to citizens feeling discontent with the overall performance of the government (Anderson & Tverdova, 2013). Corruption affects one's overall trust in political institutions, not only distrust of

specific politicians. Citizens feel disappointed and robbed by the representatives which they elected to help their country prosper and succeed. Thus, citizens feel less confident in their own judgment of current representatives and of future candidates. They feel hopeless and believe that their best choice is to abstain from voting, since they have lost trust in the democratic institution and do not have trust in other representatives. Therefore, trust can be understood as a mediator for the relationship between perceived corruption and voting behavior.

To investigate this relationship further, this paper aims to explore the relationship between perceived corruption on voter turnout in Brazil, a democracy with a compulsory voting system. Brazil has had a long history of corruption scandals and distrust in political institutions. Overall distrust and dissatisfaction with the democratic system have since become structural traits of Brazilian politics (Avritzer & Rennó, 2021). Given this, I hypothesize that as the levels of perceived corruption increase, the numbers of blank/invalid votes also increase as they reflect those that would like to abstain from voting but cannot do so due to the compulsory electoral system in place. Overall, the results from this investigation can then be used to strengthen the claims made by Hooghe, Marien and Pauwels (2011), Chong et al. (20150, Giommoni (2021) and Stockemer (2009) or to prove empirically the theoretical model adopted by Karahan, Coats and Shughart (2006).

Hypothesis 1: As perceived corruption levels increase, so does the intentions of casting a 'blank/invalid' ballot.

Research Design

Case selection

For this investigation, the case selected is Brazil in the year of 2016. In the country, voting is compulsory for those eligible to vote, and optional for those between 16 and 17 years old,

illiterates and for people over 70 years old (Power & Roberts, 1995). Furthermore, those that fail to attend the national elections, are punished with monetary penalties to even the loss of the right to vote entirely (Power & Roberts, 1995). Lastly, those that are unable to attend, must legally justify their abstention (Power & Roberts, 1995). This can be done either physically or online and consists of providing legal documents to prove their justification for abstaining. Some reasons include being out of town during the election day or incapacity to attend due to illness. Therefore, the compulsory electoral system is carefully monitored and heavily enforced.

Moreover, although the country has a federal control system to account for corruption, in general, those fail to work as corruption in Brazil has become widespread and often impunity is the norm (da Silva, 1999). However, interestingly, in 2016 then President Dilma Rousseff suffered an impeachment led by leading figures in the Congress, the mainstream media, and the Judiciary (Saad-Filho & Boffo, 2021). Such process was preceded by corruption scandals and allegations under covered by the Lava Jato anti-corruption operations (Operation Car Wash), "the largest ever ongoing criminal investigation in Brazilian history (Pohlmann & Valarini, 2020, p. 225). The operations portrayed the gravity of corruption in Brazil, as it specially highlighted Rousseff's political party (Partido Trabalhador/PT) as criminous (Saad-Filho & Boffo, 2021).

This is the ideal period to be studied since the corruption scandals were centered around the incumbent political party, PT. Therefore, this investigation will allow for the exploration of whether perceived corruption impacts voter turnout or anti-incumbent voting. If voting turnout does indeed decrease, this will help solidify the notion that corruption leads to overall distrust in the democratic institution and an increase in vote abstention. Furthermore, although Brazil is a relatively new democracy, it is also the largest with a compulsory voting system. Therefore, the

findings of this case study can then be used as a reference and an overall guideline for future studies.

Sample

The data used in this paper is the AmericasBarometer 2016/17 Survey, conducted in Brazil between April 5th and May 11th, 2017. The public opinion survey was conducted by the Latin American Public Opinion Project (LAPOP). The survey used a national probability design of a total of 1532 voting-age adults. It consisted of face-to-face interviews carried out in Portuguese, but results were then translated to English. Interviews were conducted in both rural and urban areas across all regions within Brazilian territory. Households were selected in clusters of 6 in rural and urban areas by a multi-stage probability design and was stratified by the five major Brazilian regions. Thus, the sample sizes for the regions were 219 for the Northern region, 346 for the Northeastern region, 217 for the Mid-west region, 491 for the Southeastern region and 259 for the Southern region. Out of those, 1322 respondents were surveyed in urban areas and 210 in rural areas.

Additionally, only a single respondent per selected household was eligible for the survey. The requirements for such related to age and residency. Therefore, individuals were required to be adult citizens who were permanent residents of given household. If there were more than one eligible respondent present at the moment the interview was conducted, the person who most recently celebrated a birthday was chosen to sit the interview. This was done to prevent selection bias.

Overall, LAPOP is a credible institution and has a respectable academic reputation as a research institute. Its principal focus is on governance and democracy in Latin America. Given such, LAPOP makes for an appropriate and reliable source for data retrieval.

Dependent variable

The dependent variable of this investigation is voter intention, measured by vote intention for President in 2017, as the specific measure for turnout would not be relevant to this study. The survey contains a measure indicating how citizens voted in the first round of the 2014 Presidential elections, but such will not be used for this investigation. The reason for this is because as this happened in 2014, 2 years before the corruption scandals occurred, it would not reflect the impact of perceived corruption levels on voter turnout. The scandals can impact how one perceives corruption as it made the issue of corruption very prevalent in the media. Therefore, if an individual voted 'blank/null' in 2014 and then formed a perception of corruption after the 2016 scandals, it would not be ideal to use such measure. This would not model the effect of perceived corruption on voter turnout as the perception of corruption was formed priorly to the vote choice.

Thus, the measure indicating vote intentions for President in 2017 will be used. It is specifically quantified through the question "If the next presidential elections were being held next week, what would you do?" with a possibility of four responses. The possible responses are 1) wouldn't vote, 2) would vote for a candidate or a party of the current president/administration, 3) would vote for a candidate or party different from the current president/administration and 4) would go to vote but would leave the ballot blank or would purposefully cancel my vote. There is a total of 1464 individual responses. The responses are distributed between these four options as follows: 1) 14.1% (a weighted count of 202.6), 2) 7.2% (a weighted count of 103.2), 3) 24.7% (a weighted count of 353.6) and finally 4) 54.0% (a weighted count of 774.1).

Consequently, voter turnout is operationalized into a dichotomous variable by combining response 1 and 4 into response 'no vote' and the remaining responses will be categorized as 'vote'. 'No vote' is then equal to 1, while 'vote' is equal to 0 for the statistical model. The reason for the

combination of responses 1 and 4 is because although some expressed that they would choose to not go vote, such option is not viable and would not go unpunished in the voting system implemented in Brazil. Hence, response 4 is the only realistic option for those dissatisfied with the presidential elections to actually express their intentions. Thus, the combination of responses allows for the coverage of true voters' intentions even though may not be realistically attainable.

Independent variable

The independent variable is how much Brazilians perceive corruption among political candidates in 2016. According to Olken and Pande (2011) such perception surveys offer a more accurate depiction of corruption as it is easier to measure individual perception of corruption than to measure corruption directly, due to its illegal nature. Therefore, using this data to measure the dependent variable will increase accuracy and reliability of the results due to the extensive coverage of the variable at hand.

For the operationalization of this variable, the measure used will be perception of amount of corruption among politicians. This is calculated by the following question: "Thinking of politicians in Brazil, how many do you believe are involved in corruption?". There are then 5 possible answers, 1) none, 2) less than half of them, 3) half of them, 4) more than half of them and 5) all. The total number of responses is 1515. This scale (1-5) will enable the quantification of corruption perception. Therefore, those that have a response of 5 have a higher perception of corruption than those that have a response of 1. Such independent ordinal variable will be treated as a continuous variable for the model of this investigation.

In terms of the distribution of results, there were a total of 1515 responses. 0.8% responded that none of the politicians in Brazil are corrupt (weighted count of 11.6), 4.2% responded that less than half of them are corrupt (weighted count of 61.7), 11.5% responded half of them are corrupt

(weighted count of 170.6), 44.2% said that more than half of the politicians are corrupt (weighted count of 655.4) and 39.3% believe that all Brazilian politicians are corrupt (weighted count of 582.7).

Control variables

Culture and religion both influence corruption perception and voter turnout (Mensah, 2014 & Alford & Lee, 1968). Mensah (2014) argues that cultural and religious differences among citizens are incrementally related to perceived corruption. Additionally, differences in culture and religion arise with a mixture of ethnicities and peoples in the same territory. Alford and Lee (1968) then argue that territories that are more ethnically diverse have higher voting turnout. Therefore, given this influence, such variables must then be controlled for to not skew the results of this analysis.

Additionally, other general demographics should also be accounted and controlled. Melgar, Rossi and Smith (2010) find that women have a higher perception of corruption than men and that education levels also play an important role in determining corruption perception. In terms of voter turnout, a less educated population has higher turnout levels (Alford & Lee, 1968) and higher levels of inequality are associated to lower turnout levels (Frank & Martinez, 2021).

Thus, to account for such influences, the variables of age, education, socio-economic status, gender, culture, and religion will be added to the analyses as control variables. These will be operationalized using measurements also taken from the LAPOP AmericasBarometer 2016/17 Survey. Age is measured in years (mean = 38.56, standard deviation = 15.57). Socio-economic status will be measured through the proxy variable ‘employment status’. This is measured in categories ranging from working to actively looking for a job, student, retired, or taking care of the home. Education is then measured by years of schooling (mean = 8.732, standard deviation =

3.703). Gender is determined through the binary variable 'sex' where 0 = male and 1 = female. Culture is calculated through the proxy variable 'ethnicity'. This is determined by 6 categories. These are white, indigenous, black, mulatto, Asian and other. Culture is operationalized that way as ethnicity is based on one's personal social and cultural identity, language, race and motherland. Finally, religion will be determined through the proxy variable 'importance of religion'. This does not differentiate between religion types, but it does consider the relevance of religion to one's life which is what ultimately impacts their behaviors. The categories for this measurement are 1) religion is not important at all, 2) not very important, 3) somewhat important, and 4) very important.

Model

This investigation will be based on a logistic regression analysis, in which the dependent variable, voter intention, is binary. Therefore, 'vote' responses will be coded as 0 and 'not vote' responses as 1. The model will be used to predict the probability that an individual will cast a 'blank/null' vote given their levels of perceived corruption. This will be done twice. The first model will only include the relationship between the independent and dependent variable, while the second will include the other control variables. This enables a comparison and an evaluation of the results to be made to assess whether such control variables do indeed better the statistical model. Finally, all test assumptions for the binary logistic regression have been tested and results can be found in Appendix A. There were no violations, meaning that the regression can be run and analyzed with no statistical concerns.

Results

For this investigation, I hypothesized that an increase in corruption perception would lead to an increase in the probability of casting an 'invalid/blank' ballot (operationalized as 'no vote').

This is consisted with the results obtained from the analyses of both the logit coefficients of the binary logistic regression and the odds ratio of such relationship (see Table 1).

Table 1. Binary logistic regression of the probability of not voting.

	Model 1		**Model 2**	
	Logit coefficient	**Odds ratio**	**Logit coefficient**	**Odds ratio**
(Constant)	-0.753**	0.471**	-0.378	0.685
	(0.279)		(0.419)	
Corruption perception	0.347***	1.415***	0.369***	1.446***
	(0.067)	[1.242; 1.612]	(0.069)	[1.264; 1.655]
Age			-0.016***	0.984***
			(0.004)	[0.997; 0.992]
Sex			0.480***	1.617***
			(0.120)	[1.279; 2.044]
Years of schooling			-0.073***	0.929***
			(0.017)	[0.899; 0.961]
Employment status			0.017	1.018
			(0.033)	[0.953; 1.086]
Ethnicity			0.000	1.000
			(0.000)	[1.000; 1.000]
Importance of religion			0.021	1.021
			(0.082)	[0.869; 1.199]
-2LL	1764.036		1714.475	
Cox and Snell's R^2	0.019		0.053	
Nagelkerke's R^2	0.027		0.074	
N	1404		**1404**	

Note 1: binary logistic regression coefficients with standard error in brackets.
Note 2: odds ratio with 95% confidence intervals in brackets.
****p < 0.001, **p < 0.01, *p < 0.05*

Interpreting model 1

Firstly, in model 1, the logit coefficient for corruption perception is 0.347. This is statistically significant ($p < 0.001$). This implies that the probability that an individual will choose to not vote in the upcoming Presidential elections increases as there is an increase in corruption perception. Therefore, there is a 0.347 change in the logit of corruption perception associated with

a one-unit change in the predictor variable (vote intention). Additionally, the odds ratio results support the conclusion stated previously. But, with the odds ratio, the probability of the event of an individual choosing not to vote can be better quantified. Thus, for model 1, the odds of an individual not voting increase by 1.415 times [CI:1.242, 1.612] for each unit increase in perceived corruption. Although this is not a large effect, it should not be ignored. This result still carries statistical significance and should thus be considered relevant when taking into account factors impacting voter turnout.

Interpreting model 2

For model 2, control variables were added. Both the logit coefficient and the odds ratio for corruption perception have slightly increased while controlling for age, sex, years of schooling, employment status, ethnicity, and importance of religion in comparison to model 1. The logit coefficient thus increased from 0.347 to 0.369 and such relationship remained statistically significant ($p < 0.001$). Regarding the odds ratio, with the addition of the control variables, the odds of an individual choosing to not vote increase by 1.446 times [CI:1.264, 1.655] for each unit increase in perceived corruption. Once more, although the small effect, the statistical relevance indicates a true relationship which should thus be further explored.

In addition, model 2 also portrays the logit coefficients and the odds ratio for the control variables. Since only the variables of age, gender and education are statistically significant ($p < 0.001$), those will be further discussed. Age in years has a negative logit coefficient (-0.016), thus as an individual gets older, there is a decrease in the probability that they will not vote. So, in other words, the older the individual, the likelihood of them casting a ballot is greater. Similarly, the odds ratio for age is 0.984 [CI: 0.997, 0.992], meaning that as an individual gets older, there are higher odds that they will indeed choose to vote. Thus, the choice of not voting for older

individuals is less likely. In regard to gender, the variable 'sex' has a positive logit coefficient (0.480). Since it is a dichotomous variable, men coded as 0 and women coded as 1, this indicates that there is a higher probability for women to not vote than men. Furthermore, the odds ratio is 1.617 [CI: 1.279, 2.044]. So, the odds of women not voting are 1.617 times greater than the odds of men voting. Lastly, 'years of schooling' has a negative logit coefficient of -0.073. This indicates that as an individual has more years of schooling, so becomes more educated, the probability of such individual choosing to not cast a ballot decreases. Thus, those more educated have higher odds of choosing to cast a ballot than choosing to not vote. This is seen as the odds ratio for the education variable is 0.929 [CI: 0.899, 0.961].

Explanatory power

In addition to the logit coefficients and the odds ratio, Table 1 also displays the likelihood ratio and the value for Nagelkerge's R Square. These measures relate to the model fit of the binary logistic regression. Model 1 has a larger likelihood ratio than model 2 (χ^2 = 1764.036 and χ^2 = 1714.475). This ultimately means that model 1 better predicts the outcomes of the dependent variable. This is interesting to note as model 2 contains the control variables, which in theory, should be controlled for to improve accuracy of the predictability of results. Consequently, when it comes to the value for Nagelkerge's R Square, model 1 has a value of 0.027 and model 2, a value of 0.074. Therefore, although the difference is small, this suggests that model 2 has better explanatory than model 1. This then does indeed favor the logic that once control variables are included to the model, more accurate results can be achieved.

Given the results, I reject the null hypothesis. Upon analyzing the relationship between vote intention for the next President and corruption perception on the individual level, it is clear that an increase in corruption perception leads to an increase in the probability of casting an

'invalid/blank' ballot (operationalized as 'no vote'). In addition, once analyzed further, the individual most likely to vote 'null/blank' are younger, less educated women in comparison to other individuals with the same levels of perceived corruption.

Concluding remarks

In this research paper, I aimed to explore the impact of corruption on voter turnout in a democracy adopting a compulsory voting system. This is relevant as not much research has been done regarding such specific topic in the past, which ultimately left a knowledge gap within the political science literature. In this case, corruption was calculated through individual perception levels of corruption. So, in other words, how much corruption did one perceive to be present within the Brazilian political system. Additionally, due to the compulsory nature of the voting system, voter turnout was operationalized through individual Presidential vote intentions. Furthermore, those that intended to vote 'null/blank' or invalidate their votes were classified as non-voting individuals. Therefore, turnout was divided by those that would intend to vote (for whatever candidate) and those that would intend to 'not vote' (vote 'null/invalid). Upon investigating the relationship between perceived corruption and voter turnout in Brazil, it was clear that on the individual level, an increase in perceived corruption resulted to higher probabilities of vote abstention. As well as this, those most likely to choose not to vote were younger, less educated women. With this said, this study was not flawless and such limitations must be acknowledged and further discussed.

Limitations

The most significant limitation of this study is in relation to the dependent variable, vote intention. Although this variable allows for the differentiation between vote types (vote for a candidate of the current elected political party, a candidate of the incumbent political party, choose

to vote ‘null/invalid’ or to abstain from voting entirely), this may not accurately portray the individual’s final vote choice during elections day. This could be the case for two specific reasons. The first, many may answer the public survey differently than reality due to both internal and external pressures. And the second, an individual may well change their mind about their vote intention from the day the survey was answered to elections day.

In Brazil, votes are secret, meaning that one can vote for whichever option available in total secrecy. This ultimately helps alleviate any external pressures and allows for one to make their vote choice based on their own personal convictions. However, when answering a public survey, one may feel pressured to answer in a specific way, either because of their own personal/internal pressures or due to pressures regarding their surroundings. Since the survey is conducted in the individual’s household, those that have different ideologies to their family member’s, may feel more pressured to answer the survey in a specific way because of fear or shame. This could mean either answering that they would vote for a specific candidate which does not represent their actual vote or answering that they would simply vote blank to avoid any political commitment. Either way this ultimately skews results, as what was answered in the survey may not actually represent reality. If one falsely answers that they would vote blank, this will mean that the observed relationship in this investigation is overestimated. Thus, the conclusion that perceived corruption levels impact blank voting may not be as strong and significant as stated previously. Hence, such behavior would then lead to inaccurate conclusions.

Moreover, one’s intentions may change over time. While one’s perception of corruption may not drastically change within a short period of time, someone’s choice regarding the Presidential elections may indeed change in such period. Someone’s choice may be altered due to personal circumstances, heavy political campaigning, unexpected events (such as sudden economic or

social crisis), and many more. Therefore, although there is not one specific reason as to why a change in someone's vote intentions may occur, such decision is extremely sensitive to external forces and is thus, extremely volatile. Hence, this limitation should be considered once generalizing the study's results to avoid inaccurate and misinterpreted conclusions.

Additionally, due to this study focusing on the relationship between the variables at a single point in time, reversed causation may be present. This is when Y causes X instead of X causing Y. Therefore, in this case, individuals who choose to vote blank may also be more likely to have higher corruption perception levels. This limitation is then referred to as the 'directionality problem'. To solve for this, future researchers should run a cross-lagged study. Such method focuses on measuring both variables at two or more points in time. Since causation tends to occur forward in time, measuring the cause of the variables before the effect, should determine the direction of the causal relationship. This would then determine whether corruption perception levels predict blank voting or whether those who vote blank are also more likely to perceive there to be more corruption. In doing so, the relevance of the results found in this study would increase as limitations of the research design are addressed and corrected for.

Future work

As previously mentioned, this research paper is not flawless, therefore it leaves space for future research to be done to either help improve this research design or to add new relevant conclusions to the topic explored. In terms of improving the current research design, since the public opinion survey was done across all of Brazil, it would be interesting to analyze the differences of results between regions. Within Brazilian politics, clientelism has become the norm. The term refers to the exchange of goods and services for political support. However, in the Northeast region, there is a variant of clientelism denoted as 'declared support' (Nichter, 2009). This is where citizens

engage in strategic behavior regarding their vote choice by either choosing to declare their support to a candidate publicly or remain undeclared. Therefore, those with clientelist linkages may benefit from post-election benefits if their declared support politician does indeed win the Presidential elections. Hence, those individuals in the Northeast region may choose to also answer the public opinion survey in a strategic manner.

This may impact the results of this research in several ways. First, those individuals engaging in strategic behavior may be aware of corrupt politicians in office but may choose to answer the survey in a way that paints such corrupt politicians in a positive light. This would mean that they would have lower perceived corruption levels on paper than in reality. Secondly, their vote choice may be directly influenced by such clientelist activities and not their overall corruption perceptions. Thus, the relationship observed between perceived corruption and blank voting in the Northeast region of Brazil may not be a true reflection of such relationship as citizens engage in strategic behavior. Therefore, it would be beneficial to conduct this investigation taking into account the different Brazilian regions and to investigate whether the Northeast region results are aligned with other remaining regions. If not, such could be negatively impacting the results of this investigation as the observed relationship between corruption perception and blank voting may be too weak than reality.

Additionally, future work could also focus on exploring this topic further in order to acquire new relevant information. This could be done through investigating the relationship between corruption and voter turnout in Brazil in the regional/municipal level. Boas et al. (2019) establish that individuals tend to give less importance to corruption on the municipal level due to the familiar notion of *rouba mas faz* (‘steals but gets things done’). Therefore, citizens may excuse corrupt activities of politicians who deliver in terms of health/educational services and employment

creation. Thus, on the municipal level, would the impacts of corruption on voter turnout be the same as the ones in the national level? Such findings can then be used to better understand the mechanisms behind Brazilian politics, as well as how corruption can impact different aspects of politics.

Lastly, it would also be interesting to compare different democracies which adopt the compulsory voting system. Would democracies in the Global North have the same results as those in the Global South? How would the Belgian and Australian democracies compare to Latin American ones? This comparison would uncover new implications of this research as it would enable for linkages to be made. These could be regarding whether corruption affect individuals in different contexts equally or whether different democracies also face issues regarding citizen participation. Thus, future work should focus on creating new knowledge which can be used by political science scholars to better understand democratic systems worldwide.

Broader Implications

This paper then reveals that higher corruption perceptions negatively influence voter turnout even within a democracy with a compulsory voting system. This system is implemented to encourage citizen participation in politics, but as discovered, citizens prefer to invalidate their votes given certain situations. This means that those politicians which have been democratically elected may not necessarily be the nation's best representative, as they do not necessarily represent the citizens' true feelings and desires. Therefore, this uncovers the need for a democratic reform. Since the compulsory voting system is not efficiently pushing for citizen participation, should there be another voting system implemented in Brazil instead?

More generally, elections can be used as tools by citizens to hold politicians accountable and sanction political malpractice. But, as discovered, citizens would rather invalidate their vote

than vote against corrupt incumbent politicians. This has broader implications to all democracies and not only those adopting a compulsory voting system. Such implications regard the ability of citizens to exercise their political tasks. As citizens are unable to sanction illegal political activities and ill-performing politicians, they lose interest in the democratic system. This loss in interest and participation affects the overall efficiency and performance ability of democracies. Hence, more citizens may be drawn to more authoritarian political movements and more radical political figures. This could then help to explain the current global democratic backsliding movement. Thus, such ineffective democratic voting systems, as the example provided in this paper, may cause citizens to neglect democratic ideologies and practices.

Moreover, this paper also uncovered that those most likely to not vote were younger, less educated women. This follows the overall worldview of politics being a male dominated industry, which both those being elected to power and those actively participating within politics are male. Hence, to increase citizen participation in Brazilian politics, there should be a greater focus on the empowerment of the female population. One way in which this can be achieved is through more female representation in politics and in specific higher-ranking positions within the democratic system. Such females can then act as role models for younger female individuals, ultimately helping to encourage such to get more involved in the political arena.

Finally, these results also have certain implications regarding the overall educational system. To achieve more engaged citizens, countries should focus on good quality education, which will then lead to sophisticated voters. Such can then make better decisions in regard to their own personal circumstances as well as taking into consideration the nation's best interest. Hence, politics and education are closely linked and are co-dependent as educational reforms can only be

made by politician and politicians can only be elected by citizens committed to politics which are pushed to do so as they acquire more education.

Overall, this research paper produces relevant knowledge which can be used to better understand compulsory voting system democracies as a whole. The findings of this paper make dialogue with those produced by Hooghe, Marien and Pauwels (2011). Previously, I argued that higher corruption perceptions lead to more distrust of the democratic system and thus an increase in blank voting. Hooghe, Marien and Pauwels (2011) argue that higher corruption perceptions do indeed lead to more blank voting and this investigation uncovered that higher corruption perceptions also lead to an increase in blank voting. Hence, once analyzed in unison, the argument that political distrust can be seen as a mediator variable in the relationship between corruption and voter turnout seems more plausible. Furthermore, it also supports previous claims made by Chong et al. (20150, Giommoni (2021) and Stockemer (2009). Therefore, the results found in democracies with a voluntary voting system and those in a compulsory voting system are similar. Thus, corruption negatively impacts turnout in democracies overall and should thus be controlled and fought against as it is a salient issue affecting the democratic system.

Additionally, the limitations present within this study do not take away from the significance of the study's results, but it does add important factors to consider when producing future research. In conclusion, the results found within this study have broader implications regarding democracy, female representation in politics and education systems. Hence, the results can be generalizable to other contexts and topic areas to help deepen scientific knowledge within the political science literature.

Bibliography

Alford, R. R., & Lee, E. C. (1968). Voting Turnout in American Cities. *American Political Science Review*, *62*(3), 796–813. https://doi.org/10.2307/1953431

Anderson, C. J., & Tverdova, Y. V. (2003). Corruption, Political Allegiances, and Attitudes Toward Government in Contemporary Democracies. *American Journal of Political Science*, *47*(1), 91–109. https://doi.org/10.1111/1540-5907.00007

Avritzer, L., & Rennó, L. (2021). The Pandemic and the Crisis of Democracy in Brazil. Journal of Politics in Latin America, 13(3), 442–457. https://doi.org/10.1177/1866802X211022362

Boas, Taylor C., F. Daniel Hidalgo, and Marcus André Melo. (2019). "Norms versus Action: Why Voters Fail to Sanction Malfeasance in Brazil." *American Journal of Political Science* 63(2): 385–400.

Chêne , M. (2014). *The impact of corruption on growth and inequality - knowledge hub*. Transparency International . Retrieved November 22, 2022, from https://knowledgehub.transparency.org/assets/uploads/helpdesk/Impact_of_corruption_on_growth_and_inequality_2014.pdf

Chong, A., De La O, A. L., Karlan, D., & Wantchekon, L. (2015). Does Corruption Information Inspire the Fight or Quash the Hope? A Field Experiment in Mexico on Voter Turnout, Choice, and Party Identification. The Journal of Politics, 77(1), 55–71. https://doi.org/10.1086/678766

Citrin, J., and Stoker, L. (2018). "Political Trust in a Cynical Age." Annual Review of

Political Science 21: 49–70.

da Silva, M. (1999). The political economy of corruption in Brazil. Revista de Administração de Empresas [online]. V. 39, n. 3 [Accessed 9 November 2022] , pp. 26-41. https://doi.org/10.1590/S0034-75901999000300004

Dumdei, J. (2022). *Compulsory Voting and Corruption in Latin America* [Review of *Compulsory Voting and Corruption in Latin America*].

Frank, R.W., Martínez, F. (2021). Correlates of Voter Turnout. *Polit Behav*ior. https://doi.org/10.1007/s11109-021-09720-y

Giommoni, T. (2021). Exposure to corruption and political participation: Evidence from Italian municipalities, European Journal of Political Economy, Volume 68, 102000, ISSN 0176-2680, https://doi.org/10.1016/j.ejpoleco.2021.102000.

Hooghe, M., Marien, S., & Pauwels, T. (2011). Where Do Distrusting Voters Turn if There is No Viable Exit or Voice Option? The Impact of Political Trust on Electoral Behaviour in the Belgian Regional Elections of June 2009. *Government and Opposition, 46*(2), 245-273. doi:10.1111/j.1477-7053.2010.01338.x

Kapsa, I. (2020). Political Trust vs. Turnout in Modern Democracies. *Polish Political Science Yearbook*, *49*(3), 151–160. https://doi.org/10.15804/ppsy2020309

Karahan, G. R., Coats, R. M., & Shughart, W. F. (2006). Corrupt Political Jurisdictions and Voter Participation. *Public Choice*, *126*(1/2), 87–106. http://www.jstor.org/stable/30026577

Kubbe, I. (2014). Corruption and trust: a model design. In: Debiel, T., Gawrich, A. (eds) (Dys-) Functionalities of Corruption. Springer VS, Wiesbaden. https://doi.org/10.1007/978-3-658-04633-0_6

LAPOP. (n.d.). LAPOP. Retrieved October 27, 2022, from https://www.vanderbilt.edu/lapop/

Lawton, W. (2016). *Brazil rising*. Brazil Rising: A New Initiative to Study the World's Fourth-Largest Democracy | Watson Brazil Initiative. Retrieved November 22, 2022, from https://watson.brown.edu/brazil/news/profiles/2014/brazil-rising-new-initiative-study-worlds-fourth-largest-democracy

Melgar, N., Rossi, M., & Smith,T. (2010). The Perception of Corruption, *International Journal of Public Opinion Research*, Volume 22, Issue 1, Pages 120-131, https://doi.org/10.1093/ijpor/edp058

Mensah, Y.M. (2014). An Analysis of the Effect of Culture and Religion on Perceived Corruption in a Global Context. *J Bus Ethics* 121, 255–282. https://doi.org/10.1007/s10551-013-1696-0.

Nichter, S. (2009). Declared Choice: Citizen Strategies and Dual Commitment Problems in Clientelism. *Social Science Research Network*.

Olken, B., & Pande, R. (2011). Corruption in Developing Countries. *Annual Review of of Economics*. https://doi.org/10.3386/w17398

Pohlmann, M., & Valarini, E. (2020). The Fight Against Corruption in Brazil: A Case of Good Governance? *Knowledge for Governance*, 225–241. https://doi.org/10.1007/978-3-030-47150-7_10

Power, T. J., & Roberts, J. T. (1995). Compulsory Voting, Invalid Ballots, and Abstention in Brazil. *Political Research Quarterly*, *48*(4), 795–826. https://doi.org/10.2307/448975

Saad-Filho, A., & Boffo, M. (2021). The corruption of democracy: Corruption scandals, class alliances, and political authoritarianism in Brazil. *Geoforum*, *124*, 300–309. https://doi.org/10.1016/j.geoforum.2020.02.003

Stockemer, D. (2009). Bribes and Ballots: The Impact of Corruption on Voter Turnout in 75 Democracies. APSA 2009 Toronto Meeting Paper, Available at SSRN: https://ssrn.com/abstract=1452312

Appendix A

Logistic regression test assumptions:

1) **Multicollinearity:**

Table 2. Collinearity statistics

Model		Tolerance	VIF
1	(Constant)		
	Perceived corruption	1.000	1.000
2	(Constant)		
	Perceived corruption	0.989	1.011
	Age	0.868	1.152
	Sex	0.946	1.057
	Years of schooling	0.871	1.148
	Employment status	0.881	1.136
	Ethnicity	0.994	1.006
	Importance of religion	0.981	1.020

Result: The assumption of multicollinearity has not been violated, as the tolerance level of both models are equal or less than 1. Furthermore, the VIF levels are also less than 10, within the threshold of the rule of thumb.

2) **Outlier assumption test:**

Table 3. Residual_329

	Frequency	Percent	Valid percent	Cumulative percent
Valid	1404	91.6	100.0	100.0
Missing	128	8.4		
Total	1532	100.0		

Table 4. Residual_258

		Frequency	Percent	Valid percent	Cumulative percent
Valid	**0.00**	1403	91.6	99.9	99.9
	1.00	1	0.1	0.1	100.0
	Total	1404	91.6	100.0	
Missing	**-9.00**	128	8.4		
Total		1532	100.0		

Table 5. Residual_196

		Frequency	Percent	Valid percent	Cumulative percent
Valid	**0.00**	1370	89.4	97.6	97.6
	1.00	34	2.2	2.4	100.0
	Total	1404	91.6	100.0	
Missing	**-9.00**	128	8.4		
Total		1532	100.0		

Results: There are no outliers in the analysis. All data points have a standardized residual result of less than 3, meaning they conform to the outliers' rule of thumb.

3) Influential cases:

Table 5. Residuals statistics

	Minimum	Maximum	Mean	Standard deviation	N
Cook's distance	0.000	0.007	0.001	0.001	1404

Results: There are no influential cases within the data as the maximum Cook's distance of the cases in the data is 0.007. Cases are only considered influential if they have a Cook's distance of larger than 1.