

Economic and Political Inequality: The Role of Political Mobilization

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Abstract

This paper analyzes the relationship between economic and political inequality. Beyond the view that inequality reduces turnout we document a non-linear relationship between them. To explain these patterns we argue that parties' strategies to target and mobilize low income voters reflect the level of economic inequality and development. Under high inequality and low development, clientelism becomes the dominant form of political competition and turnout inequality declines. As societies grow and inequality recedes, clientelism becomes suboptimal and parties turn to mobilize voters around programmatic offerings. As a result, turnout inequality increases. Empirically, we produce two analyses. First, we identify the relationship between political mobilization strategies, inequality and turnout by exploiting the randomized allocation of anti-fraud measures across Brazilian municipalities in the early 2000s. Second, we address the generalizability of our findings by carrying out a cross-national multilevel analysis of the relationship between inequality, strategies for political mobilization, and turnout inequality.

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1 Introduction: Puzzles and Outline

The nexus between economic and political inequality lies at the heart of democratic theory and political economy (Przeworski, 2010). Dahl defined democracy as a set of procedures guided by the principle of “*equal consideration*”, that is the notion that “In cases of binding collective decision, to be considered as an equal is to have one’s interests taken equally into consideration by the process of decision-making” (Dahl, 1991, p.87). In other words, the ability to participate in politics, influence policy, and government’s responsiveness are what determines whether citizens truly are it political equals under democracy. A pre-requisite for this conception of democracy to work effectively is that citizens’ *positive freedoms* (Berlin, 1958) are not undermined by a reduction in their capability set due to material deprivation (Sen, 1992). The undermining of positive freedoms may take various forms, from the capture of the vote choice in exchange for material benefits to the induced self-exclusion of the electoral body altogether. Who chooses to vote, how, and why, has in turn major implications for distributive politics and economic outcomes, feeding back into the linkage between economic and political inequality.

The negative impact of inequality on political engagement and electoral turnout is a recurrent theme in comparative politics. Inequality and poverty limit access to the necessary resources individuals need to engage in politics, whether material or informational (Verba et al., 1995; Solt, 2008; Gallego, 2010; Mahler, 2008); alter the structure of informational networks under which individuals operate politically (Bond et al., 2012; Abrams, Iversen and Soskice, 2011); shape the levels of political polarization (Pontusson and Rueda, 2010), or alter the incentives of political parties to target different types of voters in different electoral systems (Anduiza Perea, 1999; Anderson and Beramendi, 2012; Gallego, 2014). Jointly, these findings help understand an important empirical regularity from the standpoint of the

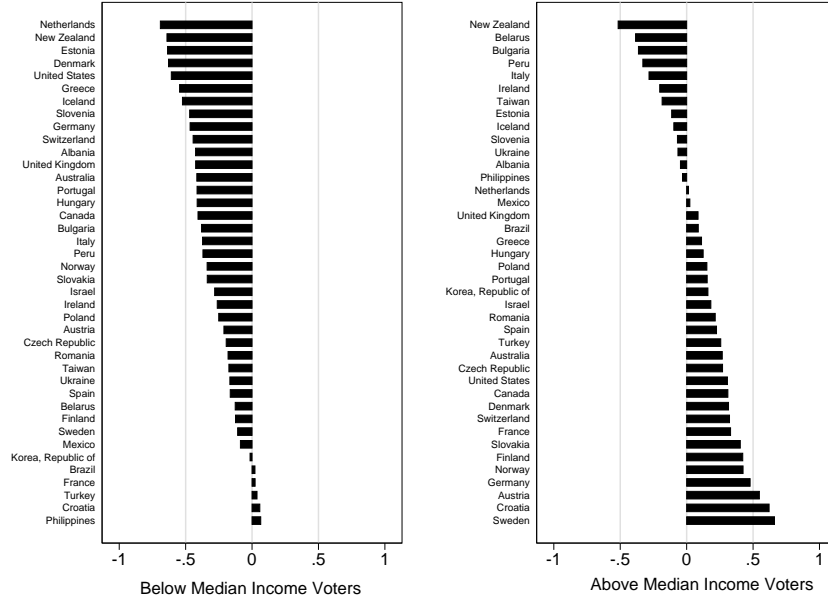
linkages between economic and political inequalities: poorer citizens are less likely to vote than rich ones, and even more so in more unequal societies. The lack of engagement of the poor reduces the strength of pro-redistributive coalitions at the same time that increasing inequality feeds back into the political participation of low-income citizens (Franzese and Hays, 2008).

Yet, younger and less developed democracies call into question the generalizability of this well established result by previous literature. In less developed and very unequal democracies poor voters often seem as willing (if not more) to engage in politics than their counterparts in rich democracies (Krishna, 2008; Stokes et al., 2013). As a matter of fact, the relationship between inequality and electoral turnout in the developing world reverses the patterns observed in wealthier democracies: higher levels of inequality are associated with high electoral participation, rather than low, in places like Mexico, Brazil, or Peru even after one accounts for obvious institutional factors such as compulsory voting laws.

Figure 1 analyzes the relationship between income and turnout in the range of developed and developing democracies for which we have information. On the basis of the *Comparative Study of Electoral Systems Database* (CSES), the left panel in figure 1 analyzes the correlation between being below the national median income and whether the respondent turned out to vote in the last election. The right panel in the same figure performs a similar analysis for voters above their national median income. The coefficients come from the estimation logit regression with individual income dummies for each country-year available: $Pr(Vote) = \Phi(\alpha + \beta_{LQ}Income_{i,LQ} + \beta_{HQ}Income_{i,HQ} + \beta_3X_i + \epsilon)$. Where the estimated parameters of interest are: (i) the turnout probability by income groups: $\hat{\beta}_{LQ,j}$ and $\hat{\beta}_{HQ,j}$; and (ii) the turnout inequality across income groups: $\hat{\beta}_{diff,j} = \hat{\beta}_{HQ,j} - \hat{\beta}_{LQ,j}$.¹

¹The estimated logit equations are very similar to the ones estimated by Kasara and Suryanarayan (2014); they include controls for education, age, age squared, gender, and rural setting. The CSES data measures income in five quintiles. The regression takes the third quintile (median) as the reference category for the

Figure 1: The Income-Turnout Link across countries



Interestingly, there are countries, such as New Zealand, where the middle income citizens seem more likely to vote than either low or high income ones. There are places like Sweden, where the low and middle income citizens show very similar patterns of behavior but high income citizens seem relatively more engaged in elections. There are countries, like the United States, where the income polarization of turnout is at its maximum: voters in the bottom half of the income distribution are less likely to vote than the median while at the same time voters in the top two quintiles are much more likely to do so. And finally there are countries such as Brazil or Mexico where everyone is nearly as likely to vote: low income voters do not show a different pattern of behavior relative to either middle or high income voters.² The range of variation in the extent to which either low or high income voters differ

impact of the two variables of interest on turnout. Low income quintiles are the bottom two (bottom 40 % of the distribution) whereas upper income quintiles include the 4th and the 5th (top 40 % of the distribution). Finally, magnitudes reflect averages within countries for all the years for which there is information available in the data.

²Importantly, these differences are not a mere reflection of compulsory voting laws. For instance, while Brazil is known to have effectively enforced compulsory voting laws for literate citizens above 18 and below 70, Mexico, Portugal, and France do not. Obviously, we control for this and other institutional features in

in their propensity to turn up at the ballot box is quite striking.

Figure 2 presents a summary measure of the levels of political (turnout) inequality and its relation to economic inequality. Turnout inequality is defined as the difference between the estimated coefficient for the effect of income on turnout for voters in the top two quintiles minus the estimated coefficient for the effect of income on turnout for those in the bottom two quintiles (i.e. $\hat{\beta}_{diff,j} = \hat{\beta}_{HQ,j} - \hat{\beta}_{LQ,j}$).³ Economic inequality is measured by the Gini market coefficient, that is before taxes and transfers.⁴ Figure 2 brings out a number of interesting patterns. First, turnout inequality tends to be higher among advanced industrial than among the middle income countries in our sample. The former are disproportionately more represented in the upper range of the measure of turnout inequality. The USA show very high levels of turnout inequality,⁵ but so do Germany, Denmark, or Switzerland relative to the rest of the sample. By contrast, Portugal, Spain, Brazil, Peru, or Mexico have significantly lower levels than any of these countries.

Second, and more importantly, by considering the relationship between turnout and the overall distribution of income, figure 2 provides a new perspective on the existing understanding about the relationship between economic and political inequality. Turnout inequality tends to be higher in places with intermediate levels of economic inequality. By contrast, when economic inequality is either very high or very low, turnout inequality declines. What explains these puzzling patterns in the relationship between income and turnout across nations?

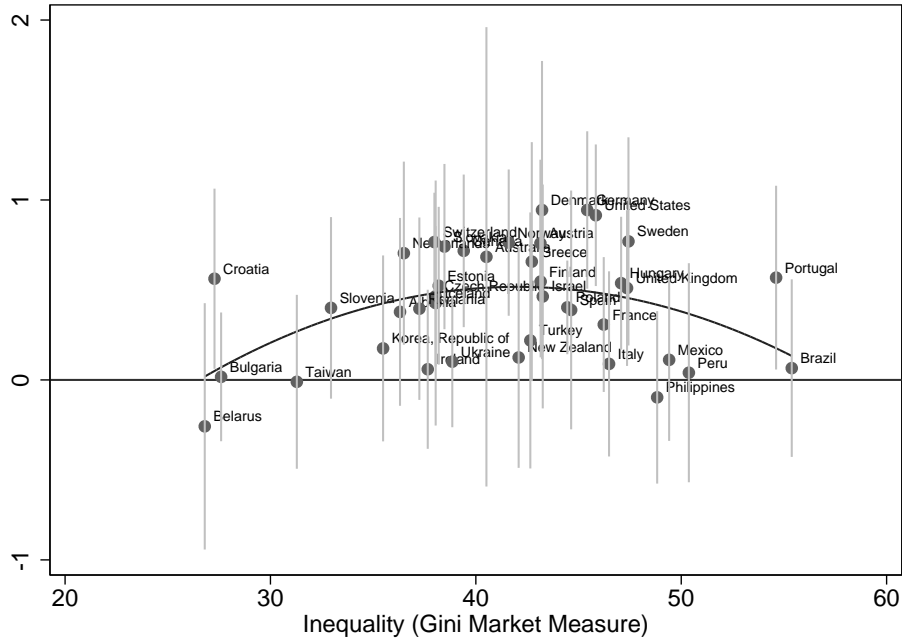
our multivariate analysis below.

³Positive values reflect high levels of turnout differentials among voters stratified along income lines. Negative values imply that low income citizens show a higher propensity to vote than high income citizens (as both are compared to the same reference group, the middle income strata).

⁴The data are from Solt's standardized income inequality database (Solt, 2009). We restrict our sample to the high quality database, that is to estimates with a standard error below 1.5 standard deviations. The reported patterns are very similar if one uses a post-taxes, post-transfer indicator of inequality instead

⁵These levels deviate even more with respect to the rest of the sample when one defines turnout inequality as the ratio between the bottom and the top quintiles of the income distribution (see Kasara and Suryanarayan (2014))

Figure 2: Economic and Political (Turnout) Inequality



Largely occupied with the turnout gap by low income citizens in rich countries, especially the USA, comparative politics has largely neglected the variation in levels of turnout inequality in the broader range of democracies. While several possible explanations exist to account for the differences in turnout inequality and turnout decline in rich democracies (e.g. Blais and Rubenson 2013), the reasons why turnout inequality is low in places like Mexico, Argentina, Brazil or India and high in societies such as the United States or Germany beg for additional theoretical and empirical efforts. In two recent and important exceptions, Gallego (2014) puts the focus on institutional contextual variables, whereas Kasara and Suryanarayan (2014) stress the importance of the bureaucratic capacity to extract from the rich and the salience of redistributive conflicts as a political *cleavage* in societies. In their account, the rich are more likely to vote than the poor (and therefore turnout inequality is high) when the threat of extraction is credible (as determined by the level of bureaucratic capacity) and redistribution (as opposed to alternative second or third dimensions) articulates the contrast

between contending political platforms.⁶

In this paper we pay attention to a different set of mechanisms: parties' choice of mobilization strategies to target different groups of voters. We reason from the premise that turnout levels reflect primarily parties' efforts to mobilize voters, especially those situated in the lower half of the income distribution. That the case, the explanation of turnout inequality requires not only an account of the incentives of high income voters to engage in elections but also of parties' choices about (1) *whom to target* and (2) *how to target them*. We see these two choices as interlinked. We explore the conditions under which parties choose to pursue one of two strategies: mobilization through programmatic party-voter linkages, built around competitive offerings of sets of public policies (public goods), and mobilization through clientelistic linkages, which we broadly consider as targeted efforts towards a self-contained group of voters based on a "particular mode of exchange between electoral constituencies as principals and politicians as agents [...] focused on particular classes of goods, [...] direct, contingent" (Kitschelt and Wilkinson, 2007, p.7-8).⁷

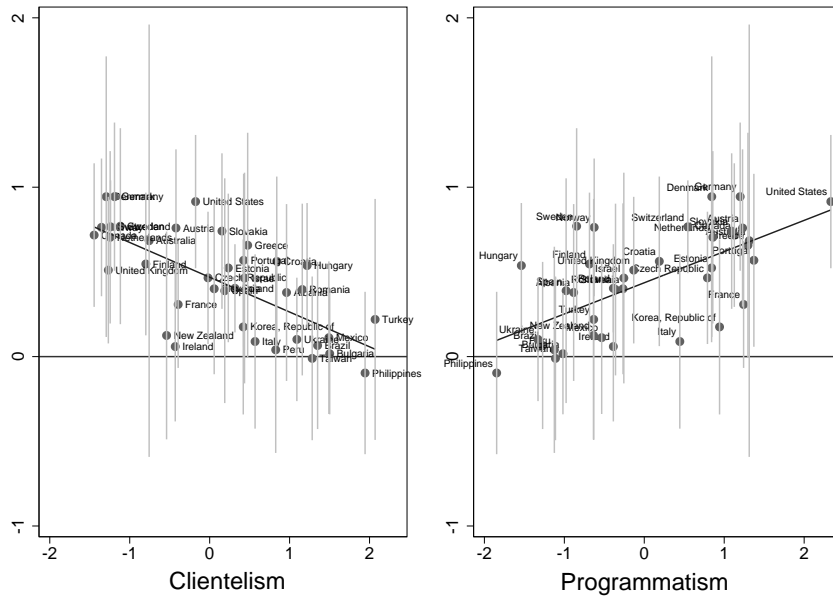
Figure 3 presents a first exploration of the relationship between different forms of political mobilization and turnout inequality, again measured by $\hat{\beta}_{diff,j} = \hat{\beta}_{HQ,j} - \hat{\beta}_{LQ,j}$.⁸ The type of political mobilization at work in different countries seems highly consequential for

⁶In an earlier contribution along similar lines, Radcliff (1992) argues that the extent to which economic adversities translates into changes in turnout is mediated by the degree of welfare state development

⁷For a more detailed analysis of different forms of non-programmatic politics consistent with the approach in this paper see Stokes et al. (2013)

⁸Clientelism is an aggregate and continuous measure of clientelistic efforts by parties at the country level, codes as *b15nwe* in Kitschelt's dataset (Kitschelt, 2013). The aggregate indicator of clientelism reflects the sum (weighted by party size) of experts' judgment of the extent to which party candidates promise voters (1) consumables (2) benefits or marketable goods (3) access to services or employment (4) government contracts and regulations or any other form of material inducements in exchange for their vote. Similarly, the aggregate indicator for programmatism *cosalpo4nwe* is also weighted by party size and reflects experts' judgments on the extent to which the coherence and salience of party policy positions are based on several fundamental dimensions of political competition (social spending on the disadvantaged, state role in governing the economy, public spending, national identity and traditional authority). Both measures are centered at their mean in the x axis of figure 3. Data points reflect within country averages for all the observation in our data. Bars reflect the standard deviations.

Figure 3: Political(Turnout) Inequality and Party Competition



the observable levels of turnout inequality. There is a strong negative relationship between clientelism and turnout inequality, and a strong positive relationship between programmatic competition and turnout inequality. As we will see below, clientelism bolsters the political participation of citizens located in the lower half of the income distribution, thus reducing turnout inequality. In contrast, programmatism bolsters the participation of citizens in the upper half, as conflicts over public goods affect them more directly, thus increasing turnout inequality.

By focusing on parties' mobilization strategies as the linking mechanism between economic and political inequality, this paper makes a number of contributions towards a better understanding of the link between political economy and political behavior. First, by placing at center stage alternative strategies of party competition, this paper illuminates the conditions under which elites resort to turnout buying (Nichter, 2008) versus other forms of policy portfolio diversification (Magaloni, Diaz-Cayeros and Estévez, 2007), and with

what consequences. Second, a better understanding of the connection between economic inequality, party strategies and political inequality helps illuminate the political conditions under which bad equilibria (high inequality, clientelistic democracies, low state capacity) are likely to emerge and persist (Robinson and Verdier, 2013). We offer a genuinely political mechanism behind the persistence of *perverse accountability* (Stokes, 2005), bad development equilibria and the self-reproduction of inequality, both economic and political. In doing so, our analysis expands the array of mechanisms linking affluence and influence (Gilens, 2012; Gingerich, 2013).

Finally, by exploiting a natural experiment facilitated by the Brazilian federal government's of randomized audits against corruption at the local level, this paper contributes to the causal identification of mobilization strategies as the mechanism mediating economic inequality and electoral turnout. We build on the work by Ferraz and Finan (2008, 2011) to exploit the audit randomization and gain leverage on the electoral and political consequences of interventions directly designed to curbe corruption and clientelism. Through this approach, we are able to identify the specific conditions under which an exogenous reduction in the effectiveness of clientelism shifts the relationship between economic and political inequality.

We find that constraining clientelism through audits translates into larger reductions in turnout when there are strong local media, when the opposition is stronger, and in rural as opposed to urban areas. The core of these findings are consistent with recent results on the impact of audits on vote registration as a mechanism for vote buying (Hidalgo and Nichter, forthcoming), as well as on the role of local media as transmission mechanisms of information about the nature of the political process, and their implications for the electoral fortunes of incumbent political parties (Larreguy, Marshall and Snyder Jr, 2014, 2015). The rest of the paper is organized as follows. Section I develops our theoretical model. Section II

develops the experimental analysis of the randomized corruption audits in Brazilian municipalities. Therefore, section III addresses external validity through a large-n analysis. Finally, section IV concludes and outlines some avenues for further research endeavors.

2 Model: Inequality, Development, and Mobilization

2.1 Premises and Set-up

We model the choice between two policy tools for the purpose of mobilization of low income voters: targeted goods (that can range from ad hoc transfers (bribes) to small local club goods) and tax financed public goods (programmatic politics) and study how inequality shapes the choice of strategy by political elites. The model builds on a number of assumptions. Parties have limited resources to mobilize voters. They can devote them to mobilize via targeted good or transfers or programmatic competition. Parties must choose how much they devote to targeted goods to low income voters (b_P), how much to high income voters (b_R), and how much to general public goods (g). Politics is therefore an activity initiated by elites at all ends of the ideological spectrum. Accordingly, mobilization is a choice by different groups of rich citizens. Any subgroup of rich citizens (elite party) chooses the policy set that maximizes their utility. The fundamental problem for any party is to maximize the utility of their base such that they attract the support of low income voters. That is the rich will optimize their policy selection in such a way that they (1) meet their budget constraint and (2) at least leave the poor indifferent between their policy offering and the offering that the poor would consider optimal.

To incorporate inequality into the analysis, and following the standard notation in Acemoglu and Robinson (2006), we define δ and $(1 - \delta)$ as the fraction of, respectively, rich

and poor citizens in any given society. Similarly, we define ϕ and $(1 - \phi)$ as the *share of income* of, respectively, the rich and the poor. Using these simple definitions we can express the income of the rich (w_R) and the poor (w_P) as a function of inequality:

$$w_R = \frac{\phi \bar{w}}{\delta} \quad \text{and} \quad w_P = \frac{(1 - \phi) \bar{w}}{1 - \delta}$$

Finally, elites (rulers) face a standard budget constraint defined by $t\bar{w} = b_P + b_R + g$. To capture the variety of experiences in terms of state/fiscal capacity, we impose the assumption that a share, λ , of the income of the rich is non-taxable by low income voters. Accordingly, the budget constraint is defined as:

$$t\bar{w}(1 - \lambda\phi) = b_P + b_R + g \quad \text{and} \quad \text{for the share of citizens } (1 - \delta)$$

$$\text{and} \quad t\bar{w} = b_P + b_R + g \quad \text{for the share of citizens } \delta$$

On the basis of these premises, we model the problem as a strategic interaction in which low income voters decide whether to vote (or not), and the elite parties choose which policy tool to concentrate their efforts on. Critically, we assume that the poor will vote if their utility threshold is satisfied by the offerings made by the party of the rich. Therefore, solving the model requires to take three steps, sequentially:

1. Identify the optimal values of taxes (t^*), private goods (b_p), and public goods (g^*) for the poor, given the budget constraint. These values define the indifference threshold for the poor to turnout to vote. The problem for low income voters is defined as follows:

$$\begin{aligned} & \underset{t, b, g}{\text{maximize}} \quad U_i(t, b, g) = (1 - t)w_P + \alpha \ln(b_P) + g \\ & \text{subject to} \quad t\bar{w}(1 - \lambda\phi) = b_P + b_R + g \end{aligned} \tag{1}$$

where α capture the sensitivity of low income voters to targeted goods. As detailed in the appendix, this yields the following results: $b_P^* = \alpha$; $b_R^* = 0$; $t^* = t^{max} \leq 1$; and $g^* = t\bar{w}(1 - \lambda\phi) - \alpha$. These in turn allow to define the poor voter's utility threshold for voting. Poor voters will vote under any combination of t , b , and g that generates levels of utility *at least* similar to those defined by:

$$\bar{U}_P = (1 - t^{max})w_P + \alpha \ln(\alpha) + t\bar{w}(1 - \lambda\phi) - \alpha \quad (2)$$

This expression defines the level of utility of the poor that the elites must meet with their policy offerings so that the latter turn out to vote.

2. Identify the optimal values of taxes (t^*), private goods (b_r), and public goods (g^*) for the elite. The elites, irrespective of their ideological leanings, needs to choose a portfolio of targeted goods, public goods, and taxes that meets two constraint: (1) a budget constraint (recall that the poor had limited ability to tax the elite, but the elite has full capacity to tax itself); and (2) a political constraint driven by the need to meet the mobilization threshold of low income voters defined in (2). Accordingly, its maximization problem can be defined as:

$$\begin{aligned} & \underset{t,b,g}{\text{maximize}} && U_i(t, b, g) = (1 - t)w_R + \beta \ln(b_R) + g \\ & \text{subject to} && t\bar{w} = b_P + b_R + g \\ & \text{and to} && (1 - t)w_P + \alpha \ln(b_P) + g \geq \bar{U}_P \end{aligned} \quad (3)$$

where β captures the sensitivity of high income voters to targeted goods and \bar{U}_P defines the low income voters' utility threshold as defined above.

3. Study how inequality shapes the choice of strategy and establish the equilibria resulting from the strategic interaction between rich and poor citizens.

2.2 Analysis: Comparative Statics

Solving the model (step by step details are provided in the Appendix) allows us to explore how the relationship between economic inequality and the elite's choice between targeted goods for low income citizens and (programmatically) public goods shape turnout and turnout inequality. Recall from the set-up above that we proxy inequality from two angles: the proportion of low income citizens in society ($1 - \delta$) and the share of income owned by high income citizens (ϕ). The model yields the following comparative statics between these two aspects of inequality and the choice of targeted (b_p^*) or public (g^*) goods.

1. *Inequality and the elite's choice for targeted goods towards the poor:*

$$\frac{\partial \ln(b_p^*)}{\partial(\phi)} = \frac{-\tau^{max}\bar{w}\lambda}{\alpha} \leq 0 \quad \text{and} \quad \frac{\partial b_p^*}{\partial\phi} < 0 \quad (4)$$

$$\frac{\partial \ln(b_p^*)}{\partial(1 - \delta)} = \frac{\tau^{max}w_P\lambda}{\alpha} \geq 0 \quad \text{and} \quad \frac{\partial b_p^*}{\partial(1 - \delta)} > 0 \quad (5)$$

2. *Inequality and the elite's choice for public goods:*

$$\frac{\partial g^*}{\partial\phi} = -t^{max}\bar{w} + t^{max}\bar{w}\left(1 - \frac{\beta}{\alpha}\right)\frac{b_P^*}{\alpha}\lambda \quad (6)$$

$$\frac{\partial g^*}{\partial(1 - \delta)} = t^{max}w_P - t^{max}w_P\left(1 - \frac{\beta}{\alpha}\right)b_P^*\frac{\lambda}{\alpha} \quad (7)$$

Inequality shapes the choice between bp^* and g^* through two sets of mechanisms: structural and political. In terms of structural factors, the optimal level of targeted goods towards the poor (bp^*) increases in the number of poorer voters ($1 - \delta$) and decreases in the

share of income of the upper half (ϕ). The former effect captures the strategic implications of a change in the size of the pool of potentially targetable voters. Insofar as the poor are relatively more responsive to targeted goods than the elite, an increase in the share of low income citizens makes rational for elites to increase efforts in clientelistic mobilization and reduce the supply of public goods. The latter captures the fact that as elites become wealthier, it is cheaper for them to buy votes. Interestingly, our result above also implies that the elites will shift away from clientelism to a larger extent as development increases, a result consistent with previous findings in the literature (Kirchheimer, 1965).

More interestingly, our results point to an important political mechanism: namely, the ability of the elite to hide away part of their wealth (and conversely the ability of the state to monitor and tax). A higher ability of the rich to hide their wealth (λ) enhances both the rationality of clientelism when the number of poor increases and the shift away from clientelism as development increases. By contrast, at later stages of political development, when elites cannot hide away their wealth ($\lambda = 0$), an increase in the number of the poor does not lead to increasing clientelistic efforts (rather it leads to more public goods), and an increase in the elite's wealth yields a lower provision of public goods (which they would have to fund).

These results unveil the strategic calculus of elites. Elites do not only react by mobilizing against the increasing revenue raising power of the state (as in Kasara and Suryanarayan (2014)). They actually lead and anticipate different political scenarios through their choice of mobilization technology. Our model identifies the conditions under which clientelism is rational and self-enforcing⁹, namely low development, high inequality and a political constraint on the ability of the state to prevent elites from hiding part of their wealth (low state capacity), at the expense of the provision of public goods and programmatic competi-

⁹Thus preventing endogenously in the first place the rise in state capacity that would lead upper income groups to mobilize against the state

tion¹⁰. To see this let us consider what happens to the choice of policy offerings when the elite is not constrained to meet the utility threshold that ensures the participation of the poor. To this end, we solve the elite's problem with and without the political constraint (\bar{U}) and evaluate the difference between the two. This analysis yields the following results (again, full details in Appendix):

$$g^* > g_{\bar{U}}^* \quad \text{if} \quad \beta < \alpha \quad \text{and} \quad b_p^* > 0 \quad (8)$$

The comparison outlined in [8] suggests an important result: insofar as the poor are more responsive to targeted goods than the rich and $b_p^* > 0$, both conditions that occur precisely under conditions of high inequality, meeting the political constraint of the poor implies a sacrifice in terms of public goods. Under conditions of high inequality and low tax capacity¹¹, it is both necessary and cost efficient to meet the political constraint of the poor to win elections and therefore privileging b_p^* becomes the optimal strategy. Insofar as the number of poor and the optimal size of targeted goods towards decline, elites will tend to resort to public goods as the key policy device to win elections.

To summarize, elites will resort to clientelism as opposed to public goods when they have the capacity to hide part of their income from taxes, the share of low income citizens is large, their income is low and as a result they are responsive to bribes in a society with lower average income. We refer to this scenario as a high inequality, lesser development equilibrium in which low income voters respond to elite's clientelistic strategies, thereby leading to higher levels of turnout and reducing the level of observable turnout inequality. By contrast, when the state can actually limit the ability of elites to hide their income, the income of the poor

¹⁰For evidence consistent with this theoretical contention in the Brazilian case, see Timmons and Garfias (2015)

¹¹See Besley and Persson (2011) for a discussion of some of the mechanisms through which high inequality and low tax capacity reinforce each other

is higher, and societies are relatively wealthier, elites find clientelism increasingly expensive and suboptimal relative to the provision of public goods. As this dynamics consolidates, a different scenario around programmatic competition emerges, one in which societies are more developed and relatively more equal, low income citizens are less targeted as such, leading to lower levels of turnout and higher levels of turnout inequality.

The joint consideration of these two scenarios suggest that the level of inequality and the nature of political competition jointly determine the level of turnout inequality, which leads to the following hypothesis: *Conditional on economic inequality being sufficiently high, clientelism (programmatism) increases (reduces) the level of turnout, thus reducing (increasing) the level of turnout inequality.* In addition, our argument also implies that the specific combinations of inequality and mobilization constitute an equilibrium, the symmetric conditional relationship should also hold: given clientelism (programmatism) as the dominant form of political competition, higher economic inequality increases (reduces) the level of turnout of low income voters, thus reducing (increasing) turnout inequality.

3 Empirical Strategy

Needless to say, causally identifying this relationship poses major challenges. Several recent contributions highlight various feedback channels, further enhancing the challenge of causally identifying the mechanism posited in this paper. Fergusson, Larreguy and Ri-ano (2014) show how parties with a strategic advantage in clientelistic politics will oppose investments in state capacity, thus limiting pro-equality politics. Debs, Helmke et al. (2010) show that the left fares better under equality because voters are more likely to cling to pro-redistributive coalitions that in turn help contain inequality. Bursztyn (2013) focuses in turn on voter's demand: it is the voters themselves who may not want more public goods under

conditions of high inequality and high turnout, thus reinforcing the vicious circle. Finally, incorporating several of these mechanisms into a common framework, Robinson and Verdier (2013) show how clientelism becomes self-enforcing under conditions of high inequality and low productivity. If clientelism feeds back into inequality (and viceversa), it is hard to imagine a situation in which mobilization strategies change for exogenous reasons, thus allowing to identify its mediating role between economic and political inequality.

To ameliorate these concerns, we follow in the footsteps a recent stream of scholarship exploiting Brazilian municipalities as source of leverage to identify mechanisms driving the interaction between voters and politicians in contexts with a strong incidence of corruption, clientelism, and inequality (Hidalgo and Nichter, forthcoming; Brollo, 2012; Brollo et al., 2013). Our specific strategy focuses primarily on the random audits by the Brazilian government on its municipalities (Ferraz and Finan, 2008). The federal audits on Brazilian municipalities constitute an excellent case for three reasons: first, these audits, implemented through a randomized selection of targeted municipalities, provide a plausibly exogenous manipulation of that effectiveness of clientelistic political competition that gives us significant methodological leverage; second, in terms of linking concepts and measurement, insofar as clientelism and the ability of the rich to hide their wealth go hand in hand, the available proxy for clientelism (details below) captures directly the extent to which local elites manage to privatize wealth both for private gains and for political purposes; third, the audits provide a good balance between internal and external validity in that they cover a large number of municipalities with sufficient variation in terms of our key parameters of interests, namely inequality and political mobilization strategies.

Admittedly, though, our empirical strategy faces a trade-off between identification leverage and measurement accuracy. While the data on audits provides the former, we do not have a direct measure of turnout inequality at the local level in Brazil. Instead, our

empirical strategy rests on the premise that in contexts such as Brazil aggregate turnout rates provide relevant information on the behavior of low income voters. In support of our premise, recent findings by Cepaluni and Hidalgo (forthcoming) suggest that this very much depends of the type of intervention (and their associated penalties) being evaluated. When the penalties associated with the intervention affect services with access primarily reserved to middle and upper income groups, changes in turnout rates will reflect the elasticity of these groups to the intervention (in their case, age related enforcement of compulsory voting). When the intervention affects instruments such as mismanagement of cash funds or access to basic social services, as it is the case with the anti-corruption audits, the expectation is that aggregate turnout rates trace in large part responsiveness by lower income strata.

At the other end of the trade-off, we perform a large n analysis a large n multilevel cross-national analysis of the determinants of turnout inequality as defined in figure 2). This exercise helps assess whether the relationship between economic and political inequality follows the patterns suggested by our theory more broadly, after we have provided plausible causal evidence on the workings of a key mechanism behind it. In addition, it allows us to establish the robustness of our results with a measure of turnout levels and turnout inequality that captures directly the behavior of voters at different levels of income.

4 Evidence from Brazil

We proceed in two steps: first, we describe the institutional background of the case study and outline our research design; second, we present the econometric specifications to best exploit the quasi-experimental nature of the data and discuss the findings.

4.1 Institutional Background and Research Design

The ability to identify the impact of an exogenous change in party strategies derives from two major institutional innovations introduced by Brazilian authorities since the late 1990s (Ferraz and Finan, 2008, 2011). The first consists in a constitutional change to allow the possibility of re-election at the local level in 1997, implemented from the 2000 elections onwards; the second, in the launch of a major anticorruption initiative in 2003, led by the *Controladoria General da União* (CGU), scrutinizing the use of federal funds by local authorities. The audit analyzes the use of federal funds by localities during the period 2001-2004. These data allow us to do three things:

1. Make use of various measures of the extent to which local authorities resort to clientelistic strategies in the run-up to the election (or re-election). To measure party strategies we resort to the variable that Ferraz and Finan (2011) defined as *local mismanagement* and that is defined as “the number of violations divided by the number of service items audited” (Ferraz and Finan, 2011, p. 1284). These violations include the performance of uncompetitive bidding for local contracts, the misuse of resources for earmarked for other purposes (i.e. using resources intended for health to boost teachers salaries) or other forms of turning public goods into club goods. This proxy matches quite closely the conceptualization of clientelistic strategies as a “material inducement” geared towards the modification of electoral behavior that defines clientelism (Kitschelt and Wilkinson, 2007).¹²
2. Match these measures to census-based socio-demographic, and economic information at the local level, as well as to detailed political information obtained from the Tribunal

¹²Results below are robust to replacing this indicator by proxies capturing acts of corruption more directly oriented towards targeted personal gains, such as frauds in procurement, diversions of public funds to private individuals or entities, or over-invoicing of goods and services.

Superior Electoral (TSE), including the level of turnout in local elections. While in Brazil there are compulsory voting laws in place for individuals between 18 and 70 in all elections, there remains considerable variation in the average levels of turnout across localities. For the localities in our sample, the range was between 65% and 96% in 2000 and 2004. In both instances the distribution was approximately normal (see Figure 10 in the Appendix). If anything, the reduced variation due to institutional constraints makes Brazil a harder case to test the hypothesis.

3. Evaluate whether truly exogenous changes in the type of political strategy adopted by local elites matter for changes in the level of turnout *at different levels of inequality*.

The leverage for our identification strategy emerges from several features of the design and implementation the anti-corruption program by the Brazilian federal authority. These features are as follows (see Ferraz and Finan (2011, 2008) for additional details on the program):

1. Through a sequence of lotteries, the CGU chose randomly about 8% of a total of 5500 Brazilian municipalities, including state capitals and coastal cities (N of audited municipalities=366). Once a municipality is chosen, the CGU gathers information on all federal funds received and sends a team of auditors to examine the use of these funds (particularly in the areas of public works and public services). Auditors get information from the community and the local council members about any form of malfeasance or misuse of funds, as well as from the local documentation available.
2. Immediately, after the inspection (about a week long visit), a detailed report is sent back to the CGU, which in turn forwards it to the federal accounting auditor (*Tribunal de Contas da União*), the judiciary, and all members of the local council. A

summary with the key findings for each audited municipality is made available online and disclosed to local media.

3. Critically, we have information on the date in which the reports were released to parties and voters. As a result we can exploit the contrast between those municipalities in which the audit results were released before the 2004 election and those in which they were not. Since the sequence selection-inspection-release is standard across all the audits and takes a similar amount of time once the municipality is randomly chosen, we can rule out the possibility of strategic releases by the federal government in the run-up to the 2004 election. Given the short time span between selection, visit, and release randomization determines both which particular municipality is selected and when the information is released.

The combination of the random selection of municipalities and the discontinuity around the 2004 election define both the nature of the treatment and the composition of the treatment and control groups. Since all the municipalities included in our sample have been investigated, the *treatment* is whether the results of the audit have been made public to local citizens and competing parties or not. It is therefore a purely informational treatment in which the *treatment group* includes all municipalities that have been audited and in which the results of the investigation have been released and the *control group* includes all the municipalities where the investigation took place and was released after the 2004 election. See Table 5 in the Appendix to see the balance tables for the treatment and control groups.

Our approach implies that the publication of the audit reports undermines the feasibility of clientelism as a mobilization strategy. Accordingly, we should observe that, given high levels of inequality, in those municipalities where the publication of the audit induces a switch towards more programmatic political competition, clientelism ceases to be

a viable mobilization strategy and higher levels of inequality are associated with a reduction in the levels of turnout in the next election. Before describing the main results (that to *changes in turnout*), it is worthwhile mentioning that Table 3 in the Appendix shows that the (ex-post) audited mismanagement interacted with inequality was already a good predictor of the turnout levels in 2000.

4.2 Specification and Findings

To establish whether these expectations are borne out by the data, we model the determinants of the *change in the levels of turnout between 2000 and 2004*¹³ as a function of the interaction between three variables: the degree of inequality within the municipality, as measured by Brazil’s census bureau, the type of political strategy adopted (more *local mismanagement* implies more clientelism, and viceversa), and a dummy capturing whether the municipality belongs to the treatment or the control group (before vs after 2004). To keep the comparison as sharp as possible we restrict the sample to those majors who just finished their first mandate and are seeking re-election for the first time.¹⁴ In addition, merging and expanding the databases in Ferraz and Finan (2011) and Ferraz and Finan (2008) to include all relevant potential confounders, we introduce controls concerning municipal level characteristics¹⁵, specific political and judicial institutions¹⁶, the level of federal transfers received and the level of unemployment within the municipality, mayor specific characteris-

¹³Specifically, the change in turnout is defined as $\Delta T = \frac{T_{2004} - T_{2000}}{T_{2000}}$.

¹⁴In the appendix (table 4) we provide evidence that the higher the number of terms a major has been in office, the more he/she tends to resort to clientelistic practices. Therefore, this restriction is in order to avoid the confounding effect of the length of term in office.

¹⁵Gathered from either the CGU or the Instituto de Pesquisa Econômica placed (IPEA), these include: the area, the log of population, the share of urban population within the municipality, the local gdp per capita, the change in the level of population between censuses, the share of population over 18 with at least secondary education, whether the municipality is new, the number of active public employees.

¹⁶These include whether the municipality has a judicial district, whether the municipality used participatory budgeting during the period 2001-2004, and the seats (*vereadores*) to voters ratio within each municipality

tics¹⁷, electoral competition¹⁸, and the change in the electoral census. The results are robust to the inclusion to controls for all these potential confounders, as well as to the inclusion of lottery fixed effects and state level fixed effects.¹⁹

Table 1 displays the full battery of specifications. All models include lottery fixed effects (FEs) to account for different timing in the audit release²⁰. Columns 1 and 2 do not include regional fixed effects, whereas all the other columns include them. Since we know that clientelism is geographically concentrated among certain areas, the inclusion of regional FEs is important. And also, the inclusion of regional FEs provides some safety net against unobserved heterogeneity. Finally, the last two columns exclude those municipalities in which the mayor was member of the PMDB. The reason is that the PMDB is known for being one of the parties with powerful clientelistic machines.

The results are pretty much stable across all the specifications in Table 1. It is remarkable that the results are robust to the inclusion of both mayor's characteristics controls and to regional fixed effects. Audits information release had a negative effect on turnout especially when both the audited mismanagement and inequality were high. However, the results are specially strong once the incumbents who are members of the PMDB are excluded in the last two columns. This might be explained by the fact that PMDB's mayors may have devoted resources to exonerate them after the audit releases²¹.

¹⁷Including age, gender, level of education, and past non-consecutive experience as a mayor or council member.

¹⁸Gathered primarily from the TSE these include the share of council members from the same party as the mayor, whether the mayor was from the same party as the governor, the effective number of parties in the 2000 election, and the margin of victory.

¹⁹Importantly, we have also checked if the correlation between mismanagement and inequality is the same across exposed and non exposed municipalities. To do so we have estimated several regressions with inequality prior to 2004 as dependent variable and the interaction between mismanagement and exposure (i.e. the treatment) as independent variables; controlling for the municipality characteristics and regional fixed effects. In such models the null hypothesis according to which for both the treatment (exposed) and control groups (non exposed) there is no effect of audited mismanagement on inequality cannot be rejected.

²⁰In addition, standard errors are clustered at the region (state) level.

²¹Interestingly, with the sample that excludes the PMDB mayors, the model without any controls also provides significant results.

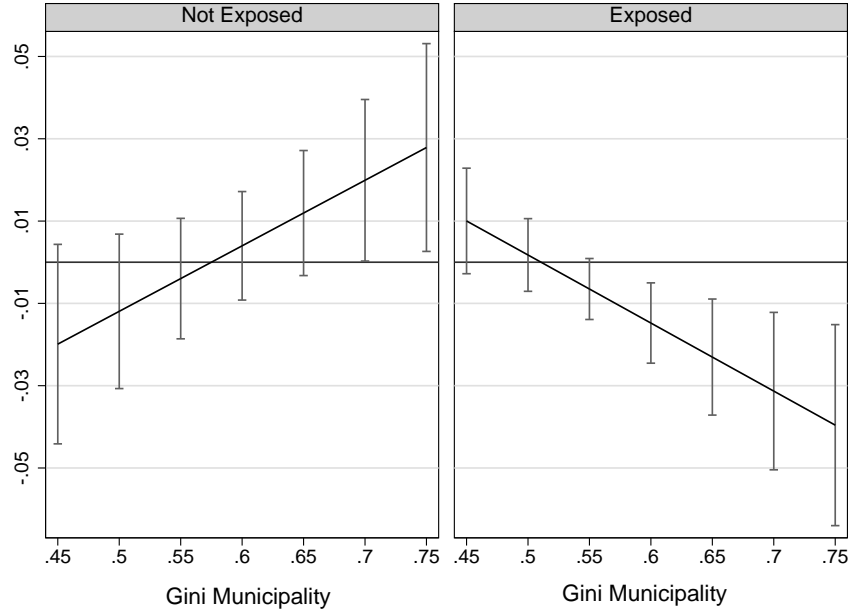
Table 1: Brazil Main Results: Audited Municipalities with Mayors in First Term

DV: Turnout Change 2004-2000	1.1	1.2	1.3	1.4	1.5	1.6
Gini	-0.217 (0.146)	-0.276 (0.164)	-0.139 (0.111)	-0.208 (0.151)	-0.349* (0.186)	-0.486** (0.183)
Mismanagement	-0.054 (0.035)	-0.069* (0.038)	-0.029 (0.031)	-0.046 (0.040)	-0.065 (0.051)	-0.092* (0.049)
Gini X Mismanagement	0.096 (0.062)	0.117* (0.067)	0.044 (0.055)	0.070 (0.069)	0.114 (0.083)	0.159* (0.082)
Exposed	-0.194* (0.105)	-0.226* (0.110)	-0.163 (0.100)	-0.201* (0.116)	-0.290* (0.143)	-0.364** (0.148)
Exposed X Gini	0.334* (0.184)	0.389* (0.190)	0.290 (0.172)	0.355* (0.193)	0.556** (0.261)	0.696** (0.257)
Exposed X Mismanagement	0.105** (0.047)	0.120** (0.049)	0.089* (0.047)	0.109* (0.054)	0.143* (0.071)	0.176** (0.071)
Exposed X Gini X Mismanagement	-0.204** (0.085)	-0.225** (0.090)	-0.169* (0.085)	-0.199** (0.096)	-0.269** (0.124)	-0.325** (0.124)
Constant	0.381** (0.164)	0.407** (0.164)	0.104 (0.144)	0.129 (0.151)	0.241 (0.212)	0.309 (0.226)
Municipality & Institutional Controls	Yes	Yes	Yes	Yes	Yes	Yes
Electoral Competition Controls	Yes	Yes	Yes	Yes	Yes	Yes
Mayor's Characteristics Controls	No	Yes	No	Yes	No	Yes
Lottery FEs	Yes	Yes	Yes	Yes	Yes	Yes
Regional State FEs	No	No	Yes	Yes	Yes	Yes
Clustered SEs at the Regional Level (26 States)	Yes	Yes	Yes	Yes	Yes	Yes
PMDB Mayors Excluded	No	No	No	No	Yes	Yes
Observations	203	203	203	203	165	165
R-squared	0.558	0.570	0.696	0.711	0.622	0.651

*** p<0.01, ** p<0.05, * p<0.1

Figure 4 and figure 5 focus on the core findings regarding the relationship between inequality and turnout in the control and the treatment groups. Figure 4 compares the marginal effect of party strategies (local mismanagement) on changes in municipal levels of turnout in the control (left panel) and treatment (right) groups at various levels of inequality. The results suggest that, given high levels of inequality, in those municipalities where the external audits were not released, the more incumbents misuse federal funds for clientelistic purposes, the higher the levels of turnout with respect to the previous election. By contrast,

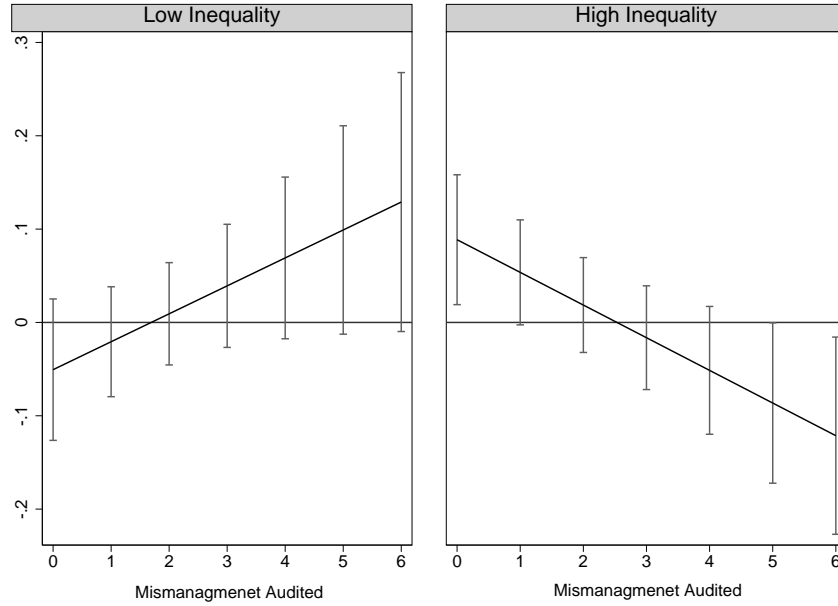
Figure 4: Marginal Effect of Local Mismanagement on Change in Turnout



in those municipalities where the audit took place and was released before the 2004 election, the same strategy triggers a reduction in electoral participation of a similar magnitude. For completion, Figure 11 in the Appendix shows the marginal effect of inequality on changes in turnout for the treatment and control groups. The results further reinforce our theoretical expectations: higher levels of inequality translate into lower levels of turnout when the audited mismanagement is low in the control group. But crucially the relationship reverses for the treatment group: more inequality leads to less turnout when high levels of clientelism has been exposed and, we argue, they are no longer effective prior to the election.

We take this to be evidence that when a political shift towards programmatism is exogenously induced, clientelism ceases to be an effective mobilization strategy (again) *under high levels of inequality*. Figure 5 digs deeper by displaying the heterogeneous effects of the treatment, namely an actual exposure to random audits. Under a status quo of low inequality and relative programmatism (i.e. low levels of mismanagement of federal funds), the results

Figure 5: Marginal Effect of Random Audit Exposure on Change in Turnout



suggest (falls just short of statistical significance) that exposure of the audit results may have demobilized voters, thus reducing the level of turnout. Interestingly, though, under conditions of high inequality and rampant clientelism, exposure of political actors to random audits has a clear and significant demobilization effect.

The quasi-experimental results on the basis of random audits of Brazilian municipalities lend strong a robust support to the idea that party strategies mediate the relationship between economic inequality and electoral turnout. Under clientelism (proxied by high levels of local mismanagement) more inequality is associated with higher levels of turnout (and by implication less turnout inequality). By contrast, the exogenous reduction in the effectiveness of clientelism enforced by randomly the federal audits, switches the nature of the relationship between inequality and turnout: once clientelism is no longer effective, higher levels of inequality lead to lower levels of turnout, and by implication to higher levels of turnout inequality.

4.3 The Mechanism: Limits on Clientelism

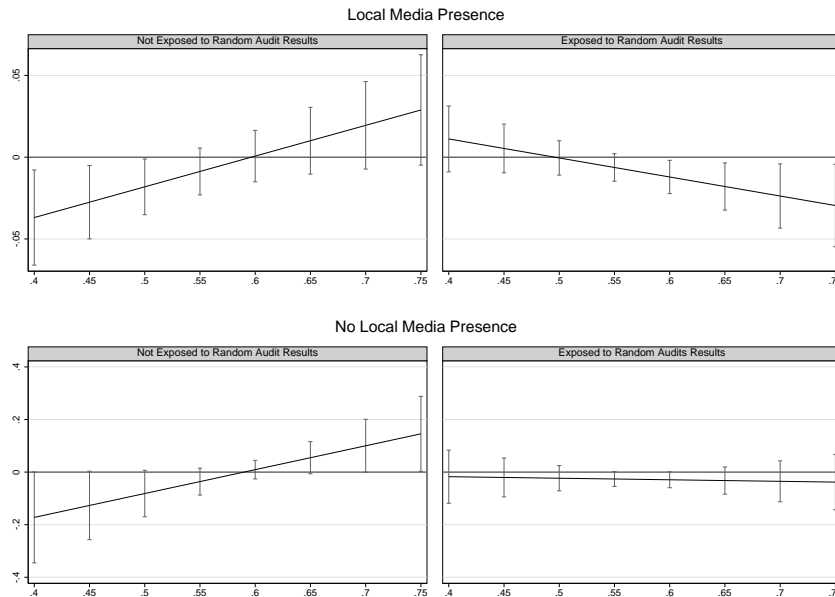
The results in the previous section are both robust and consistent with the hypothesis. To further substantiate the idea that the randomized audits exogenously reduced the effectiveness of clientelism, thus altering the connection between economic and political inequality, this section presents additional analyses that delve deeper in the nature of the mechanism triggered by the audits and their exposure. We focus first on the informational nature of the treatment by comparing municipalities with strong local media presence (radio or newspaper ²²) to those without it. If the information effect we attribute to the exposure of the audits is real, the transformation of the relationship between inequality and turnout should be particularly visible in areas with strong local media presence. Figure 6 (and the corresponding table 6 in the Appendix) examine the contrast in the effect of audits in municipalities with and without a strong local media presence.

Second, to the extent that audits render clientelism less feasible and less effective, their impact should be all the more visible in areas with a strong and effective opposition capable of capitalizing politically on the diffusion of the audits results and, more importantly, of keeping an eye on attempts by incumbents to keep on misusing federal funds for political purposes. To assess this possibility, Figure 7 (and the corresponding table 7 in the Appendix) explore the heterogenous treatment effects of the audits on the relationship between inequality and turnout across two subgroups of municipalities: those where the margin of victory in the 2000 election was below one standard deviation and those where the same margin was above, indicating that the incumbent had secured a stronger political victory. Finally, if audits really worked to constrain the feasibility of clientelism, their ability to modify the relationship between economic and political inequality should be more

²²See Ferraz and Finan (2011) for the coding of the variable distinguishing whether localities had autonomous media.

apparent in those areas where clientelism was more pervasive in the first place, namely in rural areas. Accordingly, Figure 8 (and the corresponding table 8 in the Appendix) compare the heterogenous effect of audits in urban versus rural areas.

Figure 6: The Importance of Local Media



Taken altogether, Figures 6-8 lend considerable support that the randomized audits performed by the federal government worked to undermine the effectiveness of clientelism as a mobilization strategy and triggered an exogenous change in the linkage between economic and political inequality. The sudden stop in the workings of the clientelistic machine and that attendant transition, in relative terms, to a more programmatic world where the relationship between inequality and turnout reverses took place most visibly in rural areas, where clientelism had a higher incidence, where the opposition was already politically capable and present in local institutions, and where the citizens had access to local media. In the absence of these conditions, the reversal of the positive relationship between inequality and electoral participation either was much weaker. For instance, in areas without strong local media, the positive association between clientelism and turnout ceases to be significant but fails to

Figure 7: The Strength of the Opposition

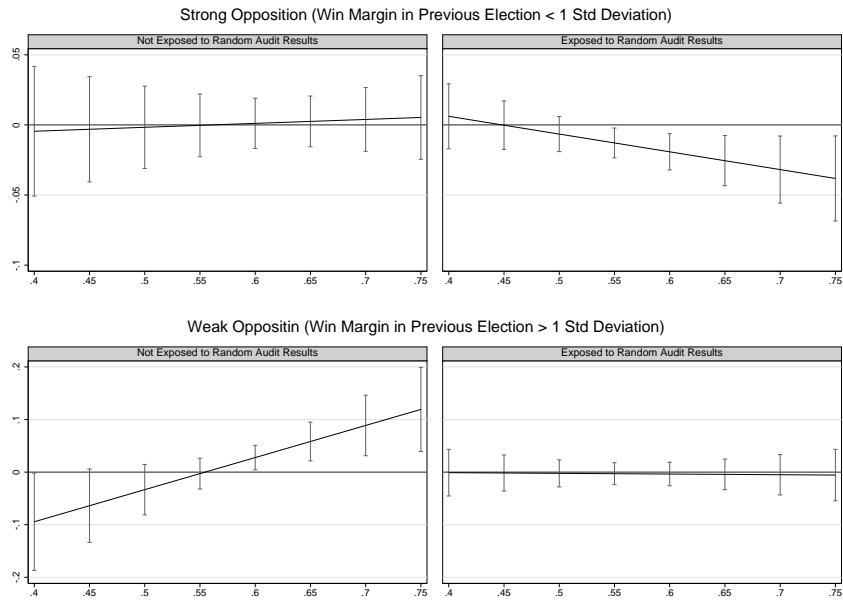
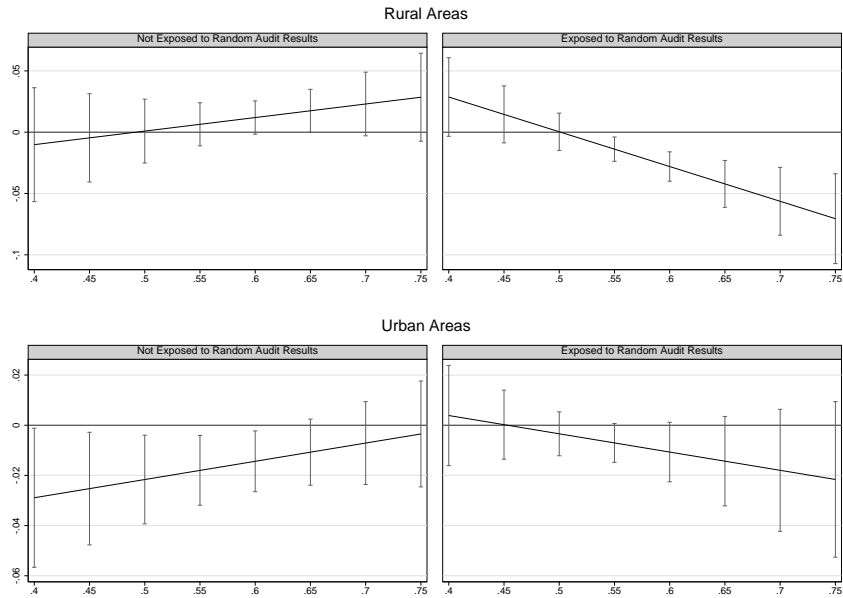


Figure 8: Urban vs Rural Environments



fully reverse. In turn, in the case of areas with a weak opposition, the exposure to audits eliminates the positive impact of clientelism on turnout but does not turn the relationship into a negative one, as happens in areas with a strong opposition. A similar situation is observable in cities as opposed to rural areas.

5 External Validity: Comparative Evidence

Our argument implies that a switch to programmatism in countries with high inequality causes a relative demobilization of low income voters that reduces overall levels of turnout and increases turnout inequality. While the previous section has identified the effect of an exogenous change in the type of political mobilization and has provided evidence on the mechanisms at work, the available data constrain us to study only the implications of such changes on the overall levels of turnout. That is, the study of the determinants of turnout across Brazilian municipalities does not rest on a direct measure of the behavioral responses by low income voters to different combinations of inequality and clientelism/programmatism. To overcome this limitation and assess the external validity of our logic, Table 2 analyzes the determinants of both low income voters turnout (columns 1-3) and the corresponding levels of turnout inequality (columns 4-6).

We perform a two-stage analysis (Lewis and Linzer, 2005) 75 country-year surveys from the Comparative Study of Electoral systems (Waves 1, 2, & 3). The first stage²³ analysis produces the measure of turnout inequality presented in Figure 2, which we then use as the dependent variable in the second stage. In the second stage we implement a FGLS estimator to account for heterokedasticity since the dependent variable in the first stage is

²³Recall that the first stage estimates the logit regression $Pr(Vote) = \Phi(\alpha + \beta_{LQ}Income_{i,LQ} + \beta_{HQ}Income_{i,HQ} + \beta_3X_i + \epsilon)$ in each country-year available across the three CSES waves; where the controls included are age, age squared, education, gender, and a dummy variable capturing urban-rural divides.

not estimated with the same precision in all the available country-surveys from the CSES data. Accordingly, the second stage models recover the standard error from the first stage and implements the Borjas correction in the second stage, weighting the second stage models by the standard errors of the individual level.²⁴ The key independent variable of interest is again the level of economic inequality in interaction with the clientelistic efforts. We use the Gini coefficient after taxes and transfers for the former ²⁵ and the same measure of political parties' clientelistic efforts reported in figure 3.

A first set of controls include potential confounders associated with structural socio-economic variables ²⁶ (some of which could potentially shape electoral behavior via economic voting). A second set of controls targets the institutional determinants of turnout among low income people: a first, and obvious one, concerns whether the country has compulsory voting legislation. In addition, the degree of institutionalization of democracy, as captured by Polity, captures socialization effects; the electoral system holds constant institutional features that constrain the role of parties as mediators between the executive and the voters. In addition, the amount of redistribution in place in any given country/year, controls for the opportunity cost of not voting for low income citizens. Finally, we also control for other features that may impact the incentives of low income voters to engage in politics such as the degree of ethnic fractionalization and the infant mortality rate (included as a proxy of the specific incidence of low levels of development on the very poor). ²⁷

The findings reported in table 2 are fully consistent with the expectations derived

²⁴In addition, the second stage models are clustered at the country-level since we have multiple CSES waves for various countries.

²⁵The data are from Solt's standardized income inequality database (Solt, 2009). We restrict our sample to the high quality database, that is to estimates with a standard error below 1.5 standard deviations.

²⁶These include: Population size, GDP per capita (*both logged*), GDP growth, and the economic globalization index.

²⁷All controls are mean centered and standardized so that they take values between 0 and 1. The sources of the cross-country variables is the Quality of Government Institute Dataset (v.2013) and the Penn World Tables.

Table 2: Cross Section: Second Stage Regressions, Clientelism Measure

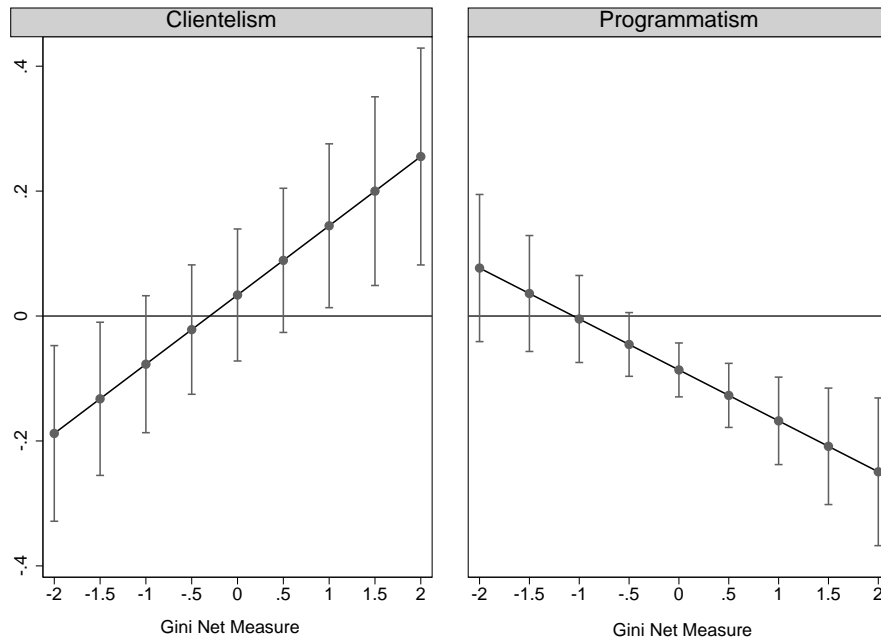
Second Stage Weighted Regressions	Low-Income Voters Turnout $\hat{\beta}_{LQ,j}$			Turnout Inequality $\hat{\beta}_{diff,j}$		
	2.1	2.2	2.3	2.4	2.5	2.6
Gini Net	-0.517** (0.220)	-0.431*** (0.154)	-0.639** (0.283)	0.359* (0.211)	0.359* (0.180)	0.754** (0.349)
Clientelism	-0.639*** (0.219)	-0.535*** (0.161)	-0.671* (0.344)	0.495** (0.183)	0.501*** (0.167)	0.831** (0.378)
Gini Net X Clientelism	1.064** (0.398)	0.937*** (0.284)	1.312** (0.542)	-0.893** (0.342)	-0.878*** (0.306)	-1.599** (0.645)
High Income Voters Turnout ($\hat{\beta}_{HQ,j}$)		0.569*** (0.091)	0.571*** (0.099)		0.316** (0.120)	0.287* (0.156)
Constant	-0.010 (0.141)	-0.083 (0.149)	-0.091 (0.174)	0.117 (0.161)	0.093 (0.153)	0.117 (0.176)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Borjas Weighting	Yes	Yes	Yes	Yes	Yes	Yes
Clustered Std Errors at the Country Level	Yes	Yes	Yes	Yes	Yes	Yes
High Quality Gini Dataset (Solt 4.0)	Yes	Yes	Yes	Yes	Yes	Yes
Clientelism Data Time Trend Correction	No	No	Yes	No	No	Yes
CSES Waves	1,2&3	1,2&3	1,2&3	1,2&3	1,2&3	1,2&2
Countries	30	30	25	30	30	25
Observations (Country-Year)	75	75	47	75	75	47
R-squared	0.293	0.544	0.514	0.638	0.698	0.674

Controls Include: lnGDPpc, Redistribution, Compulsory Voting, PR, lnPOP, Polity2, Mortality Rate, GDP Growth, Globalization Index

*** p<0.01, ** p<0.05, * p<0.1

from the model as well as with the experimental evidence reported in the previous section. Given high levels of economic inequality, clientelism works to increase the level of turnout by low income voters (columns 1-3) -i.e. when the dependent variable is $\hat{\beta}_{LQ,j}$. Conversely, programmatism shows the opposite effects (see Table 9 in the Appendix). Figure 9 displays the predicted behavior of low income voters at different combinations of economic inequality and political mobilization strategies. The cross-national patterns show remarkable consistency with the ones identified in the case of Brazilian municipalities using the overall levels of turnout as the dependent variable: given high levels of economic inequality, clientelism (programmatism) increases (reduces) the political engagement of low income voters. On the other hand, columns 4 to 6 show in turn how the behavior of low income voters translates into the overall patterns of turnout inequality ($\hat{\beta}_{diff,j}$). Interestingly, these results are ro-

Figure 9: Marginal Effect of Party Strategies on Low Income Voters Turnout



bust to the inclusion of a control for the level of political engagement among high income voters. In contrast to what Kasara and Suryanarayan (2014) report, namely that turnout inequality is primarily a function of the response by high income voters to redistributive threat, our findings suggest that cross-national differences in turnout inequality reflect how parties strategize the mobilization of citizens in the lower half of the income distribution. In equilibrium, the mobilization strategy chosen by parties does mediate the impact of economic inequality on (turnout) inequality. For completion, Figure 12 in the Appendix shows the marginal effect of inequality on changes in turnout for the treatment and control groups. The results further reinforce theoretical expectations: conditional on clientelism, being the dominant political strategy, an increase in inequality translates into higher levels of turnout by low income citizens and lower levels of turnout inequality.

6 Conclusion

This paper has developed an explanation of turnout inequality based on the interaction between economic inequality parties' mobilization strategies to target voters. We have shown formally that under high inequality levels parties have incentives to prioritize clientelistic strategies that boost low income voters' turnout and, as a result, reduce turnout inequality. We have also shown how these incentives disappear once inequality declines: parties adjust their strategies to programmatic competition over public goods oriented towards upper income voters, and turnout inequality increases. By exploring the connection between political and economic inequality our analysis contributes to a better understanding of the mechanisms behind the persistence of political and economic underdevelopment in many large democracies around the world. Our account for the relationship between economic and political (turnout) inequality builds on two types of evidence: a quasi-experimental comparison facilitated by the randomized anti-corruption audits conducted by the Brazilian government from 2003 onwards, and a large n , multi-level analysis that exposes the mediating role of political mobilization strategies using available observational data. The former unveils the working of the key mechanisms posited by the theory in a setting in which the key political mechanism at work, i.e. the type of political mobilization strategy, is manipulated exogenously and cases are allocated randomly into the manipulation. The latter confirm both the nature and the scope of the conditional relationship between economic inequality, political mobilization, and political inequality.

So far, we have treated the divide between clientelism and programatism as either long-run equilibria across nations or as a mechanism that can be manipulated externally in a quasi-experimental set-up, therefore altering its role as mediating mechanism in the relationship between economic and political inequality. Yet the theoretical model also sheds lights

on the endogeneity between party strategies on the one hand and the levels of development and inequality (see also Kitschelt and Kselman (2013)). Looking ahead, an obvious next step would be to examine empirically the long-term origins of various mobilization strategies as a joint function of inequality and development. In addition, the analysis in this paper has purposefully excluded political competition between several parties from the theoretical model. Focusing on competition in future research would be particularly important to understand the mechanisms driving turnout inequality in more advanced societies where clientelism is less pervasive. Finally, this paper has taken advantage of an exogenous manipulation of clientelism. The natural complement to these efforts towards the assessment of the theory presented in this paper involves identifying and exploiting situations in which the levels of economic inequality change exogenously.

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Appendix for Online Publication Only

Appendix I: Theory

We begin by defining the offerings elites need to provide such that low income voters turn out to vote. The problem for low income voters is defined as follows:

$$\begin{aligned} & \underset{t,b,g}{\text{maximize}} && U_i(t, b, g) = (1 - t)w_P + \alpha \ln(b_P) + g \\ & \text{subject to} && t\bar{w}(1 - \lambda\phi) = b_P + b_R + g \end{aligned} \quad (1)$$

Where α capture the sensitivity of low income voters to targeted goods. The analysis yields the following results:

1. $b_P^* = \alpha$
2. $b_R^* = 0$
3. $t^* = t^{max} \leq 1$ since utility is linear in t
4. $g^* = t\bar{w}(1 - \lambda\phi) - \alpha$

Accordingly, poor voters will vote under any combination of t , b , and g that generates levels of utility *at least* similar to those defined by:

$$\bar{U}_P = (1 - t^{max})w_P + \alpha \ln(\alpha) + t\bar{w}(1 - \lambda\phi) - \alpha \quad (2)$$

This expression defines the level of utility of the poor that the elites must meet with their policy offerings so that the latter turn out to vote. The elites, irrespective of their ideological leanings, need to choose a portfolio of targeted goods, public goods, and taxes that meets two constraints: (1) a budget constraint (recall that the poor have limited ability to tax the elite, but the elite has full capacity to tax itself); and (2) a political constraint driven by the need to meet the mobilization threshold of low income voters defined in (2). Accordingly, their maximization problem can be defined as:

$$\begin{aligned} & \underset{t,b,g}{\text{maximize}} && U_i(t, b, g) = (1 - t)w_R + \beta \ln(b_R) + g \\ & \text{subject to} && t\bar{w} = b_P + b_R + g \\ & \text{and to} && (1 - t)w_P + \alpha \ln(b_P) + g \geq \bar{U}_P \end{aligned} \quad (3)$$

Where β captures the sensitivity of high income voters to targeted goods and \bar{U}_P defines the low income voters' utility threshold as defined above.

The Lagrangian is defined as:

$$\begin{aligned} \mathcal{L} = & (1-t)w_R + \beta \ln(b_R) + t\bar{w}(1-\lambda\phi) - b_P - b_R + \\ & + \mu[(1-t)w_P + \alpha \ln(b_P) + t\bar{w}(1-\lambda\phi) - b_P - b_R - \bar{U}] \end{aligned} \quad (4)$$

From here it follows that:

$$t_R^* = t^{max} \leq 1 \quad \text{since utility is linear in } t \quad (5)$$

$$\frac{\partial \mathcal{L}}{\partial b_P} = -1 + \mu\alpha \frac{1}{b_P} - \mu = 0 \quad (6)$$

$$\frac{\partial \mathcal{L}}{\partial b_R} = \beta \frac{1}{b_R} - 1 - \mu = 0 \quad (7)$$

$$\mu[(1-t)w_P + \alpha \ln(b_P) + t\bar{w} - b_P - b_R - \bar{U}] = 0 \quad (8)$$

From [4]-[6], it follows that:

$$b_P^* = \frac{\alpha\mu}{1+\mu} \quad (9)$$

$$\mu = \frac{b_P}{\alpha - b_P} \quad (10)$$

$$b_R^* = \frac{\beta}{1+\mu} = \frac{(\alpha - b_P)\beta}{\alpha} \quad (11)$$

Substituting (10) into the CSC (7), which must be binding given that $\mu > 0$, we obtain:

$$\alpha \ln(b_P) + b_P \left(\frac{\beta}{\alpha} - 1 \right) + t^{max} \bar{w} - \beta + (1 - t^{max}) w_P = \bar{U} \quad (12)$$

Inequality and the Elite Choice of Targeted Goods for the Low-Income Voters

From [11] and [12] it follows that

$$\alpha \ln b_p^* = \beta - \alpha + \alpha \ln \alpha - t^{max} \bar{w} \lambda \cdot \phi \quad (13)$$

Which yields

$$\ln b_p^* = \frac{\beta}{\alpha} - 1 + \ln \alpha - \frac{t^{max} \bar{w} \lambda \cdot \phi}{\alpha} \quad (14)$$

From which it follows that

$$b_p^* = e^m, \quad \text{where } m = \frac{\beta}{\alpha} - 1 + \ln(\alpha) - \frac{\tau^{max} \bar{w} \lambda \phi}{\alpha} \quad (15)$$

Which in turn allows us to establish the following comparative statics on the impact of inequality on the level of targeted goods towards citizens in the lower half of the distribution:

1. With respect to the share of income of those above the mean (ϕ), it follows:

$$\frac{\partial \ln(b_p^*)}{\partial(\phi)} = \frac{-\tau^{max} \bar{w} \lambda}{\alpha} \leq 0 \quad (16)$$

Note as well that:

$$\underbrace{\frac{\partial \ln(b_p^*)}{\partial \phi}}_{\leq 0} = \underbrace{\frac{\partial \ln(b_p^*)}{\partial b_p}}_{> 0} \frac{b_p^*}{\partial \phi}$$

From which it follows that:

$$\frac{\partial b_p^*}{\partial \phi} < 0$$

2. With respect to the share of voters below median income ($1 - \delta$):

Substituting $\phi = -\frac{w_P(1-\delta)}{\bar{w}}$ into [13] and differentiating with respect to $(1 - \delta)$ produces:

$$\frac{\partial \ln(b_p^*)}{\partial(1 - \delta)} = \frac{\tau^{max} w_P \lambda}{\alpha} \geq 0 \quad (17)$$

Note as well that:

$$\underbrace{\frac{\partial \ln(b_p^*)}{\partial(1-\delta)}}_{\geq 0} = \underbrace{\frac{\partial \ln(b_p^*)}{\partial b_p}}_{> 0} \frac{b_p^*}{\partial(1-\delta)}$$

From which it follows up that:

$$\frac{b_p^*}{\partial(1-\delta)} > 0$$

Inequality and the Elite Choice of Public Goods

Given the budget constraint and previous results on b_p^* , b_r^* and t^{max} we have:

$$b_R^* = \frac{(\alpha - b_P)\beta}{\alpha}$$

$$b_P^* = e^m; \text{ with } m = \frac{\beta}{\alpha} - 1 + \ln(\alpha) - \frac{\tau^{max} \bar{w} \lambda \phi}{\alpha}$$

Which yields the following budget constraint

$$t^{max}[(1-\delta)w_P + \delta w_R] = e^m + \frac{(\alpha - b_P)\beta}{\alpha} + g^*$$

Rearranging on the basis of previous results, we obtain

$$g^* = t^{max}[(1-\delta)w_P + \delta w_R] - e^m - \frac{(\alpha - b_P^*)\beta}{\alpha}$$

Or developing:

$$g^* = t^{max}[(1-\delta)w_P + \delta w_R] + \left(\frac{\beta}{\alpha} - 1\right)e^m - \beta \quad (18)$$

Recall that

$$\phi = 1 - \frac{w_P(1-\delta)}{\bar{w}}$$

Substituting m and subsequently ϕ into [17] allows us to take the derivative of g^*

with respect to $(1 - \delta)$, which yields the following result:

$$\frac{\partial g^*}{\partial(1 - \delta)} = t^{max}w_P + t^{max}w_P\left(\frac{\beta}{\alpha} - 1\right)e^m\frac{\lambda}{\alpha} \quad (19)$$

Rearranging we obtain:

$$\frac{\partial g^*}{\partial(1 - \delta)} = t^{max}w_P - t^{max}w_P\left(1 - \frac{\beta}{\alpha}\right)b_P^*\frac{\lambda}{\alpha} \quad (20)$$

Note that $\frac{\partial g^*}{\partial(1 - \delta)} < 0$ insofar as $\beta < \alpha$, and b_P^* in equilibrium is high enough, which suggests that insofar as the poor are more responsive to bribes than the rich, an increase in the number of poor voters implies a reduction in the optimal level of provision of public goods.

Using a similar approach we can obtain results that relate the optimal level of public goods and the share of income in the hands of high income voters. First recall that:

$$1 - \delta = (1 - \phi)\frac{\bar{w}}{w_p} \quad (21)$$

Substituting this expression and m into [17] above gives:

$$g^* = t^{max}\left[(1 - \phi)\frac{\bar{w}}{w_p}w_P + \delta w_R\right] + \left(\frac{\beta}{\alpha} - 1\right)e^{\frac{\beta}{\alpha} - 1 + \ln(\alpha) - \frac{\tau^{max}\bar{w}\lambda\phi}{\alpha}} - \beta \quad (22)$$

We can now take the derivative of (2) with respect to ϕ , yielding:

$$\frac{\partial g^*}{\partial\phi} = -t^{max}\bar{w} - t^{max}\bar{w}\left(\frac{\beta}{\alpha} - 1\right)\frac{e^m\lambda}{\alpha}$$

Rearranging we obtain:

$$\frac{\partial g^*}{\partial\phi} = -t^{max}\bar{w} + t^{max}\bar{w}\left(1 - \frac{\beta}{\alpha}\right)\frac{b_P^*}{\alpha}\lambda \quad (23)$$

The Elite's Choice of Public Goods and the Political Constraint

The results for the elite choice in the presence of the political constraint (\bar{U}) are the same as above. In what follows, we solve the maximization problem in the absence of the political constraint, and compare the optimal levels of public goods (g^*) under both circumstances (g^* vs. $g_{\bar{U}}^*$). The maximization problem without the political constraint becomes:

$$\begin{aligned} & \underset{t,b,g}{\text{maximize}} && U_i(t,b,g) = (1-t)w_R + \beta \ln(b_R) + g \\ & \text{subject to} && t\bar{w} = b_P + b_R + g \end{aligned} \tag{24}$$

$$\underset{t,b_R,g}{\text{maximize}} \quad U_i(t,b,g) = (1-t)w_R + \beta \ln(b_R) + t\bar{w} - b_P - b_R + g \tag{25}$$

Solving the problem yields:

- $t_R^* = t^{max} \leq 1$
- $b_P^* = 0$
- $b_R^* = \beta$ since $\frac{\partial U_i}{\partial b_R} = \beta \frac{1}{b_R} - 1 = 0$
- finally, substituting into the budget constraint and rearranging we obtain $g^* = t^{max}[(1-\delta)w_P + \delta w_R] - \beta$

Recall that, by contrast, the level of public goods with the political constraint ($g_{\bar{U}}^*$) is given by $g_{\bar{U}}^* = t^{max}[(1-\delta)w_P + \delta w_R] + (\frac{\beta}{\alpha} - 1)bp^* - \beta$. Comparing the optimal level of public goods provisions with and without the political constraint produces the following result:

$$\begin{aligned} g^* &\leq g_{\bar{U}}^* \\ t^{max}\bar{w} - \beta &\leq t^{max}\bar{w} + (\frac{\beta}{\alpha} - 1)bp^* - \beta \\ 0 &\leq (\frac{\beta}{\alpha} - 1) \underbrace{bp^*}_{\geq 0} \end{aligned} \tag{26}$$

This implies that $g^* > g_{\bar{U}}^*$ if $\beta < \alpha$ and $bp^* > 0$.

Appendix II: Empirics

Figure 10: Turnout Rates for Municipal Elections in Brazil, 2000 and 2004

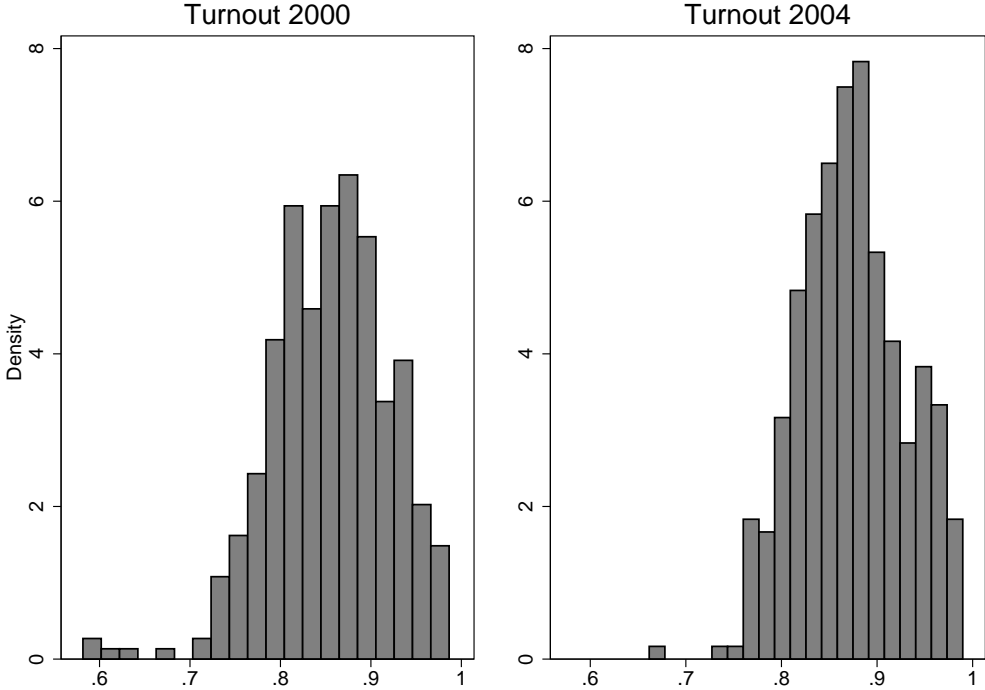


Figure 11: Marginal Effect of Inequality on Change in Turnout

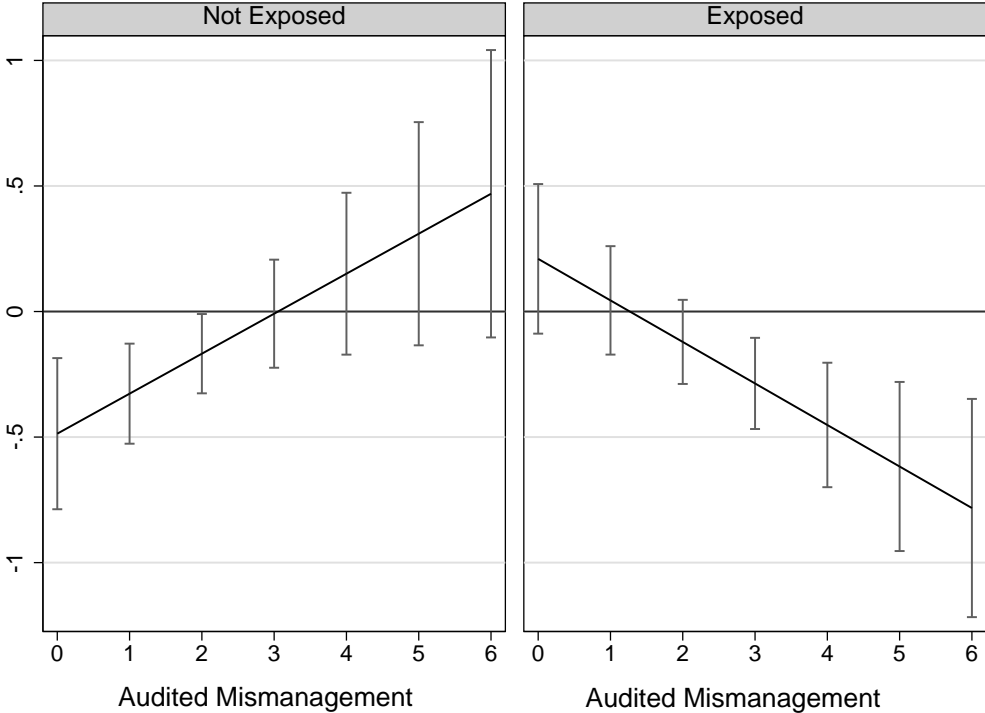


Table 3: Turnout Levels Across Audited Municipalities

DV: Turnout Level in 2000	3.1	3.2	3.3	3.4
Gini	-0.199** (0.091)	-0.189** (0.088)	-0.196** (0.087)	-0.209** (0.086)
Audited Mismanagement	-0.023 (0.020)	-0.025 (0.018)	-0.028 (0.019)	-0.030* (0.017)
Gini X Audited Mismanagement	0.053 (0.035)	0.057* (0.033)	0.061* (0.034)	0.065** (0.030)
Constant	0.994*** (0.051)	0.824*** (0.084)	0.868*** (0.104)	0.838*** (0.107)
Municipality Controls	Yes	Yes	Yes	Yes
Institutional Controls	No	Yes	Yes	Yes
Federal Transfers and Employment Controls	No	No	Yes	Yes
Electoral Competition Controls	No	No	No	Yes
Lottery FEs	Yes	Yes	Yes	Yes
Regional State FEs	Yes	Yes	Yes	Yes
Clustered SEs at the Regional Level (26 States)	Yes	Yes	Yes	Yes
Observations	366	366	366	366
R-squared	0.543	0.557	0.562	0.576

*** p<0.01, ** p<0.05, * p<0.1

Table 4: Motivation of the Exclusion of Second Term Mayors

DV: Audited Mismanagement	4.1	4.2	4.3	4.4	4.5	4.6
Gini	1.956 (1.248)	1.879 (1.243)	1.881 (1.283)	1.806 (1.279)	1.854 (1.229)	1.862 (1.204)
Mayor in First Term	3.190** (1.153)	3.190** (1.169)	3.192*** (1.143)	3.124*** (1.119)	2.918** (1.136)	2.903** (1.167)
Gini X Mayor in First Term	-5.388** (2.056)	-5.389** (2.078)	-5.393** (2.030)	-5.339** (2.002)	-5.036** (2.043)	-5.048** (2.094)
Constant	-0.688 (0.964)	0.020 (1.166)	0.016 (2.762)	-0.221 (3.000)	-0.330 (2.959)	0.793 (2.912)
Municipality Controls	Yes	Yes	Yes	Yes	Yes	Yes
Political and Judicial Controls	No	Yes	Yes	Yes	Yes	Yes
Federal Transfers and Employment Controls	No	No	Yes	Yes	Yes	Yes
Electoral Competition Controls	No	No	No	Yes	Yes	Yes
Mayor's Characteristics Controls	No	No	No	No	Yes	Yes
Lottery FEs (sorteios)	Yes	Yes	Yes	Yes	Yes	Yes
Regional State FEs	Yes	Yes	Yes	Yes	Yes	Yes
Party FEs	No	No	No	No	No	Yes
Clustered SEs at the Regional Level (26 States)	Yes	Yes	Yes	Yes	Yes	Yes
Observations	366	366	366	366	366	366
R-squared	0.423	0.424	0.424	0.428	0.435	0.456

*** p<0.01, ** p<0.05, * p<0.1

Table 5: Balance Tables for the Control (Not-Exposed) and Treatment (Exposed) Groups

Not Exposed Municipalities				Exposed Municipalities			
Variable	Mean	Std. Dev.	N	Variable	Mean	Std. Dev.	N
mismanagement	1.789	1.174	37	mismanagement	1.624	1.198	166
gini_ipea	0.578	0.065	68	gini_ipea	0.571	0.063	199
lpib02	-0.927	0.872	68	lpib02	-1.054	0.758	199
lpop	9.82	1.01	68	lpop	9.552	0.964	199
purb	0.629	0.226	68	purb	0.617	0.225	199
p_secundario	0.246	0.106	68	p_secundario	0.246	0.097	199
mun_novo	0.191	0.396	68	mun_novo	0.221	0.416	199
area	2.129	3.435	68	area	2.263	7.256	199
comarca	0.603	0.493	68	comarca	0.553	0.498	199
vereador_eleit	11.695	8.723	68	vereador_eleit	15.051	11.775	199
lrec_trans	16.006	0.947	68	lrec_trans	15.797	0.809	199
lfunc_ativ	6.287	0.929	68	lfunc_ativ	6.060	0.817	199
ENLP2000	4.735	1.921	68	ENLP2000	4.492	1.801	199
winmargin	0.151	0.142	68	winmargin	0.143	0.161	199
samepartygov98	0.206	0.407	68	samepartygov98	0.241	0.429	199
pref_masc	0.971	0.17	68	pref_masc	0.940	0.239	199
pref_idade_tse	46.985	9.426	68	pref_idade_tse	48.266	9.113	199
exp_prefeito	0.279	0.452	68	exp_prefeito	0.312	0.464	199
pref_escola	6.279	1.752	68	pref_escola	6.005	1.874	199
p_cad_pref	0.251	0.148	68	p_cad_pref	0.276	0.142	199
vereador9600	0.074	0.263	68	vereador9600	0.111	0.314	199
op_01_04	0.015	0.121	68	op_01_04	0.03	0.171	199
ratioaptos	1.072	0.144	68	ratioaptos	1.104	0.141	198
media2	0.853	0.357	68	media2	0.829	0.377	199

Table 6: The Mechanism: Local Media Presence versus No Local Media

DV: Turnout Change 2004-2000	No Local Media				Local Media	
	6.1	6.2	6.3	6.4	6.5	6.6
Gini	-1.520 (0.905)	-2.108* (1.117)	-3.089** (1.343)	-0.181 (0.157)	-0.275 (0.168)	-0.291 (0.175)
Mismanagement	-0.219 (0.175)	-0.351 (0.229)	-0.536** (0.245)	-0.087** (0.038)	-0.108*** (0.038)	-0.112** (0.044)
Gini X Mismanagement	0.395 (0.298)	0.619 (0.384)	0.908** (0.412)	0.149** (0.070)	0.183** (0.067)	0.188** (0.078)
Exposed	-0.510 (0.592)	-1.020 (0.702)	-1.440 (0.870)	-0.203* (0.108)	-0.285** (0.112)	-0.299** (0.121)
Exposed X Gini	1.019 (1.031)	1.929 (1.186)	2.577 (1.508)	0.314 (0.190)	0.450** (0.194)	0.468** (0.202)
Exposed X Mismanagement	0.187 (0.206)	0.403* (0.220)	0.542* (0.282)	0.133** (0.054)	0.162*** (0.051)	0.170*** (0.058)
Exposed X Gini X Mismanagement	-0.389 (0.354)	-0.760* (0.357)	-0.967* (0.485)	-0.246** (0.101)	-0.295*** (0.096)	-0.304*** (0.107)
Constant	2.014 (1.289)	2.387 (1.438)	3.264 (1.953)	0.251 (0.191)	0.320 (0.194)	0.322 (0.197)
Municipality & Institutional Controls	Yes	Yes	Yes	Yes	Yes	Yes
Electoral Competition Controls	No	Yes	Yes	No	Yes	Yes
Mayor's Characteristics Controls	No	No	Yes	No	No	Yes
Lottery FEs	Yes	Yes	Yes	Yes	Yes	Yes
Clustered SEs at the Regional Level (26 States)	Yes	Yes	Yes	Yes	Yes	Yes
Observations	40	40	40	163	163	163
R-squared	0.751	0.831	0.916	0.617	0.628	0.646

*** p<0.01, ** p<0.05, * p<0.1

Table 7: The Mechanism: Strong Opposition versus Weak Opposition

Turnout Change 2004-2000	Strong Opposition			Weak Opposition		
	7.1	7.2	7.3	7.4	7.5	7.6
Gini	-0.070 (0.137)	-0.105 (0.151)	-0.201 (0.223)	-0.845 (0.561)	-1.333** (0.574)	-1.285* (0.714)
Mismanagement	0.015 (0.043)	0.006 (0.047)	-0.016 (0.059)	-0.290** (0.126)	-0.360*** (0.122)	-0.339** (0.135)
Gini X Mismanagement	-0.021 (0.065)	-0.005 (0.073)	0.028 (0.093)	0.527** (0.217)	0.644*** (0.206)	0.610** (0.228)
Exposed	-0.083 (0.097)	-0.103 (0.118)	-0.147 (0.131)	-0.545* (0.300)	-0.758** (0.275)	-0.740* (0.359)
Exposed X Gini	0.142 (0.156)	0.179 (0.192)	0.257 (0.213)	1.063* (0.575)	1.473** (0.536)	1.425* (0.712)
Exposed X Mismanagement	0.044 (0.061)	0.050 (0.062)	0.073 (0.066)	0.301** (0.143)	0.370*** (0.118)	0.343** (0.139)
Exposed X Gni X Mismanagement	-0.111 (0.099)	-0.120 (0.101)	-0.155 (0.108)	-0.552** (0.244)	-0.670*** (0.197)	-0.624** (0.229)
Constant	0.238 (0.155)	0.247 (0.164)	0.279 (0.164)	0.389 (0.363)	0.967** (0.407)	0.895 (0.645)
Municipality & Institutional Controls	Yes	Yes	Yes	Yes	Yes	Yes
Electoral Competition Controls	No	Yes	Yes	No	Yes	Yes
Mayor's Characteristics Controls	No	No	Yes	No	No	Yes
Lottery FEs	Yes	Yes	Yes	Yes	Yes	Yes
Clustered SEs at the Regional Level (26 States)	Yes	Yes	Yes	Yes	Yes	Yes
Observations	140	140	140	63	63	63
R-squared	0.495	0.500	0.530	0.790	0.820	0.827

*** p<0.01, ** p<0.05, * p<0.1

Table 8: The Mechanism: Urban and Rural Areas

DV: Turnout Change 2004-2000	Urban Areas			Rural Areas		
	8.1	8.2	8.3	8.4	8.5	8.6
Gini	0.084 (0.117)	0.057 (0.110)	-0.054 (0.120)	-0.342 (0.494)	-0.226 (0.356)	-0.324 (0.361)
Mismanagement	-0.039 (0.042)	-0.041 (0.039)	-0.058 (0.043)	-0.048 (0.109)	-0.034 (0.080)	-0.054 (0.078)
Gini X Mismanagement	0.047 (0.071)	0.051 (0.066)	0.073 (0.071)	0.101 (0.177)	0.075 (0.129)	0.110 (0.129)
Exposed	-0.040 (0.101)	-0.064 (0.095)	-0.103 (0.086)	-0.318 (0.319)	-0.239 (0.251)	-0.317 (0.228)
Exposed X Gini	0.017 (0.182)	0.057 (0.175)	0.118 (0.155)	0.627 (0.541)	0.519 (0.425)	0.655 (0.396)
Exposed X Mismanagement	0.075 (0.059)	0.080 (0.055)	0.091 (0.061)	0.192 (0.131)	0.170 (0.109)	0.196* (0.105)
Exposed X Gini X Mismanagement	-0.128 (0.110)	-0.138 (0.103)	-0.145 (0.109)	-0.385* (0.213)	-0.348* (0.181)	-0.394** (0.182)
Constant	0.122 (0.180)	0.184 (0.169)	0.232 (0.193)	-0.070 (0.362)	-0.104 (0.285)	-0.050 (0.310)
Municipality & Institutional Controls	Yes	Yes	Yes	Yes	Yes	Yes
Electoral Competition Controls	No	Yes	Yes	No	Yes	Yes
Mayor's Characteristics Controls	No	No	Yes	No	No	Yes
Lottery FEs	Yes	Yes	Yes	Yes	Yes	Yes
Clustered Ses at the Regional Level (26 States)	Yes	Yes	Yes	Yes	Yes	Yes
Observations	101	101	101	102	102	102
R-squared	0.565	0.572	0.588	0.690	0.719	0.736

*** p<0.01, ** p<0.05, * p<0.1

Table 9: Cross Section: Second Stage Regression, Programmatism Measure

Second Stage Weighted Regressions	Low-Income Voters Turnout $\hat{\beta}_{LQ,j}$			Turnout Inequality $\hat{\beta}_{diff,j}$		
	9.1	9.2	9.3	9.4	9.5	9.6
Gini Net	0.299** (0.114)	0.337*** (0.092)	0.312* (0.153)	-0.351*** (0.110)	-0.330*** (0.100)	-0.289* (0.166)
Programmatism	0.354* (0.173)	0.327** (0.122)	0.201 (0.169)	-0.314** (0.126)	-0.309** (0.124)	-0.179 (0.170)
Gini Net X Programmatism	-0.423** (0.160)	-0.413*** (0.117)	-0.329* (0.181)	0.414*** (0.122)	0.403*** (0.120)	0.310 (0.182)
High Income Voters Turnout ($\hat{\beta}_{HQ,j}$)		0.607*** (0.078)	0.548*** (0.094)		0.297** (0.117)	0.320* (0.161)
Constant	-0.043 (0.113)	-0.087 (0.114)	-0.120 (0.184)	0.119 (0.130)	0.103 (0.127)	0.158 (0.210)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Borjas Weighting	Yes	Yes	Yes	Yes	Yes	Yes
Clustered Std Errors at the Country Level	Yes	Yes	Yes	Yes	Yes	Yes
High Quality Gini Dataset (Solt 4.0)	Yes	Yes	Yes	Yes	Yes	Yes
Clientelism Data Time Trend Correction	No	No	Yes	No	No	Yes
CSES Waves	1,2&3	1,2&3	1,2&3	1,2&3	1,2&3	1,2&3
Countries	30	30	25	30	30	25
Observations (Country-year)	75	75	47	75	75	47
R-squared	0.318	0.607	0.592	0.683	0.736	0.708

Controls Include: lnGDPpc, Redistribution, Compulsory Voting, PR, lnPOP, Polity2, Mortality Rate, GDP Growth, Globalization Index

*** p<0.01, ** p<0.05, * p<0.1

Figure 12: Marginal Effect of Inequality on Low Income Voters Turnout

