Distributive politics and asymmetric mobilization [*]

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Abstract

Can broadly targeted welfare policy create electoral dynamics similar to particularistic strategies? We theorize a novel mechanism, we call asymmetric mobilization, which explains mobilization as a self-selection process induced by a broadly targeted benefit. Asymmetric mobilization is based on incomplete information of citizens about the de facto allocation of benefits. When citizens expect particularistic allocation, 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 the 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 our argument in 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, which signal party loyalty.

Keywords: Electoral mobilization, clientelism, unconditional benefit, welfare policy, distributive politics, Brazil

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1 Introduction

Political Science has a substantial interest in the electoral effects of distributive policies. Two broad perspectives are discussed in the literature (Golden and Min, 2013). On the one hand, there is strategically targeted distribution, entailing clientelism, as a strategy to mobilize support. Clientelism is understood as a contingent exchange between particularistically targeted voters and elected politicians (Hicken, 2011). In many young democracies targeted distribution of resources is a an effective strategy to develop and foster ties with voters (Golden and Min, 2013). On the other hand there is programmatic policy, invoking retrospective voting. This form of distribution is not strategically targeted. Yet, through retrospective voting programmatic policy creates electoral benefits. Voters simply reward programmatic policy (Healy and Malhotra, 2013).

The research we present here highlights the space in-between the two broad perspectives. We, therefore, strongly relate to research highlighting strategic complementarities between programmatic and particularistic policy (Frey et al., 2021; Imai et al., 2020). In literature on clientelism there is a growing interest in the grey are 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 mobilization theory ponits towards an incumbency advantage, similar to retrospective voting or particularistic targeting, how the electoral gains are achieved differs from both. We do, however, not claim that asymmetric mobilization 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 such as asymmetric mobilization. In fact, asymmetric mobilization can happen incidentally or strategically. Politicians can have programmatic policy intentions or purposely manipulate conditions on the ground to induce asymmetric mobilization. Yet, 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; Frey, 2019; 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 mobilization 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.

In a nutshell asymmetric mobilization 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 induce the self-selection process. First, only registered voters get 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 different de facto rules. 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, the 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, signalling support is more costly for citizens who are ideologically more distant to the incumbent. Hence, ex-ante supporters of the incumbent face stronger incentives (larger net expected benefits) form registering to vote and applying for the benefit program. On top, asymmetric mobilization 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 – no strings attached. From qualitative interviews with locals in Maricá we learn, however, that de facto (perceived) eligibility looks different. Citizens of Maricá do 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 asymmetric mobilization, which allows for a rigorous assessment of citizens incentives, given the institutional environment. We then test the implications of the model against data from a novel survey we fielded in Maricá.

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, which relate to signaling support to the incumbent. 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 for 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 to create 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 at the ballot (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 impacts regime duration, especially in non-democracies. Extracting maximum wealth requires staying in power long-term, which in turn requires to satisfy a large selectorate[1] using natural resource wealth (Robinson et al., 2006; Mahdavy, 1970). Our

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

results suggest that even in a democratic system, oil can fuel the survival of a local regime.[2]

2   The Case of Maricá

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 proximity to the Santos Basin Pre-salt Zone (SBPZ), an off-shore oil and gas explorations 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 made 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 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

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[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.

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's Worker's Party (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 already existing and consolidated online repository allows the local administration to process applicants' information with lower targeting costs. Importantly, deciding who can or cannot receive the program implemented locally is still entirely at the municipal-level control.

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 proof of being registered to vote in Maricá often applies. This is possible because people working at the *Secretaria de Economia Solidária*, the local bureau office 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.

3   Theoretical Argument

3.1   The Role of Expectations in Clientelism

Clientelism is a pervasive feature of many young democracies (Keefer, 2007; Kitschelt and Kselman, 2013). Clientelism is understood as a contingecy based exchange combined with particularistic targeting Hicken (2011). Benefits obtained by clients in such exchanges are often characterized as "material" (Auyero, 1999; Stokes, 2005, based on the classic literature, e.g.) but must be understood very broadly here. Benefits can entail not revoking existing benefits or not taking something of value away. Importantly, threats can be part of the incentive structure in the patron client relationship (Kramon, 2016). Both threats and promised benefits play on expectations. After all, the patron's promise of material benefits impacts the client's cost-benefit-calculations as a future expected benefit at the time of the promise and only materializes later in the relationship. Similarly, the patrons' threats enter the clients' calculations as expected costs, which only materialize later if the client does not comply.

The behavioral impact of expected benefits or costs depends in all cases on the

probability with which they materialize. It can be argued, from a prospect theory perspective (Tversky and Kahneman, 1992) that clients may react more sensitively to (potential) losses, due to loss aversion. Especially in contexts of low and unstable income, and high vulnerability, where individuals react strongly to small income changes, politicians can exert strong leverage over citizens (Dixit and Londregan, 1996; Anderson et al., 2015; Bobonis et al., 2022; Frey, 2020).

3.2 Why Even Consider Alternative Electoral Strategies?

Why would politicians then resort to broad welfare politics as an electoral strategy, rather than pursuing clientelism in contexts of high vulnerability? Making credible promises or threats, especially to a meaningfully large share of the electorate, is a challenging task for politicians or parties. Parties can use targeting strategies relying on reciprocal clients (Finan and Schechter, 2012) or well networked voters (Cruz, 2019) to buy votes effectively. Yet, there remain considerable reputational and legal risks for political actors to directly engage in illicit practices.[3] Which is why politicians rarely do the dirty work themselves.

Perhaps not surprising, clientelistic parties often rely on middlemen – brokers, who assume a crucial role for clientelistic exchange (see e.g. Mares and Young, 2016; Novaes, 2018; Auerbach and Thachil, 2018; Brierley and Nathan, 2022, 2021; Koster and Eiró, 2022) – to carry out illicit business. Besides avoiding legal and reputational costs, brokers possess skills and knowledge, connections and trust, which politicians do not have. This allows brokers to limit agency costs between politicians and voters. For the same reasons brokers are more efficient than politicians in targeting clients and

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[3] Vote buying is banned by law in 91% of all countries world wide (Nichter, 2021, 3). In Brazil Law 9840, an anti-clientelism legislation, is famous for being the first law passed based on a popular initiative. Law 9840, is the main reseason for politicians being ousted in Brazil and recognized as a credible threat by many local politicians in Brzil (Nichter, 2021).

maintaining relations. Yet, brokers create substantial agency costs (e.g., Szwarcberg, 2012; Larreguy et al., 2016). Brokers' power to renege can negatively affect electoral performance and even cause parties to break up (Novaes, 2018). In the end, to be competitive, a party must carefully craft an optimal strategy considering all costs and risks of all available strategies.

3.3 Expectations and Incentives under incomplete information

What are viable strategies for parties to secure electoral support? We argue that – in an environment of incomplete information – a broadly targeted welfare benefit can secure an electoral advantage beyond retrospective voting without having to rely on illicit and fragile clientelistic strategies. Citizens expectation about policy implementation are key to that. While most cash transfers programs are de jure distributed according to objective criteria, de facto implementation is potentially subject to discretion. On the ground citizens have incomplete information politicians discretion levels over particular policies. However, in the Latin American context, and Brazil is no exception, clientelism is pervasive. Unsurprisingly, citizens therefore tend to assume politicians have high levels of discretion. When citizens believe that politicians can manipulate eligibility to a welfare policy, the threat of doing so is credible, even if this was outside the politicians' power. Citizens in Maricá seem to concur that supporters of the local incumbent do not have to fear that benefits are 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 display of 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 an instrumental incentives for citizens to signal partisanship in order to secure benefits. Since signaling support increases the perceived likelihood of receiving the benefit, signaling can be seen as a "soft" eligibility criterion. 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.[4] 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, too is costly (Nichter and Nunnari, 2022). Signaling can entail activities like campaigning, showing up to rallies, turning up for party meetings, joining the party, visibly displaying endorsement 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 signalling costs leads to systematic differences in the evaluation of the cost benefit calculation

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[4] Even if the applicant were were to successfully call bluff on 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.

between citizens ideologically close and distant from the incumbent.

3.4   The Electoral Justice

We have now discussed how the environment of incomplete information distorts citizens incentives to participate in a broadly targeted welfare benefit program. For the incumbent to materialize electoral gains from the distortion of incentives under incomplete information, a link between voting and program participation needs to exist. The electoral institutions of Brazil give way to such a link.

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* (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, of course, being citizens not registered to vote anywhere. Those are often the local poor, many of whom are employed in the informal sector. For the last general elections in Brazil the share of registered voters was approx. 77% of the population aged 18 or older.[5]

The crucial link between program participation and voting happens through voter 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 incen-

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[5] 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.

tivizes non-voters, from both pools, local unregistered or from elsewhere, to register to vote in Maricá, in order to receive the RBC.

Woman:	*Some people that 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."

Increased mobilization should theoretically contribute to increased turnout in Maricá compared to a counterfactual situation without the RBC. For some of the unregistered the costs of registration was a prohibitive constraint. 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 obtain the benefit, they will register but still abstain. Those registered in other municipalities, switching to Maricá, expand the electorate in Maricá. Therefore, if at least some of them turn out, there is higher turnout.

The electoral residence requirement alone, would expand the electorate in all directions of the political spectrum. However, when combined with the distorted incentives of ideological supporters of the incumbent being more willing to participate in the program, the two conditions together leads to a self-selection of ideological supporters of the incumbent into the set registered voters.

4   Formal Analysis

4.1   General setup

As a starting point we build on Nichter's (2008) turnout buying model, which extends Stokes's (2005) vote buying model by including non-voters, to allow for a setup where the incumbent cannot observe voters' choice, only whether they vote or not. Since we augment existing models by differentiating between registration and actual voting, for our case we assume the incumbent can only observe vote registration. Following the literature, voters $i = 1, ..., n$ 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). We slightly depart from Nichter (2008) in setting up the cost of voting as specifically the cost of registration and dividing the constant cost of voting by individual income. This captures that fixed costs tend to pose binding restrictions when income gets smaller, hence $c_i = \frac{c}{y_i}$. Lower propensity to turn out among the poor is well documented (Schaub, 2021). We decide to include income also for the reason that income is a decisive eligibility criterion for the RBC. 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 clientelistic mobilization we aim to highlight in the model does not depend on from which pool of unregistered voters are mobilized. The decision to move electoral residence depends on a range of variables 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 we draw out in the model applies for her. The material benefit in form of a cash transfer is denoted by B_i. Note that B_i is technically 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 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 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 gets registered 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, so i chooses x_i^* from set $X = \{0, 1\}$. Since we assume political preferences to be distributed independently from voting costs, income and benefits, society will be split into voters and non-voters with mirror-type preferences analogous to Nichter (2008). We abstract from the dynamic nature of the game, i.e., benefits being payed every period, while registration and signaling are one shot activities because we

think this additional layer of complication does not add any substantive insight to the model. One could instead think about the utility from the cash transfer B in terms of an a time discounted net present value of all future transfers.

The basis for the utility function is $Eu(x_i^*) = -\frac{1}{2}(x_i - x_i^*)^2$,[6] where citizens receive utility from voting according to their own preference, which is commonly assumed in the literature (see, Stokes, 2005; Nichter, 2008).[7] Similar to utility from voting, we think of signaling as 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 payment introduces the incomplete information to the decision. 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 believe 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

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

[7] 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 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
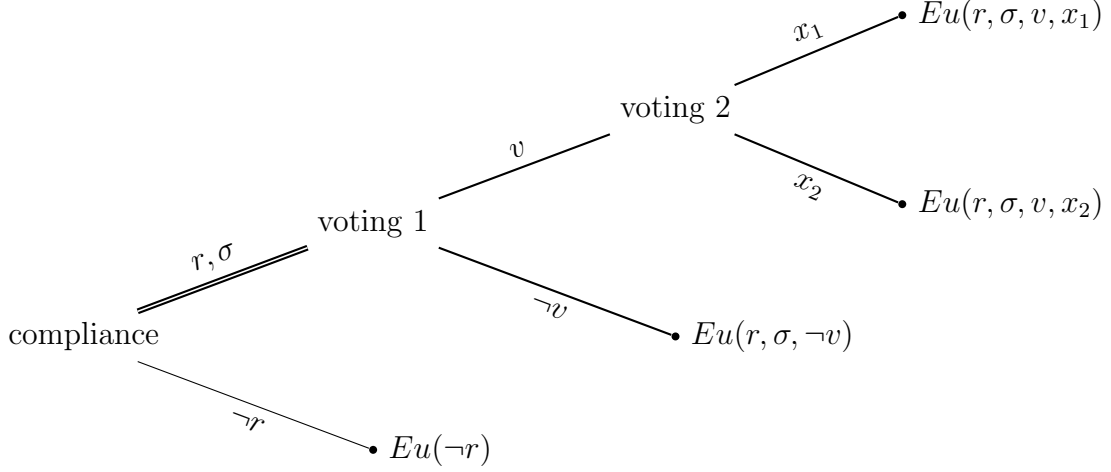
Double lines indicate two variables being chosen simultaneously along a path.

profile the expected utility function takes the following forms.

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

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

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

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

4.2 General Mechanics of the Model

The transfer is conditional on income, $B_i = B > 0$, if $y_i \leq \tau$ or $B_i = 0$. The transfer is conditional on being registered (r). And in expectation the transfer depends on signaling support (σ_i). To find the optimal behavior for each citizen, we need to find an optimal strategy for each individual. By comparing expexted utilities of all possible strategy profiles we can derive conditions contingent on individuals' initial characteristics that describe optimal behavior.

1. Active voters (given r,v was chosen before) vote for the incumbent x_1, if

$$Eu(r, \sigma_i, v, x_1) > Eu(r, \sigma_i, v, x_2) \quad \Leftrightarrow \quad x_i < \frac{1}{2}, \tag{5}$$

and the opposition if $x_i > \frac{1}{2}$, i.e. voters vote according to their true policy preference.

2. Citizens choose to abstain, when registered $(R = r)$, if (not) voting yields lower (higher) utility than voting for their preferred party.

    (a) For citizens leaning towards the incumbent:

    $$Eu(r, \sigma_i, \neg v) > Eu(r, \sigma_i, v, x_1) \quad \Leftrightarrow \quad x_i > \frac{1}{4}. \tag{6}$$

    (b) For citizens leaning towards the opposition:

    $$Eu(r, \sigma_i, \neg v) > Eu(r, \sigma_i, v, x_2) \quad \Leftrightarrow \quad x_i < \frac{3}{4}. \tag{7}$$

3. Registered voters choose a signal that optimally balances the trade-off between higher expected benefits against cost of signaling.

$$\max_{\sigma_i} Eu(R, \mathbf{B_i}, V, X) \tag{8}$$

$$\frac{\partial Eu(.)}{\partial \sigma_i} = -B_i + x_i - \sigma_i \quad \Rightarrow \quad \sigma_i^*(x_i) = x_i - B_i \tag{9}$$

4. Citizens will not register for voting, if utility from not voting exceeds the utility of the preferred alternative between registered abstention and voting for the preferred party. In other words the costs of registration must outweigh the utility of the expected material benefit and potentially the benefit of voting according to

ones own interest.

(a) Abstaining without registration is preferred over registering and abstaining, if the combined costs of registration and signaling, outweigh the present day expected utility from receiving the benefit:

$$Eu(\neg r) > Eu(r, \sigma_i, \neg v) \quad \Leftrightarrow \quad \frac{c}{y_i} + \frac{1}{2}(x_i - \sigma_i)^2 > (1 - \sigma_i)B_i \qquad (10)$$

$$\Leftrightarrow \quad y_i < \frac{c}{(1 - \sigma_i)B_i - \frac{1}{2}(x_i - \sigma_i)^2} \qquad (11)$$

For an optimally chosen signal according to individual preferences the threshold is:

$$y^*(x_i, B_i)|_{\sigma_i = \sigma_i^*} := \frac{2c}{2B(1 - x_i) + B^2} \qquad (12)$$

Note that we can drop the subscript i here, because this threshold bites only for program beneficiaries with $B_i = B > 0$ and is not defined for $B_i = 0$.

(b) Not registering is preferred over voting for the incumbent, if

$$Eu(\neg r) > Eu(r, \sigma_i, v, x_1) \qquad (13)$$

$$\Leftrightarrow \quad \frac{c}{y_i} + \frac{1}{2}(x_i - \sigma_i)^2 > \frac{1}{8} - \frac{1}{2}x_i + (1 - \sigma_i)B_i \qquad (14)$$

$$\Leftrightarrow \quad y_i < \frac{c}{\frac{1}{8} - \frac{1}{2}x_i + (1 - \sigma_i)B_i - \frac{1}{2}(x_i - \sigma_i)^2} \qquad (15)$$

For an optimally chosen signal according to individual preferences the threshold is:

$$\psi_1(x_i, B_i)|_{\sigma_i = \sigma_i^*} := \frac{2c}{\frac{1}{4} - x_i + 2B_i(1 - x_i) + B_i^2} \qquad (16)$$

(c) Not registering is preferred over voting for the opposition, if

$$Eu(\neg r) > Eu(r, v, x_2) \tag{17}$$

$$\Leftrightarrow \quad \frac{c}{y_i} + \frac{1}{2}(x_i - \sigma_i)^2 > \frac{1}{2}(x_i - \frac{3}{4}) + (1 - \sigma_i)B_i \tag{18}$$

$$\Leftrightarrow \quad y_i < \frac{c}{\frac{1}{2}(x_i - \frac{3}{4}) + (1 - \sigma_i)B_i - \frac{1}{2}(x_i - \sigma_i)^2} \tag{19}$$

For an optimally chosen signal according to individual preferences the threshold is:

$$\psi_2(x_i, B_i)|_{\sigma_i = \sigma_i^*} := \frac{2c}{x_i - \frac{3}{4} + 2B_i(1 - x_i) + B_i^2} \tag{20}$$

Inspecting the asymptotics of $\psi_1(x_i, B_i)$ towards infinite income, while increasing policy preference from the incumbents position upward, gives a threshold value in the preference domain ψ_1^*. Above ψ_1^* every citizen supports the incumbent too weakly, such that they would rather not register, than vote for the incumbent. We find this limit at the root of the denominator of equation 16.

$$\lim_{x_i \nearrow \psi_1^*} \psi_1(x_i, B_i) = \infty \tag{21}$$

$$\Rightarrow \psi_1^* = \frac{B_i^2 + 2B_i + \frac{1}{4}}{1 + 2B_i} \tag{22}$$

Evaluating the threshold below which voters are too poor to register, yields for incumbent supporters ($x_i = 0$):

$$\psi_1(0, B_i) = \frac{2c}{\frac{1}{4} + 2B_i + B_i^2} \tag{23}$$

Analogously, we inspect the limit of $\psi_2(x_i, B_i)$, moving from the oppositions down in

the preference space. This yields the threshold $\psi_2(x_i, B_i)^*$, below which no voter would vote for the opposition as they would rather not register.

$$\lim_{x_i \searrow \psi_2^*} \psi_2(x_i, B_i) = \infty \tag{24}$$

$$\Rightarrow \psi_2^* = \frac{\frac{3}{4} - 2B_i - B_i^2}{1 - 2B_i} \tag{25}$$

Evaluating the threshold below which voters are too poor to register, yields for opposition supporters $(x_i = 1)$:

$$\psi_2(1, B_i) = \frac{2c}{\frac{1}{4} + B_i^2} \tag{26}$$

4.3 Baseline Model: Behavior Without Transfer

We first study the benchmark situation where the RBC does not exist. Without any cash transfer $B_i = 0 \quad \forall \quad i$. This implies $\sigma_i^* = x_i$ (see equation 9). Under the standard assumption of uniformly distributed preferences the vote is split, since there are no incentives for voters to vote for anything else than the closest position to their policy preference. Further, we show that the decision to abstain is symmetric for incumbent and opposition supporters. Comparing not registering to registering and not voting, i.e. equations 3 and 4, immediately shows that registering and not voting is dominated by not registering. Benefits are the same, despite bearing the cost of registration when registering. Hence, abstention occurs only through not registering. For those who vote, the benefit of casting a vote must outweigh the cost of voting. Consider first the case of a voter with preferences closer to x_1, i.e., $x_i < 0.5$:

$$Eu(r, v, x_1) > Eu(\neg r) \quad \Leftrightarrow \quad y_i < \frac{8c}{1 - 4x_i} = \psi_1(x_i, 0) \tag{27}$$

Analogously, for the voter leaning towards x_2, i.e., $x_i > 0.5$:

$$u(r, v, x_2) > Eu(\neg r) \quad \Leftrightarrow \quad y_i > \frac{8c}{4x_i - 3} = \psi_2(x_i, 0) \tag{28}$$

Since there is no additional benefit from voting against personal policy preference, 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 the uniformly distributed preferences this implies symmetric patterns of abstention across preferences and equally large vote shares for both parties.

To illustrate the mechanics of the model we can turn to figure 2. We can solve the threshold implicitly defined by inequality 27 (28) for y_i at $x_i = 0$ ($x_i = 1$) to find the income below which citizens, irrespective of their preferences, never vote, $y^* = 8c$. Moreover, implicitly differentiating equation 27 (and 28) 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 intensity of preferences and relative costs of 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.

4.4 Implications of the RBC program

Keep in mind that the RBC only affects poorer citizens with income $y_i \leq \tau$. For richer citizens with $y_i > \tau$, the RBC does not have any behavioral implications. Hence, the following implication apply for citizens with $y_i < \tau$. Figure 3 illustrates the implications of the RBC graphically.

1. Turnout increases for both parties:

    (a) Supporters of the incumbent, who were either previously too poor or just

Figure 2: Baseline model
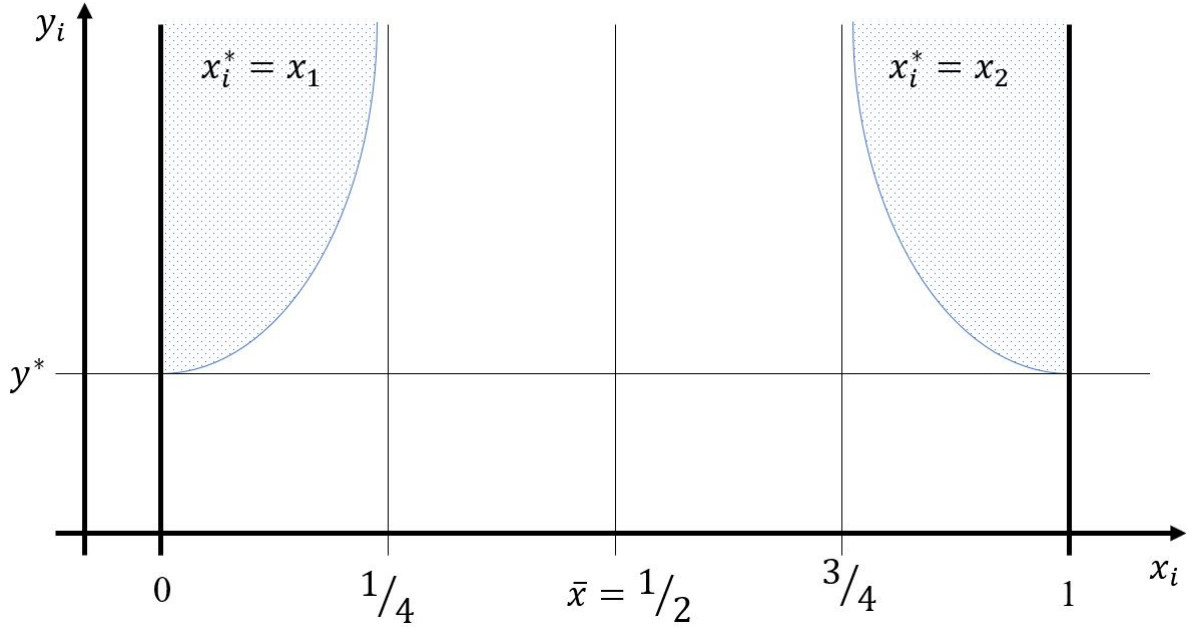
beyond the margin to indifference are crowded in, since $\psi_1(x_i, B) < \psi_1(x_i, 0)$. This can also be easily seen from the asymptotes, $\psi_1^*(x_i, B) > \psi_1^*(x_i, 0)$. The dark gray area above $x_i \in [0, \frac{1}{4}]$, is larger than the dotted dark gray area (compare both below τ), where the latter represents the mass of voters before the RBC.

(b) For some weaker incumbent supporters, however, $y_i > \psi_1(x_i, B)$ is not sufficient to induce voting, as $x_i > \frac{1}{4}$. They register but abstain (see hatched area to the right of $\frac{1}{4}$).

(c) Supporters of the opposition, who were either previously too poor or on the margin to indifference are crowded in, since $\psi_2(x_i, B) < \psi_2(x_i, 0)$. Below τ the dark-gray area above x_2 (without the hatched area) contains the dotted area, which represents opposition voters before the RBC.

(d) For some weaker opposition supporters, with $x_i < \frac{3}{4}$, $y_i > \psi_2(x_i, B)$ is not sufficient to induce voting. They register but abstain (see hatched area to

Figure 3: Model including the RBC transfer
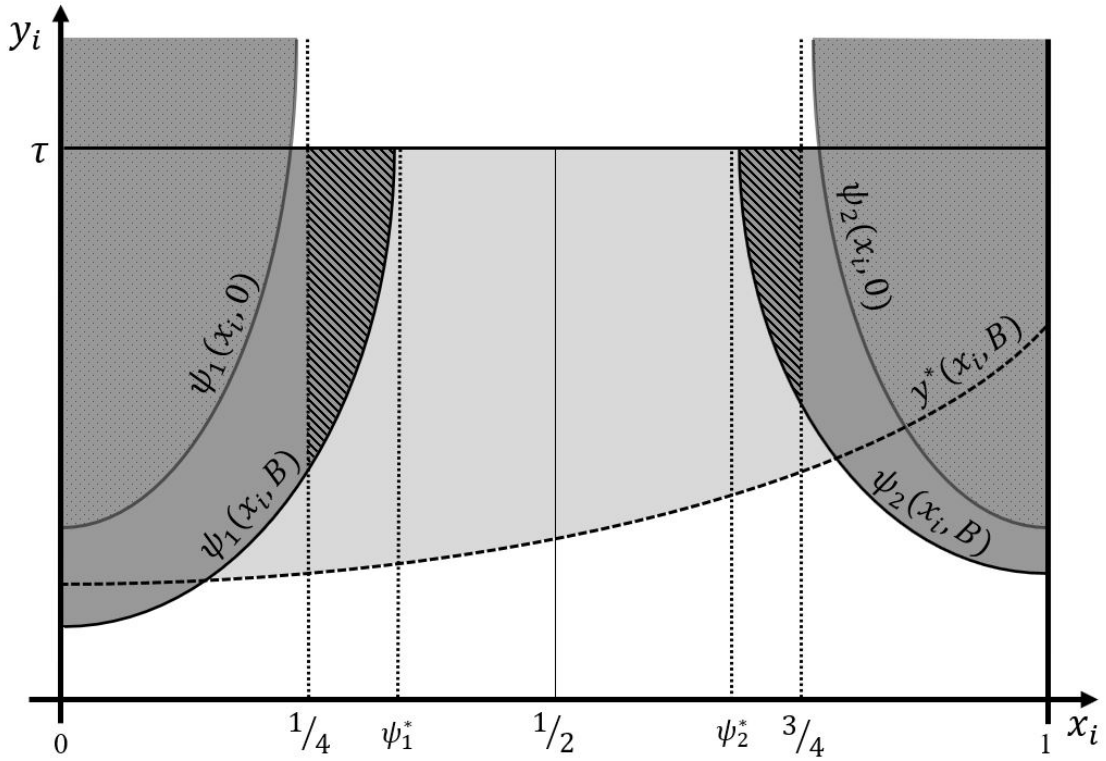
Dark grey areas contain voters, except for cross hedged areas. Dotted areas contain the citizens who would have voted without the RBC in place. All blank areas a populated by non-registered citizens. Non-voters are in the light grey area, and cross hedged areas, above $y^*(x_i, B)$ and below τ. They register as voters when the RBC is in place but abstain.

the left of $\frac{3}{4}$).

2. There is asymmetric mobilization. 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 decreases the expectation to receive the benefit. Analytically, this follows from comparing the surface area above $\psi_1(x_i, B)$ from 0 to $\frac{1}{4}$ against the surface area above $\psi_2(x_i, B)$ from $\frac{3}{4}$ to 1 (see Appendix A, Equation 31 and Figure 6). Graphically, the dark gray area to the left being larger than the dark gray area to the right implies higher mobilization in favor of the incumbent.

3. Signaling support to one's favorite party is less often prevalent 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 an 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 it is the other way around. Opposition supporters have a lower incentive (by the amount B) to signal support to their actually preferred party.

Implication 1 calls for higher turnout straightforwardly. From implication 2 follows that in an environment of incomplete information, the incumbent can mobilize more voters than their competitors, by supplying a broadly target welfare scheme, which 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. E.g., there could be some well placed rumors or some selective denials. After all, it could 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. To test implication 2, we need to empirically verify, whether beneficiaries (those with income below τ in the simpler language of the model) vote more often for the incumbent than those who do not get the RBC (with income above τ). The model is silent about the pool from which citizens are asymmetrically mobilized. 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 those mechanisms separately. Implication 3 predicts the signaling behavior of those affected by the RBC. Hence, implication 3 speaks to the mechanism of asymmetric of costs in signaling support to the incumbent. Empirically, we expect signaling to be more prevalent among beneficiaries, who support the incumbent. In the following 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.

5 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 receive 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.

5.1 Data and Empirical Strategy

We fielded a survey during 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 is provided in the appendix Table 4.[8]

5.1.1 Measurement

To assess 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 outcomes 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 the 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 the any party in the opposition. Note that Fabiano Horta was elected with slightly over 80% of votes, hence pooling the opposition parties is also justified by keeping the statistical analysis tractable. Here the model prediction is straight forward: 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.[9] Therefore, we asked respondents whether or

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

[9] 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

not they have engaged in seven activities in the past two years, which relate to signaling support. 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 recognizes 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 to enter the application process for a benefit program with 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 which in the end impact 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, which 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 fulfilment (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 valuable in the process of gaining eligibility, can also be created and fostered through direct exchange initiated by the citizen.

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. We can, however, condition the analysis on vote choice. The model predicts that voters do not vote against their preferences, only 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 to their preferred candidate than incumbent supporters.

5.1.2 Eligibility and Inclusion

De jure, there exist two criteria 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 learnt from qualitative interviews, those are not the (only) criteria that matter de facto. But 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 south-west quadrant, created by the dashed threshold lines in the respective dimensions, are false inclusions (116). Non-beneficiaries in the south-west quadrant are false exclusions (312). There are three indications in the data, which 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 is from São Gonçalo (22%) and Rio de Janeiro (21%), which both 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 which are concentrated in slums (favela) areas. 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 out of the 327 only 163 are eligible in terms of income. Yet, out of those, still 25 (approx. 15%) are prematurely admitted to the RBC.

5.2 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 extend. In the model, to keep things tractable, we abstract from false inclusion and false exclusion. In fact, we even abstract from the time of residence dimension for eligibility. Empirically, however, those distinctions exist. However, we cannot exactly measure who was potentially eligible, and hence whose behavior was actually affected by the RBC. We observe de-facto beneficiary status and de-jure eligibility. Both could serve as proxies.

Figure 4: Eligibility and Inclusion
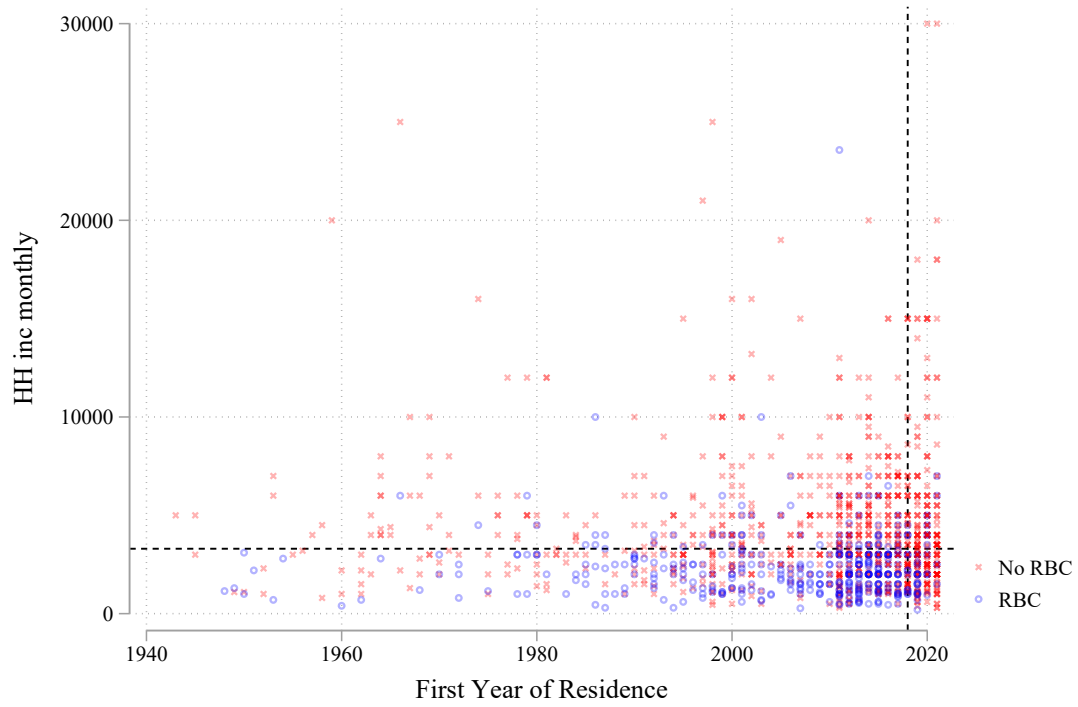
The axis depict dimensions of eligibility. Dashed lines demarcate eligibility thresholds in the respective dimensions, partitioning the plane into quadrants. RBC beneficiaries are denoted with "o" and non-beneficiaries with "x". Eligible individuals lie in the south-west quadrant. While individuals falling in any other quadrant are not eligible due to either not residing in Maricá long enough, or have too high of a household income, or both.

Rather than arguing for or against a particular proxy we aim to triangulate the measurements and report comparisons in voting behavior for both, RBC-beneficiaries vs. non-beneficiaries, and eligible citizens vs. non-eligible. 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. Note, however, 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, 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. Results for OLS estimation of a linear model with voting behavior as dependent variables and beneficiary status as independent variables are reported in Table 3. Models in columns

Table 2: Contingency of voting behavior and beneficiary status

	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

(Column header spanning: "Voting behavior")

(1)-(3) do not condition on control variables, i.e. they show pure correlations, models (4)-(6) use demographic control variables. The regression analysis confirms what the contingency table suggests. Beneficiaries vote significantly more often for the incumbent ($p < 0.01$) and more often in general ($p < 0.01$). This 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 5). Hence, we conclude that the evidence supports the model prediction of asymmetric mobilization in favor of the incumbent.

5.3   Signaling Support

With the model being validated by the empirical patterns in voting behavior, we now turn to investigate, whether those who are affected by the incentive scheme are more likely to display behavior that relates to signaling support to the incumbent. 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 gives 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. The model suggests that the optimal direction of 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) by some amount. 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. Thus, we want to test the hypotheses:

H_1: Signaling activities are more prevalent among beneficiaries, who vote for PT.

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

To do so, we estimate the following model by OLS:

$$signaling_i = \alpha + \beta_1 RBC_i + \beta_2 votePT_i + \beta_{12} RBC_i \times votePT_i + \gamma X_i + \varepsilon_i \qquad (29)$$

For individuals i, $signaling$ is the respective outcome as described in Table 1. RBC indicates the beneficiary status. [10] $votePT$ indicates whether someone vote for PT. X is a vector of control variables. 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.

Results are reported in Figure 5. The reported coefficients of interest estimate the difference in conditional means for the outcomes between incumbent voters and opposition voters, conditioning on beneficiaries (eligibles, lower panels in Figure 5) and control variables (right-hand side panels in Figure 5).

In general, the results confirm both hypotheses. In the upper right panel in Fig-

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[10] The results for the same specification using eligibility instead of beneficiary status is reported in the Appendix

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

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

ure 5, the specification with beneficiary status as independent variable and 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 95% confidence level. Besides rally participation ($p = 0.116$), we can reject the null at 90% confidence level for participation in party meetings and making suggestion or reporting issues. In both lower panels, 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, i.e. asymmetric signaling costs for incumbent supporters vis-à-vis non-supporters, creates the predicted patterns of asymmetric mobilization, which we empirically documented in the above section.

Taken together the empirical evidence presented in Section 5.2 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 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.

Figure 5: Partial correlations plot
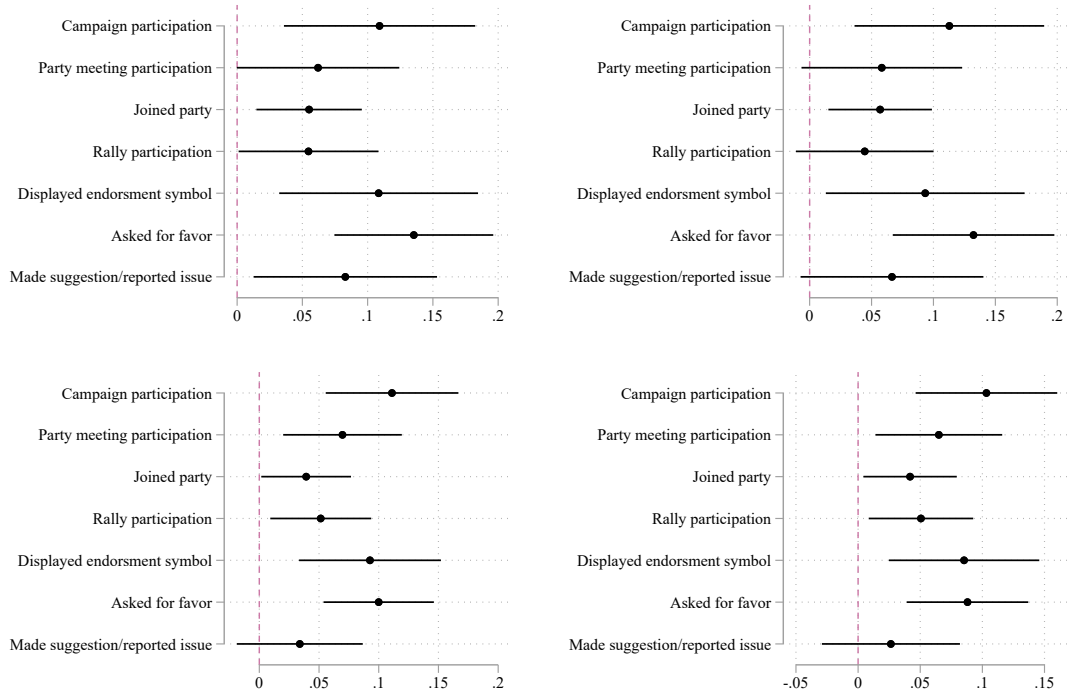
The plotted coefficients are partial correlations of voting for PT with outcomes among beneficiaries. Upper panels take beneficiary status as independent variable, lower panels take eligibility as independent variable. Panels on the left are without controls, panels to the right condition on demographic control variables. We report 95% confidence intervals from Huber-White robust standard errors.

6   Conclusion

We theorize a novel mechanism, 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. Leveraging incomplete information about de facto allocation rules on the side of the citizen, we charter new territory in-between particularistic and programmatic policy. Asymmetric mobilization happens because citizens expect particularistic allocation. And when benefit allocation depends on voter registration, citizens' expectation of particularistic allocation is sufficient to alter behavior. It is not necessary that there is any actual particularism. Yet, the electoral dynamics play out similar to turnout-buying (Nichter, 2008) or voter-buying (Hidalgo and Nichter, 2016). Unmobilzed voters in Maricá can be mobilized (i.e., turnout-buying) and voters from surrounding municipalities are mobilized (ie., 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, which 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 benefit 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 manipulation of expected clientelism already be classifiable as clientelism? What strategies can be used to manipulate expectations? Which actors participate in information-brokerage?

And, what happens to "traditional" brokers? Are "traditional" clientelistic relationships maintained at all?

From a policy design and evaluation perspective it is desirebale 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. Our findings caution, similar to Frey (2020), that the underlying incentives need to be considered to ultimately evaluate 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.[11] Our research highlights that even when young democracies move towards less particularistic policies, the legacy of clientelism is carried on in citizens expectations about policy making. 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.

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

Appendix A   Verifying asymmetric mobilization

$$\frac{1}{4}\tau - \int_0^{\frac{1}{4}} \psi_1(x_i, B)dx_i > (1 - \frac{3}{4})\tau - \int_{\frac{3}{4}}^1 \psi_2(x_i, B) \tag{30}$$

$$\frac{ln(\frac{1}{4} + 2B + B^2) - ln(\frac{3}{2}B + B^2)}{1 + 2B} < \frac{ln(\frac{1}{4} + B^2) - ln(\frac{1}{2}B + B^2)}{1 - 2B} \tag{31}$$

Figure 6: Comparing the mass of voters
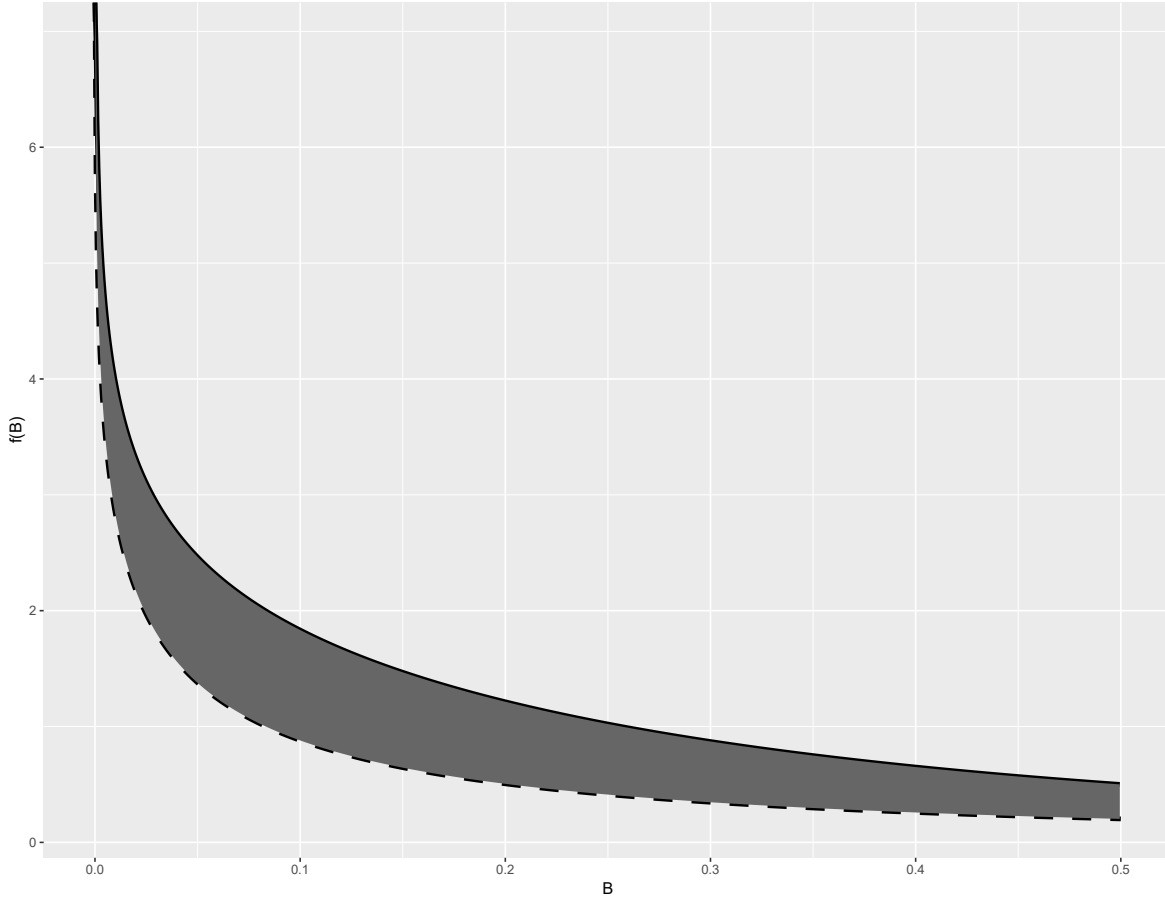
The plot evaluates Inequality 31 over the domain of B ($0 < B < \frac{1}{2}$). The solid line evaluates the right-hand side (area proportional to the mass of machine voters) and the dashed line evaluates the left-hand side (area proportional to the mass of opposition voters). The visible conclusion is that Inequality 31 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 4: 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
Pentacostal	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 5: Voting behavior of RBC eligibles vs. non-eligibles

| | (1) | (2) | (3) | (4) | (5) | (6) |
	PT	Abstain	Opposition	PT	Abstain	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

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

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