Heterogeneous Effect of Corruption: Experimental Evidence from Peru *

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Abstract. An increasing body of literature on the effects of corruption on political behavior employs innovative experimental methods. This paper aims to contribute to this scholarship by uncovering the heterogeneous effect of corruption information. The evidence suggesting that the support for corruption is conditional on economic exchanges is inconclusive. This moderator factor can be observationally indistinguishable from beliefs of widespread corruption and the clarity of viable alternatives to corruption, which makes different causal mechanisms difficult to disentangle. In a nationally representative survey in Peru, I randomly varied the corruption information and randomly primed a set of subjects with prevalent/limited corruption context and high/low goods provision. The results suggest that the impact of corruption information is unconditional to the levels of good provision and the perception of widespread corruption but that punishment for corruption decreases as we move to contexts of low electoral competition.

Keywords: survey experiments, heterogenous treatment effects, corruption, accountability

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1 Introduction

In spite of their use of public office for personal gain, voters frequently return elected representatives to their posts. The deficit of accountability for corruption is one of the most pressing problems of young democracies in developing countries. Not only does corruption happen quite frequently, but also voters fail to hold corrupt candidates accountable for wrongdoings. The lack of accountability weakens the incentives of authorities to perform well, and thus it undermines the opportunities for better governance. In this paper, I study the conditions under which voters fail to hold politicians accountable for corruption.

The growing literature about the electoral consequences of corruption has produced inconclusive evidence in favor of the economic exchange hypothesis of voter support for corrupt politicians. Some studies show that voter negative reactions to corruption scandals are conditional on the economic performance, as citizens are instrumental voters who are willing to support corruption when material benefits are delivered (Fernandez-Vazquez et al., 2013; Carlin et al., 2015; Zechmeister & Zizumbo-Colunga, 2013; Rosas & Manzetti, 2015). While others have found that voters "do not tolerate corruption and are unlikely to express support for corrupt politicians, even if these politicians otherwise perform well by providing public goods" (Weitz-Shapiro & Winters, 2014). This evidence inconsistency called for a new corruption experiment.

To establish whether the economic performance is an effective moderator of the negative effects of corruption, it is important to disentangle it from potential moderators that are observationally indistinguishable from it. In particular, I focus on the political context in which voters make choices. Given that increased goods provision is often associated with greater opportunities for corruption, it is possible that voters tolerate the corrupt candidates because they perceive that all alternatives are equally corrupt or potentially corrupt. If corruption is so endemic that voters cannot differentiate among candidates, corruption is unlikely to be a decisive factor in voting behavior.

Another reason why scholars have not yet fully specified the sources of the support for

corrupt politicians is that most studies assume voters have the ability to punish the corrupt incumbent. This is a reasonable assumption in consolidated democracies where free and fair elections are the norm, campaign finance is regulated, and rules are likely to be enforced. However, in many democracies where corruption and clientelism are pervasive, elections are often dominated by a political group that use illegal money to retain office. If this is the case, and elections are won by large margins, voters might feel their vote against corruption makes no difference. Thus, a weak electoral opposition shields the corrupt candidate from strong electoral penalties. Voters are not able to hold politicians accountable when the viable alternative choices are absent.

I consider that these two moderator factors, the context of widespread corruption and the weak electoral opposition, are necessary conditions for the voters' capacity to punish a corrupt candidate. In this paper, I test the punishing capacity hypothesis along with the economic exchange hypothesis. That is, in addition to the hypothesis based on the economic gain of voters, I explore whether voters do care about corruption but do not find any political alternative to the corrupt incumbent. They might prefer a candidate that does not steal, but they do not perceive possible alternatives. They either think that all politicians are equally corrupt or that none of the possibly clean alternatives have any real chance at winning. Thus, depending on (i) the prior beliefs about how widespread corruption is and (ii) the intensity of the electoral competition in a given district, voters will be more or less likely to punish corruption.

I propose an experiment that is able to simultaneously test for these conditional factors along with the economic exchange hypothesis. With a survey experiment in Peru, I randomly manipulated the corruption information about a given candidate, as well as the perceived context of widespread corruption and the amount of public spending. Then, I tested whether corruption information has a different effect in these different settings. By randomly priming a set of subjects on the perception of pervasive/limited corruption context and high/low goods provision, I am able to analyze how the perception of widespread corruption and high

goods provision affect the willingness and ability of voters to punish politicians for credible corruption accusations. Furthermore, by looking at the pre-treatment variables of electoral competition, I am able to analyze how this factor moderates the impact of corruption on voter preferences.

I organize this paper as follows. Section 2 frames my expectations regarding the relation between corruption and performance, and how this relationship shapes accountability. Section 3 outlines two hypotheses derived from the punishing capacity argument. Section 4 justifies the setting of the survey experiment in Latin America. Section 5 presents the experimental design and treatment conditions. Section 6 discusses the main findings, which provide partial support for the punishing capacity hypothesis and no support for the economic exchange hypothesis. Section 7 discusses the implications of the finding that corruption punishment is unconditional to goods provision but that it diminishes as we move to districts of low electoral competition.

2 Economic Exchange, Corruption and Accountability

What does the literature say about the support for corrupt politicians? Given the variability of electoral consequences of corruption, the rapidly growing literature on corruption and political behavior explores the individual and contextual factors that moderate or exacerbate the effects of corruption information.

There are broadly two strands in the literature. Some researchers focus on the rational economic decision-making of voters and argue that the tolerance to corruption depends on whether voters receive material benefits from the government or not. Others focus on the context in which voters make their choices. They argue that the political context matters for how much voters can punish corrupt politicians and show that attitudes and behaviors towards corruption are context-dependent.

There is robust evidence showing that politicians are more likely to be re-elected under

good economic times while they are more likely to suffer electoral defeats in economic downturns (Lewis-Beck, 1988; Lewis-Beck & Stegmaier, 2000; Kinder & Kiewiet, 1981). In this line of reasoning, the instrumentalist citizen deems some corrupt practices acceptable as long as they secure benefits to their community. This means that they will reward good economic performance or material benefits provision even if blatant corruption was disclosed.

Following the literature on economic voting, the scholars investigating the electoral consequences of corruption have argued that bad economic conditions drive voters to punish corrupt politicians more harshly. While voters condone the corrupt politicians who are best at providing material benefits (Pereira & Melo, 2016; Pereira et al., 2008). The popular phrase 'roba pero hace' (steals but delivers) captures the sentiment that malfeasance does not weaken electoral support as long as the leader is effective in delivering tangible benefits to the community.

Cross-national evidence from Latin America shows that voters whose governments sustain strong patron-client relationships are more likely to support a corrupt leader (Manzetti & Wilson, 2007). Zechmeister & Zizumbo-Colunga (2013) found that individuals facing bad economic conditions apply higher penalties to presidential approval for perceived corruption. And Rosas & Manzetti (2015) confirms this relationship with a cross-national survey sample of 18 Latin American countries over a 10-year period (2004-2014) showing that presidential disapproval among corruption victims is more pronounced in contexts of high inflation and high unemployment.

Comparative literature from Europe also provides support for the economic exchange hypothesis. There is evidence that Spanish voters reward the types of corruption that bring side benefits, such as licensing construction or environmental crimes, more than those that do not incur in any direct economic return (Fernandez-Vazquez et al., 2013). Similarly, Klasnja & Tucker (2013) found that corruption information is more severely punished in Moldova than in Sweden, where a higher percentage of voters believe the economy was strong.

However, the growing experimental literature on corruption information and voter re-

actions is inconsistent with the traditional the economic exchange hypothesis. In Brazil, Winters & Weitz-Shapiro (2012) found that, against the popular belief that most voters are willing to overlook corruption in exchange for service delivery, citizens do not tolerate corruption. In India, citizens are less likely to express support for candidates who are alleged to be criminal or corrupt and this behavior is unrelated to ethnicity and levels of education (Banerjee et al., 2014). Also, in Spain, experimental evidence suggests that citizens are less inclined to ignore an accusation of corruption when the candidate is not a member of the political party with whom they sympathize (Anduiza et al., 2013). Moreover, others have found that when sophisticated voters are provided with reliable information they punish the corrupt candidate (Weitz-Shapiro & Winters, 2014; Botero et al., 2015).

In sum, while the there is some evidence that voters' negative reactions to corruption in formation is moderated by the provision of goods and services, the theoretical and empirical links between the citizens' willingness to punish corruption and the delivery of tangible benefits remain underdeveloped. Thus, this paper tests this hypothesis using a nationally representative survey experiment in Peru.

H1: The electoral penalty for corruption is smaller when voters perceive more material benefits.

3 Conditional Corruption Voting

Beyond the type of information about corruption and the type of material gains received from the suspected politician, not every new piece of information about corruption will activate accountability to the same degree. Depending on the political context, the new evidence of corruption may exacerbate or moderate the penalties for corruption. This is a serious matter because, under certain circumstances, the information about corruption might counteract the likelihood that voters will hold politicians accountable for wrongdoings. When should we expect information to have a positive impact on accountability?

Contrary to the economic exchange hypotheses, an alternative explanation is based on the context in which citizens make judgements, and suggests that voters do care about corruption but that they cannot observe viable and clean alternatives. Some scholars have found that the clarity of alternative choices is an important factor affecting electoral accountability (Sanders & Carey, 2002; C. J. Anderson, 2007).

In this line of thought, there is evidence that the perceptions about how much corruption has penetrated the society can affect attitudes and behavior towards corruption. In particular, it is possible that tolerance towards corruption is high because of the normalization of the practice. With a corruption experiment, Corbacho et al. (2016) found that the societal levels of corruption increase the likelihood of engaging in corruption. They conclude that corruption perception is a self-fulfilling prophecy because the more you believe that others are prone to corruption, the more you engage in it yourself.

Other factors related to the generalization of corruption have an impact on behavior and attitudes towards corruption. In another experiment, Campos-Ortiz (2011) found that corruption victimization impacts the voter's willingness to engage in corruption. In line with the evidence that the context of corruption might have an impact on voter attitudes and behavior towards corruption, it is possible that voters are less willing to punish corruption when they perceive that corruption is pervasive. In the contrary, in contexts where corruption is perceived as occasional, corruption will be more readily punished. And when electoral competition is low, voters would be less likely to effectively exercise their right to 'throw the rascals out' because they do not find viable alternative choices to the corrupt politician.

Therefore, there is some evidence that the environment of corruption matters for citizens' reactions to new cases of corruption. Perhaps the voters overlook corruption accusations when they perceive that the practice of corruption is so widespread that all candidates are likely to be equally corrupted or that no honest candidate has a credible chance of winning. In fact, occasionally an incumbent who is accused of corruption faces a challenger whose reputation is also tainted with corruption. In this case the ability of voters to punish the

corrupt candidate is reduced. Similarly, when electoral competition is low, and few political alternatives to corruption are viable, voters will have a reduced capacity to punish the corrupt candidate.

So, the two factors that hold the argument of the punishing capacity of votres are that (1) when a context is such that corruption is perceived to be normal practice among the political elite, voters will not punish corruption because their prior beliefs lead them to expect corruption from all politicians, and (2) when an electoral context provides a low 'punishing capacity', voters will perceive fewer viable political alternatives and will apply low penalties to corruption.

First, in a context of high widespread corruption, the voter will react differently to new information on corruption than they would in a context where corruption was rare. It may be the case that a voter will prefer to retain the politician accused of corruption rather than to take a gamble for any of the other political alternatives, which are believed to be equally corrupt. That is, corruption information does not affect the vote uniformly across populations with different prior beliefs about corruption. In a context where the voters' prior expectation is that corruption is a normal practice, additional pieces of information about corruption might in fact undermine accountability.

H2a: The electoral penalty for corruption is smaller when a voter perceives widespread corruption.

Second, in a setting where voters cannot find viable political alternatives to the corrupt incumbent, they may prefer to vote for the notorious yet corrupt politician. That is, the penalties for corruption do not only depend on the performance of the government but also on how the voters perceive the political alternatives to it. There is evidence that the fewer viable alternative choices, the greater the impact of issues such as the economy on political preferences (Anderson, 2000; Sanders & Carey, 2002). Following this line of reasoning, when voters seek to 'throw the rascals out' there need be feasable alternatives available. There are some contexts where it is more difficult for voters to identify a clear alternative to the

incumbent government, such as when the level of electoral competition is low. So, when the 'punishing capacity' of voters is limited because of low electoral competition, the voters are less likely to punish corruption.

H2b: The electoral penalty for corruption is smaller when a voter perceives fewer viable alternatives.

Both traits of the electoral context –the prevalence of corruption and the level of electoral competition– are commonly associated with the failure of accountability in young democracies, but they have not been studied in relation to corruption, nor do we know the nature of the relationship between them. Thus, this study will contribute with a novel explanation for why more corruption information might not necessary boost accountability. It will identify the factors that inhibit accountability and provide policy recommendations on how to break the vicious cycle of corruption (Ashworth et al., 2012).

4 Corruption in Latin America

As one of the world's most corrupt regions, Latin America represents a highly relevant context for testing these hypotheses. Public awareness of corruption is rising across Latin America. Recent scandals uncovering corruption schemes in Brazil and Guatemala motivated massive protests. In Brazil, hundreds of thousands rallied against the alleged bribery of politicians at the state oil company Petrobras. As a result, President Rousseff's impeachment is on the table and several senior politicians have been sentenced to prison. In Guatemala, citizens took to the streets after it transpired that officials were implicated in a customs fraud network. As a consequence, President Otto Pèrez Molina was stripped of his immunity and hours later jailed on corruption charges. In the past year, other high-profile corruption scandals have rocked public opinion in Chile, Colombia, Honduras, and Mexico. Is patience with corruption running out?

Witnessing episodes of anti-corruption protests in very different Latin American countries

some scholars have concluded that Latin Americans are standing up to corruption more than ever before (Castaneda, 2016). And others have announced that an anti-corruption crackdown is now sweeping Latin America (Winter, 2016). This new anticorruption activism, on the streets, the press, and the courts, suggests that officials who are exposed using public money for personal gain are increasingly facing public denunciation. If there was a new spirit of condemnation of corruption in Latin America, what motivates it and what are its consequences for democracy?

The thesis of a new wave of popular disapproval of corruption is, however, inconsistent with the traditional view of the rational economic voter in Latin America. In this instrumentalist view, the voter is willing to exchange electoral support for the smallest gift. A long tradition of studies on clientelism documents how patronage and vote buying undermine electoral accountability (Stokes, 2005; Stokes et al., 2013; Weitz-Shapiro, 2014). The voter who is held in a clientelistic relationship will support the patron either because they fear missing out on the benefits or because honesty is a second order consideration in their vote calculus. This is why the presence of clientelistic networks have long time been considered the main source of the accountability deficit in Latin America.

Based on the economic voting scholarship, this literature depicts a voter who often overlooks honesty or transparency for good economic conditions or material benefits. Latin American history is flooded with examples of popular leaders who were re-elected in spite of massive corruption. The popular support of Menen in Argentina (1989-1999) or Fujimori in Peru (1990-2000), in spite of criminal charges, has often been attributed to their personalistic leadership and their success ending hyper-inflation that stroke the region in the 1980s (Weyland, 2000, 2003). When generalized corruption in the Mexican government was of public domain in the late 1980s, concerns about corruption had little direct effect on the likelihood of voting for the opposition in the 1988 and 1991 national elections (McCann & Domínguez, 1998). The re-election of politicians accused of criminal charges can also be found in legislative and sub-national positions across the region.

5 Experimental Design

The goal of the analysis is to determine the effect of corruption information on citizens' vote choice. More specifically, the degree to which such attitudes are affected by various conditions: goods provision, the prevalence of corruption, and the electoral competition.

To explore the heterogeneous effects of corruption, I embedded an experiment in a nationally representative survey of 1,308 people in Peru, in which respondents are randomly assigned to one of eight conditions along three factors: corruption information (yes/no), goods provision (high/low), and perceived corruption context (widespread/limited). Vignettes in large samples are advantageous because they enable the researcher to easily manipulate more than one characteristic of the hypothetical situation and test multiple hypotheses simultaneously without losing statistical power (Mutz, 2011).

The experimental approach allowed me to guard against self-selection bias and to disentangle different heterogeneous treatment effects. Self-selection bias was a special threat to causal inference in this project because corruption information does not emerge randomly and punishment for corruption might be endogenous to the availability of information. Corruption events usually leak after the action of journalists, whistleblowers, or oversight institutions. And thus, it may be the voters who tend to punish corruption are also more likely to be exposed to corruption information, because these political and social actors are more willing to reveal corruption information when it is potentially consequential. An observational approach to the electoral consequences of corruption could have confounded the effect of corruption information with that of contexts in which this type of information is revealed.

When trying to discern meaningful differences in attitudes across subjects with and without corruption information, I run into the danger of misattributing such differences to corruption. Thus, having an experiment with which I exogenously manipulate the exposure to corruption information will facilitate establishing a causal relationship. Random assignment guarantees that the corruption treatment is independent from any other variable, whether measured or not, except by random chance (Ho et al., 2007). This is why I use a vignette

treatment in which I systematically vary relevant elements of a hypothetical situation.

In addition, corruption information might also be correlated with goods provision or other forms of performance, which are the theoretically relevant factors that this paper aims at testing. For example, it is possible that a corrupt politician is more likely to engage in goods provision. By randomizing other performance traits, we are able to avoid confounding effects. Following this reasoning, we opted to randomly vary the corruption environment. If subjects were self-selecting their perceived corruption environment, we will end up with groups that are different from each other. People who live in areas were corruption is widespread will end up in different groups from those in low corruption areas. This would prevent us from estimating differences across corruption environments as causal. To get balanced groups to make a causal comparison, we needed random assignment along the conditional factors of corruption voting too.

The Peruvian case offers a convenient case to explore the question of corruption voting by allowing us to credibly manipulate the appearance of a corruption accusation against a hypothetical candidate. Peru maximizes the chances to properly test the effect of the perceptions of widespread corruption and goods provision, which varies greatly within the country, while allowing for realism in the experimentally manipulated contextual conditions. One of the most common criticisms to experimental methods involves the realism of the setting and the manipulation (Druckman et al., 2011a). Thus, by embedding the experiment in a survey in Peru, where the experimental treatments could be representative of realistic situations, I ensure that the subjects take the stimulus seriously and respond in a way that is meaningful.

Ipsos-Peru, a local survey firm, implemented the survey during a three-week period from November 2nd to November 23rd, 2015. A sample of 1,308 Peruvians was randomly drawn using a stratified two-stage cluster sampling with replacement. The sample was first stratified into 5 regions: Center, North, South, Lima, and Amazon. Then, districts were randomly sampled from within each region with replacement, and from each district, neighbourhoods

Table 1: Summary Statistics

Variable	Observations	Mean	Std. Dev.	Min	Max
Corruption Information	1308	.4999	.0141	0	1
Prevalent Corruption	1308	.5015	.0155	0	1
Goods Provision	1308	.4999	.0133	0	1
Education	1308	5.095	0.933	1	6
Socioeconomic Level	1308	3.221	1.029	1	5
Gender	1308	1.504	.5002	0	1
Edad	1308	37.69	14.06	18	70
Problem Corruption	1308	.2898	.4538	0	1
Victimization	1308	.8363	.3701	0	1
Sociotropic	1284	2.339	.6768	1	3

were randomly sampled. Face-to-face interviews were conducted with individual respondents following informed consent.

The survey contains a number of questionnaire items that are meant to measure basic attitudes and opinions about corruption. It was designed based on the needs of the NGO Proética, the Peruvian Chapter of Transparency International in Peru, which runs a nationally representative survey every year since 2004.[1] Table 1 lists the sample level summary statistics of the main outcomes of interest as well as key variables such as electoral competition, most important problems in the nation, corruption victimization, economic situation, and socioeconomic characteristics, such as age, gender, and education. Appendix A show that the T test results indicate that no characteristic is significant.

5.1 Treatment Conditions

In this experiment we manipulate along with the corruption status of the candidate, the perceived context of widespread/limited corruption and the perceived level of high/low goods provision. Because we manipulated three factors experimentally, and each factor has two levels, this is a 2 x 2 x 2 factorial design. So, the three treatment conditions yield eight experimental groups ($2^3 = 8$) shown in table 2, which we will compare in terms of one

[1]Results of all the annual corruption surveys can be found in: `http://www.proetica.org.pe/encuestas-corrupcion/`

outcome variable, the 7-points scale of the likelihood of voting for the candidate described in the survey vignette.

Table 2: Treatment Conditions

Conditions		Corrupt	Not Corrupt
Prevalent Corruption	High Goods Provision	T1 N=162	T2 N=164
	Low Goods Provision	T3 N=162	T4 N=166
Limited Corruption	High Goods Provision	T5 N=163	T6 N=167
	Low Goods Provision	T7 N=165	T8 N=159
Total		N=1308	

In the context of the survey, we presented a vignette identical to all treatment groups, with the exception that a portion of text intended to manipulate three conditions. The first treatment varied the corruption status of the hypothetical candidate, the first group was told that the candidate in question was accused of corruption and the second group that the candidate is well-know for his transparency/honesty. The second treatment varied the provision of works, one group was informed that the candidate facilitated more public works than average and the other was told that she facilitated less public works than average. The third treatment varied the perception of how normalized corruption is, one group was informed of the prevalence of corruption and the other was told the region was known for its low levels of corruption. This final experimental treatment aimed at varying the perceived levels of the normalization of corruption in the given region. In spite of the realism losses of this almost 'lab-in-the-field' approach, it increased the experimental control, minimizing the effect of confounding variables (Druckman et al., 2011b).

The vignette was the following:

"Imagine that Juan is a candidate to congress for a region known for its [high/low] levels of corruption. An international anticorruption commission has [praised/criticized] Juan for

performing multiple public contracts in [exchange for bribes amounting to 1 million soles/ a honest and transparent manner] during his previous administration as mayor. Also, Juan is known because he built [more/fewer] works in benefit of the population than the majority of the mayors in the country. Juan assert that if he is elected congress member he will work to improve the quality of life in his region"

The wording of the vignette was designed to increase success in eliciting honest responses. To rule out the possibility that corruption goes unpunished due to lack of trustworthiness of the accusation presented in the experimental treatment, I attributed the source of the information to an international anticorruption organization. The literature dealing with the credibility of corruption accusations argue that some allegations are more credible than others (Botero et al., 2015; Weitz-Shapiro & Winters, 2014). Thus, I opted for the international organization as a way guard against the effect of unreliable information from local sources such as media outlets or political institutions. To prevent the over-reporting of punishment for corruption, a socially desirable behavior, I employed a third-person vignette, after which I asked subjects for whom a "person like you living in a neighborhood like yours" would vote. Even though this question wording could introduce some noise in the responses, it diminish the bias generated by social desirability. In the case of the treatment condition attempting to examine the support to forms of goods provision, I did not specify the type of public work because citizens may value different types of public works. Moreover, I opted for public works targeted to the region instead of money or gifts in order to avoid the bias against vote buying (Gonzalez-Ocantos et al., 2012).

To analyze the data, I compare the outcome variables across different treatment conditions. To test the exchange hypothesis, I compare the treatment effect under the high goods provision condition versus the low goods provision condition. If I find that the difference in the outcome variable vote is greater under low goods provision than under high goods provision, I conclude that there is evidence in favor of the economic exchange hypothesis. To test for the hypothesis of 'punishing capacity', I first look into the treatment effect con-

ditional on the level of widespread/limited corruption. If the treatment effect of corruption under the condition of prevalence of corruption is greater than under the condition of limited corruption, I conclude that the 'punishing capacity' hypothesis is partially supported by the data.

Besides the experimental conditions, our analysis will exploit the location of each individual respondent to estimate attitudinal differences across the districts of high and low electoral competition. To test the second component of the 'punishing capacity' hypothesis, based on the availability of viable alternatives, I compare the treatment effect for subjects living in a district with a large opposition to those in a district with small opposition. Even though, I did not attempt to manipulate this condition experimentally, it was measured before the experiment, in the 2014 regional elections in Peru, one year prior to the application of the survey. By relying on pre-treatment covariates for the analysis of the heterogeneous treatment effects, instead of post-treatment covariates, I avoid inducing bias in the estimates.

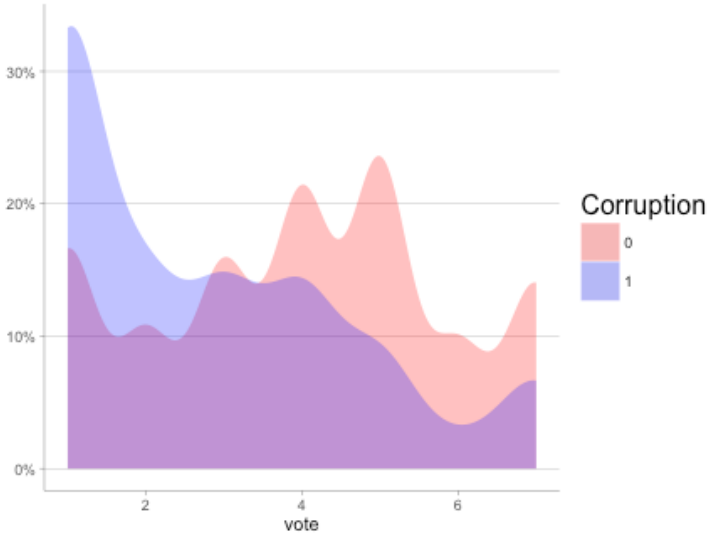
6 Main Findings

6.1 Average Effect of Corruption

The main outcome of interest is the effect of information about corruption on the willingness to emit a vote in support of the candidate in question. I measured this outcome variable with a 7-points scale of the likelihood a respondent will opt to vote for the candidate, where 1 is very unlikely and 7 very likely.

Figure 1 displays the overlaying distributions of vote under the "corrupt" and "clean" conditions, where the "corrupt" condition yields a lower vote probability in the scale 1-7 (average mean vote 2.81) than the "clean" condition (average mean vote 3.98). This confirms the intuition that corruption has a negative effect on the support for a candidate. Table 3 shows that, according to my expectations, the corruption information treatment decreases the vote intention by 1.18 points in the 1-7 scale. This indicates that strong allegations of

Figure 1: Overlaying Distributions of Vote Under Corruption and Clean Conditions



corruption sharply decrease vote intention by 16.85%. In the two conditions combined, the average support for the candidate is 3.39 (SE=0.06) while in the "clean" condition support is 3.98 (SE=0.08). But when allegations of corruption are mentioned, support plummets to 2.81 (SE=0.07), and this difference is statistically significant ($p<0.000$). The strong negative effect of corruption information on respondent intention to vote for a hypothetical candidate is in line with what others have previously found (Weitz-Shapiro & Winters, 2014).

Similarly, the average impact of the prevalent corruption context and goods provision treatments are statistically significant and in the expected directions. Table 3 displays the Average Treatment Effects of the corruption treatment along with the other two treatments on the outcome variable of vote measured in a 7-point scale of how likely the respondent is to support the candidate. The average mean support of respondents in the high goods provision treatment group is 0.60 (SE=0.11) higher than that of those in the low goods provision treatment group, and this difference is statistically significant ($p<0.000$). That is, the respondents are more likely to support a candidate who provides a lot of goods than one who does not.

In the case of the prevalent corruption treatment, the average effect is also statistically significant but slightly smaller. The average mean support of those in the prevalent corrup-

Table 3: Average Treatment Effects on Vote

	Corruption Treatment	Goods Provision Treatment	Prevalence Treatment
ATE	-1.18	0.60	-0.22
SE	(0.11)	(0.11)	(0.11)
P-value	0.000	0.000	0.048

tion context goods provision is -0.22 (SE=0.11) smaller than that of those in the limited corruption context, and this difference is statistically significant ($p<0.050$). That is, the respondents are more likely to support a candidate who runs in a context of limited corruption than someone in a context of prevalent corruption. The goal of this treatment was to affect the voters pre-existing attitudes towards corruption along with the description of the candidate. It nevertheless suggest that the widespread corruption context might not act as a shield in favor of corrupt candidates, as voters are on average less likely to support a given candidate. I will come back to this.

6.2 The Effect of Corruption Conditional on Goods Provision and Punishing Capacity

Are some voters more susceptible to corruption information? Under what conditions should we expect to see a greater negative impact of corruption information? To answer these questions we need to examine whether there is a difference in treatment effect across subgroups of the sample.

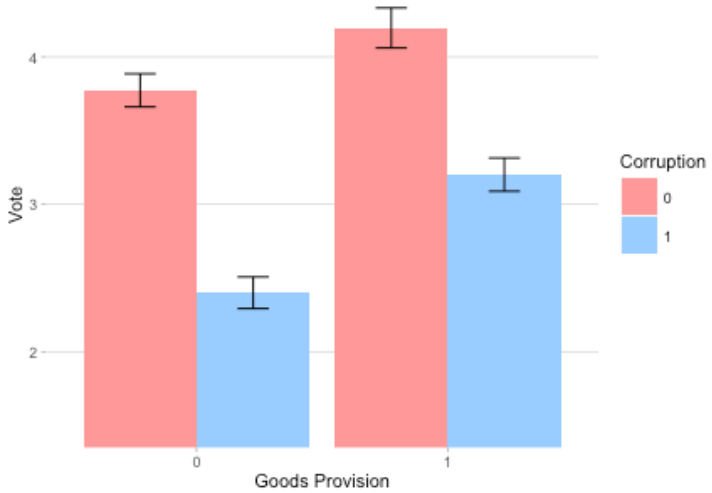
Here, I explicitly consider differences in treatment effectiveness, by estimating the conditional average treatment effect (CATE) (Feller & Holmes, 2009). There is increasing interest in examining how treatment effects in randomized experiments may vary across individuals in a systematic way, thus this survey experiment contributes to that literature (Grimmer et al., 2014; Gaines & Kuklinski, 2011; Imai & Strauss, 2011). Heterogenous treatment effects are important because information can be used to "derive an optimal policy about which

treatment should be given to whom" (Imai & Strauss, 2011).

In this study, we are interested in whether the corruption effect is smaller for subjects in the high goods provision condition versus the low goods provision (H2), subjects in the prevalence of corruption condition versus the limited corruption condition (H1a), and also subjects in the low versus high electoral competition districts (H1b). To evaluate whether the support for corrupt candidates is conditional on these theoretically relevant factors, we employ a difference-in-differences analysis as well as maximum likelihood estimation.

Do citizens punish more harshly corrupt candidates who do not provide goods? Figure 2 displays the heterogenous impact of corruption on vote for the goods provision condition. We can observe that for both low and high goods provision conditions the impact of corruption is negative as it decreases vote support. However, the change in vote intention is greater for those who perceive low goods provision (on the left) than for those who perceive high goods provision (on the right). Specifically, the treatment effect of corruption is -.995 ($p<0.000$) under the high goods provision, whereas it is -1.373 ($p<0.000$) under the low goods provision. So, the penalty for corruption is slightly greater for those politicians who do not comply with delivering material gains.

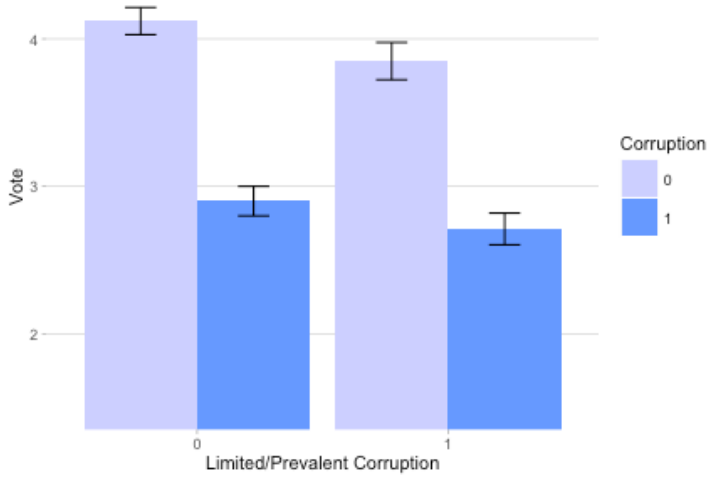
Figure 2: Corruption Effects by Goods Provision



However, the interaction between goods provision and corruption information is not sta-

tistically significant (p=0.111). This finding brings the exchange hypothesis, where voters will be more lenient towards corrupt politicians who are good at delivering tangible benefits, into question. It suggests that the punishment for corruption is unconditional to goods provision. Unlike the standard explanations for the lack of accountability for corruption, in the case of corrupt politicians, voters are not exchanging electoral support for material goods. While available observational evidence points at the conditional impact of corruption on government approval and candidate evaluation, the experimental evidence from Peru suggests that leniency towards corruption in the case of vote intention is not statistically different for politicians providing material goods than for politicians not providing material goods. If the punishment of corruption does not diminish significantly for candidates providing tangible benefits, what are other conditions that could be shielding candidates from the electoral consequences of corruption?

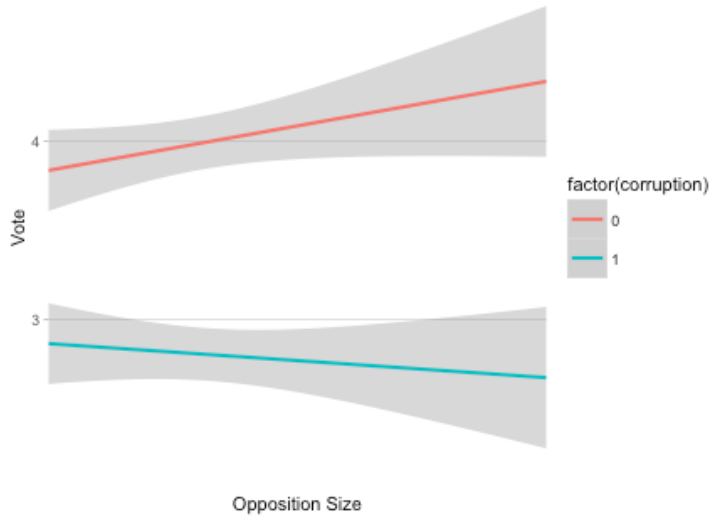
Figure 3: Corruption Effects by Prevalence of Corruption



The context of prevalent corruption works in a similar way than goods provision; it shields corrupt politicians from electoral penalties but it is not statistically significant. The figure 3 shows that the change in vote intention is greater for voters who perceive that corruption is pervasive than for those who perceive it is limited. For the prevalent corruption condition, the effect of corruption is - 1.139 (p<0.000), while for the limited corruption

condition, the change in vote intention is - 1.221 ($p<0.000$). So, the punishment is slightly bigger under the limited corruption context. This is due, in part, to the fact that voter support is so high under the combined conditions of a clean candidate in a context of limited corruption, which rises to 4.12 on average. The direction of the change in vote intention is consistent with the hypothesis that corruption allegations are more harshly punished in contexts where corruption is rare. However, the p-value for this conditional effect is not statistically significant ($p=0.657$). This suggests that voters are willing to punish a corrupt candidate regardless of the context of corruption. Voters are not lenient, even if corruption is prevalent and might generate the perception that all candidates are equally corrupt or potentially corrupt.

Figure 4: The Effect of Corruption Conditional on Opposition Size



To further test the hypothesis of the capacity of voters to act on their disproval of corruption, I used available electoral data measured prior to the application of the survey. Figure 4 shows the effect of corruption on vote conditional on the opposition size. Here, I opted to measure electoral competition with the size of the largest opposition. As the opposition size increases, the vote for the corrupt candidate decreases. So, I find that the negative impact of corruption is exacerbated by a high electoral competition but moderated by a low electoral competition. That is, when there are alternative choices with real possibilities of

winning the election, the penalties for corruption increase. Such penalties are significantly diminished when feasible political alternatives are not present. This means that corruption loses importance when defection is hopeless. This evidence provides partial support for the punishing capacity hypothesis, for which the presence of viable contestants was a necessary condition.

Finally, I turn to the maximum likelihood estimation. To estimate how the effect of receiving information about corruption varies depending on whether a subject perceives high or low material benefits, or lives in a context where corruption is normalized or not, as well as a context of intense electoral competition or not, I use standard regression techniques. Formally, I estimate the following equation for the full model:

$$\begin{aligned} y_{ij} = \alpha + \delta corrupt_i + \theta goods_i + \gamma corrupt_i * goods_i \\ + \zeta prevalent_i + \upsilon corrupt_i * prevalent_i \\ + \lambda opposition_j + \phi corrupt_i * opposition_j \\ + X_i\beta + \epsilon_i \end{aligned} \tag{1}$$

Where y_{ij} represents vote for individual i in district j and $X_i\beta$ is the matrix of pre-treatment control variables. The estimated parameter $\hat{\delta}$ represents the treatment effect of being in the "corruption" condition versus the "clean" condition. The $goods_i$ is a dummy indicator for whether the respondent was in the high goods provision condition or not. The $prevalent_i$ is a dummy indicator for whether the respondent was in the prevalent corruption context condition or not. The $opposition_j$ is a dummy indicator for whether the respondent lives in a high competition district or not. Finally, the estimated parameters $\hat{\gamma}$, $\hat{\upsilon}$, and $\hat{\phi}$ represent the effect of the interaction terms.

Table 4 reports the coefficient estimates of the maximum likelihood estimator for three model specifications, where the dependent variable is intention to vote for the candidate in question in a 1-7 scale. The first model specification examines the effect of corruption information, context of corruption, and goods provision. The second model specification

includes the interaction terms for each of the independent variables. And the third model specification –the full model in equation 1– includes as controls the socioeconomic variables of age, gender, and education.

Table 4: Maximum Likelihood Estimator for Vote Intention

Independent Variables	Model 1 No interactions	Model 2 Interactions	Model 3 Interactions And Controls
Corruption	-1.190***	-1.195***	-1.178***
	[0.111]	[0.200]	[0.200]
Prevalence of Corruption	-0.222**	-0.275**	-0.275**
	[0.0979]	[0.138]	[0.134]
Goods Provision	0.628***	0.451**	0.460**
	[0.123]	[0.186]	[0.185]
Opposition Size	0.262	0.919*	0.940*
	[0.369]	[0.572]	[0.559]
Corruption x Prevalence		0.106	0.0929
		[0.181]	[0.177]
Corruption x Goods Provision		0.351	0.364
		[0.232]	[0.230]
Corruption x Opposition Size		-1.259*	-1.255*
		[0.705]	[0.696]
Constant	3.742***	3.742***	4.311***
	[0.121]	[0.151]	[0.328]
Controls	No	No	Yes
N	1261	1261	1261

Standard errors in brackets *.10 **.05 ***.01. Model 3 includes controls for gender, age, and education.

OLS point estimates suggest that the interaction terms for goods provision and prevalent corruption had a strong positive effect on vote share. This means that while corruption decreases the likelihood of a vote for the candidate in question, the context of widespread corruption and high goods provision moderate this negative effect. However, the coefficients of 0.0929 (corruption*prevalent) and 0.364 (corruption*goods provision) with standard errors of 0.177 and 0.230 respectively, imply p-values of 0.601 and 0.118. Evidently, the statistical precision of the interaction terms falls just short of conventional $p<0.05$ levels.

However, the interaction effect of the opposition size is significant at a $p<0.10$ level. This

means that the context of high electoral competition exacerbates rather than moderates the negative effect of corruption. When a subject perceives viable alternative choices (measured by the size of the opposition), they will punish more harshly the corruption of the candidate in question. This penalty for corruption is greater when there are viable alternative choices than when these choices are weak. For example, the marginal effect of corruption when the opposition size is 10% is -1.30 ($p<0.000$) but when the opposition reaches 40% it is -1.68 ($p<0.000$). This is significant evidence in favor of the punishing capacity hypothesis.

7 Discussion

Even though the direction of the effect of goods provision is as hypothesized, it does not produce a significant difference in the rates at which corruption is punished. I could not discard that the observed leniency for candidates providing a lot of material benefits is a product of chance. So, the evidence suggests that voters punish corruption regardless of the level of goods provision. That is, the punishment for corruption is unconditional to the provision of material benefits and might not be moderated by the provision of goods. Therefore, when it comes to the type of goods provision presented to the subjects in this experiment –public works to the region– the penalties do not diminish to a significant degree.

I also found partial evidence in favor of the punishing capacity hypothesis. While electoral competition matters –that is, the perception that alternative candidates have a chance at winning–, the perceived levels of widespread corruption does not. That is, the idea that corruption is so generalized that all candidates are perceived to be equally corrupt might not have a significant effect on how likely a voter is to punish corruption.

The results presented here need to be interpreted with caution. Even though the randomization allowed us to increase experimental control, it is possible that the unrealistic treatment of the context of widespread corruption produced an underestimated effect on vote. Based on the methodology used in the literature of corruption experiments, I tested

whether hearing different framings of the qualities of a candidate affects people's beliefs and attitudes, in particular attitudes towards corruption and willingness to punish a corrupt candidate. However, it is possible that, in the case of the manipulation of the context of corruption in which the hypothetical candidate runs, my treatment might not have been successful in the eliciting the expected attitudinal responses.

Moreover, it might be that the context of corruption elicited unexpected attitudes such as lower political trust and lower political efficacy, which could have an effect on vote opposite than expected. It could be the case that, along with the disapproval of the candidate in question, the context of widespread corruption affects the subject's willingness to participate in the political process rather than their willingness to punish the corrupt candidate. If such evidence was found it would be in line with previous studies that show that corruption decreases turnout (Chong et al., 2015).

Finally, the finding that electoral competition matters for the capacity of voters to punish the corrupt candidate suggest that the electoral impunity is not only associated with the voter tolerance towards certain candidates' wrongdoings but that they are also related to the political context in which voters make judgements. Most studies of the electoral consequences of corruption have assumed that voters have always the ability to exercise their disproval of corruption, however, when voters are presented with viable alternatives they are likely to punish the corrupt candidate.

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Appendix A. Tables

Table 5: Characteristics of Respondents by Treatment Group

Conditions	Combined N=1308	Corrupt N=652	Clean N=656	T-test
Age	37.69	38.06	37.32	0.34
Gender	1.50	1.51	1.50	0.87
Region	2.32	2.32	2.32	0.94
Education	2.71	2.69	2.72	0.74
Socioeconomic level	3.22	3.23	3.21	0.83

Table 6: The Effect of Corruption on Voting Intention and Seeking Information

Outcomes	Combined N=1308	Corrupt N=652	Clean N=656	Difference	T-test
Vote Choice [1-7]	3.39	2.81	3.98	-1.18	0.00
SE	(0.06)	(0.07)	(0.08)	(0.11)	