Abstract

Three puzzles may arise from the examination of Lula’s recent political deeds. First, what made candidate Lula suddenly moderate his long established radical-left political positioning in 2002? Second, what were the incentives for President Lula to honor his commitment after elections and implement the moderated policies he had announced (in theory very different from his preferences at the time)? Third, how did President Lula get reelected in 2006 and why does his popularity keep growing? This paper aims to solve these puzzles through a model that incorporates particularities of the Brazilian electoral system and characteristics of both, the electorate and the campaign contributors.

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1. Introduction

“*That's my man right here. Love this guy. He's the most popular politician on Earth.*”

Barack Obama’s comments on Lula - April, 2009 – G20 Summit

The moderation in Lula’s political attitude and positioning over the past twenty years was staggering. Between 1989 and 2002, he took part in four presidential elections. In 1989, the radical-left union leader Lula received 16.1% of the votes with an anti-elite platform that included the suspension of external debt payments and an extremely aggressive land reform plan. During the 2002 campaign, a pragmatic Lula compromised to respect the agreements between the Brazilian Government and the IMF and released a “Letter to the People of Brazil”, in which he promised to control inflation, respect investors, honor contracts and preserve the primary surplus. He was able to expand PT’s span of alliances and to attract private financing for his campaign (total declared contributions were of less than US$2 million in 1994 and 1998 (Samuels, 2001a), and exceeded US$13 million in 2002).

Lula was elected with 46.4% of the votes in the first round and 61.4% in the second round.

Once in office, President Lula adhered almost completely to his rival predecessor’s (Fernando Henrique Cardoso’s) fiscal and monetary policies, which he used to call the "accursed legacy". He truly maintained the terms of the 1999 agreement with the IMF and even increased the primary surplus target from 3.75% to 4.25%. He appointed a former CEO of Boston Fleet and member of an opposition party head of the Central Bank. And finally, he sponsored strict inflation targeting (with extremely high and unpopular interest rates) and responsible sovereign debt management. He did all this despite severe pressure by some wings of his leftist party.

Lula was reelected in 2006 with 46.6% of the votes in the first round and 60.8% in the second round. By the end of 2008, Lula’s popularity, in terms of the share of the electorate that approves

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1 Besides running for the state government of São Paulo in 1982 and for congressman in 1986.
2 He actually signed a letter of intentions with the IMF, agreeing to put in practice the stabilization plan negotiated by Fernando Henrique Cardoso’s administration in case he was elected.
3 Data from Tribunal Superior Eleitoral (www.tse.gov.br), converted using the annual average exchange rate from Banco Central do Brasil.
4 I use the translation in Samuels (forthcoming) of the expression “herança maldita”, in Portuguese.
his performance, was of 84%\(^5\). In terms of the share of voters who think he has been doing a good or very good job it was of 70%\(^6\). The evolution of his popularity seems to have some correlation with the levels of inflation, employment, government expenditures and minimum wage (see figures 1 to 4).

Three puzzles arise from this narrative:

1. What made candidate Lula suddenly change his political attitude and platform so much?
2. What were the incentives for President Lula to honor his commitment after elections and implement the moderated policies he had announced (in theory very different from his preferred policies at the time)
3. How did President Lula get reelected in 2006 and why does his popularity keep growing?

The goal of this paper is to solve these puzzles through a model that incorporates particularities of the Brazilian electoral system and characteristics of both, the electorate and the campaign contributors. The main features I take into consideration are:

- Voting in Brazil is obligatory for all citizens older than 18 and younger than 64. It is optional for those older than 16 and younger than 18 and also for those older than 64. Historical turnout has been above 80%.
- The president is chosen by direct ballot in a two-round majoritarian election every four years.
- Reelection is allowed for one term only. After that, a politician is free to compete again in the future, after staying out of power for one term.
- Electoral campaigns are privately financed. According to the official database of historical campaign contributions\(^7\), financing for presidential candidates come mainly from corporations (more than 90% of the funds in the 2002 and 2006 presidential campaigns). Most of the money donated by corporations (roughly 70% of it) comes from the construction, finance and heavy industry sectors (Samuels, 2002; page 36).
- The electoral law grants candidates free TV and radio advertising time for a predetermined period before elections (45 to 60 days). In the first round, airtime is allocated

\(^{5}\) Source: CNI-IBOPE, December 2008 (www.cni.org.br).

\(^{6}\) Source: Datafolha (www.datafolha.com.br).

\(^{7}\) Partly available at www.tse.gov.br and partly gently provided by David Samuels (originally obtained from TSE). Official contribution figures may be underestimated, because they exclude “caixa dois” (or illegal) money obtained by parties. There is, however, no obvious reason to believe that unofficial campaign funds differ from official money in terms of distribution in time, among candidates and by type of source.
among candidates according to their coalitions’ share of representation in Congress. In the second round, time is split equally. No paid TV or radio advertising is allowed for.

- TV (radio) penetration in Brazil was of 90% (87.9%) of the households in 2002 (and 94.8% (88.4%) in 2007). More than 50% of the voters declare that they watch the political campaign on TV and that it influences their votes.
- The “party system is highly fragmented; electoral volatility is comparatively high; more than one-third of its sitting legislators change parties during a term; and individualism, clientelism, and personalism, rather than programmatic appeals, dominate electoral campaigns.” (Samuels, 2006; page 1)
- In 2002, “almost two-thirds of Brazilians expressed no partisan preference; about one in four Brazilians expressed a party preference for the PT; and about one in ten Brazilians expressed a preference for one of Brazil’s many other parties.” (Samuels, 2006; page 5)
- Brazilian voters are uneducated. 22.6% are illiterate or semi-illiterate. 82.3% possess less than secondary education. Only 3.5% have higher education.

The proposed theoretical explanation of the three puzzles connected to Lula are summarized below.

**Puzzle 1:** What made Lula suddenly change his positioning in 2002? This paper argues that the majority of voters in Brazil can be assumed to vote retrospectively. In 2002, Lula had a real chance of winning the elections because, different than in 1998, most voters were not happy with the incumbent’s performance. In order to get elected, Lula had to, not only maintain, but raise the share of votes he had at the beginning of the 2002 campaign (roughly 30% of total votes in the polls). That could be achieved if he was able to increase in the efficiency of the advertising presented during the daily free TV/radio airtime granted to his party. Such an efficiency gain entailed higher spending in marketing advisory and in the production of ads. Therefore, rising campaign funding was an absolute requirement. But 90% of presidential campaign financing in Brazil had historically come from corporations and, in 1998, Lula had received money from eighteen firms only! The solution was to qualify for financing by understanding what drives firms to contribute: a combination of a candidate’s chance to win and his level of commitment to a) respect property rights and b) strive to maintain economic stability. Lula decided to trade some velocity in the transformation of the society towards his bliss point for an increase in the probability of winning.

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He did hold on to his pro-poor preferences, but began to put more weight on the inexorable need to hold office in order to implement his preferred policies.

**Puzzle 2:** Why did Lula stick to his campaign commitments? Because the reputational cost he would incur had he reneged on such commitments exceeded the benefit of trading future rents for an immediate utility blast (even discounted by a high rate). That was so because the costs of defection incorporated not only the forfeited future contributions (relevant for Lula’s and PT’s long-term horizon), but also a potential threat of sanctions (even jeopardizing his stability in power). Given the fact that his campaign financing was concentrated in the hands of relatively few firms, the likelihood of successful coordination was not negligible.

**Puzzle 3:** Why did Lula get reelected in 2006? And why does his popularity keep growing? Uneducated and uninformed Brazilian voters are classified as impressionable voters and have preferences defined over policy outcomes. They don’t observe or judge policy variables (the ones actually moved by incumbents). Because the policy outcome space is multidimensional, the likelihood of there being a Condorcet winner for policy outcomes is close to zero. And even if there was one, this would not imply the existence of a Condorcet winner for policy variables. Given these limitations, it is difficult to predict what actions an incumbent will choose to implement. However, there are some strategies they can be expected to pursue. One example is the implementation of policies that please some voters without significantly unpleasing any other voter in the short-term, such as increasing anti-poverty programs coverage and size of transfers or raising the minimum wage in real terms (other possibilities are detailed in section 2.4). Another factor that cannot be ignored despite not being under Lula’s control is his luck: i) to have ruled mostly during good times and ii) to be facing a world crisis right before the end of his tenure (a perfect excuse to overspend).

In the next section, I present the proposed theoretic environment for presidential politics in Brazil. In section 3, I evaluate the three puzzles in light of the predictions made in section 2. Section 4 concludes.
2. Proposed Theoretic Environment for Presidential Politics in Brazil

2.1. Voting Decision

Types of Voters: Unimpressionable and Impressionable
I begin by dividing Brazilian voters into two types: i) unimpressionable and ii) impressionable. Unimpressionable voters include those that are attached to a political party and/or can be classified as educated and informed. Partisan voters are assumed to be 100% loyal to their parties. Educated and informed individuals are assumed to vote prospectively, based on a large set of information on candidates. For simplicity, I assume they have perfect information. Impressionable voters, on the other hand, are uneducated\(^{11}\), uninformed, non-ideological and not partisan-attached\(^{12}\). They are assumed to vote retrospectively for the incumbent and, in case they don’t approve his performance, their vote is a function of the money spent by challengers in their campaigns. Figure 5 shows a tree representation of the universe of voters and their distribution within the aforementioned groups. Unimpressionable voters account for 38% of total voters. Impressionable voters for 62%\(^{13}\).

The votes of unimpressionable individuals are seen as given variables by political candidates. That does not mean they are not relevant for the outcome of the elections. But it is fair to say that these voters are not the focus of politicians during their campaigns.

Impressionable Voters: Retrospective and Loss Averse
In order to determine how impressionable voters decide on their votes given their evaluation of the incumbent’s performance, I make use of two behavioral assumptions I consider pertinent for uneducated and uninformed voters: retrospective voting and loss aversion. Depending on how the environment is modeled, loss aversion is not a necessary assumption; risk aversion is sufficient.

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\(^{11}\) In the sense that they possess limited information processing capabilities and have no familiarity with politics.

\(^{12}\) Samuels (2006, pages 20 and 21) argues that “we can certainly conclude that partisanship does not drive the vote for most Brazilians”. He than states that “It is not education per se that shapes partisan attachments, but rather whether Brazilians with even relatively limited degrees of education have the motivation to obtain political information…”. So I allow for uneducated and uninformed partisan voters to exist (the case of many PT supporters). But I classify these voters as being of the unimpressionable type.

\(^{13}\) Sources are the CSES survey in Samuels (2006) for partisan attachment and IBOPE reports for approximate share of voters with superior education and high-end salaries (simplistically assumed to be the educated/informed), and for share of partisan voters in such group. Numbers reflect IBOPE’s estimates of turnout per group.
Part of the public opinion literature claims that mass publics don’t pay attention to politics, have minimal levels of political information and minimal stability of their political preferences\(^{14}\). More recently, scholars have started to focus on how citizens overcome these information shortfalls\(^{15}\). Two strands of argument have been developed. One, based on Condorcet’s “jury theorem”\(^{16}\), claims that the aggregation of many imperfectly informed decisions into a collective one produces the canceling out of errors\(^{17}\). The other sustains that voters rely on cues and information shortcuts to make their choice. Retrospective evaluations of the economy (Key, 1966 and Fiorina, 1981) and party identification (Robertson, 1976) are two generally cited sources of political cues.

In order to perform what Fiorina (1981) calls “Simple Retrospective Evaluations” (based mainly on personal finance and direct experiences), voters only need to judge their own past experiences\(^{18}\). In Fiorina (1981)’s words, even uninformed citizens “typically have one comparatively hard bit of data: they know what life has been like during the incumbent’s administration.” And the more they are conscious of their ignorance, the more they are likely to employ retrospective voting as a cost-efficient information shortcut.

Bendor et al. (forthcoming) point out that retrospective voters are not rational. They don't form rational expectations of what incumbents will do and they sometimes punish an incumbent for negative changes in welfare that are not under his control (like exogenous shocks to the economy). Both criticisms are mitigated by the assumptions of cognitive and informational constraints\(^{19}\). The individuals in this model face Knightian uncertainty. They have no priors regarding candidates. Under these circumstances, by forming adaptive expectations in order to judge the incumbent, they are rationally using all the information available to them. In Achen and Bartels (2004; page 9)’s words: “The voter’ problem is to forecast the future course of the economy under each of the competing candidates and choose, other things being equal, whichever candidate offers the most favorable economic prospects. This interpretation of pocketbook voting portrays voters as rational and forward-looking: but their prospective choices are rendered retrospective through the auxiliary assumption that the most obvious and reliable way to form rational expectations about the future is by evaluating the parties’ actual past performance in office.

\(^{14}\) The paradigm of minimalism, also related to the rational ignorance, originally underlined by Downs (1957).
\(^{15}\) Bartels (1996) is a great reference for this paragraph.
\(^{16}\) McKelvey and Ordeshook (1985) represent this strand.
\(^{17}\) Which would work if individual errors were random, not correlated and had an expected value of zero.
\(^{18}\) Achen and Bartels (2006)’s argument that voters’ perceptions may be skewed by partisan biases is not applicable because I model impressionable voters with no partisanship.
\(^{19}\) Which were obviously not made to mitigate such criticisms.
Achen and Bartels (2004), as well as other scholars\textsuperscript{20}, have found little empirical evidence of pocketbook voting in the U.S.. That may be the case, but it may also have to do with clarity of responsibility issues and with a potential bias in voters’ evaluations of the performance of same party incumbents (people tend to be more forgiving with politicians from their own party and harder on politicians from other parties, which neutralizes average retrospective vote responses to economic outcomes)\textsuperscript{21}. By restricting the empirical analysis to non-partisan voters this bias could be minimized.

Back to the model, say the incumbent performed well during his administration from a certain voter’s perspective. Why then doesn’t this voter play the lottery to try and elect a politician that may perform even better than the incumbent? That is where the loss-aversion hypothesis comes into play\textsuperscript{22}. Loss aversion implies status quo bias (Samuelson and Zeckhauser, 1988). Voters prefer a good sure thing to a probabilistic better thing. So in the model, voters first check if the incumbent politician was “good to them”. If the answer is yes, they reelect him (or his party), even if some other candidate announces a platform equal to their optimum. Otherwise, they go and compare the candidates from other parties to make their choice. Without the need to coordinate, these voters retaliate the incumbent if he does not cooperate. And cooperate with him otherwise. The resulting structure is the same as the one in Ferejohn (1986)’s political agency model but stemming from different assumptions\textsuperscript{23}. In both models, voters don’t even consider other candidates if the incumbent is pleasing them. They act in a tit-for-tat manner. In Ferejohn (1986), it happens because voters have an intentional punish/reward strategy (though coordination is not discussed). In the model proposed here, it happens because voters’ aversion to loss holds them back.

In case the incumbent fails to please a voter, the loss aversion hypothesis again determines that the voter will act as in the Ferejohn (1986) model. That is because the value function is convex for

\textsuperscript{20} Achen and Bartels (2004) provide extensive references on page 17.

\textsuperscript{21} Another potential bias may play a role on elections in which the incumbent party has to run for reelection with a new candidate, not the incumbent politician (the case of Dilma, running for Lula’s party in 2010 and the case of Serra, running for Fernando Henrique Cardoso’ party in 2002). The rate of popularity transfer from the incumbent politician to his party mate is not 100%. Additionally, I suspect there may be a bias which generates a higher rate of (un)popularity transfer when voters don’t approve an incumbent than when they do.

\textsuperscript{22} I draw on the behavioral economic approach typified by prospect theory, developed by Kahneman and Tversky (1979) as an alternative to expected utility theory. In prospect theory, the value function has reference dependence, diminishing sensitivity and displays loss aversion (it is concave for gains (risk aversion), convex for losses (risk seeking) and steeper for losses than for gains).

\textsuperscript{23} Ferejohn (1986) assumes politicians are all identical and equally unreliable (their preferences differ from those of voters). Voters act as principals, who see elections as a referendum on the incumbent. They use retrospective voting to discipline politicians.
losses, so the voter will prefer to play the lottery than to stick with the unsatisfactory incumbent\textsuperscript{24}. And how do impressionable voters select among other candidates when the incumbent does not please them? Like in Grossman and Helpman (2001), impressionable voters are receptive to messages of candidates and, because campaign ads provide them with bits of information about challengers’ competence, it is assumed that they respond directly to campaign spending. In Grossman and Helpman (2001)’s definition, impressionable voters “pay heed to campaign advertising” and are “the targets of campaign spending”. The idea is also present in Baron (1994), who models uninformed voters that don’t know about candidates’ platforms and respond directly to advertising. The hypothesis made in this paper for the situation in which a voter does not approve the outcomes produced by the incumbent is in line with these authors. Such situation will be the focus of the next subsection.

Now, when does a voter consider an incumbent was “good” to him? I define an incumbent was good to a certain voter if he has (maybe not due to his actions but to luck), during his term, moved the value of the policy outcome closer to that voter’s bliss point\textsuperscript{25} - even if the policy outcome implemented is far away from such point. This specification implies that voters may be pleased by policy moves that don’t necessarily produce their individual optimum. Consequently, even in the unidimensional problem, pleasing one voter does not necessarily entail upsetting every other voter with different preferences. In Ferejohn (1986)’s cake sharing problem\textsuperscript{26}, giving more to a certain voter will necessarily displease all the other voters since less will be left to be divided among them.

In the median voter theorem, setting policy at the median voter’s bliss point only pleases the median voter himself. And nobody else.

For the unidimensional problem, the set up proposed here is quite convenient. Also because it informs us whether more or less than 50% of the impressionable voters will support a certain move by the incumbent (which may be sufficient information to determine the result of the elections). Both these features allow for the reputational equilibrium to work, as a disciplining mechanism that ultimately substitutes the inexistent ability of politicians to commit. A necessary condition for a reputational enforcement mechanism to function is that the payoff structure of the voters must be such that it is always possible for the incumbent to cooperate, or to implement a policy move that

\textsuperscript{24} In the end of this section, I show how to adapt the model in order to hold on to the risk aversion hypothesis.

\textsuperscript{25} Actually, sufficiently closer, in the sense that a change in wages from $100 to $100.0001 will certainly not please any voter. In the detailed unidimensional model presented in Appendix 1, this sufficiency will be reflected in the value of $\delta_{\min}$.

\textsuperscript{26} Ferejohn (1986) examines the case of N voters, with the incumbent having to decide on how to divide the national pie among them (a vector of transfers). This specification does not result in an equilibrium with a reputational enforcement mechanism because voters compete with each other and the threat to the incumbent is weakened.
reelects him. That is, there must exist a “Condorcet winner policy”. Otherwise the incumbent will have no incentives not to deviate. Consequently, theoretical convergence properties of the model can only be derived for a unidimensional policy-space model.

**Risk Aversion Instead of Loss Aversion**

In order for the model to work based on the risk aversion assumption only, politicians must be classified into no more than two types: good and bad. Suppose there are four types of politicians: very good, good, bad and very bad. In that environment, assume a voter retrospectively judges the incumbent to be of the good type. Then, if this risk-averse voter believes the majority (but not all) challengers are of the good or very good types, he will not necessarily stick with the incumbent, as I want to assume (as in Ferejohn (1986)). This voter may play the lottery because he may prefer the probabilistic better thing to the good sure thing. This problem does not arise when only two types of politicians are allowed for. If a risk-averse voter regards the incumbent as being of the good type, than there cannot be a probabilistic better thing because nothing is better than the good type. Under the loss aversion hypothesis with four types of politicians, the model only fails to reflect Ferejohn (1986) if a voter has the prior that absolutely all challengers are of the good or very good types (something not very likely).

Analogously, risk aversion may display setbacks with more than two types of politicians in the case when a voter does not approve the incumbent’s performance. Let’s say the risk-averse voter categorizes the incumbent as being of the bad type and believes half the challengers are of the very bad type and half the challengers are of the good type. This voter will, under risk aversion, reelect the incumbent, which again goes against the pure retrospective voting mechanism. Once more, with only two types of politicians, risk aversion works just fine.

**2.2. The Candidate’s Problem**

From the perspective of a given challenger, the electoral competition involves the following variables: his share of votes among unimpressionable and impressionable voters at the beginning of the campaign (which already includes any effects of previous participations in political campaigns or incumbency per se), the share of impressionable voters in the electorate and the resources available for investment in the effort to gain the highest possible marginal share of impressionable votes until election day.
The resources available are of two types: i) TV/radio airtime and ii) money\textsuperscript{27}. As mentioned earlier, the amount of TV/radio airtime available for a certain candidate is a given in this analysis, which depends on the number of seats the party holds in Congress\textsuperscript{28}. Campaign financing, on the other hand, is the one variable candidates may seek to optimize. I will argue below that it is a key determinant of the efficiency of the pre-determined TV/radio time\textsuperscript{29}, which, in turn, has a great influence on votes. As a result, anything that affects the amount of campaign money a candidate can raise will be a control variable for him.

**Advertising and Elections**

The communication of campaign platforms of presidential candidates in Brazil typically concentrates on the promotion of a set of outcomes to be delivered, rather than on the presentation of detailed policy proposals or structured plans. In that sense, platforms don’t differ in any substantive way from candidate to candidate. Everyone basically promises to simultaneously raise employment, increase wages and reduce inflation; to offer better public services and lower taxes. These desirable but normally mutually exclusive pledges are advertised in equilibrium possibly because impressionable voters do not recognize their incompatibility; they don’t internalize the government’s budget constraint. Other than that, some valence issues exist (Strokes, 1963), i.e. matters for which virtually all voters agree upon the desirable policy outcome (better health services, for example). In these cases, all candidates equally assure voters that they will deliver the desirable outcome if elected (even if it is not feasible for the most competent of politicians).

Given this tradition to “overpromise” and to give guarantees on valence issues, it doesn’t come as a surprise that Brazilian voters do not trust politicians (nearly 70% of voters trust the Catholic Church, whereas less than 20% trust politicians, see figure 6). Brazilian voters seem to have learned, thanks to the repetition of broken promises, that the commitment by politicians cannot be relied upon. Candidates, on the other hand, appear to be stuck in this Nash equilibrium in which overpromising is a dominant strategy given that all other candidates overpromise.

Now, if that is the case (if all candidates say the same thing), what drives votes?

A part of the votes (those of unimpressionable voters) is “pre-determined” via complete party loyalty or access to perfect information. The remaining votes must be based on individuals’ priors

\textsuperscript{27} Note that almost elsewhere in the world, money is the resource and TV/radio airtime its main use.

\textsuperscript{28} I will not go into the politics of alliances in this paper, or into the equilibrium of party politics in the country, though they are obviously relevant.

\textsuperscript{29} See Mendonça (2001, page 110).
for the performance of each candidate if elected, i.e. for the priors for their valence term (competence attributes). But how is such inference possible if impressionable voters are originally uninformed and publicized platforms are similar to one another and equally untrustworthy? What, then, differentiates candidates?

I follow Baron (1994) and Grossman and Helpman (2006) in that there exists, for impressionable voters, a “vote production function” dependent on campaign advertisement. I modify the idea a little by narrowing the dependence of the “vote production function” to TV/radio advertisement only (which are, by far, the media to which impressionable voters are exposed the most in Brazil). On the top of it, because TV/radio airtime is a given variable in the Brazilian case, I add the quality of TV/radio advertisement as an argument of the function.

The quality of marketing is what may convince voters that a certain candidate actually plans to execute what he says, and has the competence to implement it. Not that voters take the information publicized in political advertising at face value just because they are uninformed and uneducated. But marketing does influence voters’ assessments of candidates’ valence terms (except for the incumbent). In Prat (2006; page 51)’s words: “Candidates use advertising to provide voters with positive information about themselves and negative information about their opponents” and, in doing so, they expect to affect the priors of the impressionable electorate with respect to their relative valence. Finkel (1993), Ansolabehere and Iyengar (1996), Goldstein and Ridout (2004) and Prat (2006) analyze the power of political advertising for the U.S., and Lourenço (2001), Borba (2005), and Silveira and Mello (2007) make the case for Brazil.

Another potential piece of evidence on the potential influence of political marketing on votes in Brazil is the fact that nothing less than 57.8% of reported total campaign expenditures by candidate Lula (and 38.9% by Serra) in 2002 can be classified as marketing/production expenses. It could even be argued that the lack of investment in marketing was the main cause for the drop in Ciro’s share of votes in the polls, right after the beginning of the TV/radio advertising period. Marketing accounted for only 17% of his total campaign expenditures. In absolute numbers, because Ciro had

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30 According to Mendonça (2001) (Lula’s marketing advisor): “It is amazing, therefore, that many politicians prefer to spend more money on a rally than on the production of a good TV ad. This is absurd. It implies a lack of the most basic notion of the cost-benefit relation. In a big rally, you can gather about 50 thousand people. Whereas, during the political TV advertisement hour, you reach a minimum of 10 million people in São Paulo, 2.8 million in Ceará, 6 million in Minas Gerais; and 50 million in the whole country, if the program is national”. (my translation)

31 Numbers obtained by consolidating expenditures and categories provided by TSE. Categories included are: “Produções Audiovisuais”, “Propagandas e Publicidade” and “Pesquisas ou Testes Eleitorais”.

32 Lula was the first ranked in the first round of the 2002 elections, Serra was second and Ciro was third.
less total contributions, the situation was even worse: Lula officially spent R$12MM in marketing, Serra spent R$13.5MM and Ciro only R$0.4MM. Figueiredo and Coutinho (2003) present quite persuasive charts showing time series of voters’ evaluation of each candidate’s TV ads and the respective series of share of votes in the polls. The variation in the share of votes of these three candidates over the duration of the subsidized TV advertising period was of +11p.p. for Lula, +8p.p. for Serra and -18p.p. for Ciro. The share of voters who considered each candidate’s TV campaign the “Best Advertisement”33 of all over the same period went from approximately 20% to 35% for Lula, from less than 15% to around 20% for Serra and from almost 20% to negligible 5% for Ciro. Figure 7 illustrates just how correlated the quality of the TV campaign and the evolution of the share of votes seem to be. It is important to stress that in the 2002 election, the TV airtime was divided as follows: 10 minutes and 30 seconds for Serra, 5 minutes and 25 seconds for Lula and 4 minutes and 20 seconds for Ciro. Thus the difference in airtime is not likely to fully explain Ciro’s collapse.

I find it plausible to make the assumption that investment in marketing plays a key role in the effectiveness of TV and radio advertisement in Brazilian presidential elections, also being a key item in the campaign expenditures of candidates. I will argue below that candidates seek to obtain money primarily to invest in quality political marketing, since it’s the one ingredient capable of boosting a candidate’s potential to acquire votes of impressionable voters over the campaign (remember TV airtime is a given).

**Money and Elections**

Samuels (2001a and 2001b) highlights the role of money in Brazilian politics. According to the author, estimated total expenditures for all elections in 199434 fell between US$3.5 and US$4.5 billion, about 0.5% of Brazil’s GDP. This number was estimated in US$3 billion for all elections in the U.S. in 1996, less than 0.04% of the country’s GDP in that year.

As previously mentioned, more than 90% of contributions for the presidential elections come from corporations and roughly 70% of the money coming from corporations comes from the construction, finance and heavy industry sectors (Samuels, 2002; page 36). Many firms contribute to the two best ranked candidates at the polls short before elections take place.

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33 Datafolha’s rate of “Melhor Propaganda”.
34 President, senators, governors and federal and state deputies elections.
Table 1 shows forty seven corporations which contributed to both, Lula and Serra, in 2002. Roughly half these firms made the donations at the same point in time to both candidates (most in October, the month in which elections take place). Eighteen of the firms provided the same amount of campaign money to each candidate. And almost all companies that donated to Serra and to Lula in different points in time, first contributed to Serra and then to Lula (including firms that conferred a higher share of their total contributions to Lula) - as if they had opted to donate to Lula when it was really clear that he would be the winner.

As Samuels (2001b; page 34) states: “Potential contributors in Brazil are very willing to open their pocketbooks because elected officials control the distribution of valuable resources, for example, export subsidies, banking regulations, exchange rate controls, and pork-barrel funds.” Individual firms make donations to candidates in exchange for favors. Not policy favors. Just private benefits related to firm-specific or sector-specific issues, such as contract granting, sector regulation, tax incentives allocation, license concessions; or information privileges, such as access to government officials, appointment allocation, etc. These favors, as in Snyder (1990), are contingent claims that pay off if the candidate wins the election. Campaign financiers are “investor-contributors” who see their donations as a payment for such claims. A candidate’s ability to attract financing depends on his probability of winning the election (Jacobson, 1980). But, as Jacobson (1985) points out, a candidate’s probability of winning the election is, in turn, dependent on the amount of funds he is able to raise. I sidestep this identification problem by considering a candidate’s share of votes in the polls at the beginning of the TV/radio campaign period to be exogenous. I also suppose that potential contributors make their calculations based on the maximum growth in share of votes a politician has ever obtained in recent elections. With that information, a potential financier is able to assign winning probabilities to each candidate.

Grossman and Helpman (2001) distinguish between two types of motives for campaign giving by special interest groups (SIGs): the influence motive (SIGs contribute to influence parties’ positions) and the electoral motive (SIGs contribute after parties have announced their platforms, aiming to alter election odds in the direction of their preferred positions). In an indirect way, Brazilian firms that invest in political campaigns exert some influence over parties’ positions. Here is how it works: potential financiers in a given election comprise those firms that identify, over the duration of the elected politician’s tenure, situations in which its private benefits may depend (among other factors) on the effecting of political favors by the executive power. These firms perform a simple calculation

---

35 Ninety nine firms contributed to both, Alkmin and Lula, in 2006.
in order to decide on whether to contribute or not and on the size of the contribution. They compare
the net benefits they will attain under a positive level of contributions to the net benefit they will
attain under no contribution. The reputation of a party (in terms of honoring its commitments) is
central in this computation, as well as the firm’s expectations as to the level of respect to property
rights and economic stability under this party’s ruling (which are key to determine the value of a
given benefit). At the end of the day, financiers do influence parties with respect to their positions
on property rights and economic stability, even though they don’t directly intend to (unlike the
SIGs, which may actually have that intention).

Campaign contributions by individuals are considered to be negligible. Voters are not assumed to
extract any utility from donating (consumption motive) or to envision any benefits from investing in
political campaigns. An examination of the contributions received by Lula in 1998 and in 2002
(table 2) suggests the above assumptions are appropriate for Brazil. Lula was, in 1998, the candidate
that received contributions from the largest number of individuals (by far). And he only received
contributions of 5,276 individuals, corresponding to 0.005% of the electorate (in 2002 only 830
individuals donated to Lula). In 1998, with an anti-elite platform that included deliberate threats to
property rights and to macroeconomic stability, Lula received contributions from 18 firms only,
totaling R$0.7MM. In 2002, after committing to maintain stability, fiscal discipline and property
rights (Letter to the People of Brazil), he attracted donations from 308 firms, totaling R$31.2MM.
Lula’s share of votes in the polls in the beginning of the 1998 campaign was similar to his share of
votes in 2002 (close to 30%). Hypothetically, then, he had a positive probability of winning and
would have received more funding had he chosen a more moderate positioning (which is precisely
what he did in 2002). The commitments made in the Letter to the People of Brazil were key to
allow for Lula’s access to corporate campaign finance and, ultimately, for his victory in 2002.

**Model**

A candidate’s share of votes in the polls at the beginning of the TV/radio campaign is exogenously
given. In order to maximize his share of votes gain throughout the electoral campaign, he must
extract maximum efficiency from his given TV/radio airtime. This efficiency is a function of the
party’s spending in marketing advisory. The maximization of such spending depends on the volume
of funds raised in the campaign, which in turn depends on some factors that will be presented in
more detail below.
A firm that identifies, over the tenure of the elected politician, a situation in which its private benefits may depend (among other factors) on the effecting of political favors by the executive will contribute if the net benefit from contributing exceeds the net benefit from not contributing. This model is a very simplified version of Snyder (1990), because it evaluates the donation of a certain firm to each candidate separately (not taking into consideration the whole vector of candidates).

Given a firm, I define:

- \( D_j \): contribution from the firm to candidate \( j \) (value paid for potential favor)
- \( B \): total benefit for the firm
- \( C \): total cost for the firm
- \( V \): value attributed by the firm to outcome determined by executive power
- \( pv \): probability of the firm attaining value \( V \) in the absence of political effects
- \( pv' \): probability of the firm attaining value \( V \) if it has contributed (ex-ante) to the winning candidate
- \( pv'' \): probability of the firm attaining value \( V \) if it has not contributed (ex-ante) to the winning candidate
- \( pw_i \): probability that candidate \( j \) wins the elections
- \( ph_j \): probability that candidate \( j \) honors commitment and provides contracted favor if elected

The expected value of the benefits to the firm and the cost for the firm if it donates a positive value to candidate \( j \) are given by:

\[
E(B|D_j > 0) = pw_j \cdot ph_j \cdot pv' \cdot V - pv \cdot V
\]

\[
E(C|D_j > 0) = D_j
\]

If it does not donate to candidate \( j \):

\[
E(B|D_j = 0) = 0
\]

\[
E(C|D_j = 0) = pw_j \cdot V \cdot (pv - pv'')
\]

And the net benefits for each case are:

\[
D_j > 0 \Rightarrow E(B - C) = V \cdot (pw_j \cdot ph_j \cdot pv' - pv) - D_j
\]

\[
D_j = 0 \Rightarrow E(B - C) = -pw_j \cdot V \cdot (pv - pv'')
\]

\( (pv' > pv > pv'') \)
The firm donates to candidate $j$ if:

$$V(pw_j \cdot ph_j \cdot pv' - pv) - D_j > -pw_j \cdot V(pv - pv')$$

$$\langle D_j \geq 0 \rangle$$

Therefore:

$$0 < D_j < V[pw_j \cdot ph_j \cdot pv' + (pw_j - 1) \cdot pv - pw_j \cdot pv']$$

This simple model can rationalize actual campaign contributions in the R$0.05MM to R$3MM range.

Let’s imagine the granting of a construction contract in the total value of R$500MM. Supposing a 10% return to the firm, $V=R$50MM. Assuming $pw_j=0.5$ and $ph_j=1$, we get:

$$0 < D_j < 0.5 \cdot V[(pv' - pv) + (pv - pv') - pv]$$

The table below illustrates some possibilities of resulting maximum contribution for different probability values attributed by a firm to attaining the private benefit in the absence of political forces, having donated ex-ante and having not donated ex-ante:

<table>
<thead>
<tr>
<th>$Pv$</th>
<th>0.5</th>
<th>0.4</th>
<th>0.3</th>
<th>0.2</th>
<th>0.2</th>
<th>0.1</th>
</tr>
</thead>
<tbody>
<tr>
<td>$(pv' - pv)$</td>
<td>0.3</td>
<td>0.2</td>
<td>0.2</td>
<td>0.1</td>
<td>0.1</td>
<td>0.2</td>
</tr>
<tr>
<td>$(pv - pv')$</td>
<td>0.3</td>
<td>0.2</td>
<td>0.2</td>
<td>0.1</td>
<td>0.2</td>
<td>0.1</td>
</tr>
<tr>
<td>$D_j$</td>
<td>2.5</td>
<td>0</td>
<td>2.5</td>
<td>0</td>
<td>2.5</td>
<td>5</td>
</tr>
</tbody>
</table>

The first column, for example, shows the case of a firm which believes it has a competitive probability of 50% of winning benefit $V$. It expects a 30p.p. increase in this probability (from 50% to 80%) in case it contributes (ex-ante) to the winner of the election, and expects a 30p.p. decrease in such probability (from 50% to 20%) in case it does not contribute. This firm, according to this model, will donate a maximum amount of R$2.5MM to a candidate with a 50% chance of getting to power.

As mentioned earlier, the probability of winning is estimated by each firm based on the given value of share of votes at the beginning of the campaign and the maximum growth in share of votes observed historically.
Note that:
if \( ph_j \rightarrow 0 \), then \( D_j \rightarrow 0 \)
if \( V \rightarrow 0 \), then \( D_j \rightarrow 0 \)

Therefore, in order to gain access to corporate contributions, a candidate must exhibit more than a positive probability of winning. It must also have a reputation for honoring commitments and a positioning of respect for property rights and for macroeconomic stability. The reputation for honoring contracts and the moderate positioning are the only control variables for challengers. Their dominant strategy is to announce platforms in conformity with these principles.

### 2.3. The Incumbent’s Problem 1 – To Renege or Not To Renege

A winning candidate, who has promised campaign contributors to respect property rights and strive for economic stability, faces, in case these pledges don’t reflect his policy preferences, the dilemma between reneging and not reneging on such commitments. The main benefit of reneging is the utility gain from implementing the exact policy preferences immediately. The costs will incorporate the present value loss of all possible future donations forfeited because of the defection, and the potential carrying out of sanctions by coordinated corporate contributors (which may even include a coup d’etat). So, although the usual reputational models predict that the enforcement mechanism will work in a repeated electoral game only if the incumbent has a low enough discount rate and a long-term horizon, the characteristics of the group of contributors in Brazil offers an additional incentive for the politician to honor his commitment. Because of the concentration of most financing in the hands of a few firms, coordination of defected contractors is quite achievable. And on the top of that, as Samuels (2001b; page 34) asserts: “Brazilian politicians have long-term political careers that require constant sources of funding, and thus they have strong incentives to develop long-term relationships with potential campaign financiers. Likewise, campaign financiers desire to support politicians who will enrich their coffers through delivery of government contracts over the long-term”.

The message is that only politicians who don’t plan to pursue a career in politics and are members of unserious parties would dare to renege.

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\(^{36}\) I am not analyzing the dilemma on reneging or not on the particularistic favors promised to contributors, using Baron (1994)’s terminology.
2.4. The Incumbent’s Problem 2 – Bundle of Policies

Aside from the policies discussed above, which were agreed upon with contributors, incumbents must make decisions on all other policy variables. Just like challengers over the political competition, incumbent politicians focus on impressionable voters over their tenures. Since those voters are uneducated and uninformed, I take that they are not able to differentiate between policies and outcomes. As Caplan (2007; page 159) puts it: “... politicians who want to retain power need to keep their eyes on two balls, not one. If voters’ beliefs about effective policy were correct, this would be easy, because the balls would be fused together. But in the real world, politicians face a visual challenge: keeping their eyes on two balls flying in different directions. If leaders ignore the public’s policy preferences, they will be thrown out of office no matter how good economic conditions are. If they fully implement those preferences, though, leaders become scapegoats for poor economic performance”.

I model impressionable voters with well-defined preferences over a set of policy outcomes. And an incumbent politician that must decide on a set of policy variables with the objective of maximizing his chance of reelection. So when looking at the two balls mentioned above, because voters are uneducated and are not supposed to understand policy consequences or outcome causes, incumbents will tend to center their attention on the outcome ball.

Model

The incumbent politician (also referred to by IN) is assumed to be office-motivated, with constant and rational preferences defined on sequences of rents \( r \), according to:

\[
U_s = E_s \sum_{t=s}^{\infty} \beta^{t-s} u(r) = \sum_{t=s}^{\infty} \beta^{t-s} \cdot p_{pt} \cdot u(r),
\]

where each period corresponds to one complete electoral cycle (one term\(^{37}\)), \( \beta \in (0, 1) \) is a discount factor, \( p_{pt} \) is the probability of holding office in a given period and \( r \) is the exogenous constant rent a politician receives in each period he stays in office. When a politician is not in office, \( r \) equals zero.

There is a set of policy outcomes \( O = \{o_1, o_2, \ldots, o_n\} \). Each policy outcome, \( o_i \), is defined over the interval of real numbers: \( o_i \in [o_i^{\min}, o_i^{\max}] \). A given voter has well-defined preferences over some of the policy outcomes (relevant outcomes, indexed from \( o_1 \) to \( o_s \)), and is indifferent with respect to

\(^{37}\) Generalization to shorter periods is straightforward. Political cycles are not the focus of this paper.
other (pliable outcomes, indexed from $o_{r+1}$ to $o_n$). Relevant policy outcomes have positive weights in this voter’s utility function, whereas pliable policies have zero weight. Voter j’s utility function can be represented by:

$$U_j = -\sum_{i=r}^{n} \beta^{i-r} \cdot \sum_{i=0}^{\infty} w_i \cdot (o_{ij} - \bar{o}_{ij})^2$$

Where $w_i = 0$ for $i \in [r+1, n]$

For many issues, voters display no sociotropic concerns whatsoever, with their bliss-points reflecting pure self-interested preferences. Take wages\(^{38}\), for instance. Middle-class voters’ bliss point for $o_i = wages$ will be $o_i^{max}$. And rich voters’ bliss point for $o_j = taxes$ will be $o_j^{min}$. When voters are okay to accept a wider range of values for a given policy outcome, it is usually the case that they are close to being indifferent with respect to that issue, or that they only have restrictions on that outcome value getting too extreme. For example, rich voters don’t use public health services. They will agree to a wide range of outcome values for it. But they will certainly mind if this outcome value is raised up to the point in which taxes have to be increased to cover for the deficit. And they will also mind if the outcome value for public health services reaches such a low value that epidemics begin to spread throughout the country.

The incumbent is assumed to have perfect information on each group of voters’ preferences and to know the set of policy variables he can move: $P = \{p_1, p_2, \ldots, p_m\}$. The president cannot change the unemployment rate directly, but he can adjust the interest and tax rates, which in turn affect the unemployment rate. In short, the variables that the incumbent controls are not the ones observed by impressionable voters. Besides that, unless all voters are assumed to be identical, it is very unlikely that there will be a Condorcet winner for policy outcomes. And even if there is one, this doesn’t necessarily imply that there will be a corresponding Condorcet winner for policy variables. For example, let’s imagine that the poor and middle-class voters’ set of relevant outcomes has only three elements: wages, employment and inflation. The rich voters’ set of relevant outcomes has two

---

\(^{38}\) Note that policy outcomes are variables which, from the perspective of voters, are of responsibility of the president (notion of clarity of responsibility). So, although wages are not set by any policy in a market economy, they are attributed, by impressionable voters, to the chief of the executive power.
elements: growth and inflation (with obvious bliss points for each policy outcome). The Condorcet winner for policy outcomes exists in this case:

\[
\begin{align*}
\text{inflation} &= o_{\text{inflation}}^{\text{min}}, \\
\text{wages} &= o_{\text{wages}}^{\text{max}}, \\
\text{growth} &= o_{\text{growth}}^{\text{max}}, \\
\text{employment} &= o_{\text{employment}}^{\text{max}}.
\end{align*}
\]

But because of the relations of interdependence among different policy variables and policy outcomes, an immediate Condorcet winner for policy variables will not exist: how should the incumbent set the interest rate?\(^{39}\)

In face of such problem, I argue that, although it is hard to forecast what the incumbent will do in possession of information on voters’ preferences, some predictions can be made:

1. When a group of voters has a certain preference \(\tilde{\delta}_i\) for a given relevant outcome, and \(o_i\) is considered pliable by all other groups of voters, then if there exists a policy variable \(p_i\) which moves the value of \(o_i\) without altering the value of any other policy outcome (or a “specific policy variable”), IN will implement a move in \(p_i\) so that \(o_i\) moves towards \(\tilde{\delta}_i\) by as much as it is feasible to do.

2. When different groups of voters have divergent preferences with respect to a certain policy outcome \(o_o\), then if there exists a “specific policy variable” \(p_i\) for \(o_o\), the problem becomes unidimensional\(^{40}\) and IN will move \(p_i\) towards \(p_i^m\) (the value of \(p_i\) which causes \(o_o\) to reach its median value \(o_o^m\)) by as much as it is feasible to do.

3. When all voters have the same bliss point \(\tilde{\delta}_i\) for a certain policy outcome, then:
   a. if there exists a “specific policy variable” \(p_i\) for \(o_o\), IN will obviously implement a move in \(p_i\) so that \(o_o\) moves towards \(\tilde{\delta}_i\) by as much as it is feasible to do.
   b. if there does not exist a “specific policy variable” \(p_i\) for \(o_o\), then IN’s move will depend on the weight of \(o_o\) in voters’ utility function in relation to the policy

\(^{39}\) This incoherence between policy outcomes may also happen on the individual level, since I assume they are uneducated and uninformed and do not understand the government budget constraint.

\(^{40}\) See appendix 2 for a detailed unidimensional version of the model.
outcomes that are affected by the same policy variables that affect $o_i$, and on the elasticity of other policy outcomes with respect to the policy variable that moves $o_i$ in relation to the elasticity of $o_i$ with respect to the same variable.

3. **Solving the Three Puzzles**

**Puzzle 1: Lula’s campaign promises are supposedly different from his preferences**

How to rationalize the change in Lula’s political positioning? Even before that: what has actually changed? Lula used to defend pro-poor redistributive policies. He still does. The change is on how to implement such policies. Lula used to propose a full-blown socialist revolution, with the usual effects on the level of respect for property rights. Very roughly speaking, redistribution would occur in the simplest and fastest way possible: add up all the wealth in the country and divide among its residents (a radical Meltzer and Richard (1981) scheme, with confiscation instead of taxation). In 2002, Lula seems to have (finally) incorporated the utility function used by Alesina and Holden (2008):

$$U_L = -p(L - L_b)^2 - (1 - p)(C - L_b)^2$$

Where $p$ is the probability that Lula wins the election, $L$ is the policy announced and implemented (the control variable), $L_b$ is Lula’s bliss point and $C$ is the policy implemented by the competitor in case he wins.

That is, from 2002 on, Lula became more willing to trade some velocity in the transformation of the society towards his bliss point for an increase in the probability of winning. He did hold on to his preferred policies but began to put more weight on the inexorable need to hold office in order to implement his preferred policies. He made this statement through the “Letter to the People of Brazil”. Who was it addressed to? Certainly not to “the People of Brazil”. It was addressed to owners of capital, domestic and international investors, potential campaign financiers. In Samuels (2006)’s words, Lula’s letter was a statement of principles “that emphasized his acceptance of the rules of the economic and political game”. And what were the incentives for Lula to release this letter? From one side, it would create conditions for the maintenance of the country’s economic stability, directly affecting Lula’s ability to perform well in case he won. From the other side, it
would qualify Lula to receive campaign contributions of corporate financiers, as extensively discussed in subsection 2.2. With the resulting boost in campaign funding, Lula was able to hire a competent political marketing advisor who greatly affected the share of votes gained throughout the campaign (figure 7).

One aspect to be highlighted is the fact that Lula’s victory was only possible because of the poor performance of his predecessor, Fernando Henrique Cardoso, over his second tenure. According to the assumptions in this paper, had he pleased voters, Lula would have had no chance of winning.

**Puzzle 2: Lula adheres to campaign commitments supposedly different from his preferences**
The reputational equilibrium discussed in subsection 2.3 sustains such a behavior. Even with high discount rates for future rents, the combination of i) a long-term horizon for Lula and PT, ii) the flows of future donations that would be missed out and iii) the potential threat of sanctions thanks to the coordination of “betrayed” contributors guarantees the enforcement of the campaign commitment.

**Puzzle 3: Lula gets reelected in 2006 and becomes “the most popular politician on Earth”**
First of all, it is important to highlight the difference between popularity (in terms of rate of approval or evaluation of performance in office) and vote intention. My variable of interest is the share of votes (so is Lula’s). Figures as an 84% approval of performance and a 70% share of voters evaluating the performance as good or very good must be discounted in order to reflect vote intention. A recent survey by Datafolha on the 2010 elections shows that 47% of total voters would vote for Lula, whereas 60% of voters who regarded his performance as good or very good would vote for him.

Thinking in vote intention terms, and supposing the model assumptions hold, Lula could certainly get reelected again if he could run for a third term (which he can’t). According to Samuels (2006), the share of voters who support PT is of 25%. Assuming that none of the remaining unimpressionable voters likes Lula, for the President to reach 47% of vote intentions, it must be that 35% of the impressionable voters (22% of total voters, close to 28MM people) are pleased by his policy outcomes.
How does Lula achieve that? By employing the strategy described in item 1., subsection 2.4. The granting of real term increases in minimum wages and the anticipation of the annual concession of these adjustments has a direct impact on the social security and pension benefits received by approximately 22MM individuals. This policy move has the potential to influence even more than 22MM votes, given its impact on other voters who may live in the same household as the beneficiaries. The same rationale applies to the extension of coverage and increase in the value of transfers of the Bolsa Família anti-poverty program, which benefits a total of 12MM Brazilians (and is also likely to influence even more votes than that). Of course there may be some overlapping of these two benefits, some of the beneficiaries may not vote, some may support PT (already included in the calculation). Nevertheless, we are talking about 36MM people getting pleased.

These are just quick examples of Lula’s ability and propensity to use specific policy variables (see figures 8 and 9). Note that these variables can only be considered specific policy variables in the short-term, since they create fiscal imbalances that will affect other policy outcomes in the future.

Another popularity factor, which cannot be ignored but is not under control of the incumbent, is Lula’s luck i) to have ruled mostly during good times and ii) to be facing, in 2009, a world crisis right before the end of his tenure, providing him with a perfect excuse to overspend.

7. Conclusion

The aim of this paper was to build a political economy rationale that both reflected the Brazilian “micro” reality and produced an outcome that could rationalize the Lula phenomenon. The main questions are: i) how could a radical-left union leader, who used to defend debt default and aggressive land reform, make it to power by promising to implement policies he used to condemn? ii) why has he, once in office, completely adhered to the fiscal and monetary policies of his rival predecessor? and finally, iii) how did he become “the most popular politician on Earth”\(^41\)?

In order to get elected in 2002, Lula’s strategy was to change what needed to be changed in his political positioning in order to qualify for campaign financing by corporations (90% of presidential

\(^{41}\)Barack Obama at the G20 Summit, April 2009.
campaign financing in Brazil historically comes from corporations and, in 1998, Lula had received money from eighteen firms only!). Contributions by private firms are driven by a combination of a candidate’s chance to win and his level of commitment to respect property rights and strive to maintain economic stability. Lula decided to trade some velocity in the transformation of the society towards his bliss point for an increase in the probability of winning (after all, the need to hold office in order to implement preferred policies is inexorable).

Why would increasing campaign contributions help him win the elections? First of all because most Brazilian voters can be assumed to vote retrospectively and Lula’s predecessor had not exactly pleased them over his second term in office. Given that, if Lula was able to raise the share of votes he already had at the beginning of the 2002 campaign (conquered over the years, with the participation in numerous campaigns), he could win. Such gain in share of votes could be achieved through the increase in the efficiency of the free TV/radio advertising time granted to his party (a given variable when the campaign started). The money needed to buy such efficiency (in the form of higher spending in marketing advisory and production of ads) had to be obtained from corporate contributors. That explains the moderation.

After winning the elections, Lula didn’t dare to renege on his commitment to play by the rules of the game (property rights and stability). The reason comprised the simple arithmetic of benefits exceeding costs: trading future rents (even discounted by a high rate) for an immediate utility blast was not a temptation for Lula and PT because the costs of defection incorporated forfeited future contributions (relevant for Lula’s and PT’s long-term horizons) and a potential threat to his stability in power (via the successful coordination and sanctioning by the relatively few betrayed contributors).

Finally, it is difficult to predict the actions an incumbent will choose to implement given that Condorcet winners are inexistent in multi-dimensional policy settings. Nonetheless, I argue that some strategies can indeed be expected to be pursued, when available. One possibility is for the incumbent to identify and implement policies that please part of the voters without significantly unpleasing other voters in the short-term. Increasing anti-poverty programs’ coverage and size of transfers, raising the minimum wage in real terms and anticipating the date of its annual adjustment are good examples of such strategy.
Lula’s ability and propensity to use specific policy variables is remarkable. However, this approach can sometimes be unsustainable in the long-run. Specific policy variables like the ones just mentioned can only be considered not to harm other voters if the analysis is restricted to the short-term. They obviously create fiscal imbalances that will affect other policy outcomes in the future. The good (for PT) and bad news (for all voters who are not benefited by such policies) is that this fiscal imbalance will not immediately affect votes. It is (unfortunately) quite safe to assume that the intertemporal government budget constraint is not understood by the majority of Brazilian voters.
References


Appendix 1

In order to illustrate the workings of the loss aversion and retrospective voting assumptions, the unidimensional problem referred to in item 2. from subsection 2.4 has its solution presented below. This unidimensional version can be employed by the incumbent in case there is one relevant policy outcome for all voters of the kind described in item 2. and when all other relevant policy outcomes are of the kind described in item 1.

The policy outcome \( o_i \) will be renamed \( g \), and I will assume that there exists only one relevant policy outcome for all voters. Without loss of generality, I will also assume that the policy outcome \( g \) is equivalent to the policy variable \( g \).

There is an incumbent politician indexed by \( IN \) and two candidates indexed by \( P \) = \{A, B\}.

The incumbent politician is assumed to be office-motivated, with constant and rational preferences defined on sequences of rents \((r)\), according to:

\[
U_s = E_s \sum_{t=s}^{\infty} \beta^{t-s} u(r) = \sum_{t=s}^{\infty} \beta^{t-s} \cdot p_{p_t} \cdot u(r),
\]  

where each period corresponds to one complete electoral cycle (one term\(^{42}\)), \( \beta \in (0, 1) \) is a discount factor, \( p_{p_t} \) is the probability of holding office in a given period and \( r \) is the exogenous constant rent a politician receives in each period he stays in office. When a politician is not in office, \( r \) equals zero.

At the beginning and at the end of a term are \( g_b \) and \( g_e \), respectively. There is a continuum of voters distributed over the interval of real numbers \( G = [g_{min}, g_{max}] \). Let \( F(g) \) be the fraction of voters with bliss point \( g_i^* \leq g \) and suppose \( F(g_{min}) = 0 \) and \( F' > 0 \). Given a period \( t \), with corresponding \( g_b \) and \( g_e \), a voter with bliss point \( g_i^* \) obtains the following payoffs:

---

\(^{42}\) Generalization to shorter periods is straightforward. Political cycles are not the focus of this paper.
The median value of $g_i$, $g_{m}$, is such that $F(g_{m}) = \frac{1}{2}$. Turnout is assumed to be 100%. The timing of events is as follows: i) with $g_b$ given, IN implements a certain policy $g_e$, ii) A and B announce their platforms, $g_A$ and $g_B$ (which are irrelevant), and make campaign expenditures $e_A$ and $e_B$, iii) elections are held and voter $i$ chooses:

- **IN** if $v(g_b, g_e, g_i^*) = 1$;
- **A** if $v(g_b, g_e, g_i^*) = 0$ and $e_A > e_B$; and
- **B** if $v(g_b, g_e, g_i^*) = 0$ and $e_B \geq e_A$.

Thus the incumbent politician sets his policy so as to maximize the probability of reelection, while other candidates seek to maximize funding for their campaign.

The probability of reelection (payoff function for IN) can be written as:

$$p_{IN} = \text{prob} \left[ \int_G v(g_b, g_e, g_i^*) \, di > \frac{1}{2} \mid g_b \right]$$

Note that, because the assumptions generate a “tit-for-tat” referendum on the incumbent, the integral should always be compared to $\frac{1}{2}$, no matter how many candidates compete in the election and how they behave. Additionally, maximizing the probability of reelection in the deterministic case is the same as maximizing the share of votes.

I make some extra assumptions regarding potential moves by incumbents. The change in the value of the policy variable, or size of the move, $\delta$, is constrained by two limitations: i) incumbents are not able to implement moves that imply a $\delta$ higher than a given $\delta_{\text{max}}$ because it is not feasible and ii) there is a threshold for policy fine-tuning equal to $\delta_{\text{min}}$, beyond which voters do not observe the
move. So $\delta \in [\delta_{\text{min}}, \delta_{\text{max}}]$. Additionally, if an incumbent has to decide upon two different moves that yield the same probability of reelection, he will always choose the one that generates a higher share of votes. If both produce the same share of votes, he will choose the move which implies a smaller change in $g$.

**Deterministic Equilibrium**

To define the equilibrium, it is only necessary to understand the strategies chosen by the candidates, since voters play in an automatic retrospective manner as described in (3). Candidates A and B’s strategy is to maximize their campaign expenditures (how they do that is not the focus of this paper). The incumbent, IN, chooses a strategy which maximizes $p_{\text{IN}}$ with $g_b$ and $F(\cdot)$ given. Let $S_{\text{IN}}(g_b, g_m) = [d_s, \delta_s]$ denote IN’s strategy, formed by a vector of direction and size of move ($d = +1$ for a move of $g$ from $g_b$ towards $g_m$, $d = -1$ for a move of $g$ from $g_b$ in the opposite direction of $g_m$ and $d = 0$ for no move).

**Proposition 1:** Given $g_b$, $g_m$, $\delta_{\text{min}}$ and the interval $[g_{\text{min}}, g_{\text{max}}]$:

\begin{align*}
i) \quad & \text{if } |g_m - g_b| \geq \delta_{\text{min}} \Rightarrow S_{\text{IN}} = [1, \delta_{\text{min}}] \text{ and } p_{\text{IN}} = 1 \\
\text{ii)} \quad & \text{if } |g_m - g_b| < \delta_{\text{min}} \Rightarrow S_{\text{IN}} = [0,0] \text{ and } p_{\text{IN}} = 0
\end{align*}

*Proof:* See the end of Appendix 1 and figure 10.

**Corollary 1:** The policy variable $g$ converges to the neighborhood of the median value, $g_m$, at a velocity of $\delta_{\text{min}}$ per term.

**Corollary 2:** An incumbent is reelected $n$ times before losing power in the deterministic setting.

Where $n = \text{floor}(|g_m - g_b| / \delta_{\text{min}})$
Corollary 3: If fine-tuning of policy is perfect ($\delta_{\text{min}}$ is infinitesimal) and provided reelection is allowed indefinitely (not necessarily reelection of the candidate, but of the party), the incumbent politician (or party) will stay in office permanently in a deterministic setting.

Stochastic version

Bartels (2008) correctly states that “voters have great difficulty judging which aspects of their own and the country's well-being are the responsibility of elected leaders and which are not.” In some occasions, voters blame the incumbent politician for the negative effects on welfare caused by economic downturns, which are not controllable by the incumbent.

This additional information constraint can be incorporated to the model in different ways. One possibility is to change expression (3) by assigning a probability to the event of a voter choosing IN even though $v(g_b, g_e, g_i^*) = 1$ for such voter. Equation (3) becomes:

\[
\begin{align*}
\text{IN} & \quad \text{if } v(g_b, g_e, g_i^*) = 1, \text{ with probability } p_s; \\
\text{A} & \quad \text{if } v(g_b, g_e, g_i^*) = 0 \text{ and } e_A > e_B, \text{ or } \\
& \quad \text{if } v(g_b, g_e, g_i^*) = 1, \text{ with probability } (1 - p_s) \text{ and } e_A > e_B; \text{ and } \\
\text{B} & \quad \text{if } v(g_b, g_e, g_i^*) = 0 \text{ and } e_A > e_B, \text{ or } \\
& \quad \text{if } v(g_b, g_e, g_i^*) = 1, \text{ with probability } (1 - p_s) \text{ and } e_B \geq e_A.
\end{align*}
\]

Where $p_s$ is defined as the “state effect on voter” and assumes different values for each direction of change in the state of the world: $p_b$ when the state changes for better, $p_w$ when it changes for worse and $p_e$ when it remains stable.

Though IN knows the stochastic process governing nature’s choice, this specification does not imply any changes in IN’s strategy relative to the deterministic case. It only increases the frequency with which power changes hands. To make the model more realistic, I also add an exogenous ex-post multiplier to the size of the move chosen by IN. I define the effective move, $\delta_{\text{eff}}$, as:
δ_{eff} = δ_s \cdot r_s.

Where δ_s is the move originally chosen by IN and r_s is defined as the “state effect on policy”, assuming different values for each change in the state of the world: r_b, r_w, and r_e.

The timing of events is as follows: i) with g_b given, IN chooses a certain policy g_e (which implies a certain δ_e), ii) A and B announce their platforms, g_A and g_B (which are irrelevant), and make campaign expenditures e_A and e_B, iii) nature plays and chooses the state of the world (p_s and r_s are determined), iv) the effective move in g is implemented (δ_{eff} = δ_e \cdot r_s), (v) elections are held and voter i chooses according to (8). IN is partially able to mitigate the uncertainty by choosing:

$$\delta_s' = \delta_s / \min(r_b, r_w, r_e)$$

(9)

The effective move implemented after r_s is revealed will be:

$$\delta_{eff} = \delta_s' / r_s = [\delta_s / \min(r_b, r_w, r_e)] / r_s$$

(10)

In equilibrium, Proposition 1 will hold, but policy will be magnified in all states of the world so as to maximize the expected value of (4) (since moving g does not engender any cost for IN). The outcome of elections will be probabilistic and Corollaries 2 and 3 will no longer hold.

Proof of Proposition 1:

Item i): If S_{IN} = [0, 0] ⇒ v(g_b, g_e, g_i*) = 0 ⇒ p_{IN} = 0. If S_{IN} = [-1, δ] (figure 6b), the share of voters who approve the move is F[(g_b + g_e) / 2], which is, by definition, smaller than F(g_m) = 0.5. That is because g_e will be closer to a voter with bliss point to the left of (g_b + g_e) / 2 than g_b was. If S_{IN} = [1, δ] (figure 6a), the share of voters who approve the move is F[1 - (g_b + g_e) / 2], which is, by definition, higher than F(g_m) = 0.5. As for the optimal size of δ, note that the share of votes of IN decrease by (g_b + g_e) / 2 when he moves g towards g_m. Therefore, the smaller the move, the better ⇒ S_{IN} = [1, δ_{min}] is the optimal strategy for IN.

Item ii): This follows from the assumption that voters do not observe moves that change g by less than δ_{min}. Suppose |g_b - g_m| < δ_{min}. Then |g_e - g_m| = δ_{min} - |g_b - g_m|. Therefore |g_b - g_m| - |g_e - g_m| < δ_{min} - δ_{min} + |g_b - g_m| < δ_{min}. So the benefit of such move would not be observable to voters. Because of the assumption that if an incumbent has to decide upon two different moves that yield the same probability of reelection and the same share of votes, he will choose the move which implies a smaller change in g, the optimal strategy for IN will be inaction. □
Appendix 2

Figure 1: Lula’s Popularity (% Approval) and Inflation (IGP-M % Variation)

Source: Instituto Sensus (www.sensus.com.br) and Banco Central do Brasil

Figure 2: Lula’s Popularity (% Approval) and % Employment

Source: Instituto Sensus (www.sensus.com.br) and Banco Central do Brasil

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43 One hundred minus IBGE’s metropolitan areas 30-day unemployment rate.
Figure 3: Lula’s Popularity (% Approval) and Real Government Expenditures Index (= 100 in Jan 2003\(^{44}\))

Source: Instituto Sensus (www.sensus.com.br) and IPEADATA

Figure 4: Lula’s Popularity (% Approval) and Minimum Wage Index (= 100 in Jan 2003\(^{45}\))

Source: Instituto Sensus (www.sensus.com.br) and IPEADATA

\(^{44}\) Deflated using GDP deflator.

\(^{45}\) Deflated using IGP-M.
Figure 5: Voters Tree (% of total voters)

Source: CSES survey in Samuels (2006) for partisan attachment and IBOPE reports for share of voters with superior education and high-end salaries (simplistically assumed to be the educated/informed), and for share of partisan voters in such group. Numbers reflect IBOPE’s estimates of turnout per group.

Figure 6: Share of voters who trust institution (%)

Source: IBOPE
Figure 7: 2002 Elections - % Share of Votes in Polls and Evaluation of TV Advertisement by Electorate

(“Candidate”=share of a certain candidate in the polls)

(“Candidate Ad” = share of voters who consider a certain candidate’s TV campaign the best of all)

Source: Datafolha

Figure 8: Lula’s Popularity for Classes A and C and the Minimum Wage (Index = 100 in March-2004)

Source: CNI-Ibope and IPEADATA
Figure 9: Government Expenditures per Capita and Bolsa Família \(^{46}\) Transfers Per Capita (Index = 100 in 2004)

Source: IPEADATA and www.portaltransparencia.gov.br

\(^{46}\) Anti-poverty program that extends financial aid to poor families provided that the children attend school and are vaccinated.
Figure 10a

Disapprove move  
(payoff = 0)

Approve move  
(payoff = 1)

$g_{\min}$ $g_b$ $(g_e + g_b)/2$ $g_e$ $g_m$ $g_{\max}$

$\delta/2$ $\delta/2$

Figure 10b

Approve move  
(payoff = 1)

Disapprove move  
(payoff = 0)

$g_{\min}$ $g_e$ $(g_e + g_b)/2$ $g_b$ $g_m$ $g_{\max}$

$\delta/2$ $\delta/2$
Table 1: Timing of 1st Campaign Contribution of Firms Donating to Serra and Lula in 2002, Candidate Share of Total Contributions by Firm, Total Contribution by Firm

<table>
<thead>
<tr>
<th>Firms</th>
<th>AUG</th>
<th>SEP</th>
<th>OCT</th>
<th>LULA</th>
<th>SERRA</th>
<th>TOTAL (RS '000)</th>
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<td>50%</td>
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<td>ROSSET &amp; CIA</td>
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Source: TSE
Table 2: Break-down of Campaign Contributions to Lula in 1998 and 2002

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<td>Total contributions excluding</td>
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<td>31.583.863</td>
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<td>party donations (R$)</td>
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<tr>
<td>Total number of donors</td>
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<tr>
<td>Total contributions from firms</td>
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<td>31.219.473</td>
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<tr>
<td>(R$)</td>
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<td>Total contributions from</td>
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<td>364.390</td>
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<tr>
<td>individuals (R$)</td>
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<td>% Contributions from firms/Total</td>
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<td>98,8%</td>
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<tr>
<td>% Contributions from</td>
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<td>1,2%</td>
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<td>individuals/Total</td>
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<td>Median contribution by individual (R$)</td>
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Source: TSE