Turnout, Political Preferences and Information:
Experimental Evidence from Perú[*]

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Abstract

Electoral institutions that encourage citizens to vote are widely used around the world. Yet little is known about the effects of such institutions on voter participation and the composition of the electorate. In this paper, I combine a field experiment with a change in Peruvian voting laws to identify the effect of monetary (dis-)incentives on voting. Using the random variation in the fine for abstention and an objective measure of turnout at the individual level, I estimate the elasticity of voting with respect to cost to be -0.21. Consistent with the theoretical model presented, the reduction in turnout induced by the reduction in the fine is driven by voters who (i) are in the center of the political spectrum, (ii) are less interested in politics, and (iii) hold less political information. However, voters who respond to changes in the cost of abstention do not have different preferences for policies than those who vote regardless of the cost. Further, involvement in politics, as measured by the decision to acquire political information, seems to be independent of the level of the fine. Additional results indicate that the reduction in the fine does not affect the incidence of vote buying, but increases the price paid for a vote.

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JEL Classification Codes: D71, D72, O53

1 Introduction

Thirty-three countries around the world encourage participation in elections through compulsory voting. Such laws are often believed to help ensure that all voters' preferences are adequately represented. However, it is not clear the extent to which voting incentives affect turnout. Further, voting institutions may change the composition of the electorate and therefore the outcome of elections. For example, mandating voting could distort electoral outcomes by inducing less informed or uninterested voters into the polls. On the other hand, mandatory voting could ensure representation of particular groups of voters', for example the poor, who might not vote otherwise. If the voting mandate were removed, this group's preferences will not be reflected in the policies enacted. Since, both voting itself, and enforcing laws are costly, if the objectives of higher participation and more involvement were not achieved, there could be significant welfare losses for society.

To understand how voting institutions affect the outcome of an election, it is important to first explain voters' decision to participate, an open question for most of the economics and political science literature. Moreover, we need to know what type of voter is more likely to respond to incentives, the magnitude of voters' responsiveness, and the implications for public choice. In this paper I combine a field experiment with a change in Peruvian voting laws to identify the effect of fines for abstention on voting. I find that a reduction in the cost of abstention decreases turnout, and that this decrease will be more than proportional among (i) centrist voters, (ii) those who have a lower subjective value of voting, and (iii) voters who hold less political information. These results are consistent with the predictions of the rational choice model of voter behavior with imperfect information presented in the paper.

More specifically, I exploit the fact that knowledge about the reduction in the fine for abstention was not widespread. Studying the 2010 municipal elections, I generate experimental variation in the perceived cost of abstention by informing voters in the treatment group about the *new* levels of the fine for not voting. Voters assigned to the control group were reminded about the fine, without any mention of the exact amount. After the election, I conducted a follow-up survey, and collected an objective measure of turnout by asking respondents to show their ID cards with official proof of voting. Using the random variation in the fine for abstention and the objective measure of turnout at the individual level, I estimate the elasticity of voting with respect to cost to be -0.21. Extrapolating the results, this means that if voluntary voting were implemented (i.e. the fine was reduced to zero), turnout would decrease from 94.2

percent (observed in my sample) to about 74 percent, roughly what we observe in countries where voting is voluntary.

Consistent with the predictions of the model, the reduction in turnout is driven by voters with specific characteristics: centrist voters, those less interested in politics, and the uninformed. However, this change in the composition of the electorate does not necessarily imply that the outcome of the election will be affected. Poor people are not more likely to respond to changes in the fine. Interestingly, voters whose turnout decisions are more sensitive to a change in the fine do not have distinct policy preferences. Furthermore, voters who respond to the reduction in the fine by abstaining do not acquire less political information. I further explore distortions in other markets induced by mandating voting. Specifically, I analyze how a reduction in the penalties for not voting affect the market for votes, i.e. vote buying. My findings suggest that the exogenous change in the fine for abstention introduced by the treatment does not affect the incidence of vote buying, and however, it increases the price politicians pay for the marginal vote by 49 percent, which is consistent with an exogenous shift in the supply of votes.

Voting behavior has been studied by both economists and political scientists for a long time, yet there is no canonical model for understanding turnout decisions. While theoretical research modeling the determinants of voter turnout has increased in the last decade, few empirical studies have been conducted in the field to study voter behavior, let alone to test the predictions of these models. This is especially the case in developing countries. In this paper, I provide evidence supporting the predictions of one of the models derived from the classic *"calculus of voting"* literature (Downs, 1957; Riker and Ordeshook 1968).[1]

The empirical results from this paper are closely related to several strands of the literature on voter behavior and electoral institutions. First, I contribute to the growing literature on the determinants of voter turnout.[2] My paper combines an institutional change with experimental evidence from the field

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[1] Merlo (2006) and Martinelli (2007) provide excellent reviews of the theoretical models of turnout. The models available in the literature can be classified as those that emphasize the probability of being pivotal as the main motivation to vote (Borgers, 2004; Ledyard, 1984; Palfrey and Rosenthal, 1985); those that argue that citizens are driven to the polls to fulfill their civic duty and do the right thing (Harsanyi, 1980; Feddersen and Sandroni, 2006; Feddersen, Gailmard, and Sandroni, 2009, Coate and Conlin, 2004); and uncertainty voter models, which endogenize a component of the cost of voting (Deagan, 2006; Deagan and Merlo, 2009, Feddersen and Pesendorfer, 1996, 1999; Matsusaka, 1995).

[2] Several of these papers use large scale field experiments to identify the positive effects of different types of voter mobilization campaigns on turnout in the United States (Gerber and Green, 2000, 2001 and Gerber et al., 2003). This literature has also shown that social pressure and each person's social network play an important role as an extrinsic motivation for voting (Gerber et al. 2008, Gine and Mansuri, 2012, Fafchamps, et al, 2012) and that voting is habit forming: voting in one election significantly increases the probability of going to the polls in the next election (Gerber et al., 2003). Another strand of the literature emphasizes that more informed voters are more likely to vote. Areas where the TV or radio coverage expanded earlier were more likely to show higher turnout (Gentzkow, 2006, Lasen, 2005). This fact has been shown to hold with specific information campaigns at the individual level (Banerjee et al., 2011, Chong, et al., 2011). A few empirical studies more closely related to my paper use natural experiments to test whether changes in the cost of voting affect the

to understand how a change in the incentives to vote affects turnout.[3] Unlike the previous literature, I am able to quantify the changes in the cost of (not) voting at the individual level. These changes in the perceived fine are induced by a randomly assigned treatment, which allows me to causally interpret the effect on turnout, and to provide the first estimates in the literature of the cost elasticity of voting, a parameter necessary for evaluating policy interventions affecting the cost of voting.[4]

To a large extent, the lack of credible evidence on the effects of electoral rules on turnout decisions is due to the fact that there are not many changes in electoral rules around the world. When there are, and they are unexpected (or the public is not informed about them), it is hardly the case that researchers are able to collect individual-level baseline information, and more importantly, objective measures of turnout. Further, these institutions apply to every voter, which limits our ability to causally interpret changes in behavior. In this paper, I contribute to the growing literature that uses field experiments to understand voter behavior in developing countries.[5] Experimenting with the salience and information about an institutional change is a promising research tool to get causal estimates from specific institutional features. New laws are passed frequently, and for different reasons, they are not always publicized or citizens are not aware of them because of selective and limited attention. Even though it is nearly impossible to randomize an institution, we can experiment with its salience and information about it.

A third strand of literature closely related to my paper analyzes how policy making responds to changes in the electorate. The standard median voter model predicts that any change in the composition of the electorate affects who gets elected through a change in the characteristics of the median voter (Persson and Tabellini, 2000; Husted and Kenny, 1997, Godefroy and Henry, 2011). Miller (2008) and Fujiwara (2011) analyze specific events in which groups of the population with identifiable policy preferences were enfranchised. As a consequence, they observe that policies respond to the new composition of the electorate. Unlike these studies, in the case I analyze, there is no *a priori* reason to expect that the groups that stop going to the polls due to the reduction in the fine have particular policy preferences. As such,

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likelihood of going to the polls in the election day. Brady and McNulty (2011) show that an increase in the cost of voting induced by an unexpected reduction in the number of polling stations in California's 2003 gubernatorial elections generated 3.03 percentage point reduction in polling place turnout, while absentee vote increases by 1.18 percentage points. Another commonly used source of exogenous variation is the presence of inclement weather conditions in the election day. These studies find that, on average, an additional millimeter of rain tends to reduce turnout by 1 percentage point (Knack, 1994, Gomez et al., 2007, Hansford and Gomez, 2010, Fraga and Hersh, 2010). In terms of partisan effects, the results are mixed.

[3]Laboratory experiments along these lines have been conducted by Gerardi et al. (2011).

[4]Examples of such policies are the increase in polling stations, transportation to the polling stations, electronic voting, availability of ID cards, etc.

[5]Pande (2011) provides a comprehensive survey of this literature.

though the reduction in the cost of abstention changes the composition of the electorate, I find that the average citizen who stops voting does not have significantly different policy preferences, which suggests that we should not expect changes in the policies enacted if the fines were reduced.

Finally, the results of the paper also speak to the growing literature analyzing vote buying in developing countries (Finan and Schechter, 2012; Vicente, 2013; Vicente and Wantchekon, 2009). Government regulation can generate externalities in associated markets. A potential unexpected result of mandating voting could be to affect the market for votes. My results are consistent with a downward shift in the supply of votes (caused by a reduction in the cost of abstention), thus increasing the price of each vote, making it more costly for politicians to influence the outcome of the elections.

In the next section, I present a theoretical model to characterize voter behavior and motivate the empirical analysis. Section 3 gives institutional background on the Peruvian electoral system and the change in the law that reduced the fine for abstention. Section 4 explains the experimental design and the data that I use for the empirical analysis, which is presented and discussed in Sections 5 and 6. Finally, Section 7 summarizes and discusses my findings.

2   The Model

In this section I present a slight variation of the basic model from Degan (2006), Merlo (2006), and Degan and Merlo (2011), in which I introduce an additional term of interest to motivate the empirical analysis. The objective of the model is to identify voters who are at the margin between going to the polls or abstaining, which allows me to characterize the change in the electorate induced by a reduction in the fine for abstention.

The theory builds on a rational choice model where the voting decision is based on a threshold strategy: if the cost of voting is lower than the benefits, citizens go to the polls, otherwise, they abstain. I consider an election where voters share a common prior about the distribution of ideological positions of the candidates, but are uncertain about their actual positions. The net cost of voting has three components: (i) an exogenous benefit of voting, i.e. the utility derived from fulfilling one's civic duty, (ii) a fine for abstention, and (iii) an endogenous cost of voting, which is the utility loss due to the possibility of making a *voting mistake*, i.e. voting for a candidate whose ideological position is far from the voter's.[6] This

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[6]For simplicity, the model abstracts from the cost of actually going to the polls and voting. Given that in the empirical section I use data from a randomized experiment, the cost of voting are balanced between the treatment and control groups.

endogenous component drives the predictions of the model, which imply that a reduction in the cost of abstention will reduce turnout. Voters at the margin are the ones driving the reduction in turnout, and they (i) are in the political center, (ii) have a lower subjective value of voting, and (iii) hold less political information.

Assume that there are two candidates running in the election, which I denote by $j \in J = \{L, R\}$. Each candidate has a position y_j in a uni-dimensional policy (or ideological) space $Y = [-1, 1]$. We can interpret the ideological or policy space as left/right, where 0 represents the center. I denote by L the candidate who has the lower y_j, thus $y_L < y_R$.

Citizens know their own ideological position $y_i \in [-1, 1]$, but are uncertain about the candidate's position. From the voter's perspective, the candidate's ideological positions are random variables (y_L, y_R) distributed according to a joint probability distribution $F(y_L, y_R | y_L < y_R)$. Without loss of generality, I assume that $F(\cdot)$ is uniformly distributed on the support $[-1, 1]$. The main source of heterogeneity between voters is the amount of information each voter i holds about the candidates, which I denote by $\Omega_i \in \Omega$, a refinement of $F(\cdot)$. If a voter is completely uninformed about the ideological position of the candidates, she observes $F(\cdot)$, while if she has perfect information, $\Omega_i = (y_L, y_R)$, thus knowing exactly where the candidates are located. Information is assumed to be an exogenous, individual level characteristic.

Voters are also heterogeneous in the subjective benefit they derive from voting, or from fulfilling their civic duty. This utility is represented by d_i, which is assumed to follow a uniform distribution on the support $[0, 1]$.[7] There is a cost of not going to the polls, a fine for not voting, M_i. Voters observe a noisy signal about the level of the fine for not voting, and hence each voter has a different perceived fine ($M_i = M + \varepsilon_i$). For analytical purposes, I normalize M_i to range between zero (no fine) to one (maximum perceived fine).

The voter's problem can be conceptualized as a two stage maximization. First, she evaluates the costs and benefits of voting. If she decides to vote, she chooses between the two candidates based on which has a higher likelihood of being closer to her own ideological position, given her information set. The optimization over the turnout decision and candidate choice is thus given by:

$$\underset{t \in \{0,1\}, v \in \{L,R\}}{Max} \quad t\left[d_i - C(v_i\,;\,y_i, \Omega_i)\right] - (1-t)M_i \tag{1}$$

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[7]This assumption means that nobody gets disutility from voting. The model can be extended to incorporate negative values for d_i.

where, $t_i \in \{0, 1\}$ denotes the turnout decision, $v_i \in \{L, R\}$ is the candidate choice, and $C(v_i \, ; \, y_i, \Omega_i)$ is the utility loss associated with making a *"voting mistake"* by choosing candidate v_i, given the voter's position (y_i) and information set (Ω_i).

There is a continuum of voters of measure 1, hence no voter can be pivotal. This means that all the costs and benefits of voting are realized at the time of the election. Each citizen evaluates candidate y_j based on a utility function of the form:[8]

$$u(y_i, y_j) = -(y_i - y_j)^2 \tag{2}$$

The uncertainty in the candidate's ideological position generates the possibility of making a mistake by voting for the *"wrong"* candidate, which carries a utility loss. Given the information held by citizen i (Ω_i) and her ideological position (y_i), the voter's expected utility loss of voting for candidate L is given by:[9]

$$C(L \, ; \, y_i, \Omega_i) = E\left[\mathbf{1}\left\{ u(y_i, y_L) < u(y_i, y_R) \right\} \cdot \left(u(y_i, y_R) - u(y_i, y_L) \right) \mid \Omega_i \right] \tag{3}$$

Note that Equation (3) is strictly greater than zero only when a *voting mistake* occurs, i.e. when a vote for candidate L is cast while she should have voted for R (i.e. when $u(y_i, y_L) < u(y_i, y_R)$). This utility loss is realized when casting the vote, and can be thought of as a sense of regret for choosing the *wrong* candidate. If a voter is perfectly informed, she always votes for the *correct* candidate and does not face any utility loss, thus $C(L \, ; \, y_i, \Omega_i) = C(R \, ; \, y_i, \Omega_i) = 0$. Voters who hold less information have a higher probability of making a *voting mistake*, and hence are more likely to face a utility loss.

Working backwards through the voter's problem from Equation (1), I characterize the candidate choice:

$$v^*(y_i, \Omega_i) = \begin{cases} L & if \ C(L \, ; \, y_i, \Omega_i) < C(R \, ; \, y_i, \Omega_i) \\ R & if \ C(R \, ; \, y_i, \Omega_i) < C(L \, ; \, y_i, \Omega_i) \end{cases} \tag{4}$$

if $C(R \, ; \, y_i, \Omega_i) = C(L \, ; \, y_i, \Omega_i)$, the citizen randomizes between the two options. Simplifying the ex-

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[8]Alvarez (1998) provides a justification for the use of a quadratic functional form in the context of an electoral environment with uncertainty about the candidates' policy positions. All of the results in this section also hold for more general single-peaked pay-off functions of the form: $u_i = -|y_i - y|^\beta$, $\beta \geq 1$

[9]The expression for the utility loss of voting for candidate R is symmetric.

pression above, citizen i votes for candidate L *iff*:[10]

$$C(L\,;\,y_i, \Omega_i) - C(R\,;\,y_i, \Omega_i) < 0$$

$$E\left[u(y_i, y_L) - u(y_i, y_R)\,|\,\Omega_i\right] > 0 \tag{5}$$

Substituting the utility function (2) in Equation (5) and making the condition bind, one can derive τ_i, the ideological position y_i that will make the voter indifferent between choosing either candidates, i.e. makes Equation (5) equal to zero:

$$\tau_i = \frac{E\left[y_R^2 - y_L^2\,|\,\Omega_i\right]}{2E\left[y_R - y_L\,|\,\Omega_i\right]} \tag{6}$$

The optimal voting rule for voter i, $v^*(y_i, \Omega_i)$ is completely specified by the voter's ideological position (y_i), and her ideological cut-off (τ_i). Voter i chooses candidate L *iff* $y_i < \tau_i$, and candidate R *iff* $y_i > \tau_i$. If the information set held by citizen i is $\Omega_i = (y_L, y_R)$, the cut-off will be exactly the midpoint between the two ideological position of the candidates: $\tau_i = \frac{y_L + y_R}{2}$, and when $\Omega_i = F(\cdot)$, the cut-off is zero. Given the assumption on the distribution of $F(\cdot)$, τ_i is symmetrically distributed with mean zero. Note that the previous formulation always leads to sincere voting. Unlike other theoretical settings , there is no strategic voting in this model (Feddersen and Peserdorfer, 1996).

Using this result, we can characterize the turnout decision, given that the utility loss of voting is $C(y_i, \Omega_i) \equiv C(v_i^*(y_i, \Omega_i))$:

$$t(y_i, \Omega_i) = \begin{cases} 1 & if\ C(y_i, \Omega_i) - d_i \leq M_i \\ 0 & if\ C(y_i, \Omega_i) - d_i > M_i \end{cases} \tag{7}$$

The model predicts that an exogenous change in the cost of abstention (M_i) will cause lower turnout. Further, voters at the margin between going to the polls and abstaining can be characterized in terms of the three key dimensions of heterogeneity. Hence, upon a reduction in M_i, we will observe that citizens who abstain will more likely be those who:

1. *Have an ideology closer to τ_i:*

   Note that the utility loss of voting $C(y_i, \Omega_i)$ peaks at the ideological cutoff τ_i. Intuitively, the closer

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[10]The expression is symmetric for the vote for candidate R.

a citizen is to her ideological cut-off, the more likely she is to make a *"voting mistake"* for any pair (y_L, y_R). Hence, the payoff loss associated with voting is higher for voters closer to τ_i.

Given that τ_i is symmetric with mean zero, voters with centrist ideology will face a higher expected loss from voting, and thus (in expectation) will be at the margin.

2. *Have a lower subjective benefit of voting* (d_i):

   The parameter d_i follows a uniform distribution, which is independent of Ω_i (and thus of the utility loss of voting). From Equation (7), a lower d_i implies a higher net cost of voting, and thus, for any ideology or information set the probability of voting is lower.

3. *Have less information:*

   $C(y_i, \Omega_i)$ is decreasing on Ω_i, implying that less informed voters are more likely to make a *"voting mistake,"* and hence have a higher expected utility loss of voting for any given y_i.

The predictions of the model will be tested in Section 5.

3   Institutional Background

Since 1933, voting in Perú, as in most Latin American countries, is mandatory for all citizens between 18 and 70 years old. Abstention is penalized with civil disenfranchisement. Citizens who are unable to show proof of voting (an official stamp on the ID card) are denied public or private services for which official identification is required.[11] In order to get back full citizenship, a fine has to be paid in the National Bank, and once the payment is done, the bank official places a stamp on the ID card. De facto, enforcement of the sanctions is mixed: it is usually stronger at banks, the judiciary, public notary, passport or driver license offices, or the public registry. A more mild enforcement is usually observed at lower levels of government or basic service delivery, such as police stations, municipalities, birth or death registry, social programs, among others.[12]

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[11]Civil disenfranchisement implies an effective ban on getting official certificates from the national registrar, taking part in any judiciary or administrative process, signing a contract, taking a government job, getting a passport, being part of the social security system, getting a driver's license, or in general identifying themselves officially (which includes doing any transaction in a bank, such as cashing a check). Not having voted in an election does not restrict the right to vote in any other election.

[12]In Perú, the official ID card is used for voting. 99% of the adult population has an ID card and thus is automatically registered to vote. Votes can only be cast in person on the election day, and citizens can only vote in the district where they are registered. In case someone lives in a district different from the one where she is registered, she is subject to the fine level of the latter. Voting by mail or other mechanism for remote or delayed voting is non-existent.

The high level of the fine for abstention has historically led to high turnout. For example, in the June 2006 presidential election, 87.7 percent of the eligible population (18 years old or older) voted, while in the local elections held in 2002, turnout was 83.1 percent.[13] Until 2006 the fine was S/.144 (144 Nuevos Soles, $\backsim US\$50$), which represented about 26 percent of the minimum official monthly wage. That year, Congress started discussing whether or not to change voting to a voluntary regime, with strong proponents on both sides. A final agreement was reached in August 2006, when it passed a law according to which voting was still mandatory, but the fine was reduced for everyone, with larger reduction for citizens registered in the poorest districts.

The poverty level of the district was determined based on a ranking generated by the national statistical institute (INEI). Overall, districts were classified into one of three poverty (and fine) categories: abstainers registered in non-poor districts (184 municipalities) are subject to a fine of S/.72 ($\backsim US\$25$); those in poor districts (793 municipalities) saw the fine reduced to S/.36 ($\backsim US\$12.50$), while in extremely poor municipalities (852 municipalities), the fine was reduced to S/.18 ($\backsim US\$6$).

Importantly, no major news outlet reported the changes in the fine, and no campaigns were conducted to spread the information about the new fine structure.[14] In fact, most of the population is still uninformed about the *new* fine, as will be shown in Section 4. The fact that electoral laws changed, and very few people were informed about it, presented a unique opportunity to explore the effects of (dis-)incentives to vote on voter behavior, and to test the predictions of the model.

4   Experimental Design and the Data

The goal of the empirical analysis is to identify the causal effect of changes in the cost of abstention on turnout by comparing voters exposed to different levels of the fine. One way to address this question empirically would be to compare voting behavior of citizens in districts with different level of the fine

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[13]The mild enforcement is reflected in the percentage of the population that actually pays the fines. For example, in the November 2006 local elections, out of the 12.4 percent of abstainers, about 14.1 percent of them had paid their fines as of July 2010. In urban districts, this proportion is higher. For example, in the region of Lima, the abstention rate was 11.87 percent, and out of the abstainers, 17.9 percent paid the fine as of July 2010.

[14]*El Comercio*, the major newspaper in the country only published two very short articles about this on July 6th (when the law was still under debate) and on November 20th, 2006 (the day after local elections were held). Additionally, the government offices in charge of publicizing electoral rules and providing electoral information, the ONPE (National Office of Electoral Processes) and the JNE (Electoral Jury), get a share of their annual revenues from the collection of these fines and use turnout as a performance indicator, hence they did not have incentives to publicize the new law. In 2004, 24.5 percent of ONPE's budget came from the collection of fines, while for the JNE, this share was 30.5 percent. Informal conversations with government officials at the time indicated that the heads of both offices were committed to keeping high turnout in elections, so no efforts were made to publicize the law.

for abstention, however this strategy would face two major challenges. On the one hand, the fact that voters are not informed about the new levels of the fines imply that the researcher would not observe any variation in the independent variable of interest (the perceived fine). Even if this variation were observable, it would probably be correlated with other relevant variables, such as information, or interest in politics, which leads to a bias in the estimated effects. Additionally, it would be impossible to disentangle the effect of district specific characteristics, such as the electoral context (candidates running for office, availability of polling stations, etc.) or poverty level, from the effect of the different fine levels. For example, given the well documented association between wealth and turnout (Matsusaka, 1995, Perea, 2002, Frey, 1971), if we compared turnout in the average poor district with that in the average non-poor district, we would not be able to know whether the differences are due to wealth or the fine.

One way to isolate the effect of district specific characteristics from different levels of the fine would be to compare districts that are on the threshold between being classified as poor and non-poor, or between being extremely poor and poor. In expectation, districts that are just on both sides of each of the thresholds should be comparable in all relevant characteristics. Further, if we believe that the monetary cost of abstention matters in the decision to vote, had voters been informed about the reduction in the fine, we would observe a decrease in turnout in the elections that took place after the reduction in fines, i.e. the November 2006 and October 2010 local elections. On the other hand, this change in turnout would not be present in the elections that took place before the law came into effect, for example in the 2002 local elections.

Figure 1 shows the results of a regression discontinuity analysis for the last three local elections (2002, 2006, 2010).[15] For each of these elections, districts are ranked from richest to poorest, plotting their turnout, and fitting a cubic polynomial for municipalities in each of the three poverty levels.[16] The vertical lines indicate the thresholds at which a district is categorized as non-poor, poor, or extremely poor. There is no statistically significant difference in turnout between districts located at each side of the thresholds in any of the elections analyzed, as one would expect if the population were informed about the new levels of the fine.

The results presented in Figure 1 can be interpreted as evidence that changes in the monetary cost

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[15]For the 2010 elections, I exclude the 10 districts where I run the experiment from the sample to allow a cleaner comparison. The plots for 2002 and 2006 include these districts, but the basic results remain the same if I exclude them. The regression versions of Figure 1 are available upon request.

[16]In municipal elections, voters elect the mayor for the district, the mayor for the province, and the regional president. These are the three sub-national levels of government. In this paper, I use district and municipality interchangeably.

of not voting do not influence the decision to go to the polls. Alternatively, it could mean that the cost matters for turnout decisions, but that voters were not informed about the change in the fine. Voters decide whether or not to go to the polls based on their perceived cost of abstention, and if these beliefs are still aligned with the old level of the fine (which did not vary across poverty categories), we shouldn't expect to see a difference at each threshold.

4.1 Experimental Design and Sample

Following the latter interpretation of the results from Figure 1, I designed the experiment to generate within district, individual level variation in the cost of abstention. I do this by randomly providing information on the actual levels of the fine to voters in 10 districts in the Region of Lima just before the municipal elections of October, 2010. Within the region of Lima, I chose districts on each side of the two thresholds. After the election, I re-interviewed all the subjects in the treatment and control groups and, among other information, I collected objective measures of turnout by asking respondents to show official proof of voting (sticker in the ID card). The advantage of this strategy is that I can compare an objective measure of the voting behavior of people who likely believe that the fines were still at the previous level (control group) with those whose information set had been updated by the treatment.

Within each district, I randomly sampled villages (in rural areas) or neighborhoods (in urban areas), and within each village we interviewed individuals eligible to vote (between 18 and 70 years old) from a random sample of households.[17] By clustering the randomization at the village level, I can make comparisons within villages, thus isolating the effect of any district (and village) specific characteristic. The unit of observation is the individual, but the treatment status is determined at the household level, hence in the empirical analysis I allow for arbitrary correlation of the errors within the household by clustering them at that level. Table A.1. in the Appendix provides descriptive statistics about the districts from which the sample was drawn, while Figure 2 shows the location of the districts in a map, indicating their poverty category.

The baseline interview took place between one and four weeks before the municipal election of October 3rd, 2010. I included questions regarding household characteristics, composition and expenditures. I also asked about basic demographics, political preferences, policy priorities for the district, knowledge about the current electoral process, past voting, and usage of public services. Importantly, respondents were

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[17]In the national census, the villages are called "centro poblado."

asked whether they knew if there were consequences for not voting, and what were these consequences (open question). If the respondent mentioned that there was a fine, I inquired about the amount of the fine. At the end of the interview, the enumerator provided the treatment.

If the household was chosen to be part of the treatment group, the enumerator read a script informing the respondent about the level of the fine in effect in the district where she was registered to vote.[18] In order to reinforce the message, the enumerator showed a copy of the official newspaper where the law was published, also she gave the respondent a flier with the exact text of the script, and the message was sent by SMS during the week before the elections (for those who had a cell-phone). To avoid differential salience between the treatment and control group, the latter received a reminder that voting is mandatory and that there is a fine for not voting (without mentioning anything about the amount of the fine).[19] Respondents in the control group also received a flier repeating the script, and those with a cell phone received SMS reminders. The purpose of the treatment provided is to induce exogenous variation in the perceived fine by updating the information for the treatment group, while keeping all else constant for the control group. In practice, the script provided to the control group did not provide any new information, since in the baseline 98.5 percent of respondents reported that abstention was penalized with a fine.

The follow-up survey was gathered between one and three weeks after the election. The main variable collected in the survey was whether or not each respondent voted in the election. I measured voting through a self reported variable, but also collected an objective measure of voting by asking each respondent to show their ID card, where the enumerator confirmed if it had the official stamp or not.[20] Among the 2,275

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[18]Along the questionnaire, we asked every respondent the district where she is registered to vote. This information was cross checked with the subject's ID. Every enumerator had a list of the 1,834 districts in the country, with their corresponding poverty level, so they were able to tell each respondent the exact level of the fine applicable the district where she was registered.

The script for the treatment group was as follows (see Figure A.1. in the Appendix for the original version, in Spanish):

> *Dear Sir/Madam,.*
>
> *On August 2006, Congress passed a law in which the fines for not voting were reduced (Ley No. 28859). According to this law, those who do not vote are no longer subject to a fine of S/.144, but the fines are now lower for everyone, and they vary according to the poverty level of the district where you are registered to vote. According to the information that you just provided me, if you do not vote in the upcoming elections you will be subject to a fine of S/.(AMOUNT IN THE DISTRICT WHERE SHE'S REGISTERED).*

[19]The exact script for the control group was as follows (see Figure A.1. in the Appendix for the original version in Spanish):

> *Dear Sir/Madam,*
>
> *In Perú, voting is mandatory by law, and not voting is subject to a sanction that implies a fine.*

[20]The option to pay the fine and get the official stamp in the ID card is only available once the full voting record is centralized, which usually happens more than a month after the elections. Hence the only way in which the respondents could have the stamp at the moment of the interview was by having voted.

respondents in the follow-up survey, only 5 of them refused to tell the enumerator whether they voted or not. 67 percent of the respondents agreed to show their ID cards. There does not seem to be a tendency to lie about voting. Out of those for whom I have the self reported and objective measures of voting, only 6 respondents reported that they did not vote, and their ID cards had the official stamp, while the opposite happened in 7 cases.

Given the low lying rate, in order to maximize the sample size I define the turnout variable based on the objective measure of voting for those who showed their ID, while I take the self reported values for those who did not. In the empirical analysis in the next section I show that the results are robust to using only the self reported or objective measure of voting. The survey also included questions about political preferences, information about the political process, the candidates and parties running, and a battery of questions about vote buying.

4.2   Descriptive Statistics

Overall, I interviewed in the baseline and follow-up surveys 2,275 individuals from 1,668 households. I provide the descriptive statistics for the balanced sample of respondents in Table 1 (Table 17 in the Appendix shows the statistics broken down by poverty category). Voters registered in extremely poor districts represent 23 percent of the sample, while 38.8 percent vote in a poor district and the remaining 37 percent in a non-poor district. On average, 42 percent of the sample is male, they are about 40 years old, with 9.6 years of education, and spend S/.255.1 ($\backsim US\$94$) per capita per month.

The ideological position of the population is highly concentrated in the center, with 8.3 percent locating themselves in the left and 25.1 percent in the right. This outcome comes from self reports in a scale ranging from extreme left (1) to extreme right (5). I take the categories in the middle (2, 3 and 4) to represent the political center. Ideology is not unidimentional, and thus I use a second measure based on policy preferences to capture a broader range of ideological distributions. In the survey, I asked voters to name (in order) the first five policies that they would implement if elected mayor of the district. This was an open question, and the enumerators had to place their answers in one of twenty eight policy categories. For each of these categories, the policy preferences are ordered from not mentioned (zero) to most preferred (five). I aggregate these questions by taking the first principal component, and dividing the sample into quintiles. The center is defined by those in the quintiles 2, 3, and 4, while the first and fifth quintiles

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define the ideological extremes.[21] The Policy Extreme 1 is related to preference for public goods, such as health and education infrastructure, roads, accessibility, etc. On the other hand, the Policy Extreme 2 is associated with public goods which are more easily appropriated by an agent (club goods), such as youth labor training, security, promotion of private investment, etc. The questions that define the ideological position of each voter were asked in the baseline survey, before the treatment was administered, so I am able to take them as predetermined.

The subjective value of voting is a difficult concept to quantify, and as such I approximate it by using different variables that measure the interest voters have on politics, the current electoral race and the campaign. Few people (8.2 percent) declare themselves to be very interested in politics, while 46.8 percent are somewhat interested, and 45.1 percent are not interested at all. The small interest in politics is also reflected in a small proportion of people who declare themselves to be very interested in the results or the campaign of the current election (39.9 percent and 10.5 percent, respectively). Respondents who are somewhat interested in the results of the election represent 44.3 percent of the sample, while 55.6 percent are somewhat interested in the campaign. Finally, 15.3 percent and 33.9 percent are not interested in the results or the campaign, respectively. It is important to note that none of these questions were placed one after another, but rather as separate as possible. Most of them were asked in different modules of the questionnaire in order to avoid confirmatory bias in the responses.

Political knowledge and information is measured in several ways in the survey. I included open ended questions asking respondents to name all the candidates and parties running in the election for the municipality where they are registered to vote. In order to get a uniform measure of political information, I express the indices as the ratio of the number of candidates (and/or parties) that the respondent is able to name, divided by the total number of candidates (and/or parties) running for the mayor's seat. On average, respondents are able to name 38.8 percent of the candidates and 29 percent of the parties running. As an alternative measure of political information, I asked 17 questions about knowledge of the political structure of the country, electoral institutions and rules.[22] The average respondent got 9.3 questions right (54.7 percent). It is important to note that the political information measures used here are uncorrelated with the knowledge about the fine. For example, the correlation between the absolute value of the errors

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[21]The coefficients for each policy item loading into the principal component analysis are listed in Table 16, in the Appendix.

[22]The questions include information about the length of the term, reelection possibilities for two consecutive periods, length of the term, and existence of run-off elections for president, congressmen and mayor, the official minimum and maximum age for which voting is mandatory, and which are the government institutions in charge of the elections, ID cards and political claims.

in the reported fine in the baseline (reported - actual fine) and the index of knowledge of candidates is 0.014.

Table 1 provides descriptive statistics for the treatment and control group, showing that there are no statistically significant differences by treatment status in the relevant variables.[23] Even though there was not a lot of time between the baseline and follow-up surveys (30 days, on average), we were unable to track down about 13 percent of the households from the baseline survey, which represents 19.8 percent of the respondents interviewed in the baseline. Table A.4 in the Appendix shows the balance of variables between attrited individuals and those who we were able to track. Overall, the sample of attriters seems to be not statistically different from those who we were able to track, and thus we should not expect the attrition to imply any biases in the estimated results.

The main independent variable of interest is the perceived fine for abstention.[24] Given that the treatment was randomly allocated, we should observe that the perceived fine is balanced between the treatment and control groups within each poverty category. Figure 3 shows the distribution of this variable in the baseline and follow-up surveys, for the control and treatment group, by poverty level of the district where each respondent is registered to vote. In each graph, the vertical line represents the actual level of the fine.[25] Importantly, in the baseline survey the average respondent reports that the fine for not voting is S/.122.29 (see Panel A of Table 2), which is close to its old level (before August, 2006). This confirms that the majority of the population was not informed about the change in the voting laws. There is significant dispersion in the data, ranging from people who think that there is no fine for abstention, to those who think that the fine is around S/.300. The distributions of these perceptions do not differ by

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[23]Table A.3. in the Appendix shows the balance between the treatment and control groups when splitting the sample by poverty level of the district where each respondent is registered to vote. Here we also see that the differences between treatment and control are not significant within each of the poverty levels. The only variable that seem to be systematically unbalanced is the proportion of voters who are on the left. The control group seems to have a higher proportion of leftists than the treatment group.

[24]In the complete panel sample, 4% of respondents do not know what are the consequences of abstention. Out of the ones who know the consequences, only 1.3% do not mention the fine as one of the consequences. I assume these respondents think that there is no fine (i.e. it is S/.0). When assessing the current value of the fine, enumerators were trained in different strategies to try to get an exact number for the respondent's belief. However, in case the respondent refused to provide it, we asked they could place their beliefs about the value within certain ranges ($< $ S/.25; S/.25 - S/.50; S/.50 - S/.100; S/.100 - S/.150; and $>$ S/.150). In order to get an individual level belief about the exact value of the fine, for respondents who provided a range, I use the median value of that range specified using data from those who did mention an exact value. The main results from the paper do not change if I restrict the sample to only respondents who reported an exact number for the fine. Further, in the main regressions I included an interactive term between the variable of interest and a dummy for having provided a range rather than an exact number, and this term is statistically significant and close to zero in all cases.

[25]In the left panel, for the baseline survey, the vertical line represents the old level of the fine (S/.144), while in the graphs in the right, the lines are set at the new levels of the fine: S/.72 for voters in non-poor districts, S/.36 for those in poor districts, and S/.18 for voters in extremely poor districts.

treatment status within each poverty level at baseline. Panel A of Table 2 shows the mean perceived fine in each of the groups, as well as the t-tests for differences in means.[26]

Not only those in the treatment group learned that the fines for not voting had decreased. For example, the average respondent registered in a non-poor district who received the treatment reports in the follow-up survey that the fine for not voting is S/.66.77, while the non-poor in the control group the average perceived fine is S/.90, which is significantly lower than the S/.126 reported in the baseline survey. The difference between treatment and control groups among voters from non-poor districts is statistically significant. For people voting in poor districts, I find a similar pattern. The distribution of perceived fines clearly moves to the left for both the treatment and control groups but the former is centered at S/.42, which is close to the actual S/.36 stipulated for this group, while the control group reports on average that the fine is S/.71. Voters from extremely poor districts are more likely to learn about the new levels of the fine. While the treatment group reports a perceived fine of S/.19, the mean for control group is S/.36. This is also apparent from Figure 3, where we see that the distribution of perceived fines shifts to the left, for both the treatment and control groups. Overall, the treatment had the desired effect of informing the population about the new level of the fine, however the control group also learned about the new fines. This is especially true for people voting in extremely poor districts.

As Panel A in Table 2 shows, 94.2 percent of the respondents voted in the October 2010 elections.[27] The effective reduction in the cost of abstaining led to lower turnout. On average, respondents in the treatment group were 3.1 percentage points less likely to show up to vote the day of the elections. This result can be interpreted as a reduced form effect, or the direct effect of the treatment on turnout. The magnitude of this effect is related to the magnitude of the reduction of the perceived fine. In non-poor districts the reduction in the fine led to a difference of 2.1 percentage points in turnout between the treatment and control groups. Likewise, in poor districts, treated voters are 5.4 percentage points less likely to vote, while voters in extremely poor districts turnout decreased in 1 percentage point (not significant).

The low and non-significant effect for the extremely poor is not surprising, since the treatment did

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[26]These results represent the direct effect of the treatment on the perceived fines, i.e. the first stage of the regressions without controls.

[27]There are two reasons why turnout in my sample is higher than the official statistics. First, I only sampled voters between 18 and 70 years old, whereas the official turnout rate is computed among all registered voters, thus including voters who are older than 70 (who are no longer mandated to vote). Second, conversations with government officials in Perú have suggested that the electoral roster is not perfectly updated, thus there is a number of dead voters who's names are still in the official roster (and of course, they are absent on the election day).

not differentially affected voters in the treatment and control groups.[28] Overall, the perceived fine for the extremely poor were on average lower for everyone. As a consequence, in these districts, the average turnout is at least 2 percentage points lower than in the control group in poor and non-poor districts (93.5 percent versus 96.7 percent and 95.9 percent, respectively). Given that the experiment did not differentially affect the perceived fines for the treatment and control respondents in extremely poor municipalities, I drop them for the subsequent analysis.[29]

Summarizing, the descriptive data shown above supports the basic hypothesis that a reduction in the fines for not voting leads to lower turnout. The next section outlines a more formal framework to test the predictions of the model presented in Section 2.

5 Empirical Strategy and Results

5.1 Basic Facts

The empirical strategy implemented to test the predictions of the theoretical model from Section 2 follows directly from the experimental design. My strategy exploits the exogenous variation in the change in the perceived fine provided by the treatment status to identify its effect on turnout. The local average treatment effect identified from the instrumental variables regressions will thus estimate the effect of a reduction in the fine for abstention on turnout for voters whose beliefs about the fine were updated.

The first part of the empirical analysis looks at the direct effect of the treatment on turnout. The reduced form equation is given by:

$$Vote_{ij} = \beta_1 NonPoor_{ij} \cdot Treat_{ij} + \beta_2 Poor_{ij} \cdot Treat_{ij} + \beta_3 Poor_{ij} + \beta_4 NonPoor_{ij} + \gamma X_{ij} + \delta_k + \eta_{ij} \quad (8)$$

$Vote_{ij}$ is an indicator of whether voter i, registered to vote in district j, voted in the election of October 3rd, 2010. The treatment status is given by the indicator variable $Treat_{ij}$. Given that there are two distinct treatment groups depending on the poverty level of the district where voter i is registered,

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[28]The amount of time between the baseline and follow-up surveys is not statistically different between non-poor, poor and extremely poor municipalities (30 days, on average). However, the number of days between the surveys explain part of the learning about the change in the fines only in extremely poor municipalities. At the same time, this learning is independent of the size of the village.

[29]I have run all the tables below including the extreme poor, and they are available upon request. All of the patterns and main qualitative results remain unchanged. The main results including this group are shown in Table 19, in the Appendix .

in all the regressions I separate the effect of the different treatment levels by interacting the treatment dummy with the poverty level of the district ($NonPoor_{ij}$ and $Poor_{ij}$). The inclusion of the dummies indicating the level of poverty of the district where voting allows restricting the comparison to treatment and control units within the same level of the fine (I exclude the constant from all regressions). I also include some relevant controls that are likely to affect voting decisions, such as age, the log of per capita expenditures, education and gender. These variables are included in the matrix X_{ij}. Finally, δ_k denotes a fixed effect at the level of the village where interview took place (where the respondent lives), and η_{ij} is a random error term.

It is not straight forward that we should expect a reduction in the fine for not voting to cause lower turnout. Gerber et al. (2003) show that voting is habit forming, and voting in one election makes voters significantly more likely to vote in the next election. In the Peruvian context, where mandatory voting has been in place for more than 80 years, and turnout is consistently high, it could be that the habit effect is stronger that the monetary effect. Table 3 presents the reduced form estimates of the effects of the treatment on turnout. Overall, the monetary effect seems to dominate the habit effect. Treated voters in non-poor municipalities are 2.7 percentage points less likely to vote than the controls in this poverty category (Column 1). Likewise, voters in poor districts showed up at the polling station 5.2 percentage points less often than the ones in the control group in the same poverty category (Column 2). Pooling voters does not affect the magnitude of significance of the results (Column 3). All the regressions shown include controls and village fixed effects, and the standard errors are clustered at the household level. These results are remarkably similar to the descriptive statistics shown in Panel A of Table 2.

The decrease in turnout is roughly proportional to the official decrease in the fine. In non-poor districts, where the fine was reduced by 50 percent, the effect of the treatment on turnout is 2.7 percentage points, while in poor districts, where the fine was reduced to one fourth of its original level, it is roughly double that size (5.2 percentage points). Voters update their beliefs differentially, and in order to say something about the magnitude of their response to different changes in the fine for not voting, we need to scale the reduced form findings by the change in the perceived fine caused by the treatment. The first stage regression in the instrumental variable approach measures this, and is given by:

$$\triangle Fine_{ij} = \beta_1 NonPoor_{ij} \cdot Treat_{ij} + \beta_2 Poor_{ij} \cdot Treat_{ij} + \beta_3 Poor_{ij} + \beta_4 NonPoor_{ij} + \gamma X_{ij} + \delta_k + \nu_{ij} \quad (9)$$

$\triangle Fine_{ij} = (Fine_2 - Fine_1)_{ij}$ represents the change in the perceived fine between the follow-up and baseline surveys. In this case β_1 and β_2 represent the difference in the average change in the perceived fine between the treatment and the control group for voters from non-poor and poor municipalities, respectively. This comparison is made within the same poverty level of the district registered and between people who were interviewed in the same village.

The results from the first stage regression are displayed in Table 4. Column (1) present the results for voters registered in non-poor municipalities: the difference in the perceived fine for the treatment and control groups is S/.18.8. Similarly, the treatment effect for voters in poor districts is a reduction in the perceived fine of S/.30.5. Column (3) pools the results. Overall, Table 4 provide a strong first stage for my IV strategy, with an F-statistic for the excluded instruments of 28.7 in the pooled specification.

In the second stage, I look at the effect of the changes in the perceived fine, instrumented by the treatment status in each poverty level, on turnout. The regression equation is displayed in Equation (10):

$$Vote_{ij} = \beta_1 \triangle Fine_{ij} + \beta_2 Poor_{ij} + \beta_3 NonPoor_{ij} + \gamma X_{ij} + \delta_k + \epsilon_{ij} \qquad (10)$$

β_1 is the estimated local average treatment effect (LATE) of a change of S/.1 in the fine for not voting on the likelihood of voting for those whose information was updated due to the treatment.

The instrumental variables results are presented in Table 5. An exogenous *decrease* in the perceived fines for not voting cause fewer people to attend to the polls. A reduction of S/.1 in the fine for abstention causes a significant decrease in the likelihood of voting of 0.14 percentage points for non-poor voters, as shown in Column (1). Similarly, for voters in poor municipalities, the effect is of 0.17 percentage points (Column (2)). Pooling the results, the average voter in my sample is 0.16 percentage points less likely to go to the polls (Column (3)). The average voter, who perceives that the fines were reduced by S/.56.65 (45.7 percent from her initial perception of S/.124), has a 9.59 percentage points (10.15 percent) lower probability of voting. This implies a reduction in turnout from 94.5 percent to 85.4 percent, and a price elasticity of voting of -0.21.[30]

Extrapolating these results to the whole population, driving the fines to zero could lead turnout to 74.7 percent, a level comparable to the one observed in some countries where voluntary voting is in place. To

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[30]The reduced form, first stage and two stage least squares including the extremely poor are shown in Appendix Table 19. Similarly, Appendix Table 20. shows the main results without controls. In both Tables, the main qualitative results remain unchanged. Further, the results are also robust to using the change in the fine as a percentage of per capita expenditures.

put these results in context with the previous evidence, Gerber et al. (2008) find that reminders to vote emphasizing social pressure messages cause an increase in turnout between 4.8 and 8.1 percentage points. In my experiment, a reduction of S/.56.7 ($\backsim US\$20$) leads to a reduction in turnout of 9.6 percentage points.[31]

Table 21, in the Appendix, shows the heterogeneity of the effects of the reduction in the fine on voting by several demographic characteristics. Overall, I find the effect is constant between people of different ages, educational levels and expenditure levels. However, women seem to be significantly more sensitive to changes in the perceived fines. Contrary to what is commonly believed, poor voters are not more likely to respond to changes in the fine for not voting, which is consistent with the constant elasticity found.

5.2   Robustness and Validity Checks

The main identifying assumption is that the treatment only affects turnout through the change in the perceived fine, and hence the treatment is uncorrelated with ϵ_{ij}. The fact that the treatment was randomized, and that the main variables in the analysis are not statistically different from each other between the treatment and control groups supports this assumption. However, it might be the case that the treatment generated differential changes not only in the perceive fine, but also on the probability of enforcement, which would (partially) explain my results. In the follow-up survey, I asked voters to name all the possible consequences of abstention. If it was the case that the treatment differentially affected the perceived enforcement probabilities, we should observe a difference between treatment and control groups in their perceived effects of abstention. Table 6 shows that it was not the case.

One potential concern with the interpretation of my result is that the elasticity of voting with respect to the cost might not be constant. Computing the elasticity using the results from the separate estimations, I find that the for non-poor it is -0.18, as compared to -0.21 in poor districts. These elasticities are not statistically different from each other. This evidence supports the idea of a constant price elasticity. In itself, this is and important result for the Peruvian representation system, since the largest reduction in the fine took place in the poorest districts, and hence turnout would be reduced more than proportionally in these groups.

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[31]Gerber et al. (2008) found that sending mailings informing recipients that it is public information whether or not they voted and listing the recent voting record of each registered voter in the household had an effect of 4.8 percent on turnout. Listing not only the household's voting records but also the voting records of those living nearby led a 8.1 percent higher turnout.

It is important to note that when I split the sample I am only using one instrument in each regression, rather than two. Still, the first stage regressions have very strong predictive power, with F-statistics ranging between 14.7 and 41.03, which reinforces the idea that the previous results are not driven by one of the two instruments in the first stage.

An important robustness check regards measurement of the dependent variable. As mentioned above, the dependent variable is constructed based on both self-reported and objective measures of voting. I run the main specification with both variables separately and with different sample sizes in Table 7. The results are very similar across the different samples and voting measures. In the sample for which I have both self-reported and objective voting measures, turnout is higher since people who reported not voting were less likely to show their ID cards. In this sample, the results using the self reported measure of voting is attenuated but still large and economically significant.

Table 8 presents a validity test for the effect of the treatment on turnout. If the treatment did affect the perceptions about the magnitude of the fines, it should have affected turnout in 2010, but it would have had no way of affecting past behavior. Table 8 shows the results of running the same specifications as in Table 5, but using a self reported measure of turnout in 2006 as the dependent variable. The change in the perceived fines do not have a statistically significant effect on the self reported measure of voting in 2006. Also, it is reassuring to see that the coefficients across the different samples are very close to zero.

5.3   Ideological Position

The model predicts that voters with a centrist ideology are more likely to abstain upon a reduction in the fine, since they are more likely to make a *"voting mistake."* The random variation in the cost of not voting provided by the treatment allows me to causally interpret the effect of changes in the cost of abstention induced by the treatment on turnout *within* each ideological position category. That is, the interactive term between the change in the perceived fines and the ideological position, instrumented by the treatment dummies and their interactions, provide causal evidence of whether people with centrist ideologies are the more likely to react to a change in the cost of abstention, as the model predicts. More precisely, given the three ideological positions, left, center and right, denoted by P_{ij}^l ($l = 1, 2, 3$), the effect of the reduction in

fines on turnout for each ideological position is identified by equation (11).

$$Vote_{ij} = \sum_{n=1}^{3} \beta_n \triangle Fine_{ij} \cdot P_{ij}^n + \sum_{n=1}^{3} \beta_{n1} Poor_{ij} \cdot P_{ij}^n + \sum_{n=1}^{3} \beta_{n2} NonPoor_{ij} \cdot P_{ij}^n + \beta_{10} Poor_{ij} + \beta_{11} NonPoor_{ij} + \gamma X_{ij} + \delta_k + \epsilon_{ij}$$
(11)

In order to compare people within the same fine level, the model in Equation (11) includes interactions between all the relevant coefficients and the poverty level dummies. The only effects that I constrain to be constant across poverty categories are the control variables (X_{ij}). The coefficients of interest in this case are β_n, and if the predictions of the model hold, we should observe that the coefficients associated with the interaction between the indicators of political extremes (P_{ij}^1 and P_{ij}^3) with the change in the perceived fines will be zero (β_1 and β_3). On the other hand, the coefficient testing for the effects of changes in the fine on voting *among* centrists voters (β_2, associated with P_{ij}^2) should be positive, meaning that a larger decrease (increase) in the perceived fine causes lower (higher) turnout.

Table 9 shows the results from Equation (11). In Column (1) I use the self reported measure of political ideology, and find that the bulk of the effect of the change in the fine on turnout observed in Table 5 comes from voters who place themselves in the political center. Voters on both political extremes seem to be insensitive to changes in the cost of not voting. The results in Column (2), using the second measure of ideological position based on policy preferences, are even more stark. Voters in the the second through fourth quintiles of the policy preference scale account for the whole effect of changes in the fine for not voting, while voters in the political extremes show effects close to zero and statistically insignificant. Overall, the results from Table 9 are consistent with the first prediction of the model, and show that people in the political extremes are less likely to respond to a change in incentives (not) vote. [32]

This result has important implications in terms of how to structure the incentives to vote and its potential effects on political competition and social conflict. In the medium run, the political supply should respond to changes in the electorate. If this is the case, a reduction in turnout among centrists might lead parties to bunch in the extremes of the political spectrum, which could cause coordination problems in the government, polarization and social conflict.

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[32]These results are also consistent with the predictions in Glaser et al. (2008).

5.4 Interest in Politics / Subjective Value of Voting

Voters with a higher subjective value of voting (d_i) need lower incentives to attend to the polls, compared with those who derive lower utility gains from voting. The subjective benefit of voting is an unobserved individual characteristic, so I use a battery of questions on interest in politics, in the results of the current election, and in the campaign.

As shown in Table 10, voters who are more interested in politics go to the polls regardless of the change in the perceived fine. People who report being somewhat interested in politics are less likely to vote when the fine for abstention is reduced. Consistent with the predictions of the model, the effect is smaller in magnitude than the one we observe for voters who are not interested in politics. Similarly, voters who are very interested in the political campaign or in the results of the election are unlikely to respond to a reduction in the fine, while people who are somewhat interested have a significant effect, but again, lower in magnitude than those with a low interest in the campaign or in the results of the election. This result is consistent with the second prediction of the model.

Using the results from Table 10 I am able to provide revealed preference estimates of the subjective value of voting. Voters who are less interested in politics are much more sensitive to a change in the fine for abstention, with an elasticity of -0.247. This result implies that in order to increase their probability of voting from the observed 93.5 percent to 100 percent, we would need to increase in the fine for abstention in S/.92.4 (~US$33). Likewise, voters who are interested in politics have an elasticity of -0.159, which implies that to achieve full participation, the fine would have to rise by S/.77.4 (~US$27). On the other hand, voters who are very interested in politics are hardly sensitive to changes in the fine, with an implied elasticity of -0.13, and they would vote even if the fine was set at zero.

5.5 Political Information

The model also predicts that $C(y_i, \Omega_i)$ is decreasing in Ω_i, which implies that less informed voters are more likely to make a *"voting mistake"*, and hence have a higher expected cost of voting for any given y_i. Empirically, I test this prediction by interacting different measures of political information with the change in the perceived fine, always relying on the treatment status to identify the LATE. More precisely, I run the test for this prediction through the following equation:

$$Vote_{ij} = \beta_1 \triangle Fine_{ij} + \beta_2 \triangle Fine_{ij} \cdot Info_{ij} + \beta_3 Poor_{ij} \cdot Info_{ij} + \beta_4 NonPoor_{ij} \cdot Info_{ij} + \beta_5 Poor_{ij} + \beta_6 NonPoor_{ij} + \gamma X_{ij} + \delta_j + \epsilon_{ij}$$

$$(12)$$

As before, in Equation (12) I am only comparing people within poverty categories. Following the model, we expect to observe that the effect of reductions in the cost of not voting is steeper for people who have less precise information about the politicians' ideological stance. The model also imply that having perfect information about the politicians means that the voter cannot make a *"voting mistake"*, and thus she should vote regardless of the cost of abstention. Following this prediction, we should expect β_2 to be negative, while for people with perfect information ($Info_{ij} = 1$), $\beta_1 + \beta_2$ should be equal to zero.

Table 11 tests this hypothesis using four different measures of political information. I use four normalized indices to proxy for political knowledge. The first three of them measure the percentage of candidates and/or parties running for office that the voter is able to name. I also use a normalized political information score, which uses information from seventeen questions about the electoral process and political institutions, knowledge about the electoral offices, official voting age, reelection rules, etc.

In all four columns of Table 11, the interaction between the information indices and the change in the perceived fine (instrumented by the treatment and the relevant interaction) is negative and significant, meaning that people who have higher levels of information are less likely to change their turnout decision when they learn that the fine has been reduced. Moreover, the magnitude of these coefficients line up remarkably well with the predictions of the model. People who are fully informed about the candidates and/or parties running in the local election are unaffected by the changes in the fine since the coefficient of the interaction offsets the direct effect.[33]

Previous evidence shows that more informed voters are more likely to hold the elected officials accountable and less likely to elect corrupt politicians.[34] It is possible that by reducing the cost of not voting, and allowing less informed voters to select out of the voters' pool, we could increase the quality of elected officials.

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[33]One potential concern with the information variables use here is that a voter might not need to know all of the candidates to make an informed choice. A strategic voter (not contemplated in the model presented here) would need to know only those who have chances of winning the election. In alternative specifications, I defined my information variables as the percentage of candidates/parties mentioned out of the 5 leading candidates. The results hold under these measures of political information and the results are available upon request.

[34]See for example, Ferraz and Finan, 2008; Banerjee et al., 2011, Chong et al., 2011, Pande, 2011

6 Policy Preferences, Information Acquisition and Vote Buying

The results from Tables 9, 10, and 11 are consistent with the predictions of the theoretical model, and have important implications for the design of voters' incentives. A lower fine for not voting draw a lower share of the population the polls. This effect is particularly important for centrist voters, those who have lower subjective value of voting (or who are less interested in politics), and the uninformed . The natural question following these results regards its implications for the aggregation of citizen preferences in electing a government.

6.1 Policy Preferences

Electoral institutions in democratic societies are designed to maximize voter representation and to ensure that policies are catered towards the interests of the majority. Mandating citizens to participate in elections imposes a cost on society, and it could be justified if the incentives to vote achieve a better representation of voter preferences. Theoretical arguments are mixed. Depending on the assumptions on the type of information available to voters, different authors have argued that compulsory voting can be welfare increasing or decreasing. For example, Krishna and Morgan (2011) present a theoretical model showing that under voluntary voting, information aggregation holds, and mandating people to vote imposes a net cost to society. Along the same lines, Borgers (2004) reaches a similar conclusion based on a model with simple private value majoritarian elections. On the other hand, Ghosal and Lockwood (2009) use a model with common values to show that compulsory voting Pareto dominates voluntary participation.

Even though I am not able to rule out any of these models, I can provide suggestive evidence that can help us think about the extent to which different incentive schemes to participate in elections can affect policy outcomes.

One way to address this issue is to analyze whether people who prefer certain type of policies are more likely to respond to the incentives to (not) vote. If that is the case, a reduction of the fine for abstention will lead to under-representation of people who have these preferences, and thus the policies preferred by this group will not be enacted (assuming perfect commitment by politicians). To implement this test, I use the policy preference questions, aggregating them into 10 categories that represent broad policy issues, and then analyzing whether voters who prefer each policy are more or less likely to respond to changes in the fine.

The results from this analysis are presented in Table 12. The interaction terms between policy prefer-ences and changes in the fine for not voting are not statistically significant and very close to zero, suggesting that voters with particular policy preferences are not over-represented among those who stop voting. The only interaction coefficient that comes through statistically and economically significant is the one for vot-ers who have preferences for policies that promote agricultural activities (i.e. water projects, investment in improved seeds, etc.). The negative interaction coefficient, which is about of the same magnitude as the average effect for the population, implies that the effect of the changes in the fine is completely offset for this group, and they are not likely to stop voting when the fines are reduced.

Overall, these results suggest that the average voter who abstain when facing a lower fine for not voting does not have significantly different policy preferences than the average voter who still votes. Assuming perfect commitment by politicians, this implies that the change in the electorate due to lower incentives to vote will not cause a change in the policies implemented by elected officials.

6.2 Information Acquisition

Proponents of mandatory voting argue that mandating people to vote not only increases participation, but also involves people in the political process, for example by providing incentives to acquire political information. The underlying model for this claims is one similar to the one proposed here, but it endoge-nizes information acquisition (Martinelli, 2005, Deagan, 2011, Oliveros, 2013). The intuition behind these models is that for sufficiently high penalties for not voting, abstention will drop and people might demand more political information to avoid making a *"voting mistake"*.

In the follow-up questionnaire, I included questions assessing the level of political information held by each respondent, so I can test whether people who stops voting due to a lower perceive penalty are less likely to acquire political information. In Table 13 I regress the change in the different measures of political information on voting, instrumented by the treatment status. The effect of a turnout on information acquisition is very close to zero and not statistically significant. Voters who stop voting due to a lower costs for abstention do not acquire information differentially than their peers who face a higher fine.[35]

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[35]These results must be taken with a grain of salt for two reasons. First, even though around the elections is the time when voters are more likely to get informed about the candidates and the political process overall, we must keep in mind that the average time between surveys was short (30 days). Second, in the medium or long-run people who stop voting might also change their behavior in terms of information acquisition.

6.3 Vote Buying

Electoral processes in developing countries are often prone to vote buying, and Peru is not the exception. In my sample, I find that 31 percent of respondents were offered and accepted cash or a gift from a political operator.[36] Vote buying represents a net loss for society since it tends to distort voters preferences, affecting the results of an election. It could be argued that in electoral systems with mandatory voting, voters who go to the polls because of the mandate are more likely to accept money for their votes. If this were the case, the mandate to vote will generate a negative externality. Using the exogenous variation in the cost of not voting, I am able to test whether a reduction in the cost of not voting affects the amount of vote buying and the price paid for each vote. I do this by using information collected in the final section of the follow-up survey, where I asked respondents if they were offered any in-kind gift or cash by someone associated with any candidate or political party before the election took place.[37] I also asked if the money or in-kind gift was given directly to the person, or indirectly as in, for example a mass giveaway.

Table 14 shows the effects of the change in perceived fines (instrumented by the treatment) on whether the voter accepted money for her vote, and the amount of money accepted. As a result of a reduction of the fine, we observe a lower share of the population attending to the polls, and thus the pool of potential votes to be bought is reduced. Further, those voters still attending to the polls despite the lower sanctions of abstention are more likely to be well informed, have a strong political position and are interested in politics. Arguably, these voters are less willing to sell their vote, and when they do, a higher amount of money is required.

The reduction in turnout due to the treatment generates an exogenous shift in the supply of votes. The results in Column (1) show that a decrease in the fine for abstention does not have a economically or statistically significant effect on the incidence of vote buying. Column (2) shows the effect on the amount of money received directly from a candidate or her representatives before the election. In this case, we do observe that a change in the fine for abstention of S/.1 leads to an increase in the price of the vote of S/.0.03. Given the small number of observations, the coefficient has a large standard error, and its not statistically significant at the conventional levels, but its magnitude is still interesting to be analyzed. This implies that for the average voter, who perceived that the fines were reduced by S/.56, her vote became 49 percent more expensive than the average S/.7.03 for what she settled before.

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[36]Vicente, 2013; Vicente and Wantchekon, 2009; Finan and Schechter, 2012.

[37]For in-kind gifts, the survey asked respondents to put a monetary value to the good.

As a robustness check for this result, in Column (3) I use as a dependent variable the amount of money indirectly received by the voter. If there is a negotiation between the voter and the political operator about the price of the vote, I do not expect this negotiation to affect the amount received in a massive giveaway of money or souvenirs. Indeed, I find a statistically and economically insignificant effect. Overall, the a reduction in the fine for abstention does not affect the incidence of vote buying, however each vote becomes more expensive, making it more costly to politicians to have influence on the outcome of the election through vote buying.

7   Summary and Discussion

Electoral institutions that encourage or mandate citizens to vote are widespread around the world. Such institutions are often introduced in the spirit of democratization, hoping to achieve better representation, and to involve the citizenship in the political process. However, since both voting and enforcing institutions are costly, there could be significant welfare losses if the objectives of higher participation and more involvement are not achieved.

In this paper I combine a natural experiment provided by a change in Peruvian voting laws with a field experiment to identify the effect of fines for abstention on voting. I find that a reduction in the cost of abstention decreases turnout, and that this reduction is more than proportional among (i) centrist voters, (ii) those who have a lower subjective value of voting, and (iii) voters who hold less political information. These results are consistent with the predictions of the rational choice model of voter behavior with imperfect information presented in the paper.

The estimates imply that cutting the fines for not voting by half leads to a 10 percentage point reduction in turnout. Further, the experimental design allows me to compute the elasticity of voting with respect to the cost, which I find to be -0.21. To my knowledge, this is the first paper to be able to estimate this parameter, which is key to evaluate policy interventions that attempt to affect the cost of voting, such as increasing in the number of polling stations, implementing electronic voting, among others.

Even though we observe a change in the electorate due to the reduction in the fine for not voting, this does not necessarily imply that the outcome of the election will be affected. On average, voters who stop going to the polls due to the reduction in the fine do not seem to have different policy preferences than their peers who do not respond to the change in the cost of abstention. This result implies that a reduction

in the incentives to attend to the polls will likely not lead to a change in the policies enacted. Further, the fact that some people do not vote as a response to the treatment does not lead them to acquire less political information.

Additionally, I find that a decrease in the fine for not voting decreases the externalities on related markets. More specifically, I find that the the reduction in the fine for abstention reduces the pool of voters who are willing to *sell* their vote, thus increasing the price paid by politicians to buy votes. Hence, lowering the incentives to vote reduces the chances politicians have to influence the election by making each vote more expensive.

The results presented have strong implications for the design of electoral institutions. First, voters respond to monetary incentives to go to the polls, and the extent in which they respond is non-negligible. Second, the experimental evidence presented suggests that the objectives of mandatory voting, namely ensuring representation and involvement in politics, do not seem to be affected by the reduction in the incentives. If these results holds when the incentives are completely eliminated, mandatory voting would lead to a welfare loss to society. However, if the polarization of society has a negative weight in the policymaker's objective function, mandating voting might dominate, since it will ensure that centrists stay in the pool of voters.

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Figure 1: Discontinuity Analysis: Effect of Non-Voting Fine Law on Turnout
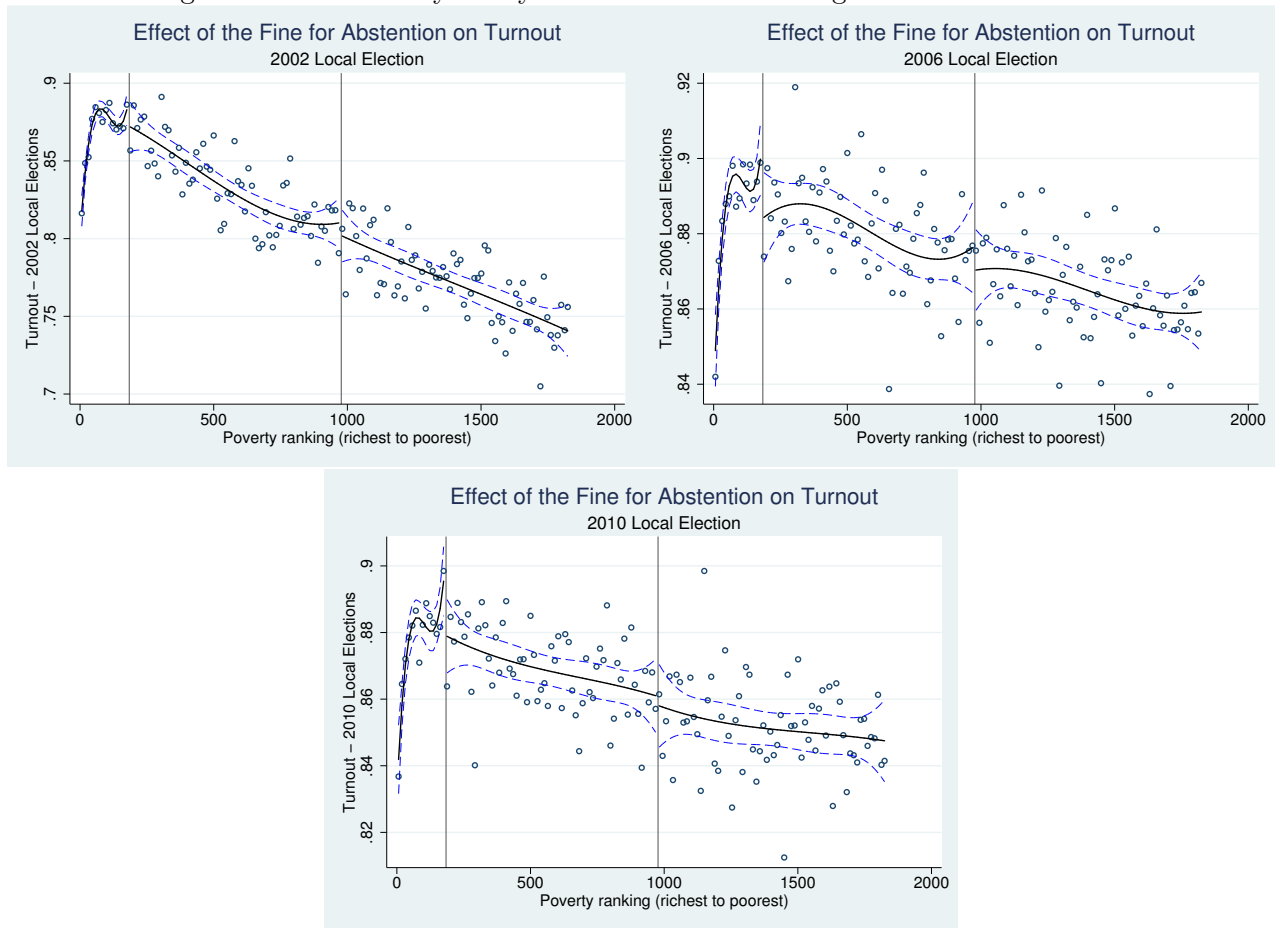
Notes: This figures plot the official turnout rates at the district level in the 2002, 2006, and 2010 municipal elections. Districts are ranked from richest to poorest, and the vertical lines indicate the thresholds at which a district is categorized as non-poor, poor, or extremely poor.

Figure 2: Geographic location of the districts in the survey
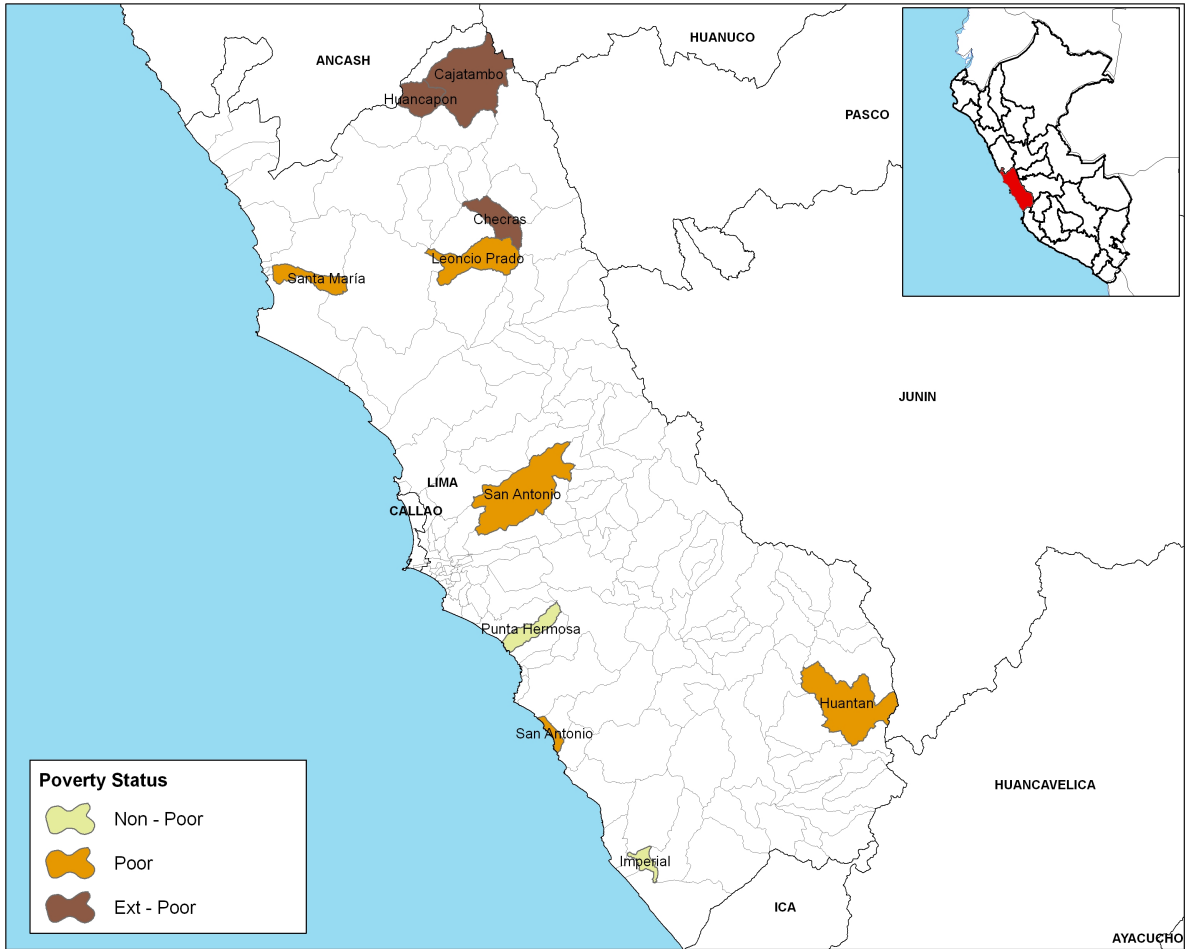
Figure 3: Perceived fines, by treatment and poverty status

Baseline

Follow-up
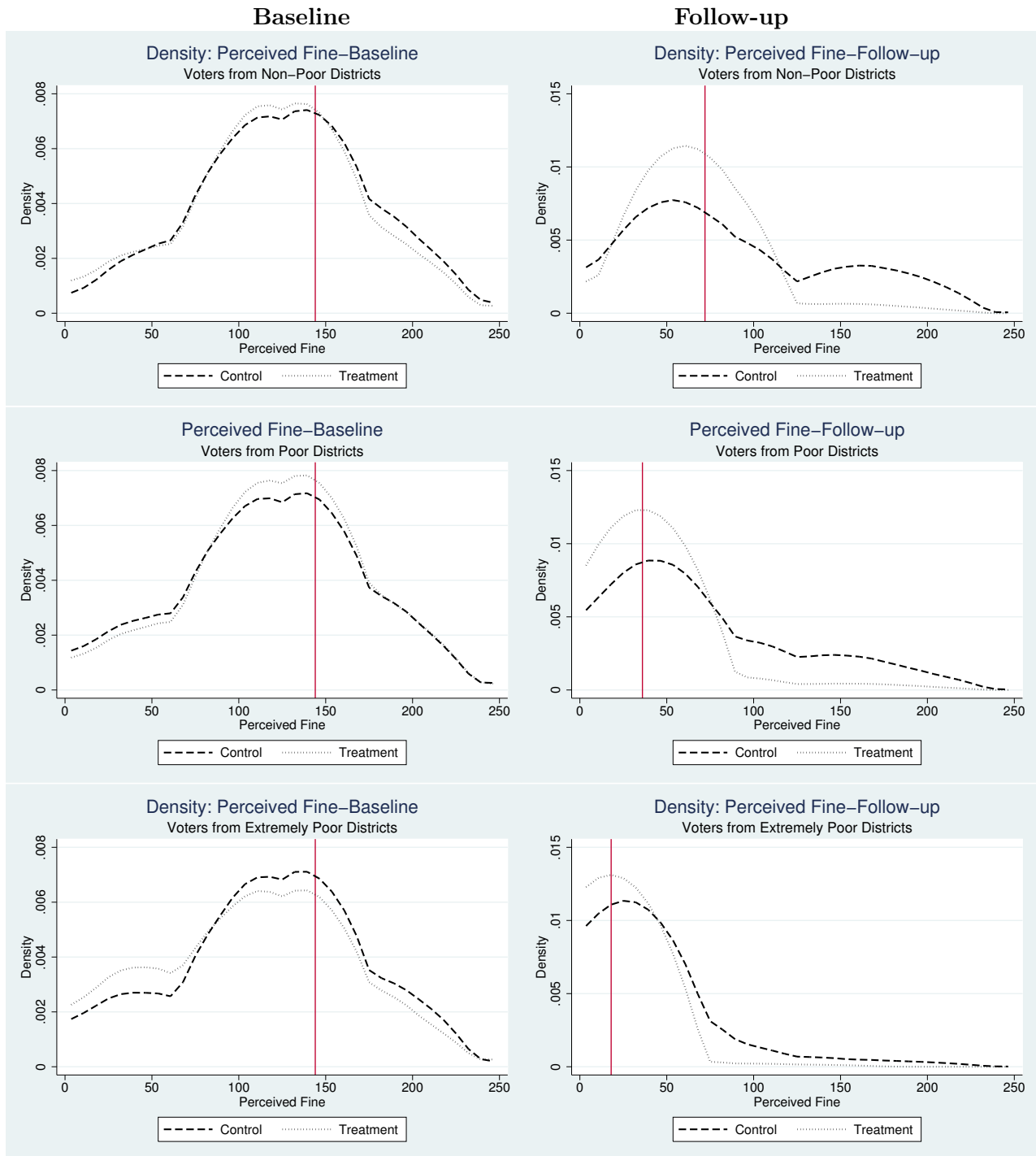
Table 1: Balance Between the Treatment and Control Group

Variable	Obs.	Full Sample		Treatment		Control		T - C	P-value
		Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.		
Perceived Fine (Baseline)	2275	121.957	56.275	123.849	56.740	120.076	55.790	-3.773	(0.110)
Gender	2275	0.424	0.494	0.419	0.494	0.428	0.495	0.009	(0.658)
Age	2275	39.885	13.358	39.916	13.256	39.874	13.456	-0.041	(0.941)
Yrs. of education	2275	9.586	4.063	9.593	4.090	9.576	4.038	-0.017	(0.920)
Log(PC Expenditures)	2275	5.190	0.871	5.176	0.883	5.203	0.859	0.027	(0.452)
Center	2201	0.667	0.472	0.671	0.470	0.662	0.473	-0.009	(0.641)
Left	2201	0.083	0.275	0.076	0.264	0.090	0.286	0.014	(0.228)
Right	2201	0.251	0.434	0.253	0.435	0.248	0.432	-0.005	(0.796)
Policy Extreme 1 (Pub. goods)	2275	0.207	0.406	0.213	0.409	0.202	0.402	-0.010	(0.542)
Policy Center	2275	0.598	0.491	0.614	0.487	0.580	0.494	-0.034	(0.101)
Policy Extreme 2 (Club goods)	2275	0.195	0.396	0.173	0.379	0.216	0.412	0.043	(0.009)
Very Interested in politics	2243	0.082	0.274	0.080	0.272	0.083	0.276	0.003	(0.822)
Interested in politics	2243	0.468	0.499	0.459	0.498	0.477	0.500	0.018	(0.385)
Not Interested in politics	2243	0.451	0.498	0.461	0.499	0.440	0.497	-0.021	(0.320)
Very Interested in the results of this election	2275	0.399	0.490	0.390	0.488	0.407	0.492	0.017	(0.406)
Interested in the results of this election	2257	0.443	0.497	0.433	0.496	0.454	0.498	0.020	(0.335)
Not Interested in the results of this election	2275	0.153	0.360	0.170	0.376	0.136	0.343	-0.034	(0.024)
Very Interested in the campaign of this election	2253	0.105	0.307	0.106	0.307	0.105	0.306	-0.001	(0.951)
Interested in the campaign of this election	2253	0.556	0.497	0.549	0.498	0.563	0.496	0.014	(0.510)
Not Interested in the campaign of this election	2253	0.339	0.473	0.345	0.476	0.332	0.471	-0.013	(0.514)
Name recall- Candidates running	2275	0.388	0.350	0.390	0.354	0.387	0.346	-0.002	(0.874)
Name recall- Parties running	2275	0.290	0.317	0.297	0.322	0.283	0.311	-0.014	(0.297)
Name recall- Candidates+Parties running	2275	0.339	0.315	0.343	0.322	0.335	0.308	-0.008	(0.540)
Political information score	2275	0.547	0.179	0.545	0.180	0.550	0.179	0.005	(0.503)

Notes: The table includes all subjects interviewed in the baseline and follow-up surveys. Table 17 in the Appendix shows the balance by poverty status.

Table 2: Turnout and Perceived Fine, by Treatment and Poverty Status

	Total	Treatment	Control	T - C	P-value
	PANEL A: Turnout				
Non-Poor	0.948	0.938	0.959	-0.021	(0.175)
Poor	0.940	0.913	0.967	-0.054	(0.001)***
Extreme Poor	0.935	0.930	0.940	-0.010	(0.641)
Total	0.942	0.927	0.958	-0.031	(0.002)***
	PANEL B: Perceived Fines				
Baseline					
Non-Poor	126.5	123.8	129.4	-5.605	(0.144)
Poor	122.1	122.3	122.0	0.230	(0.951)
Extreme Poor	115.9	111.9	120.0	-8.066	(0.132)
Total	122.3	120.4	124.2	-3.871	(0.107)
Follow-up					
Non-Poor	78.5	66.8	91.0	-24.197	(0.000)***
Poor	57.3	42.1	71.2	-29.047	(0.000)***
Extreme Poor	27.9	19.4	36.6	-17.199	(0.000)***
Total	58.2	46.1	70.2	-24.111	(0.000)***
Change					
Non-Poor	-48.0	-57.0	-38.5	-18.593	(0.000)***
Poor	-64.8	-80.1	-50.9	-29.277	(0.000)***
Extreme Poor	-88.0	-92.5	-83.4	-9.133	(0.121)
Total	-64.1	-74.2	-54.0	-20.239	(0.000)***

Notes: The actual changes that occurred were: for people voting in Non-poor districts, S/.72 (from S/.144 to S/.72); for those voting in Poor districts, S/.108 (from S/.144 to S/.36); and for people registered to vote in Extremely Poor districts, S/.126 (from S/.144 to S/.18).

Table 3: Reduced Form - Effect of Treatment on Voting

| | Dep. Var: Voted in the 2010 Election | | |
	Non-Poor	Poor	All
Treatment: Fine S/.72	-.027		-.026
	(0.015)*		(0.015)*
Treatment: Fine S/.36		-.052	-.053
		(0.016)***	(0.016)***
Gender	-.0009	0.018	0.013
	(0.016)	(0.016)	(0.011)
Age	0.001	0.001	0.001
	(0.0007)	(0.0006)**	(0.0005)***
Yrs. of education	0.002	0.004	0.004
	(0.002)	(0.003)	(0.002)**
Log(PC Expenditures)	0.004	0.011	0.007
	(0.008)	(0.013)	(0.008)
Votes in Non-Poor district	0.876		0.818
	(0.058)***		(0.05)***
Votes in Poor district		0.76	0.818
		(0.121)***	(0.054)***
Village FE	Y	Y	Y
Mean dep. var.	0.9482	0.9410	0.9446
Obs.	850	882	1732
R^2	0.953	0.947	0.947

* significant at 10%; ** significant at 5%; *** significant at 1%. Robust standard errors clustered at the household level in parentheses. Regression equation:

$$Vote_{ij} = \beta_1 NonPoor_{ij} \cdot Treat_{ij} + \beta_2 Poor_{ij} \cdot Treat_{ij} + \beta_3 Poor_{ij} + \beta_4 NonPoor_{ij} + \gamma X_{ij} + \delta_k + \eta_{ij}$$

Table 4: First Stage - Effect of Treatment on Changes in Perceived Fine

	Non-Poor	Poor	All
		Dep. Var: $\triangle$ Perceived Fine	
Treatment: Fine S/.72	-18.807		-19.317
	(4.905)***		(4.854)***
Treatment: Fine S/.36		-30.465	-30.340
		(4.756)***	(4.692)***
Gender	-2.962	-2.135	-2.839
	(4.946)	(4.741)	(3.393)
Age	0.333	0.409	0.363
	(0.201)*	(0.182)**	(0.133)***
Yrs. of education	0.266	-.753	-.243
	(0.74)	(0.703)	(0.499)
Log(PC Expenditures)	-4.101	-1.684	-2.369
	(3.524)	(3.532)	(2.520)
Votes in Non-Poor district	-35.548		-41.581
	(22.271)		(16.028)***
Votes in Poor district		-54.903	-41.491
		(32.882)*	(16.904)**
Village FE	Y	Y	Y
Mean dep. var.	-48.00	-64.99	-56.65
Obs.	851	882	1733
F-statistic	14.68	41.03	28.66
R^2	0.399	0.528	0.463

* significant at 10%; ** significant at 5%; *** significant at 1%. Robust standard errors clustered at the household level in parentheses. Regression equation:

$$\triangle Fine_{ij} = \beta_1 NonPoor_{ij} \cdot Treat_{ij} + \beta_2 Poor_{ij} \cdot Treat_{ij} + \beta_3 Poor_{ij} + \beta_4 NonPoor_{ij} + \gamma X_{ij} + \delta_k + \nu_{ij}$$

Table 5: IV - Effect of Change in Perceived Fines on Turnout

	Non-Poor	Poor	All
	Dep. Var: Voted in the 2010 Election		
	Non-Poor	Poor	All
$\triangle$ Perceived Fine	0.0014	0.0017	0.0016
	(0.0009)*	(0.0006)***	(0.0005)***
Gender	0.0034	0.022	0.018
	(0.0175)	(0.017)	(0.0124)
Age	0.0005	0.0008	0.0007
	(0.0008)	(0.0007)	(0.0005)
Yrs. of education	0.0013	0.0056	0.0042
	(0.0024)	(0.0031)*	(0.002)**
Log(PC Expenditures)	0.0101	0.0142	0.0109
	(0.0108)	(0.0145)	(0.0087)
Votes in Non-Poor district	0.9275		0.8878
	(0.0684)***		(0.0573)***
Votes in Poor district		0.8539	0.8836
		(0.1334)***	(0.0614)***
Village FE	Y	Y	Y
Mean dep. var.	0.9482	0.9410	0.9446
Obs.	850	882	1732
F-statistic	14.68	41.03	28.66

* significant at 10%; ** significant at 5%; *** significant at 1%. Robust standard errors clustered at the household level in parentheses. Regression equation: $Vote_{ij} = \beta_1 \triangle Fine_{ij} + \beta_2 Poor_{ij} + \beta_3 NonPoor_{ij} + \gamma X_{ij} + \delta_k + \epsilon_{ij}$

Table 6: Robustness: Effect of the Treatment on Perceived Consequences of Abstaining

	Fine	Can't use banks	Dep. Var: Consequence of Abstaining: Can't use municipality	Can't use notary	Can't use registry	Can't do other transactions
Treatment: Fine S/.72	-.0056	0.0171	0.0091	-.0014	0.0155	0.0261
	(0.0051)	(0.0271)	(0.021)	(0.0169)	(0.0154)	(0.0328)
Treatment: Fine S/.36	-.0076	-.0023	-.0013	-.0107	-.0013	-.0306
	(0.0051)	(0.0218)	(0.0179)	(0.0154)	(0.0131)	(0.0259)
Gender	0.0054	0.0137	0.018	-.0008	0.0088	0.0218
	(0.0042)	(0.0169)	(0.0132)	(0.0114)	(0.0104)	(0.0193)
Age	-.0002	0.0015	0.0009	0.0014	0.0012	0.0025
	(0.0001)	(0.0007)**	(0.0005)*	(0.0005)***	(0.0004)***	(0.0008)***
Yrs. of education	-.0008	0.0077	0.0034	0.0013	0.0039	0.0039
	(0.0006)	(0.0024)***	(0.0019)*	(0.0017)	(0.0015)**	(0.0029)
Log(PC Expenditures)	0.0002	0.0002	0.001	0.0137	0.0072	-.0119
	(0.0017)	(0.012)	(0.0101)	(0.0087)	(0.0081)	(0.0132)
Votes in Non-Poor district	1.0057	0.1545	0.005	-.1036	-.1139	0.4303
	(0.0146)***	(0.0875)*	(0.07)	(0.057)*	(0.0515)**	(0.0929)***
Votes in Poor district	1.0023	0.1826	0.0112	-.0942	-.1210	0.3906
	(0.0172)***	(0.0925)**	(0.0746)	(0.0602)	(0.0559)**	(0.099)***
Village FE	Y	Y	Y	Y	Y	Y
Mean dep. var.	0.994	0.155	0.096	0.063	0.048	0.287
Obs.	1713	1713	1713	1713	1713	1713
R^2	0.994	0.256	0.249	0.175	0.140	0.458

* significant at 10%; ** significant at 5%; *** significant at 1%. Robust standard errors clustered at the household level in parentheses. Regression equation:

$Consequence_{ij} = \beta_1 NonPoor_{ij} \cdot Treat_{ij} + \beta_2 Poor_{ij} \cdot Treat_{ij} + \beta_3 Poor_{ij} + \beta_4 NonPoor_{ij} + \gamma X_{ij} + \delta_k + \eta_{ij}$

Table 7: Robustness: Effect of Changes in Perceived Fine on Turnout - Different Measures of Turnout

| | | Dep. Var: Voted in the 2010 Election | | | |
| | | Available Sample | | Comparable Sample | |
	Benckmark	Self Reported	Sticker	Self Reported	Sticker
$\triangle$ Perceived Fine	0.0016	0.0013	0.0015	0.001	0.0015
	(0.0005)***	(0.0005)***	(0.0005)***	(0.0005)**	(0.0005)***
Gender	0.018	0.0142	0.0104	0.0018	0.0109
	(0.0124)	(0.0122)	(0.0126)	(0.0116)	(0.0128)
Age	0.0007	0.001	0.0002	0.0005	0.0002
	(0.0005)	(0.0005)*	(0.0005)	(0.0004)	(0.0005)
Yrs. of education	0.0042	0.0049	0.0014	0.0025	0.0014
	(0.002)**	(0.002)**	(0.0021)	(0.002)	(0.0021)
Log(PC Expenditures)	0.0109	0.0081	0.0115	0.0069	0.0118
	(0.0087)	(0.0082)	(0.0075)	(0.0064)	(0.0075)
Votes in Non-Poor district	0.8878	0.8808	0.9749	0.9681	0.9738
	(0.0573)***	(0.0551)***	(0.0453)***	(0.0419)***	(0.0454)***
Votes in Poor district	0.8836	0.8779	0.9851	0.9799	0.9842
	(0.0614)***	(0.059)***	(0.0538)***	(0.0497)***	(0.054)***
Village FE	Y	Y	Y	Y	Y
Obs.	1732	1729	1130	1127	1127
F-statistic	28.6595	28.2653	17.2611	16.8161	16.8161

* significant at 10%; ** significant at 5%; *** significant at 1%. Robust standard errors clustered at the household level in parentheses. Columns (4) and (5) use only the sample of observations for which both outcomes are available. Regression equation: $Vote_{ij} = \beta_1 \triangle Fine_{ij} + \beta_2 Poor_{ij} + \beta_3 NonPoor_{ij} + \gamma X_{ij} + \delta_k + \epsilon_{ij}$

Table 8: Robustness: Effect of Changes in Perceived Fine on Past Turnout

	Non-Poor	Poor	All
		Dep. Var: Voted in the 2006 Election	
△ Perceived Fine	-.0016	0.0007	0.00006
	(0.001)	(0.0006)	(0.0005)
Gender	-.0090	0.0212	0.0117
	(0.0175)	(0.0157)	(0.0109)
Age	0.0049	0.0023	0.0035
	(0.0011)***	(0.0009)**	(0.0007)***
Yrs. of education	0.0112	0.0078	0.0085
	(0.0029)***	(0.0023)***	(0.0017)***
Log(PC Expenditures)	-.0104	0.0175	0.004
	(0.0117)	(0.0153)	(0.0083)
Votes in Non-Poor district	0.6142		0.6965
	(0.1039)***		(0.0764)***
Votes in Poor district		0.6745	0.7007
		(0.1794)***	(0.0814)***
Village FE	Y	Y	Y
Mean dep. var.	0.9459	0.9444	0.9451
Obs.	758	791	1549
F-statistic	11.92	32.33	23.44
R^2	0.9419	0.1499	0.7375

* significant at 10%; ** significant at 5%; *** significant at 1%. Robust standard errors clustered at the household level in parentheses. Regression equation: $Vote_{ij}^{t-1} = \alpha + \beta_1 \triangle Fine_{ij} + \beta_2 Pov_{ij}^2 + \gamma X_{ij} + \delta_k + \epsilon_{ij}$. The dependent variable is self reported, and it refers to turnout in the November, 2006 municipal election.

Table 9: Effect of Changes in Perceived Fine on Turnout, by Political Preferences

	Dep. Var: Voted in the 2010 Election	
	(1)	(2)
△ Fine*Left	-.0009	
	(0.0026)	
△ Fine*Center	0.0015	
	(0.0006)***	
△ Fine*Right	0.0009	
	(0.0008)	
△ Fine*Policy Extreme 1 (Pub. Goods)		0.001
		(0.0013)
△ Fine*Policy Center		0.002
		(0.0007)***
△ Fine*Policy Extreme 2 (Club Goods)		0.0006
		(0.0009)
Controls	Y	Y
Village FE	Y	Y
Obs.	1665	1732

* significant at 10%; ** significant at 5%; *** significant at 1%. Robust standard errors clustered at the household level in parentheses. Regression equation:

$Vote_{ij} = \sum_{n=1}^{3} \beta_n \triangle Fine_{ij} \cdot P_{ij}^n + \sum_{n=1}^{3} \beta_{n1} P_{ij}^n \cdot Poor_{ij} + \sum_{n=1}^{3} \beta_{n1} P_{ij}^n \cdot NonPoor_{ij} + \beta_{10} Poor_{ij} + \beta_{11} NonPoor_{ij} + \gamma X_{ij} + \delta_k + \epsilon_{ij}$,
P_{ij}^n is a dummy variable representing political preferences $n = 1, 2, 3$ for individual i interviewed in village k. In Column (1), "Left", "Center", and "Right" are self reported variables indicating positions in the ideological scale, which ranges from 1 to 5. People choosing 1 and 5 are categorized as "Left" or "Right", respectively, while 2, 3 and 4 are considered in the "Center". The second measure of ideological positions (used in Column(2)) is an aggregation of several measures of policy preferences. I use responses from a question where I asked respondents to name (in order) the first five policies that she would implement if she were elected mayor of the district. For each of these categories, the policy preferences are ordered from not mentioned (zero) to most preferred (five). I aggregate these questions by taking the first principal component, and dividing the sample into quintiles. The center is defined by those in the quintiles 2, 3, and 4, while the first and fifth quintiles define the ideological extremes: Policy Extreme 1 (Pub. Goods), Policy Extreme 2 (Club Goods), respectively. The results from the principal component analysis is shown in Table 16 in the Appendix.

Table 10: Effect of Changes in Perceived Fine on Turnout, by Interest in Politics

	Dep. Var: Voted in the 2010 Election		
	(1)	(2)	(3)
△ Fine*Very interested in politics	0.0001 (0.0018)		
△ Fine*Interested in politics	0.0012 (0.0007)*		
△ Fine*Not interested in politics	0.0018 (0.0007)***		
△ Fine*Very interested in results		0.0007 (0.0006)	
△ Fine*Interested in results		0.0018 (0.0007)***	
△ Fine*Not interested in results		0.0039 (0.002)**	
△ Fine*Very interested in pol. campaign			0.0023 (0.002)
△ Fine*Interested in pol. campaign			0.0009 (0.0005)*
△ Fine*Not interested in pol. campaign			0.0023 (0.001)**
Controls	Y	Y	Y
Villafe FE	Y	Y	Y
Obs.	1713	1717	1714

* significant at 10%; ** significant at 5%; *** significant at 1%. Robust standard errors clustered at the household level in parentheses. Regression equation:

$Vote_{ij} = \sum_{n=1}^{3} \beta_n \triangle Fine_{ij} \cdot I_{ij}^n + \sum_{n=1}^{3} \beta_{n1} I_{ij}^n \cdot Poor_{ij} + \sum_{n=1}^{3} \beta_{n1} I_{ij}^n \cdot NonPoor_{ij} + \beta_{10} Poor_{ij} + \beta_{11} NonPoor_{ij} + \gamma X_{ij} + \delta_k + \epsilon_{ij}$,

I_{ij}^k is a dummy variable representing interest in politics $n = 1, 2, 3$ for individual i interviewed in village k.

Table 11: Effect of Changes in Perceived Fine on Turnout, by Political Information

| | Dep. Var: Voted in the 2010 Election | | | |
	(1)	(2)	(3)	(4)
$\triangle$ Perceived Fine	0.0024	0.0022	0.0024	0.0079
	(0.0008)***	(0.0007)***	(0.0008)***	(0.0031)**
$\triangle$ Fine*Candidate recall	-.0023			
	(0.0012)**			
$\triangle$ Fine*Party recall		-.0022		
		(0.0011)*		
$\triangle$ Fine*Candidate and Party recall			-.0027	
			(0.0012)**	
$\triangle$ Fine*Pol. Info. Score				-.0113
				(0.0053)**
Controls	Y	Y	Y	Y
Village FE	Y	Y	Y	Y
Obs.	1732	1732	1732	1732

* significant at 10%; ** significant at 5%; *** significant at 1%. Robust standard errors clustered at the household level in parentheses. Regression equation:

$Vote_{ij} = \beta_1 \triangle Fine_{ij} + \beta_2 \triangle Fine_{ij} \cdot Info_{ij} + \beta_3 Info_{ij} \cdot Poor_{ij} + \beta_4 Info_{ij} \cdot NonPoor_{ij} + \beta_5 Poor_{ij} + \beta_6 NonPoor_{ij} + \gamma X_{ij} + \delta_j + \epsilon_{ij}$.

The information variables are indices ranging from zero to one. The candidate and/or party recall represent the proportion of candidates/parties running in the election in the municipality where the voter is registered. Additionally, I included a battery of 17 questions related to the features of the political system, mandatory ages for voting, term limits at different levels of the government, etc. The political information score represents the proportion of questions that the respondent was able to answer correctly.

Table 12: Effects by policy preferences

	Dep. Var.: Voted in the 2010 Election	
	Coeff. on	Coeff. on
	$\triangle$ Perceived Fine	$\triangle$ Perceived Fine*Policy
Policy		
Health	0.0019	-.0005
	(0.0008)**	(0.0009)
Education	0.0009	0.0012
	(0.0005)*	(0.001)
Infrastructure	0.001	0.0007
	(0.0011)	(0.0012)
Order and Security	0.0022	-.0012
	(0.0007)***	(0.001)
Promote micro-enterprises/training	0.0016	0.0002
	(0.0005)***	(0.0012)
Agriculture	0.0022	-.0020
	(0.0007)***	(0.0008)**
Youth/Women	0.0013	0.0013
	(0.0006)**	(0.0011)
Cleaning/Environment	0.0013	0.0007
	(0.0005)**	(0.001)
Institutions	0.0018	-.0010
	(0.0006)***	(0.001)
Social/work programs	0.0017	-.0004
	(0.0006)***	(0.001)

* significant at 10%; ** significant at 5%; *** significant at 1%. Robust standard errors clustered at the household level in parentheses. Regression equation: $Vote_{ij} =$
$\beta_1 \triangle Fine_{ij} + \beta_2 \triangle Fine_{ij} \cdot Policy_{ij} + \beta_3 Policy_{ij} \cdot Poor_{ij} + \beta_4 Policy_{ij} \cdot NonPoor_{ij} + \beta_5 Poor_{ij} + \beta_6 NonPoor_{ij} + \gamma X_{ij} + \delta_k + \epsilon_{ij}$.
The coefficients shown in each row come from separate regressions. Policy preferences include: (1) Health: Infrastructure, health professionals, and training for health workers; (2) Education: Infrastructure, teachers, and training for teachers; (3) Infrastructure: Roads and access to them, sewage, water, electricity and telecommunications infrastructure, build markets, churches, community building, main square; (4) Order and Security: Traffic, more policemen in the streets, fight drugs and gangs; (5) Promote micro-enterprises/training: promote micro/small firms, train local entrepreneurs, promote private investment, promote tourism; (6) Agriculture: Build dams and irrigation infrastructure, technical assistance to agriculture, seed banks, support livestock farmers; (7) Youth/Women: Women empowerment and equality, youth policies, sporting events; (8) Cleaning/Environment: street cleaning, increase green areas, promote recycling; (9) Institutions: Transparency in managing the municipality, fight corruption, modernize the bureaucracy, participatory decision-making, land titling; (10) Social/work programs: Job training programs, help those in poverty, food aid, child care, generate jobs. For each of these categories, the dependent variable is a dummy indicating whether the respondent named at least one of the policies in this category as one of her five priorities for the district.

Table 13: Effects of Fines on Information Acquisition

	Dep. Var.:			
	(1)	(2)	(3)	(4)
	△ Candidate Recall	△ Party Recall	△ Cand.+Party Recall	△ Pol. Info Score
Voted in the 2010 Elections?	-.1332	-.2873	-.2102	-.0382
	(0.3008)	(0.341)	(0.2936)	(0.2053)
Gender	-.0208	-.0315	-.0262	-.0259
	(0.0132)	(0.0148)**	(0.013)**	(0.0096)***
Age	-.0002	0.0007	0.0003	-.0009
	(0.0006)	(0.0007)	(0.0006)	(0.0005)*
Yrs. of education	-.0030	-.0053	-.0041	-.0059
	(0.0021)	(0.0023)**	(0.002)**	(0.0015)***
Log(PC Expenditures)	-.0165	-.0076	-.0120	-.0045
	(0.0095)*	(0.0097)	(0.0086)	(0.0068)
Votes in Non-Poor district	0.0556	0.2665	0.1611	0.2349
	(0.2487)	(0.2807)	(0.2422)	(0.1695)
Votes in Poor district	0.0349	0.2767	0.1558	0.2294
	(0.2455)	(0.2772)	(0.2391)	(0.1683)
Village FE	Y	Y	Y	Y
Obs.	1732	1732	1732	1732
R^2	0.076	-.058	0.005	0.041

* significant at 10%; ** significant at 5%; *** significant at 1%. Robust standard errors clustered at the household level in parentheses. Regression equation: $\triangle Info_{ij} = \beta_1 Vote_{ij} + \beta_2 Poor_{ij} + \beta_3 NonPoor_{ij} + \gamma X_{ij} + \delta_k + \epsilon_{ij}$, where $\triangle Info_{ij}$ represents the change in the political information between the baseline and follow-up surveys, and $Vote_{ij}$ is instrumented using the treatment status.

Table 14: Effects of Fines on Vote buying

	(1) 1=Accepted Money or a Gift	(2) Amount Accepted Directly	(3) Amount Accepted Indirectly	(4) Amount Accepted Total
		Dep. Var:		
△ Perceived Fine	-.0001 (0.0009)	-.0626 (0.0483)	0.0106 (0.0176)	-.0599 (0.0503)
Gender	-.0194 (0.023)	-2.6712 (1.5085)*	-.3677 (0.561)	-3.4475 (1.5441)**
Age	-.0024 (0.0009)***	-.0873 (0.0774)	-.0314 (0.027)	-.1509 (0.0855)*
Yrs. of education	-.0021 (0.0032)	-.0907 (0.1794)	-.0385 (0.0634)	-.3210 (0.2832)
Log(PC Expenditures)	-.0122 (0.0165)	0.6991 (0.848)	-.0520 (0.3403)	1.0794 (0.9018)
Votes in Non-Poor district	0.5358 (0.1133)***	0.8829 (8.3078)	12.7471 (3.2311)***	16.2986 (9.1545)*
Votes in Poor district	0.598 (0.1194)***	0.976 (7.7949)	12.5014 (3.0902)***	16.0873 (8.6743)*
Controls	Y	Y	Y	Y
Village FE	Y	Y	Y	Y
Mean dep. var.	0.310	7.03	3.22	10.80
Obs.	1733	538	538	538
F-statistic	25.64	11.34	11.34	11.34

* significant at 10%; ** significant at 5%; *** significant at 1%. Robust standard errors clustered at the household level in parentheses. Regression equation: $Y_{ij} = \beta_1 \triangle Fine_{ij} + \beta_2 Poor_{ij} + \beta_3 NonPoor_{ij} + \gamma X_{ij} + \delta_k + \epsilon_{ij}$. In Column (1), Y_{ij} is an indicator for whether voter i accepted money from a politician or his/her representative for her vote. In Column (2) through (4), it measures the amount of money accepted (directly or indirectly) to buy a vote.

APPENDIX[38]

Figure 4: Fliers for the Treatment and Control Groups

Flier for the Treatment group:

> **Estimado Sr(a):**
>
> En Agosto del 2006, el Congreso de la República aprobó una reducción de las multas para los omisos al voto (Ley No. 28859). Según esta ley, aquellos que no voten ya no estarán sujetos a una multa de S/. 144, sino que la multa es menor para todos, y escalonada de acuerdo al nivel de pobreza del distrito.
>
> De acuerdo a la información que Ud. me ha dado, si es que Ud. no vota en las elecciones de octubre de este año, tendrá que pagar una multa de S/._____.
>
> *Si tiene alguna consulta sobre esta información, puede contactarse con el coordinador de este proyecto, el Sr. Gianmarco León, al teléfono 99985-0252

Flier for the Control group:

> **Estimado Sr(a).:**
>
> Recuerde que en el Perú votar es obligatorio, y estar omiso al voto, es decir, no asistir a cualquier elección, está sujeto a una sanción que implica el pago de una multa.

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[38]Not intended for publication.

Table 16: Coefficients for Policy Preference First Principal Component

Policy issues	Coefficients
Health: infrastructure	-0.109
Health: personnel and services	-0.146
Education: infrastructure	-0.123
Education: teachers and services	-0.081
Transport: Ordering transit	0.042
Transport: Infrastructure (roads, access, etc.)	-0.358
Basic services: Water, electricity, sewage, communications	-0.452
Promote tourism	-0.055
Economics: Support micro and small enterprises	-0.025
Economics: Training to local enetrepeneurs	-0.028
Economics: Agriculture - technical assistance, and training to local producers	-0.274
Economics: Agriculture - infrastructure projects for agriculture	-0.111
Economics: promote private investment	-0.029
Youth: Sport activities and infrastructure	-0.037
Youth: Labor training programs	0.018
Women: empowerment and programs	0.003
Social: More participation, participatory budgets	-0.024
Security: More policemen	0.153
Security: Fight gangs and drugs in the streets	0.225
Environment: Cleaning the district Garbage trucks	0.045
Environment: More green areas	-0.066
Environment: Recycling of solid residues	0.001
Institutional: Transparency in procedures	-0.025
Institutional: Modernize procedures	-0.030
Infrastructure: Markets, public buildings	-0.052
Social: Children and elderly programs, school lunches, etc.	-0.028
Social: work for the poor	-0.017
Housing: land and house titling	-0.035

Table 15: Descriptive Statistics, Districts sampled

	Lima	Lima	Lima	Lima	Lima	Lima	Lima	Lima	Lima	Lima
Region	Lima	Cañete	Huaura	Cañete	Huarochiri	Huaura	Yauyos	Cajatambo	Cajatambo	Huaura
Province	Punta Hermosa	Imperial	Santa Maria	San Antonio	San Antonio	Leoncio Prado	Huantan	Huancapon	Cajatambo	Checras
District										
Poverty										
Poverty Ranking	173	176	191	201	841	876	938	978	1042	1047
Poverty Category	Non-poor	Non-poor	Poor	Poor	Poor	Poor	Poor	Ext. Poor	Ext. Poor	Ext. Poor
Number of HHs	1767	8170	6429	897		717	311	461	791	593
Sampled HHs	251	248	240	241	240	146	93	166	166	121
Sampled Individuals	632	930	756	776	668	418	264	460	462	308
Electoral variables										
Registered voters 2006-1	4,291	24,668	17,577	2,200	5,564	872	543	724	1,857	490
2006-2	4,291	24,668	17,577	2,200	5,564	872	543	724	1,857	490
2006-3	4,297	25,006	18,183	2,255	6,478	1,017	568	778	1,891	550
2010	4,615	26,873	20,630	2,525	13,640	1,367	683	921	1,820	664
Turnout 2006-1	88.9%	92.6%	92.1%	95.0%	93.9%	91.2%	86.0%	77.1%	73.6%	86.5%
2006-2	88.4%	92.2%	91.4%	94.8%	93.7%	90.5%	88.0%	79.0%	78.3%	85.5%
2006-3	87.5%	91.1%	90.1%	94.5%	92.5%	91.6%	83.1%	82.5%	75.4%	88.7%
2010	86.7%	90.0%	88.2%	93.7%	89.9%	91.4%	82.0%	83.6%	79.0%	85.4%
Blank Votes (%) 2006-3	3.1%	9.1%	7.0%	8.4%	11.5%	5.5%	8.9%	8.9%	13.9%	12.3%
2010	3.5%	7.4%	9.3%	6.8%	14.3%	11.6%	10.2%	9.0%	15.5%	4.6%
Invalid Votes (%) 2006-3	3.8%	3.7%	9.8%	13.2%	9.2%	2.5%	4.9%	34.3%	5.4%	2.0%
2010	2.6%	5.7%	5.4%	12.3%	8.0%	0.7%	4.5%	4.3%	4.4%	39.3%
Num. of candidates running for the local government 2006	10	11	13	7	8	9	8	6	7	9
2010	5	13	20	5	12	2	7	6	6	6

Notes: 2006-1 and 2006-2 refers to the first and second round of the presidential elections held in April and June 2006, respectively. 2006-3 refers to the municipal elections held in November, 2006, the first elections under the new levels of the fines.

Table 17: Balance Between Treatment and Control Group, by poverty level

Variable	Non-Poor			Poor			Extreme Poor		
	Treat	Control	Diff. p-val	Treat	Control	Diff. p-val	Treat	Control	Diff. p-val
Perceived Fine (Baseline)	129.275	123.565	(0.130)	121.583	121.901	(0.930)	119.321	111.672	(0.146)
Gender	0.372	0.403	(0.358)	0.423	0.418	(0.871)	0.485	0.485	(0.994)
Age	38.150	38.121	(0.974)	39.443	38.901	(0.547)	43.448	44.182	(0.521)
Yrs. of education	10.275	10.348	(0.776)	9.739	9.746	(0.979)	8.291	8.080	(0.558)
Log(PC Expenditures)	5.482	5.532	(0.338)	5.187	5.194	(0.898)	4.684	4.694	(0.899)
Center	0.701	0.659	(0.197)	0.751	0.708	(0.165)	0.496	0.598	(0.018)
Left	0.067	0.100	(0.087)	0.055	0.087	(0.078)	0.121	0.077	(0.091)
Right	0.232	0.241	(0.768)	0.194	0.205	(0.679)	0.383	0.325	(0.162)
Policy Extreme 1 (Pub. goods)	0.077	0.066	(0.537)	0.246	0.249	(0.912)	0.366	0.347	(0.646)
Policy Center	0.548	0.522	(0.438)	0.671	0.610	(0.060)	0.619	0.628	(0.842)
Policy Extreme 2 (Club goods)	0.374	0.410	(0.294)	0.083	0.141	(0.007)	0.015	0.026	(0.382)
Very Interested in politics	0.078	0.076	(0.912)	0.064	0.069	(0.787)	0.111	0.116	(0.869)
Interested in politics	0.446	0.456	(0.773)	0.458	0.500	(0.214)	0.479	0.474	(0.908)
Not Interested in politics	0.475	0.468	(0.819)	0.478	0.431	(0.167)	0.410	0.410	(0.991)
Very Interested in the results of this election	0.319	0.371	(0.112)	0.410	0.413	(0.927)	0.466	0.456	(0.812)
Interested in the results of this election	0.468	0.474	(0.878)	0.427	0.461	(0.308)	0.391	0.410	(0.649)
Not Interested in the results of this election	0.208	0.153	(0.039)	0.156	0.122	(0.150)	0.138	0.131	(0.820)
Very Interested in the campaign of this election	0.094	0.104	(0.637)	0.087	0.081	(0.746)	0.155	0.143	(0.700)
Interested in the campaign of this election	0.518	0.525	(0.832)	0.550	0.622	(0.031)	0.596	0.531	(0.129)
Not Interested in the campaign of this election	0.387	0.370	(0.610)	0.363	0.297	(0.038)	0.249	0.326	(0.049)
Name recall- Candidates running	0.266	0.292	(0.216)	0.452	0.428	(0.370)	0.474	0.475	(0.960)
Name recall- Parties running	0.214	0.224	(0.582)	0.369	0.339	(0.225)	0.302	0.289	(0.601)
Name recall- Candidates+Parties running	0.240	0.258	(0.343)	0.410	0.384	(0.265)	0.388	0.382	(0.808)
Political information score	0.547	0.561	(0.217)	0.555	0.555	(0.947)	0.522	0.523	(0.972)

Table 18: Balance Between Attrited and non-Attrited

Variable	Obs.	Non-Attriters	Attriters	NA - A	P-value
	2838	125.199	121.957	-3.242	(0.221)
Gender	2838	0.482	0.424	-0.059	(0.012)
Age	2838	39.180	39.885	0.706	(0.265)
Yrs. of education	2838	9.619	9.586	-0.034	(0.860)
Log(PC Expenditures)	2838	5.225	5.190	-0.035	(0.409)
Center	2754	0.670	0.667	-0.004	(0.872)
Left	2754	0.071	0.083	0.012	(0.354)
Right	2754	0.259	0.251	-0.008	(0.685)
Policy Extreme 1	2838	0.171	0.207	0.037	(0.052)
Policy Center	2838	0.609	0.598	-0.011	(0.634)
Policy Extreme 2	2838	0.221	0.195	-0.026	(0.168)
Very Interested in politics	2795	0.065	0.082	0.016	(0.205)
Interested in politics	2795	0.443	0.468	0.025	(0.290)
Not Interested in politics	2795	0.492	0.451	-0.041	(0.081)
Very Interested in the results of this election	2838	0.375	0.399	0.024	(0.307)
Interested in the results of this election	2814	0.455	0.443	-0.012	(0.618)
Not Interested in the results of this election	2838	0.164	0.153	-0.010	(0.544)
Very Interested in the campaign of this election	2809	0.112	0.105	-0.007	(0.653)
Interested in the campaign of this election	2809	0.512	0.556	0.045	(0.058)
Not Interested in the campaign of this election	2809	0.377	0.339	-0.038	(0.091)
Name recall- Candidates running	2837	0.401	0.388	-0.013	(0.436)
Name recall- Parties running	2837	0.308	0.290	-0.019	(0.212)
Name recall- Candidates+Parties running	2837	0.355	0.339	-0.016	(0.289)
Political information score (baseline)	2838	0.561	0.547	-0.014	(0.096)

Table 19: Robustness: Main Regressions, Including Voters from Extreme Poor Districts

	Reduced Form	First Stage	IV
		Dependent Variable:	
	Voted in 2010	$\triangle$ in Perceived Fine	Voted in 2010
$\triangle$ Perceived Fine			0.0015
			(0.0005)***
Treatment: Fine S/.72	-.0208	-19.3585	
	(0.0157)	(4.8621)***	
Treatment: Fine S/.36	-.0508	-30.1273	
	(0.0161)***	(4.6858)***	
Treatment: Fine S/.18	-.0091	-8.5888	
	(0.0201)	(5.9851)	
Gender	0.01	-4.8665	0.0174
	(0.0099)	(2.9300)*	(0.0111)
Age	0.0015	0.3473	0.0009
	(0.0004)***	(0.1188)***	(0.0005)**
Yrs. of education	0.004	-.2727	0.0043
	(0.0015)***	(0.4196)	(0.0016)***
Log(PC Expenditures)	0.0014	-.9997	0.0029
	(0.006)	(2.1271)	(0.0068)
Votes in Non-Poor district	0.8345	-47.9233	0.9112
	(0.0426)***	(13.8454)***	(0.0508)***
Votes in Poor district	0.8686	-50.0673	0.9416
	(0.0478)***	(14.7154)***	(0.0556)***
Votes in Extreme Poor district	0.7051	-66.6642	0.8075
	(0.0668)***	(14.6329)***	(0.0747)***
Mean dep. var.	0.9424	-64.115	0.9424
Obs.	2273	2273	2273
F-statistic			19.57
R^2	0.9455	0.5232	0.5854

* significant at 10%; ** significant at 5%; *** significant at 1%. Robust standard errors clustered at the household level in parentheses. Regression equation for these regressions follow the structure detailed in the main text in equations (7),(9), and (10), but including an indicator for voting in an extremely poor district, and the corresponding interactions.

Table 20: Robustness: Main Regressions, Without Controls

	(1)	(2)	(3)
	Panel A: Reduced Form		
	Dep. Var: Voted in the 2010 Election		
Treatment: Fine S/.72	-.0250	-.0217	-.0258
	(0.0149)*	(0.0152)	(0.015)*
Treatment: Fine S/.36	-.0532	-.0533	-.0527
	(0.0162)***	(0.016)***	(0.0161)***
R^2	0.0391	0.0181	0.0487
	Panel B: First Stage		
	Dep. Var: $\triangle$ Perceived Fine		
Treatment: Fine S/.72	-19.5131	-18.5018	-19.3167
	(4.8591)***	(5.1395)***	(4.8544)***
Treatment: Fine S/.36	-30.5384	-29.1100	-30.3400
	(4.7246)***	(4.7584)***	(4.6921)***
R^2	0.104	0.0506	0.1098
	Panel C: IV		
	Dep. Var: Voted in the 2010 Election		
$\triangle$ Perceived Fine	0.0016	0.0016	0.0016
	(0.0005)***	(0.0005)***	(0.0005)***
Controls	N	Y	Y
Village FE	N	N	Y
Mean Vote 2010	0.9445	0.9445	0.9445
Mean $\triangle$ Perceived Fine	-56.65	-56.65	-56.65
F-statistic	28.7586	25.2301	28.6595
Obs.	1732	1732	1732

* significant at 10%; ** significant at 5%; *** significant at 1%. Robust standard errors clustered at the household level in parentheses. Regression equations: Reduced Form: $Vote_{ij} = \beta_1 \triangle Fine_{ij} + \beta_2 Poor_{ij} + \beta_3 NonPoor_{ij} + \gamma X_{ij} + \delta_k + \epsilon_{ij}$

Table 21: Effect of Changes in Perceived Fine on Turnout, by Demographic Characteristics

| | Dep. Var: Voted in the 2010 Election | | | |
	(1)	(2)	(3)	(4)
△ Perceived Fine	0.0008	0.0025	0.0051	0.004
	(0.0013)	(0.0008)***	(0.0025)**	(0.0023)*
△ Fine*Age	0.00002			
	(0.00004)			
△ Fine*Male		-.0021		
		(0.001)**		
△ Fine*Yrs. Educ.			-.0003	
			(0.0002)	
△ Fine*Log(PC Expenditures)				-.0005
				(0.0004)
Controls	Y	Y	Y	Y
Village FE	Y	Y	Y	Y
Obs.	1732	1732	1732	1732

* significant at 10%; ** significant at 5%; *** significant at 1%. Robust standard errors clustered at the household level in parentheses. Regression equation:

$$Vote_{ij} = \beta_1 \triangle Fine_{ij} + \beta_2 \triangle Fine_{ij} \cdot X_{ij} + \beta_3 X_{ij} \cdot Poor_{ij} + \beta_4 X_{ij} \cdot NonPoor_{ij} + \beta_5 Poor_{ij} + \beta_6 NonPoor_{ij} + \gamma X_{ij} + \delta_k + \epsilon_{ij}$$