Distributive Politics and Asymmetric Participation *

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Abstract

How do distributive politics affect participation under incomplete information? We theorize a novel mechanism that we call asymmetric participation, which explains participation as a self-selection process induced by a broadly targeted welfare benefit. Incomplete information about the de facto allocation of benefits causes asymmetric participation. When citizens expect particularistic distribution and access to the benefit depends on voter registration, supporters of the incumbent, who supplies the benefit, self-select into the electorate. This creates an incumbency advantage. We illustrate this argument using the case of the Renda Básica de Cidadania (RBC) in Maricá, Brazil, the largest unconditional cash transfer program in Latin America. Based on qualitative evidence, we develop a formal model, which we test against novel survey data. We find that under the de facto procedure of implementation, supporters of the incumbent supplying the RBC, self-select into the electorate, and engage more in activities that signal party loyalty.

Keywords: Distributive politics, participation, mobilization, clientelism, unconditional benefit, welfare policy, Brazil

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1 Introduction

Implementation of distributive policy is a black box for most citizens. Even completely rules-based policy could be perceived as clientelistic if citizens do not know how much discretionary power is exercised during implementation. Scholarship on distributive politics generally focuses either on clientelistic or programmatic policy. Our research contributes to closing the gap between the clientelistic and the programmatic perspective on distributive politics. We highlight that seemingly programmatic policy can still prompt sophisticated behavior by voters due to the incumbent's discretion over the implementation of policy.

We relate to recent research on strategic complementarities between programmatic and particularistic policy (Frey et al., 2021; Imai et al., 2020). In the literature on clientelism, there is a growing interest in the gray area between programmatic and clientelistic policy (cf. Calvo and Murillo, 2019; Mares and Young, 2016; Hicken and Nathan, 2020). Bardhan (2022, 5) puts it nicely: "The distinction between clientelist and programmatic politics is not always sharp; there may be a whole range of institutional arrangements in between that need to be more carefully studied".

We offer a new angle to understand broadly targeted welfare benefits as an electoral strategy. While the final implications of our asymmetric participation theory point towards an incumbency advantage, similar to economic voting or particularistic targeting, how the electoral gains are achieved differs from both. However, we do not claim that asymmetric participation happens instead of clientelistic or programmatic strategies. Rather, concurring with Calvo and Murillo (2019) we think of a portfolio of strategies. This can entail clientelistic and programmatic strategies, and strategies in between. Asymmetric participation can happen incidentally or strategically. Politicians can have programmatic policy intentions or purposely manipulate

conditions on the ground to induce asymmetric participation. The electoral effect always favors the incumbent, who supplies the benefit. We, therefore, hope to add to the recent debate about the effects and strategic motives of public policy in contexts of clientelism (Frey, 2020; Frey et al., 2021; Gottlieb, 2021; Bobonis et al., 2022; Calvo and Murillo, 2019; Diaz-Cayeros et al., 2016; Larreguy et al., 2015).

Bardhan (2022) describes a transition from clientelist to programmatic policy-making as a transition from relational to rule-based institutions. Within this framework, the logic of asymmetric participation sheds light on the transition process. Relative to Frey et al. (2021), we document a mechanism, through which an incumbency advantage, beyond retrospective rewards, can still persist even without explicit manipulation.

Put simply, asymmetric participation describes a self-selection mechanism of incumbent supporters into the electorate. There are two conditions, one on the supply side and one on the demand side, of a welfare policy that induces the self-selection process. First, only registered voters gain access to the welfare policy. Second, there is incomplete information. Citizens do not know whether the benefit is allocated according to de jure rules or whether implementation is subject to discretion by corrupted buraucrats. Relying on the information that clientelism is pervasive in local politics, citizens *expect* the distribution of benefits to be contingent (in the clientelistic exchange sense as defined in Hicken (2011)) on supporting the incumbent.

Under the expectation that benefits are contingent on political support, unregistered citizens face an incentive to register to obtain the benefit. However, citizens must fear being denied the benefit if they cannot commit to politically supporting the incumbent. Publicly declaring support and loyalty through campaigning, participating in party meetings or rallies, or displaying endorsement symbols are typical ways, in which citizens can signal their commitment to the incumbent (Nichter

and Nunnari, 2022; Nichter, 2018). This is not without cost. Specifically, signaling support is more costly for citizens who are ideologically more distant from the incumbent. Hence, ex-ante supporters of the incumbent face stronger incentives (larger net expected benefits) from registering to vote and applying for the benefit program. Moreover, asymmetric participation has a self-enforcing dynamic: as citizens observe disproportionally many supporters of the incumbent being enrolled in the policy, the expectations of contingent allocation of benefits rise.

We illustrate the argument using the case of the Renda Básica de Cidadania (RBC) in Maricá, Rio de Janeiro state, Brazil, the largest unconditional cash transfer program in Latin America. De jure, all individuals in households earning less than three times the national minimum wage and residing in Maricá for at least three years, are eligible for a monthly cash transfer, with no strings attached. However, from qualitative interviews with locals in Maricá, we learn that de facto (perceived) eligibility looks different. Citizens of Maricá believe it is helpful or even necessary to support and display loyalty to the local incumbent to access the RBC. Moreover, citizens agree that it is necessary to be a registered voter (holding a voting ID) in Maricá to access the RBC.

Based on the qualitative evidence and the seminal models of Stokes (2005) and Nichter (2008), we develop a formal model of political participation in the forms of electoral participation (registering, and voting) and signaling (campaigning, joining party meetings, joining a party, visiting a rally, displaying paraphernalia, asking politicians for favors or suggestions). We then provide suggestive evidence from a novel survey we fielded in Maricá, showing that the empirical reality plausibly aligns with the mechanics of the model.

First, we document a substantial share of violations of the three-year residence criterion for the RBC, hinting at electoral influx from neighboring municipalities. We

then compare beneficiaries of the RBC to non-beneficiaries in Maricá. In line with the model, beneficiaries turn out more and vote more for the incumbent. Further, beneficiaries engage more in activities that relate to signaling support to their favorite candidate. This entails campaigning, participating in party meetings, joining a party, participating in rallies, displaying endorsement symbols, asking politicians for favors, and making suggestions or reporting issues to politicians. We interpret these findings as evidence of the underlying mechanism of asymmetric signaling costs, which ultimately leads to an overproportional selection of incumbent supporters into the active electorate.

Besides the interaction of social policy and clientelism, our research connects well with several other strands of the literature. In the welfare state literature, our work relates to the material-particularistic argument in explaining the emergence of the welfare state (Häusermann et al., 2013; Kitschelt and Wilkinson, 2007; Lynch, 2006). The case of the RBC clearly shows how the self-interest of a party aligns with the objective of creating a broad welfare scheme.

Moreover, we relate to the literature on electoral consequences of cash transfers. It is theorized that the poor, for whom the cost of voting poses a binding restriction to turn out, are enabled to participate in voting (Pateman, 2004; Goodhart, 2007; Birnbaum, 2012; Morales, 2018; Bidadanure, 2019). While empirical evidence from both conditional and unconditional transfers backs up the theory (Manacorda et al., 2011; Labonne, 2013; De La O, 2013; Zucco Jr, 2013; Araújo, 2022), our results caution against an unequivocally optimistic reading of this literature.

Finally, since the RBC is financed from oil revenues, our work also relates to the political economy of natural resources. Here, it is often argued that resource wealth positively influences regime duration, especially in non-democracies. Extracting maximum wealth requires staying in power in the long term, which in turn

requires satisfying a large selectorate[1] using natural resource wealth (Robinson et al., 2006; Mahdavy, 1970). Our results suggest that even in a democratic system, oil can fuel the survival of a local regime.[2]

2 The Case of Maricá

2.1 The Renda Básica de Cidadania

Maricá is a coastal municipality in Rio de Janeiro State, Brazil. Since 2014, Maricá runs the largest unconditional cash transfer (UCT) program in Latin America, the Renda Básica de Cidadania (RBC). The program was implemented under former mayor Washington Quaquá (Workers Party, PT), and it has been running since then without discontinuation.

The adoption of the RBC in Maricá is mainly explained by its increasing fiscal capacity, which results from a geographical contingency. Maricá's adjoins the Santos Basin Pre-salt Zone (SBPZ), an off-shore oil and gas exploration discovered by the Brazilian federal government in 2006. According to Law nº12.351/2010, the closer to the oil and gas fields, the more royalties a given municipality should receive, which makes Maricá the main net beneficiary of the royalties in the SBPZ.

The exploitation of natural resources in the SBPZ placed Brazil among the countries with the most significant oil potential in the world and made it a net oil exporter. In 2017, the SBPZ accounted for 50.7% of Brazil's national oil and natural gas production. Despite fluctuations in oil prices, Maricá has experienced a substantive increase

[1] Cf. De Mesquita et al. (2005).

[2] While the wealth extraction motive, i.e. pocketing resource revenues privately, may not play much of a role in a more democratic context, a self-interest to stay in power appears to be a sufficiently reasonable motive to invest resource revenue into electoral support, especially, when considering the outside option to immediately extract all resource wealth does not exist either under some level of democratic oversight.

in its revenues in the last decade. As discussed by Araújo (2022), Maricá had a total revenue per capita of R$1,056 in 2003. Ten years later, it was R$4,573, more than four times larger. Since then, Maricá has been experiencing a linear growth in its revenue per capita due to the rise of the price of oil per barrel on the world market.

To be eligible for the RBC program, an individual must be registered in the Cadastro Único (known as "CadÚnico"), the federal government's unified social benefit registry. CadÚnico is an online and large-scale server developed in the 2000s in the context of the creation of Bolsa Família, a conditional cash transfer program implemented under the Worker's Party's (Partido dos Trabalhadores, PT) first administration (2003-2006). Since then, several municipalities in Brazil have been using CadÚnico to implement several other policies at the local level. This consolidated online repository allows the local administration to process applicants' information with lower targeting costs. Importantly, deciding who can or cannot receive the program remains entirely under the control of the municipal authorities.

De jure, all citizens of Maricá living in households earning less than 3 times the national minimum wage ($3 \times R\$1,045 = R\$3,135$, approx. PPP $US\$615$) and residing in Maricá for 3 years are eligible for the RBC. De facto, an informal rule conditioning the participation to prove of being registered to vote in Maricá often applies. This is possible because people working at the *Secretaria de Economia Solidária*, the local bureau where applications to the program should be submitted, have the discretion to turn down applicants who cannot comply with this informal rule. As reported by a woman interviewed during the fieldwork conducted in Maricá, "Without being able to show that you vote in Maricá, it is a waste of time applying for the RBC. They will find a reason not to give it to you."

Current enrollment in the RBC stands at more than 42,000 of Maricá's 165,000 inhabitants. Once officially in the program, each beneficiary receives an identity card

issued by Maricá's community bank, the Banco Mumbuca. This bank has adopted a local digital currency, called Mumbuca. Virtually all shops and services in Maricá have been integrated into the program. Notably, Mumbucas are restricted to Maricá and cannot be used in other localities.

From 2014 to 2016, it paid 85 Mumbucas (the exchange rate of the Mumbuca is pegged to the Brazilian Real 1 to 1) per month to roughly 14,000 households. In 2017, the RBC rose to 130 Mumbucas per household per month. In June 2019, the RBC shifted from a monthly payment of 130 Mumbucas per household to a monthly payment of 130 Mumbucas per individual, bringing the total number of beneficiaries to 42,000. In response to the Covid-19 outbreak, the RBC was increased to 300 Mumbucas in March 2021. In December 2021, this value was adjusted back down, and since then, each beneficiary has received a monthly transfer of 170 Mumbucas.

2.2 The perceived importance of signaling support

Most cash transfer programs are de jure distributed according to objective criteria, but de facto implementation is potentially subject to discretion. On the ground, citizens have incomplete information about politicians' discretion levels over particular policies. In the Latin American context, clientelism is pervasive and Brazil is no exception. Unsurprisingly, citizens therefore tend to assume politicians have high levels of discretion. When citizens believe that politicians can manipulate eligibility for a welfare policy, the threat of doing so is credible, even if this is beyond the politicians' power.

Citizens in Maricá seem to concur that supporters of the local incumbent do not have to fear benefits being withheld. When asked about the modalities of receiving the RBC, a local answered:

> *"Do you want to receive the Mumbuca* [local name of the RBC]*? I can tell you how: Show them you are loyal by campaigning for them, support the mayor and his friends in elections, and show up at every public event organized by the local administration."*

The citizens' perception of contingent benefit allocation becomes apparent in this and many similar statements. Since the incumbent cannot know who their true (ideological) partisans are, they have to identify their partisans based on observable support activities. Inferring and signaling support and loyalty through campaign involvement, and displaying paraphernalia is a common theme in clientelistic politics in Brazil (Nichter and Nunnari, 2022). It is documented in various places that citizens, who signal support are more likely to receive benefits (both in their own expectation and in real terms, Auyero (2000); Cammett (2014); Michelitch (2015); Nichter (2018); Nichter and Nunnari (2022)). This raises instrumental incentives for citizens to signal partisanship to secure benefits. Since signaling support increases the perceived likelihood of receiving the benefit, signaling can be seen as a "soft" eligibility criterion. However, this only works in an environment of incomplete information. Applying for the benefit and being turned down is costly, and retrieving the information about the true risk of being turned down due to not supporting the incumbent seems impossible.[3] Hence, at least some potential beneficiaries will apply and signal support to avoid the unknown risk of being turned down, while some others will not take any chances as signaling is too costly (Nichter and Nunnari, 2022). A self-enforcing dynamic is also plausible in this context. If known partisans of the incumbent are the first to apply and receive the benefit, non-partisans might infer partisanship causes receiving the benefit.

[3] Even if the applicant were to successfully risk rejecting the popular perception of contingent allocation of benefits, the learning about the true state of nature would be minimal as the sample consists only of one observation.

Signaling can entail activities like campaigning, showing up to rallies, turning up for party meetings, joining the party, visibly displaying endorsements through flags, t-shirts, or the like, or personally contacting local politicians. Signaling support to the incumbent is plausibly less costly for someone with an ideological position close to the incumbent, and relatively more costly to someone with an ideological position further away from the incumbent. This difference in signaling costs leads to systematic differences in the evaluation of the cost-benefit calculation between citizens who are ideologically close and distant from the incumbent.

2.3 The Electoral Justice

Brazil has mandatory voting at electronic ballot machines with biometric identification. Citizens must, therefore, register to vote at their place of residence. However, the place of electoral residence may differ from the place of legal residence, and the *Electoral Justice* (the institution in charge of voter registration) is known to be lenient in assigning electoral residences (Hidalgo and Nichter, 2016; Limongi, 2016, 11).

For local elections, this opens up an additional pool of potential voters, which parties could tap into to secure electoral support. The practice of voter buying, i.e. transferring voters from outside a district into a district, to increase the share of supportive voters is well documented in mayoral elections in Brazil (Hidalgo and Nichter, 2016). The other pool comprises citizens who are not registered to vote anywhere. Those are often the local poor, many of whom are employed in the informal sector. For the most recent general elections in Brazil, the share of registered voters was approximately 77% of the population aged 18 or older.[4]

The crucial link between program participation and voting happens through voter

[4] Authors' own calculations based on data from IDEA (2022). Citizens aged 16-17 in Brazil, have the option to register to vote but are excluded from the calculation because voting is not mandatory for them.

registration in Maricá as a participation condition. Being included in the RBC is de facto contingent on electoral residence, i.e., having a voter ID from Maricá. This incentivizes non-voters, from both pools, local unregistered or from elsewhere, to register to vote in Maricá, to receive the RBC:

Woman: *Some people who used to live in Niterói, Rio de Janeiro, and other municipalities moved to Ponta Negra [district of Maricá] to access the benefits only available here. But some do not know that they must also transfer their voter ID to Maricá.*

Interviewer: *Really? This is not part of the formal rule. Did I miss something?*

Woman: *I know, but that is how it works, trust me!*

In another instance, a man even reports from his own experience of changing electoral residence:

> *"I know some people who moved to Maricá to access the benefit, but it is not as simple as that. Besides showing them [local authorities] all the required documents, you need to be registered to vote in Maricá. That is why I am trying to transfer my voter ID from São Gonçalo to Maricá."*

For some of the unregistered, the costs of registration were a prohibitive constraint, as they would have voted if they were registered. The additional incentive to register when the RBC is contingent on registration will allow those citizens to overcome the constraint and vote. For some others, registration is only instrumental to obtaining the benefit, thus they will register but still abstain.

The electoral residence requirement alone would expand the electorate in all directions of the political spectrum. However, when combined with the expectation of

incumbent supporters receiving preferential treatment in benefit allocation an asymmetry in participation is created. Unregistered individuals ideologically more distant to the incumbent are less likely to register. For them signalling loaylty to the incumbent to avoid rejection is more costly than for unregistered individuals ideologically closer to the incumbent.

3 Theoretical model

3.1 General Setup

We start with a simple spatial framework. Citizens $i = 1, ..., n$ are characterized by their position x_i on a uni-dimensional policy space X. Citizens receive utility from casting a vote according to their preferences. We assume two parties, the incumbent and the opposition, characterized by the positions $\{x_1, x_2\} \in X$, respectively. To simplify, we normalize the policy dimension to the unit interval with $x_1 = 0$ (incumbent) and $x_2 = 1$ (opposition). Registration is costly. Because the registration cost is significant for the poor and negligible for those who earn a liveable income the constant cost is divided by individual income, hence $c_i = \frac{c}{y_i}$. We abstract from the eligibility criterion based on years of residence (≤ 3) as it would complicate the analysis without adding substantial insight. Moreover, we treat the municipality as closed. This means we do not model the decision to migrate from other municipalities explicitly. We think the mechanism of participation we aim to highlight in the model does not depend on from which pool of unregistered voters are coming. The decision to move electoral residence depends on a range of variables that we cannot capture empirically and which lead to a proliferation of parameters describing the institutional arrangements in other municipalities, which are ultimately unnecessary to the model's purpose. Once a citizen of another municipality has decided

to move her electoral residence to Maricá, the incentive structure that we draw out in the model applies.

The material benefit in the form of a cash transfer is denoted by B_i. Note that B_i is a function of income, because $B_i = B > 0$ if $y_i \leq \tau$ and $B_i = 0$ otherwise. Here, τ is the threshold income below which citizens can receive the RBC. Notice that in the absence of the RBC program, $B_i = 0 \quad \forall \quad i$. For technical reasons, we cap the maximum utility received from the benefit at $B < \frac{1}{2}$, which corresponds to the maximum disutility that a voter would incur for voting for the incumbent if her actual preference coincides with the opposition's position or vice versa.

The strategies available to a citizen can be represented in a decision tree with three stages (see Figure 1). The first stage is compliance. The choice variable $r_i \in R = \{r, \neg r\}$ captures whether or not a voter registers to vote. The other variable chosen in this stage is $\sigma_i \in [x_1, x_2]$ and denotes towards which party the citizen signals his or her support. In the second stage, the choice set is $V = \{v, \neg v\}$. $v_i \in V$ captures whether or not the registered citizen decides to vote. The third stage decision then captures for whom to vote, thus i chooses x_i^* from set $X = \{0, 1\}$. We assume that political preferences are uniformly distributed independently from voting costs, income, and benefits. We abstract from the dynamic nature of the decision, i.e., benefits being paid every period, while registration and signaling are one-shot activities because we believe that this additional layer of complication does not add any substantive insight to the model. One could instead think about the utility of the cash transfer B in terms of a net present value of all future transfers.

The basis for the expected utility function is $Eu(x_i^*) = -\frac{1}{2}(x_i - x_i^*)^2$,[5] where citizens receive utility from voting according to their own preference.[6] Similar to

[5] Note that x_i depicts individual policy affinity, i.e., the latent preference underlying the binary party choice x_i^*.

[6] While this utility function implies a split voting result for symmetric preference distributions in the electorate as the baseline, this should be regarded as purely illustrative. A biased baseline in either

utility from voting, we think of signaling as being costly proportional to how much it deviates from personal preferences, i.e., $Eu(\sigma_i) = -\frac{1}{2}(x_i - \sigma_i)^2$. Individual policy inclinations lie within the unit interval $0 \leq x_i \leq 1$. If citizens choose not to express their preference, they receive utility as if they expressed indifference $x_i = \frac{1}{2}$.

The benefit introduces incomplete information. Therefore, the random variable $\mathbf{B}_i$ with outcome space $\{0, B_i\}$ takes the value B_i if the benefit is granted, and 0 otherwise. The probability of obtaining the benefit is modelled directly proportional to the signal sent by the citizen $P(\mathbf{B}_i = B_i) = 1 - \sigma_i$, capturing the belief of contingent benefit allocation. If the citizen signals full support of the opposition, i.e., $\sigma_i = 1$, the probability of obtaining the benefit is zero. If the citizen signals indifference, the probability is $\frac{1}{2}$. Finally, if the citizen signals full support to the incumbent, the probability of access to the benefit is one. The expected benefit is, therefore, denoted by $E(B_i) = (1 - \sigma_i)B_i$. Expected utilities are captured by $Eu(R, \mathbf{B_i}, V, X)$. At the endpoints for each available strategy profile, the expected utility function takes the following forms.

$$Eu(r, \sigma, v, x_1) = -\frac{1}{2}x_i^2 + (1 - \sigma_i)B_i - \frac{c}{y_i} - \frac{1}{2}(x_i - \sigma_i)^2 \tag{1}$$

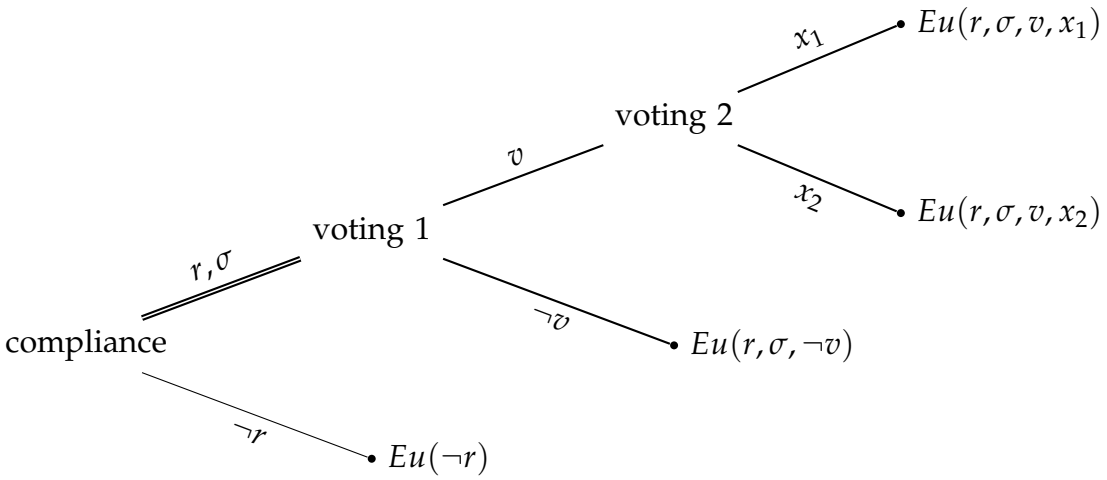
$$Eu(r, \sigma, v, x_2) = -\frac{1}{2}(x_i - 1)^2 + (1 - \sigma_i)B_i - \frac{c}{y_i} - \frac{1}{2}(x_i - \sigma_i)^2 \tag{2}$$

$$Eu(r, \sigma, \neg v) = -\frac{1}{2}(x_i - \frac{1}{2})^2 + (1 - \sigma_i)B_i - \frac{c}{y_i} - \frac{1}{2}(x_i - \sigma_i)^2 \tag{3}$$

$$Eu(\neg r) = -\frac{1}{2}(x_i - \frac{1}{2})^2 \tag{4}$$

direction could be realized without loss of generality by choosing a factor smaller or larger than $-\frac{1}{2}$.

Figure 1: Static decision tree of citizen



Double lines indicate two variables being chosen simultaneously along a path.

3.2 Analysis

The transfer is conditional on income and being registered. In expectation, the transfer also depends on signaling. By comparing expected utilities of all possible strategy profiles we can derive conditions contingent on individuals' initial characteristics that describe optimal behavior. Note that we assume that policy preferences are uniformly distributed throughout the analysis of the model. Moreover, we assume that income is distributed independently from political preferences.

3.2.1 No transfer

We start by comparing not registering to registering and not voting, i.e. equations 3 and 4. It immediately shows that registering and not voting is dominated by not registering. The benefits are the same, despite bearing the cost of registration when registering. There is no incentive to abstain upon registration.

Now we turn to voting. Consider the case of an incumbent supporter, i.e., $x_i <$

0.5:

$$Eu(r, v, x_1) > Eu(\neg r) \quad \Leftrightarrow \quad y_i < \frac{8c}{1 - 4x_i} = \psi_1(x_i, 0) \tag{5}$$

Analogously, for the voter leaning towards the opposition, i.e., $x_i > 0.5$:

$$Eu(r, v, x_2) > Eu(\neg r) \quad \Leftrightarrow \quad y_i > \frac{8c}{4x_i - 3} = \psi_2(x_i, 0) \tag{6}$$

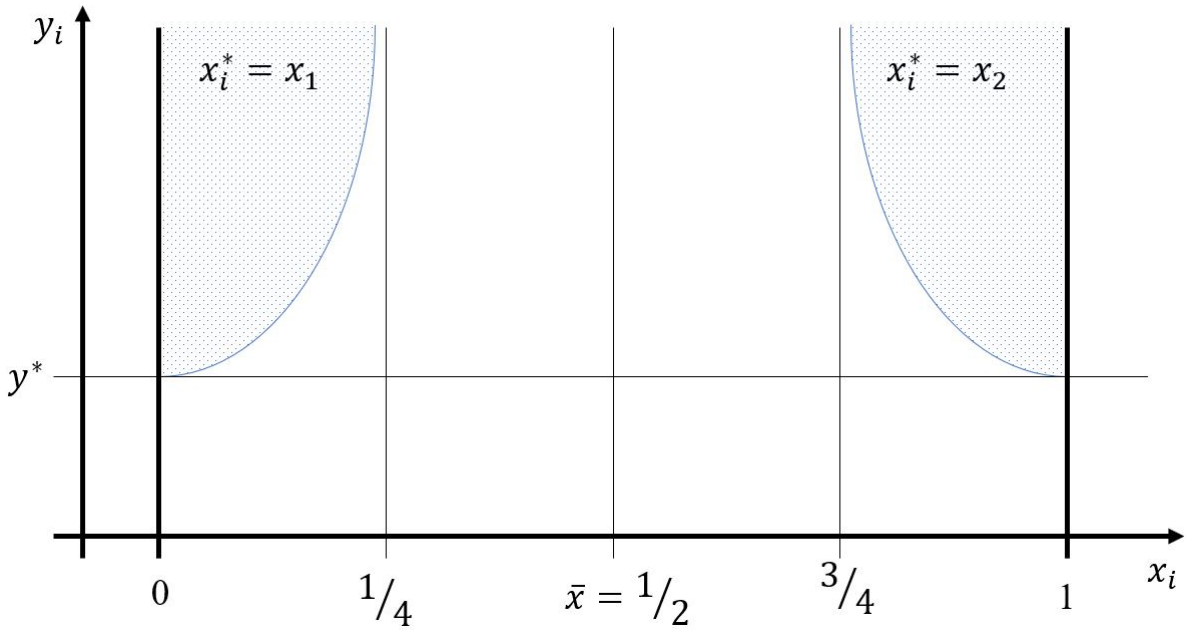
Since there is no additional benefit from voting against personal policy preferences, it immediately follows that voters vote for the incumbent, $x_i^* = x_1 = 0$ if $x_i < 0.5$, and for the opposition, $x_i^* = x_2 = 1$ if $x_i > 0.5$. For uniformly distributed preferences, this implies symmetric patterns of abstention across preferences and equally large vote shares for both parties.

Signaling is never strategic when $B = 0$. Looking at equations 1, 2, and 3, it is immediately clear that without a benefit, only truthful signaling, i.e., $\sigma_i = x_i$, maximizes expected utility.

Proposition 1 (Level playingfield benchmark)**.** *Let $B = 0$. Then citizens fall into axially symmetric regions to the midpoint of the policy space, register (or not) according to their preference and income, vote according to their unconstrained preferences if registered, and do not signal support strategically.*

To illustrate, we can turn to Figure 2. We can solve the threshold implicitly defined by the inequality in Equation 5 (6) for y_i at $x_i = 0$ ($x_i = 1$) to find the income below which citizens never vote, irrespective of their preferences: $y^* = 8c$. Moreover, implicitly differentiating Equation 5 (and 6) with respect to income (ψ_1, ψ_2) shows that the threshold preference above which citizens care to vote moves closer to the extremes in either direction of the political spectrum when income is lower. This illustrates the trade-off between the intensity of preferences and the relative costs of

Figure 2: Baseline model



voting. In Figure 2, the dotted areas show voters for x_1 and x_2, respectively, while the empty space is populated by non-voters.

3.2.2 Introducing the RBC

Note that we consider the case $B_i = B$, therfore, dropping the subscript. The behavior of non-eligible, i.e. $B_i = 0$, is unaffected by the transfer and remains as described above. We begin to induce behavior backward. In the voting 2-stage voters vote for the incumbent x_1, if $x_i < \frac{1}{2}$ and vice versa for the opposition. Sincere voting follows directly from comparing equations 1 and 2.

In the next step, voting 1, we compare the sincere vote with abstaining when being registered, $(R = r)$. Comparing equation 3 to equations 1 and 2 respectively yields $x_i > \frac{1}{4}$ (for incumbent supporters) and $x_i < \frac{3}{4}$ (for opposition supporters).

Signaling can be seen as a continuous choice that is taken before voting 1, only when $R = r$. Registered voters choose a signal that optimally balances the trade-off

between higher expected benefits against the cost of signaling. Maximizing $Eu(R, \mathbf{B}, V, X)$ yields the optimal signal $\sigma_i^*(x_i) = x_i - B$ for $0 \leq \sigma_i^*(x_i)$ and 0 for $\sigma_i^*(x_i) < 0$.

The registration decision requires comparing the expected utility of not registering to the preferred alternative among the three possible outcomes after registration, given the optimal signal.

1. Abstaining without registration is preferred over registering and abstaining, if the combined costs of registration and signaling, outweigh the expected utility of receiving the benefit:

$$Eu(\neg r) > Eu(r, \sigma_i, \neg v) \Leftrightarrow y_i < \frac{c}{(1-\sigma_i)B_i - \frac{1}{2}(x_i - \sigma_i)^2} \tag{7}$$

   For an optimally chosen signal, this defines a threshold:

$$y^*(x_i, B)|_{\sigma_i = \sigma_i^*} := \frac{2c}{2B(1-x_i) + B^2} \tag{8}$$

2. Not registering is preferred over voting for the incumbent if

$$Eu(\neg r) > Eu(r, \sigma_i, v, x_1) \Leftrightarrow y_i < \frac{c}{\frac{1}{8} - \frac{1}{2}x_i + (1-\sigma_i)B - \frac{1}{2}(x_i - \sigma_i)^2} \tag{9}$$

   For an optimally chosen signal, this defines a threshold:

$$\psi_1(x_i, B)|_{\sigma_i = \sigma_i^*} := \frac{2c}{\frac{1}{4} - x_i + 2B(1-x_i) + B^2} \tag{10}$$

3. Analoguous to 2., not registering is preferred over voting for the opposition if

$$Eu(\neg r) > Eu(r, \sigma_i, v, x_2) \Leftrightarrow y_i < \frac{c}{\frac{1}{2}(x_i - \frac{3}{4}) + (1-\sigma_i)B - \frac{1}{2}(x_i - \sigma_i)^2} \tag{11}$$

For an optimally chosen signal, this defines a threshold:

$$\psi_2(x_i, B)|_{\sigma_i=\sigma_i^*} := \frac{2c}{x_i - \frac{3}{4} + 2B(1-x_i) + B^2} \tag{12}$$

Inspecting the asymptotics of equations 10 and 12 towards infinite income gives a respective threshold value in the preference domain ψ_1^* and ψ_2^*. Right (left) of ψ_1^* (ψ_2^*), citizens support the incumbent (opposition) insufficiently, such that they would rather not register.

$$\lim_{x_i \nearrow \psi_1^*} \psi_1(x_i, B) = \infty \Rightarrow \psi_1^* = \frac{B^2 + 2B + \frac{1}{4}}{1 + 2B} \tag{13}$$

$$\lim_{x_i \searrow \psi_2^*} \psi_2(x_i, B) = \infty \Rightarrow \psi_2^* = \frac{\frac{3}{4} - 2B - B^2}{1 - 2B} \tag{14}$$

Evaluating the threshold below which voters are too poor to register yields $\psi_1(0, B) = \frac{2c}{\frac{1}{4}+2B+B^2}$, and $\psi_2(1, B) = \frac{2c}{\frac{1}{4}+B^2}$ respectively. The results of introducing the RBC can be summarized in the following proposition.

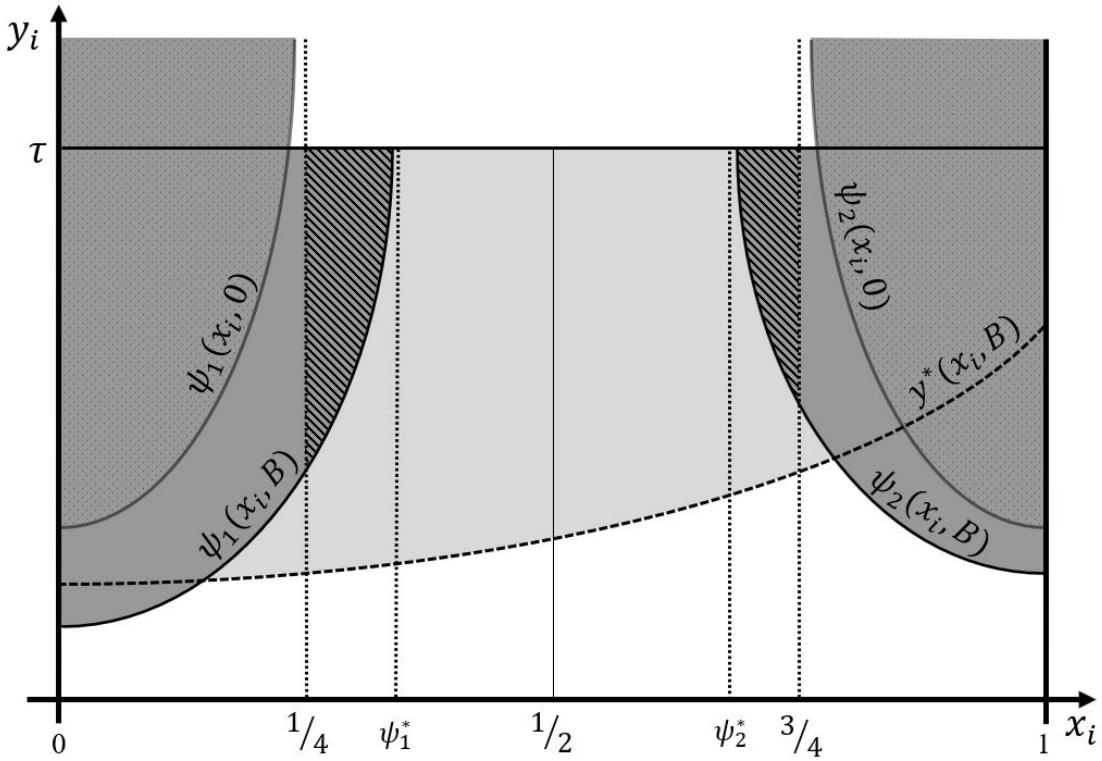
Proposition 2. *Let $B > 0$. Individuals with $y_i < \tau$ select in one of the follwoing categrories not-registered, registered non-voters, and (registered) voters. Voters vote sincerely for the opposition or the incumbent. Voters strategically signal an idealpoint closer to the incumbent than their true preference (unless their idealpoint coincides with the incumbent).*

3.3 Implications: Comparing the RBC to the benchmark

The RBC only affects poorer citizens with income $y_i \leq \tau$. The behavior of richer citizens is characterized by the benchmark case. Figure 3 illustrates the implications of the RBC graphically.

1. Turnout increases for both parties:

Figure 3: Model including the RBC transfer



Dark gray areas contain voters, except for cross-hedged areas. Dotted areas contain the citizens who would have voted without the RBC in place. All blank areas a populated by non-registered citizens. Non-voters are in the light gray area and cross-hedged areas, above $y^*(x_i, B)$ and below τ. They register as voters when the RBC is in place but abstain.

(a) Comparing $\psi_1(x_i, B) < \psi_1(x_i, 0)$ ($\psi_2(x_i, B) < \psi_2(x_i, 0)$) shows supporters of the incumbent (opposition), who were either previously too poor or just beyond the margin to indifference are crowded in. This assertion is supported by comparing the asymptotes, $\psi_1^*(x_i, B) > \psi_1^*(x_i, 0)$ ($\psi_2^*(x_i, B) < \psi_2^*(x_i, 0)$). The dark gray area above $x_i \in [0, \frac{1}{4}]$, is larger than the dotted dark gray area (compare both below τ), where the latter represents the mass of voters before the RBC. The same holds for the respective areas above $x_i \in [\frac{3}{4}, 1]$.

(b) For some weaker incumbent supporters, $y_i > \psi_1(x_i, B)$ is not sufficient to induce voting, as $x_i > \frac{1}{4}$. They register but abstain (see hatched area to the right of $\frac{1}{4}$). The same holds for opposition supporters, with $x_i < \frac{3}{4}$ and $y_i > \psi_2(x_i, B)$.

2. There is asymmetric participation. More incumbent supporters than opposition supporters are induced to vote. Intuitively, this follows from the fact that signaling is more costly to opposition supporters, which reduces the expectation of receiving the benefit. Analytically, this follows from comparing the surface area above $\psi_1(x_i, B)$ from 0 to $\frac{1}{4}$ with the surface area above $\psi_2(x_i, B)$ from $\frac{3}{4}$ to 1 (see Appendix A, Equation 17 and Figure 6). Graphically, the dark gray area to the left being larger than the dark gray area to the right implies more voting for the incumbent.

3. Signaling support for one's favorite party is less common among opposition supporters than incumbent supporters. Since the optimal signal $\sigma_i^* = x_i - B$ for $x_i > B$, and $\sigma_i^* = 0$ otherwise, incumbent supporters always have the incentive to signal support to their truly preferred candidate, and even more (by the amount B) than their underlying preference would suggest. For opposition

supporters the opposite applies, as they have a lower incentive (by the amount B) to signal support to their preferred party.

Implication 1 calls for higher turnout straightforwardly. From implication 2, it follows that in an environment of incomplete information, the incumbent can mobilize more voters than their competitors by supplying a broadly target welfare scheme that is contingent on voter registration. Note that we remain agnostic about whether this condition is strategically placed or not. In the same way, we remain agnostic about whether the expectation of contingent benefit allocation is a matter of citizens' experience with how politics work or whether there was some intervention. There could be some well-placed rumors or selective denials. After all, it could be the case that citizens observed the strong supporters being the first to obtain any benefit because those were the first to select into their party's program. This could then have spurred rumors of contingent allocation. To test implication 2, we need to empirically verify whether beneficiaries (those with income below τ in the simpler language of the model) more commonly vote for the incumbent than those who do not receive the RBC (with income above τ). The model assumes new voters come from previously unregistered citizens. In reality, there are two conceivable mechanisms. First, there are locals in Maricá, who are unregistered. Plausibly, those are poorer citizens with weaker formal connections. Second, there are citizens not local to Maricá, who are not registered in Maricá. Those could be unregistered or registered elsewhere. Either or both of the mechanisms can be at play. Data about voting behavior in poorer areas of Maricá and data on voter influx to Maricá allows us to address these mechanisms separately. Implication 3 predicts the signaling behavior of those affected by the RBC. Hence, implication 3 speaks to the mechanism of asymmetric costs in signaling support to the incumbent. Empirically, we expect signaling to be more prevalent among beneficiaries, who support the incumbent. In the fol-

lowing section, we will present empirical evidence that speaks to our expectations and detail how we deal with the discrepancies between the stylized model and the arguably more complex empirical reality.

3.4 Comments on the model

3.4.1 Reflecting on assumptions

At this point it is in order to discuss more deeply some of the model assumptions. We build on the turnout buying model of Nichter (2008), which extends the vote buying model of Stokes (2005). Since we augment existing models by differentiating between registration and actual voting, we assume that the incumbent can only observe vote registration, which aligns with the anecdotal evidence of using the voting ID as a means of administering the benefit. Note that we remain agnostic about whether this condition is strategically placed or not. In the same way, we remain agnostic about whether the expectation of contingent benefit allocation is a matter of citizens' experience with how politics work or whether there was actual denial. There could be some well-placed rumors or selective denials. However, it could also be that citizens observed the strong supporters being the first to obtain any benefit because those were the first to select into their party's program. This could then have spurred rumors of contingent allocation.

The model assumes new voters come from previously unregistered citizens. In reality, there are two conceivable mechanisms. First, there are locals in Maricá, who are unregistered. Plausibly, those are poorer citizens with weaker formal connections. Second, there are citizens not local to Maricá, who are not registered in Maricá. Those could be unregistered or registered elsewhere. Either or both of the mechanisms can be at play. Data about voting behavior in poorer areas of Maricá and data

on voter influx to Maricá allows us to address these mechanisms separately to some degree.

3.4.2 The incumbent's decision whether to implement an RBC

The main purpose of this paper is to highlight the role of expectations in the electorate's reaction to distributive policy. However, on the flip side, there is also a decision to be made by the incumbent; whether to implement a policy? It is only rational for the incumbent to implement (and invest scarce resources) if an electoral benefit is looming.

In the case of the RBC, this electoral benefit hinges partly on the distributional assumptions along the policy preference and income dimension. The initial assumptions of uniformly distributed policy preferences and income being independently distributed from policy preferences make a graphical comparison, as in Figure 3, easy and intuitive, because surface areas directly correspond to masses of citizens.

It is also intuitive that these assumptions are probably not true in reality. Especially, the assumption about policy preferences being independent of income. However, it is quite plausible that this violation works in our favor. Since the PT, a typical left-leaning party, with a strong support base among Brazil's poor, is the incumbent, it is most likely that the poorer parts of the electorate hold preferences closer to the incumbent. This implies that the density of citizens increases towards the bottom left of the income-preference plane (respectively the origin in Figure 3). Hence an expansion of active voters in this area comprises even more voters than a corresponding expansion on the opposite side of the policy preference dimension that is less densely populated. In other words, under the model assumptions we are more likely to understate than overstate the electoral advantage the incumbent derives from implementing the RBC.

Thinking from the incumbent's perspective, the distribution of voters in the preference and income space is crucial. Hence, the question arises: Under what distribution of citizens in the income-policy-preference space would it make sense to implement the RBC? In principle, any distribution that generates an electoral advantage would be acceptable. In other words, any benefit is acceptable for which the mass of voters that falls in the area between $\psi_1(x_i, 0)$, τ, $\frac{1}{4}$, and $\psi_1(x_i, B)$ in Figure 3, is greater than the mass of voters in the area between $\frac{3}{4}$, τ, $\psi_2(x_i, 0)$, and $\psi_2(x_i, B)$. As argued above, if PT supporters are poorer than opposition supporters, the incentive to implement an RBC is even stronger.

4 Quantitative Empirical Analysis

In this section, we present insights from a unique survey we fielded in Maricá. Besides demographics, respondents were asked about their political behavior and whether they received the RBC. Comparing beneficiaries of the RBC to non-beneficiaries allows us to test whether the implications of the model hold up against the real-world accounts of citizens of Maricá.

4.1 Data and Empirical Strategy

We fielded a survey in September 2021 in Maricá. Interviewers were sent to randomized sub-districts within Maricá and then followed a random path along which they interviewed pedestrians in the street. Due to the pandemic situation at the time, we explicitly refrained from in-house interviewing, to maximize safety for both interviewers and respondents. The survey yielded $N = 1,514$ valid observations of voting-age citizens from Maricá. The complete questionnaire is available upon request. A descriptive table of core demographics are provided in the appendix Ta-

ble 5.[7]

4.1.1 Measurement

To assess the voting and support signaling behavior of citizens in Maricá, we want to compare the political engagement of beneficiaries and non-beneficiaries of the RBC. Therefore, we measure several outcome variables related to political engagement.

First, we are interested in citizens' vote choices. We ask whether respondents voted or not in the last election and for whom. We then collapse the choices into binary variables for whether or not someone voted, whether they voted for Fabiano Horta (PT, current mayor, successor of Washington Quaquá under whom the RBC was conceived), and – in the spirit of the model – whether or not they voted for any party in the opposition. Note that Fabiano Horta was elected with slightly over 80% of votes, and hence pooling the opposition parties is also justified by keeping the statistical analysis tractable. Here, the model prediction is straightforward: among beneficiaries, the share of Fabiano Horta voters should be larger than the share of opposition voters.

Second, signaling support requires citizens to get in contact, communicate, or otherwise connect with the local incumbent.[8] Therefore, we asked respondents whether or not they have engaged in seven activities that relate to signaling support, in the past two years. Those are the variables displayed in Table 1.

Campaigning is a central aspect of the work of political parties. In the literature, campaigning is often used to describe all efforts parties make – clientelistic or not – to sway voters before elections (e.g., Stokes, 2005; Stokes et al., 2013; Casey, 2015). When citizens participate in these activities, it seems plausible that local politicians

[7] Since the survey is part of a larger project, some detailed demographics not relevant in the context of this study, e.g. asset ownership and infrastructure access are omitted.

[8] See **?** for a more general analysis of citizens' support declarations in clientelistic systems.

Table 1: Measures of signaling support

	N	Mean	Variance
Campaign participation	1494	.1452477	.1242339
Attending a party meeting	1479	.1041244	.0933456
Joining a party	1466	.0491132	.046733
Rally participation	1495	.0929766	.0843884
Displaying an endorsement symbol	1489	.1524513	.1292967
Contacting politician to ask for favor	1488	.108871	.0970833
Reporting issue/making suggestion to politician	1475	.1308475	.1138036

recognize them and their efforts. Maricá is not a big metropolis after all. Local party events will be held and visited by a common crowd and people likely know each other. Hence, newcomers can be easily identified. Collaborating with party members in a campaign can create exactly the key social network connections that make citizens confident about entering the application process for a benefits program with a questionable evaluation of eligibility. In the event of being held up in the bureaucratic process, "I'm a friend of your colleague X!" may be just the right answer to grease the wheels.

Similarly, we think of rally participation and visiting party meetings as activities to generate valuable network ties that ultimately influence the expectations to obtain the benefit. Joining a party is a strong commitment, and therefore an extremely strong signal towards supporting the incumbent. On the one hand, joining a party is the signal that makes it most likely to secure the benefit if the RBC was allocated based on political allegiance. On the other hand, joining a party is especially costly, when the ideological distance to the party is large. Displaying an endorsement symbol is a visual cue of support. Flags on facades or cars, posters, hats, or t-shirts make clear statements about party affiliation. Politicians can easily gather information about who pledges support to their party.

The last two variables ask for more direct contacts: Did respondents approach

a politician to ask for a favor? Did they approach a politician to report an issue or make a suggestion? From the literature on request fulfillment (e.g., Nichter and Peress, 2017), we know that not only powerful patrons exploit helpless clients but also citizens can voice demands and have agency in clientelist systems. In the view of a more dynamic exchange relationship, network connections that are valuable in the process of gaining eligibility, can also be created and fostered through direct exchange initiated by the citizen. Nonetheless, we acknowledge that these latter two measures map less directly onto the concept of loyalty signaling compared to the other measures.

Besides the latter two, we phrased questions in terms of favorite candidates to avoid social desirability bias. This complicates the analysis to some degree because we do not know citizens' underlying preferences. However, we can condition the analysis on vote choice. The model predicts that voters do not vote against their preferences, only that strong supporters vote for their preferred candidate. This then allows us to make a meaningful comparison of signaling activities between voters of PT and voters of the opposition. Here, the model prediction is clear: for opposition supporters the the optimal signal (in terms of their favorite candidate not in terms of incumbent support) is biased away from their preferred candidate (towards the incumbent) by the size of the benefit. Hence, opposition voters are less likely to signal support for their preferred candidate than incumbent supporters.

4.1.2 Eligibility and Inclusion

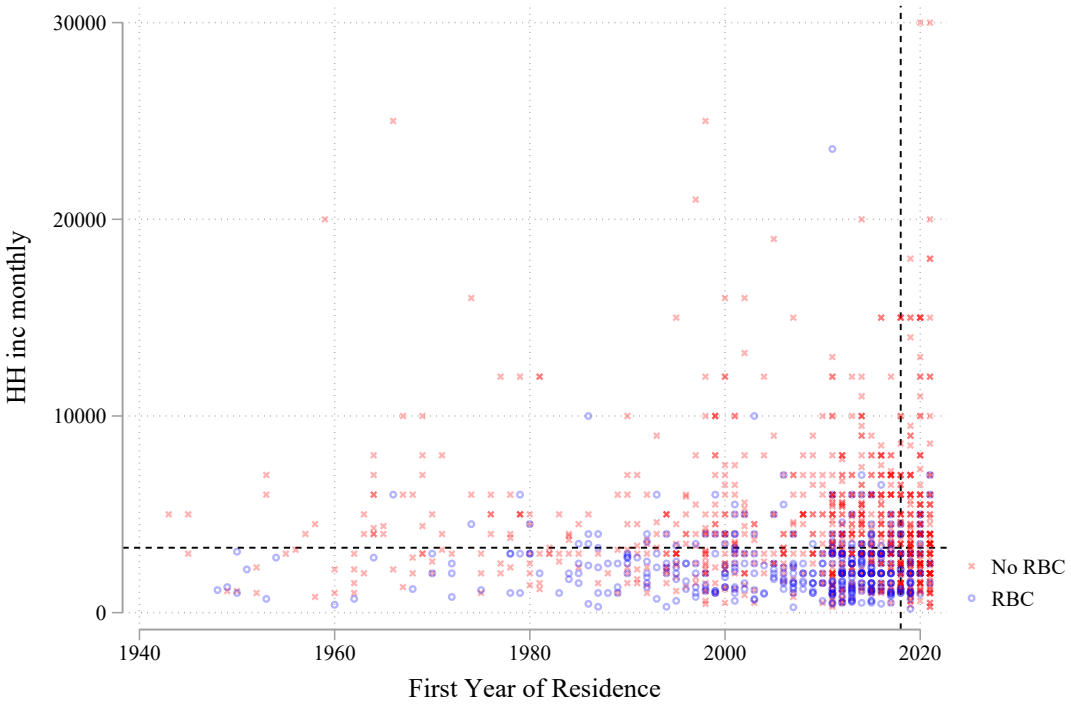
De jure, there exist two criteria that citizens need to satisfy to be eligible for the RBC. One, citizens must reside in Maricá for at least 3 years. Two, citizens must live in a household earning less than $R\$3,300$. As we have learned from the qualitative interviews, those are not the (only) criteria that matter de facto. How big is the de-facto-

de-jure-gap? Figure 4 plots household income against the first year of residence in Maricá while distinguishing between RBC beneficiaries and non-beneficiaries. Beneficiaries outside the southwest quadrant, created by the dashed threshold lines in the respective dimensions, are false inclusions (116). Non-beneficiaries in the southwest quadrant are false exclusions (312). There are three indications in the data that align with the notion of electoral influx from neighboring municipalities. First, there is a large share of influx to Maricá in general, which roughly aligns with the announcement of the RBC. Second, the largest shares of influx are from São Gonçalo (22%) and Rio de Janeiro (21%), both of which have relatively high rates of poverty. While the first is the poorest neighboring municipality of Maricá, in the second there is a high absolute number of poor people, many of whom are concentrated in slums (favelas). For the poor, the prospect of the RBC is likely a strong incentive to change electoral residence. Third, 33 out of 327, about 10%, of citizens, who reside in Maricá for less than 3 years are falsely included in the RBC. This share is substantial, considering that only 163 out of the 327 are eligible in terms of income. Yet, out of those, 25 (approximately 15%) are prematurely admitted to the RBC.

4.2 Voting behavior

To validate the model, it is central that the predictions concerning voting behavior hold. The de-facto-de-jure gap outlined before complicates this endeavor to some extent. In the model, to keep things tractable, we abstract from false inclusion and false exclusion. We even abstract from the time of residence dimension for eligibility. Empirically those distinctions exist. However, we cannot exactly measure who was potentially eligible, and hence whose behavior was affected by the RBC. We observe de-facto beneficiary status and de-jure eligibility, both of which could serve as proxies. Rather than arguing for or against a particular proxy, we aim to

Figure 4: Eligibility and Inclusion



The axis depicts dimensions of eligibility. Dashed lines demarcate eligibility thresholds in the respective dimensions, partitioning the plane into quadrants. RBC beneficiaries are denoted with ”o” and non-beneficiaries with ”x”. Eligible individuals lie in the southwest quadrant. Individuals falling in any other quadrant are not eligible due to either not residing in Maricá sufficiently long, or their household income exceeding the threshold, or both.

triangulate the measurements and report comparisons in voting behavior for both, RBC beneficiaries vs. non-beneficiaries, and eligible vs. non-eligible citizens. Despite misassignment, eligibility, and inclusion still positively correlate ($\rho = 0.39$) and patterns in voting behavior are similar and consistent in both comparisons.

Following the logic displayed in Figure 3, citizens can be classified in $2 \times 3 = 6$ categories. There are incumbent (PT) voters, non-voters, and opposition voters (moving from left to right in Figure 3). Citizens are respectively either de-facto beneficiaries (de-jure eligible) or not. Table 2 tabulates the absolute and relative frequencies of voters in those categories. First, we look at non-beneficiaries. It becomes clear that there exists a baseline difference in voting behavior. Unlike in the model, there is no 50-50 split of the electorate, looking only at those unaffected by the RBC. 54% of non-beneficiaries turned out for Fabiano Horta (PT), while only 16% turned out for the opposition, and 30% abstained. However, note that the balanced baseline of voter preferences in the model is merely a stylized assumption made for illustrative reasons. An asymmetric baseline could be easily set up without changing the logic at work. Thus, we should compare the voting behavior of beneficiaries against the empirical baseline of non-beneficiaries. Among beneficiaries, the share of PT voters is 74%, 15% did not vote, and 11% voted for the opposition. Note first that in line with the model, turnout is higher among beneficiaries. Second, among the 15% who turned out more relative to non-beneficiaries, PT voters are over-proportionally represented, leading to a higher share of PT voters and a slightly lower share of opposition voters.

In a simple linear regression framework, we can test whether the differences in voting behavior between beneficiaries and non-beneficiaries are statistically significant. The results for an OLS estimation of a linear model with voting behavior as the dependent variable and beneficiary status as the independent variables are reported

Table 2: Contingency of voting behavior and beneficiary status

	Voting behavior							
	PT		Did not vote		Opposition		Total	
	Freq.	Row %	Freq.	Row %	Freq.	Row %	Freq.	Row %
RBC beneficiary								
No	591	54.4	321	29.6	174	16.0	1086	100.0
Yes	306	74.3	61	14.8	45	10.9	412	100.0
Total	897	59.9	382	25.5	219	14.6	1498	100.0
Eligible for RBC								
No	461	51.9	292	32.8	136	15.3	889	100.0
Yes	433	71.5	91	15.0	82	13.5	606	100.0
Total	894	59.8	383	25.6	218	14.6	1495	100.0

Table 3: Voting behavior of RBC beneficiaries vs. non-beneficiaries

	(1) PT	(2) Abstain	(3) Opposition	(4) PT	(5) Abstain	(6) Opposition
RBC	0.199***	-0.147***	-0.051***	0.185***	-0.168***	-0.017
	(0.026)	(0.022)	(0.019)	(0.031)	(0.026)	(0.022)
Controls				✓	✓	✓
N	1498	1501	1498	1378	1381	1378

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

in Table 3. The models in columns (1)-(3) do not condition on control variables, i.e. they show pure correlations, the models (4)-(6) use demographic control variables. The regression analysis confirms what the contingency table suggests. Beneficiaries vote significantly more commonly for the incumbent ($p < 0.01$) and more in general ($p < 0.01$), which seems to go at the expense of the opposition. However, when conditioning on demographics, the negative difference in opposition vote share becomes smaller and insignificant. Using eligibility instead of beneficiary status as the alternative independent variable shows similar results (see Appendix 9). Hence, we conclude that the evidence supports the model prediction of asymmetric mobilization in favor of the incumbent.

4.3 Signaling Support

After voting behavior, we want to examine whether the model's implications align with reported signaling behavior. Since we measure outcome variables in terms of signaling support to a "favorite" politician, we need to account for the unknown underlying preferences of voters. Vote choices give us a measure of revealed preferences, even if only a crude one, since weaker supporters, in any case, are likely to abstain, and hence do not reveal preferences. Remember that according to the model, voting should still be sincere and not be influenced by the RBC. The model suggests that the optimal direction of the signal is biased towards the incumbent (PT) by the amount of the benefit. Therefore, even for the strongest opposition supporters, there is an incentive to reduce their signaling to their favorite candidate (the opposition). Conversely, such an incentive does not exist for incumbent (PT) supporters. If anything, even the optimal signal of the supporters of the incumbent is biased towards signaling more support to their favorite candidate. Ideally, we want to compare the *change* in signaling prevalence before and after the RBC across eligibility status. Comparing only level differences in signaling across eligibility status is not very informative, since it is plausible that more affluent voters are more politically engaged and interested anyway. We contend that it is more useful to compare level differences across PT and opposition voters. As vote choice should not change due to the RBC, level differences in signaling are more plausibly related to the RBC.[9] Thus, we want to test the hypotheses:

H_1: Signaling activities are more prevalent among PT supporters than opposition supporters.

H_2: Signaling activities are more prevalent among beneficiaries, who vote for PT.

[9] Despite the same caveat of not observing ex-ante levels of signaling across political camps, there is less reason to expect ex-ante differences in this dimension.

H_3: Signaling activities are more prevalent among eligible citizens, who vote for PT.

For this purpose, we estimate the following model by OLS:

$$signaling_i = \alpha + \beta_1 RBC_i + \beta_2 votePT_i + \beta_{12} RBC_i \times votePT_i + \gamma X_i + \varepsilon_i \quad (15)$$

For individuals i, *signaling* is the respective outcome as described in Table 1. *RBC* indicates the beneficiary status or eligibility status respectively; *votePT* indicates whether someone voted for the PT. X is a vector of control variables, and ε denotes the error term. The quantity of interest is the partial correlation between the outcome and voting for the PT among beneficiaries or eligible individuals, respectively.

The results are reported in Table 4. Figure 5 reports the difference in predictive margins (based on the results in Table 4) between incumbent voters and opposition voters, for beneficiaries (eligibles, lower panels in Figure 5) without control variables and with control variables (right-hand side panels in Figure 5).

In general, the results confirm the hypotheses. Overall, PT voters are more likely to signal support for their favorite candidate. In the upper right panel in Figure 5, for the specification with beneficiary status as the independent variable, including demographic controls, for participation in party meetings, rally participation, making suggestions, or reporting issues to politicians, we cannot reject that the estimated coefficients differ from 0 at the 95% confidence level. Besides rally participation ($p = 0.116$), we can reject the null at the 90% confidence level for participation in party meetings and making suggestions or reporting issues. In both lower panels, for the specifications using eligibility as the independent variable, we fail to reject the null on the coefficient for making a suggestion or reporting an issue ($p = 0.207$, $p = 0.351$). Hence, we are confident that the proposed mechanism in the model,

Table 4: Signaling behavior of PT voters

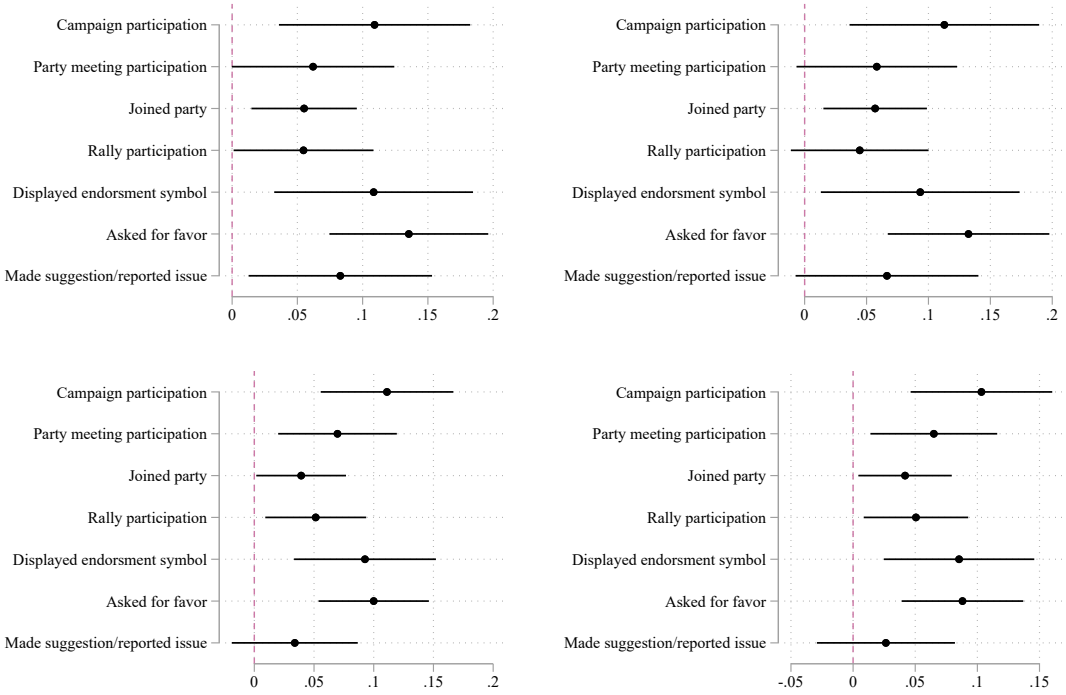
	(1) Campaign	(2) Meet	(3) Join	(4) Rally	(5) Symbol	(6) Favor	(7) Suggest
Beneficiary status							
RBC	0.027	0.007	-0.003	-0.003	0.042	-0.022	0.000
	(0.031)	(0.027)	(0.015)	(0.023)	(0.033)	(0.024)	(0.031)
PT voter	0.118***	0.074***	0.043***	0.079***	0.136***	0.044**	0.068***
	(0.020)	(0.018)	(0.012)	(0.017)	(0.020)	(0.018)	(0.020)
RBC×	-0.009	-0.012	0.012	-0.024	-0.028	0.091**	0.015
PT voter	(0.042)	(0.036)	(0.024)	(0.032)	(0.044)	(0.036)	(0.041)
N	1483	1469	1455	1484	1478	1477	1465
Eligibility status							
RBC	0.010	0.004	0.019	-0.006	0.045*	-0.029	-0.001
	(0.024)	(0.022)	(0.015)	(0.019)	(0.026)	(0.021)	(0.026)
PT voter	0.122***	0.066***	0.040***	0.091***	0.157***	0.055***	0.105***
	(0.022)	(0.020)	(0.013)	(0.020)	(0.023)	(0.020)	(0.023)
RBC ×	-0.011	0.004	-0.001	-0.039	-0.064*	0.045	-0.072**
PT voter	(0.036)	(0.032)	(0.023)	(0.029)	(0.038)	(0.031)	(0.036)
N	1480	1465	1452	1481	1475	1474	1461

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Note: The corresponding predictive margins are reported in the Appendix, Table 7. The same models including control variables is reproted in the Appendix, Table 6.

Figure 5: Partial correlation plots



The plotted coefficients represent the marginal effects of being a PT voter conditional on positive beneficiary status or eligibility status respectively. For the left panels, this corresponds to a linear combination of the coefficients of "PT voter" and "RBC $\times$ PT voter" reported in Table 7. The panels to the right are based on specifications using demographic control variables, corresponding to Table 8. We report 95% confidence intervals from Huber-White robust standard errors.

i.e. asymmetric signaling costs for incumbent supporters vis-à-vis non-supporters, creates the predicted patterns of asymmetric participation.

Taken together, the empirical evidence presented in Section 4.2 and this section supports the argument that a de jure universalist welfare program creates mobilization in favor of the incumbent party through asymmetric mobilization. Under incomplete information about the de-facto allocation of welfare benefits, expectations to be included in the welfare program are contingent on signaling support for the incumbent party. Coupled with local voter registration, this leads to a self-selection

of supporters of the incumbent into the electorate.

5 Conclusion

We theorize a novel mechanism for how voters are being mobilized by social policy. Our baseline predictions of higher turnout, especially for the implementing party, are similar to classic explanations like clientelism or retrospective voting. Going beyond that, leveraging the power of expectations under incomplete information about de facto allocation rules on the side of the citizen, we charter new territory between particularistic and programmatic policy. Asymmetric mobilization happens because citizens expect particularistic allocation. Indeed, when benefit allocation depends on voter registration, citizens' expectations of particularistic allocation are sufficient to alter behavior. There doesn't need to be any actual particularism. Yet, the electoral dynamics play out similarly to turnout-buying (Nichter, 2008) or voter-buying (Hidalgo and Nichter, 2016). Unmobilized voters in Maricá can be mobilized (i.e., turnout-buying) and voters from surrounding municipalities are mobilized (i.e., voter-buying). Instead of voters being actively incentivized to participate, supporters of the party handing out the benefit self-select into the electorate under asymmetric mobilization.

In line with recent literature, exploring the blurry lines between programmatic and particularistic policy (Hicken and Nathan, 2020; Bardhan, 2022; Frey, 2019; Frey et al., 2021; Imai et al., 2020; Calvo and Murillo, 2019; Mares and Young, 2019; Holland and Freeman, 2021), we highlight that even an unconditional cash transfer that undoubtedly improved the living situation of many poor citizens on the ground can have complex complementarities with party incentives and ultimately corroborate a local stronghold. Whether there is manipulation, e.g., in the form of selective bene-

fit allocation, is unknown to us and leaves scope for future work. Some follow-up questions might be particularly interesting for the clientelism literature. Would the strategic manipulation of expected clientelism already be classifiable as clientelism? What strategies can be used to manipulate expectations? Which actors participate in information brokerage? Moreover, what happens to "traditional" brokers? Are "traditional" clientelistic relationships maintained at all?

From a policy design and evaluation perspective, it is desirable to know which exact institutions allow for manipulations of seemingly programmatic policies. Recent literature has argued for irrevocable benefits as anti-clientelistic (Bobonis et al., 2022; Frey, 2020). Yet, we find scope for strategic interference – even if not exactly clientelistic – in an irrevocable benefit program. Similar to Frey (2020), our findings caution that the underlying incentives need to be considered to ultimately evaluate the strategic (mis-)use of irrevocable benefits.

The classic party patronage argument states that clientelistic systems prevent progressive policy (Häusermann et al., 2013; Shefter, 1977). However, we show that even universalist welfare policy can align with politicians' interest in creating a local stronghold. In the larger process of democratic consolidation, this means that universalist social policy can replace particularistic policy.[10] Our research highlights that even when young democracies move towards less particularistic policies, the legacy of clientelism is carried on in citizens' expectations about policymaking. This in turn has real effects on electoral outcomes. From this perspective, asymmetric mobilization can inform the discussion on how welfare states develop and democracies consolidate. In an optimistic outlook, it seems possible that policies, like the RBC, could even outlive the incumbent who implemented them, leaving behind a universalist social policy without partisan connection.

[10] Bardhan (2022, sections 4 and 5) discusses the economic and political conditions of a transition from particularistic to programmatic institutions.

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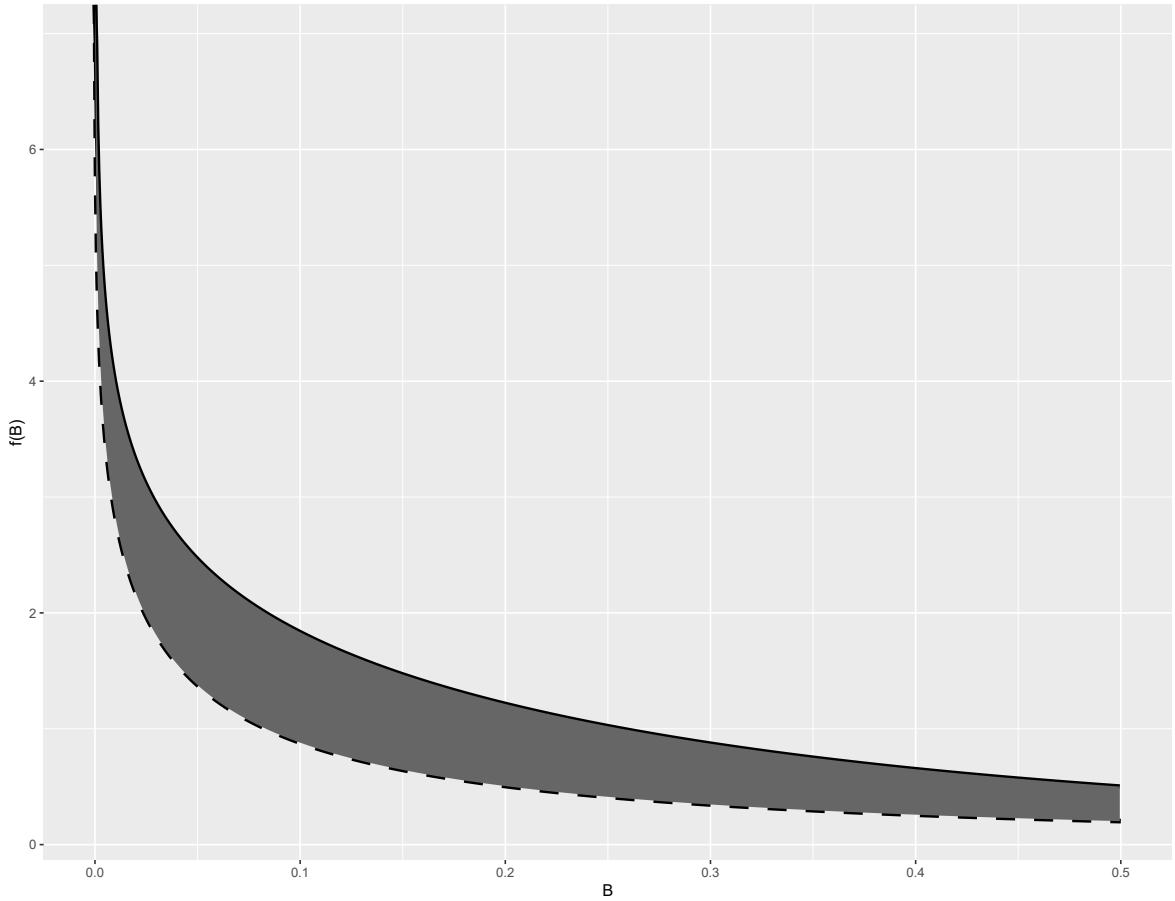
Appendix A Verifying Asymmetric Mobilization

$$\frac{1}{4}\tau - \int_0^{\frac{1}{4}} \psi_1(x_i, B)dx_i > (1 - \frac{3}{4})\tau - \int_{\frac{3}{4}}^{1} \psi_2(x_i, B) \tag{16}$$

$$\frac{ln(\frac{1}{4} + 2B + B^2) - ln(\frac{3}{2}B + B^2)}{1 + 2B} < \frac{ln(\frac{1}{4} + B^2) - ln(\frac{1}{2}B + B^2)}{1 - 2B} \tag{17}$$

Figure 6: Comparing the mass of voters



The plot evaluates Inequality 17 over the domain of B ($0 < B < \frac{1}{2}$). The solid line evaluates the right-hand side (area proportional to the mass of machine voters) and the dashed line evaluates the left-hand side (area proportional to the mass of opposition voters). The visible conclusion is that Inequality 17 is satisfied over the domain of B. This in turn implies a larger vote share for the machine under the RBC scheme.

Appendix B Descriptive Statistics

Table 5: Descriptive statistics

	N	Mean	Variance
First Year of Residence	1499	2007	219.5305
Age	1485	37.92997	220.5477
Household Income	1454	3801.906	9998046
Personal Income			
$R\$0 - R\$500$	1486	.154105	.1304444
$R\$500 - R\$1,100$	1486	.4629879	.7120972
$R\$1,100 - R\$2,200$	1486	.8519515	1.831266
$R\$2,200 - R\$3,300$	1486	.5841184	1.996623
$R\$3,300 - R\$5,500$	1486	.5720054	2.534542
$R\$5,500 - R\$11,000$	1486	.3432032	1.942738
$> R\$11,000$	1486	.089502	.61892
Female	1514	.5217966	.2496898
Race			
Black	1514	.2622193	.1935882
Brown	1514	.3038309	.2116575
White	1514	.4240423	.2443918
Education			
No Degree	1514	.01321	.0130442
Primary	1514	.1869221	.1520827
Secondary	1514	.509247	.2500797
Professional/Technical	1514	.0937913	.0850507
Bachelor	1514	.151255	.1284617
Postgraduate	1514	.0376486	.0362551
Religion			
Agnostic	1507	.0995355	.0896877
Atheist	1507	.0630392	.0591044
Catholic	1507	.3583278	.2300817
Pentecostal	1507	.2680823	.1963445
Spiritist	1507	.0935634	.0848656
Other	1507	.1174519	.1037258
Married	1514	.4062087	.2413626
Social Benefits			
RBC	1501	.2751499	.1995754
Bolsa Familia	1479	.0851927	.0779876
BPC/LOAS	1470	.0108844	.0107732

Appendix C Auxiliary Results

Table 6: Signaling behavior of PT voters

	(1) Campaign	(2) Meet	(3) Join	(4) Rally	(5) Symbol	(6) Favor	(7) Suggest
Beneficiary status							
RBC	0.038	0.027	0.005	0.022	0.077**	-0.030	0.048
	(0.034)	(0.030)	(0.017)	(0.026)	(0.036)	(0.028)	(0.035)
PT voter	0.111***	0.072***	0.042***	0.073***	0.137***	0.031*	0.063***
	(0.021)	(0.019)	(0.013)	(0.018)	(0.022)	(0.019)	(0.021)
RBC×	0.002	-0.014	0.015	-0.029	-0.043	0.102***	0.003
PT voter	(0.044)	(0.038)	(0.025)	(0.033)	(0.046)	(0.038)	(0.043)
N	1366	1354	1345	1367	1362	1361	1351
Eligibility status							
RBC	0.033	0.039	0.032**	0.021	0.062**	-0.041*	0.052*
	(0.027)	(0.025)	(0.016)	(0.021)	(0.028)	(0.023)	(0.028)
PT voter	0.118***	0.059***	0.037***	0.076***	0.160***	0.044**	0.089***
	(0.025)	(0.021)	(0.014)	(0.021)	(0.025)	(0.022)	(0.025)
RBC×	-0.015	0.006	0.005	-0.025	-0.075*	0.044	-0.063*
PT voter	(0.038)	(0.033)	(0.024)	(0.030)	(0.040)	(0.033)	(0.038)
N	1362	1349	1341	1363	1358	1357	1346

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Note: All models reported here control for individual income, age, race, religion, sex, education, household income and marital status. The corresponding predictive margins are reported in the Appendix, Table 8.

Table 7: Signaling behavior of PT voters by beneficiary status, margins

	(1) Campaign	(2) Meet	(3) Join	(4) Rally	(5) Symbol	(6) Favor	(7) Suggest
Beneficiary status							
No RBC	0.139	0.105	0.048	0.098	0.146	0.097	0.129
RBC	0.161	0.105	0.052	0.080	0.172	0.129	0.138
No PT voter	0.076	0.063	0.022	0.050	0.076	0.065	0.088
PT voter	0.192	0.134	0.068	0.122	0.205	0.134	0.160
No RBC × No PT voter	0.069	0.061	0.022	0.051	0.065	0.071	0.088
No RBC × PT voter	0.187	0.135	0.065	0.130	0.201	0.115	0.156
RBC × No PT voter	0.096	0.068	0.019	0.048	0.107	0.049	0.088
RBC × PT voter	0.205	0.130	0.075	0.102	0.215	0.184	0.171
N	1483	1469	1455	1484	1478	1477	1465
Eligibility status							
No RBC	0.144	0.100	0.040	0.106	0.153	0.108	0.151
RBC	0.147	0.107	0.058	0.077	0.159	0.106	0.107
No PT voter	0.075	0.063	0.024	0.050	0.077	0.064	0.088
PT voter	0.193	0.130	0.064	0.124	0.208	0.137	0.164
No RBC × No PT voter	0.071	0.061	0.017	0.052	0.059	0.075	0.088
No RBC × PT voter	0.193	0.127	0.057	0.143	0.216	0.130	0.194
RBC × No PT voter	0.081	0.065	0.035	0.046	0.104	0.046	0.087
RBC × PT voter	0.192	0.135	0.074	0.098	0.197	0.146	0.121
N	1480	1465	1452	1481	1475	1474	1461

Table 8: Signaling behavior of PT voters

	(1) Campaign	(2) Meet	(3) Join	(4) Rally	(5) Symbol	(6) Favor	(7) Suggest
Beneficiary status							
No RBC	0.136	0.099	0.045	0.087	0.138	0.094	0.112
RBC	0.175	0.118	0.058	0.092	0.189	0.125	0.163
No PT voter	0.081	0.064	0.021	0.050	0.079	0.068	0.089
PT voter	0.193	0.132	0.067	0.115	0.203	0.127	0.153
No RBC × No PT voter	0.070	0.056	0.020	0.043	0.057	0.076	0.075
No RBC × PT voter	0.181	0.128	0.062	0.117	0.194	0.107	0.138
RBC × No PT voter	0.108	0.083	0.025	0.066	0.134	0.047	0.123
RBC × PT voter	0.221	0.142	0.082	0.110	0.227	0.179	0.190
N	1366	1354	1345	1367	1362	1361	1351
No RBC	0.137	0.083	0.032	0.086	0.147	0.111	0.122
RBC	0.161	0.126	0.067	0.092	0.165	0.096	0.136
No PT voter	0.081	0.065	0.024	0.050	0.079	0.068	0.091
PT voter	0.193	0.126	0.063	0.115	0.207	0.131	0.154
No RBC × No PT voter	0.067	0.048	0.010	0.041	0.053	0.085	0.069
No RBC × PT voter	0.186	0.108	0.047	0.117	0.212	0.130	0.158
RBC × No PT voter	0.100	0.087	0.042	0.062	0.114	0.044	0.121
RBC × PT voter	0.203	0.152	0.084	0.113	0.199	0.132	0.147
N	1362	1349	1341	1363	1358	1357	1346

Table 9: Voting behavior of RBC eligibles vs. non-eligibles

	(1) PT	(2) Abstain	(3) Opposition	(4) PT	(5) Abstain	(6) Opposition
RBC eligible	0.196***	-0.177***	-0.018	0.204***	-0.217***	0.013
	(0.025)	(0.021)	(0.018)	(0.032)	(0.029)	(0.023)
N	1495	1502	1495	1374	1377	1374

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$