

The Electoral Disconnection: Local Political Competition and Public Goods Provision in an Era  
of Fiscal Re-Centralization

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Dissertation

Submitted to the Faculty of the  
Graduate School of Vanderbilt University  
in partial fulfillment of the requirements

for the degree of

DOCTOR OF PHILOSOPHY

In

Political Science

March 31, 2018

Nashville, Tennessee

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A mi familia  
A Nelly, gracias por tu amor y compañía

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## INTRODUCTION

For several decades now, the decentralization of policy authority to local officials has been a key component of development strategies around the world – emanating both from developing country governments themselves and the international development community as well. After more than thirty years of these efforts, we still have no clear consensus concerning the impact this strategy has had on the lives of the citizens of these countries. In the following pages, I explore through analysis of the case of Colombia how the local electoral context of municipalities helps us answer this question through its impact on budgetary choices with disparate development outcomes that, nonetheless, were carried out under the umbrella of a decentralized strategy of development.

Decentralization both empowers and forces local authorities to make difficult choices in terms of which basic services to prioritize and which to leave for another day. For example, based on my own calculations I find that in 2008, Colombian mayors in only half of the country's municipalities used discretionary funds to provide health services, but 79 percent chose to finance local artistic groups. Also, while 61 percent of mayors invested in building new schools, only 34 percent chose to finance the training of teachers. Despite being bound by the same political institutions, fiscal rules, and administrative duties, local governments exhibit a great deal of variation in their spending choices. What explains such divergent spending choices within a single country across largely similar municipalities? Many accounts of subnational public goods provision stress the role of electoral motivations in setting local spending priorities. Some argue that the mere process of holding elections for local office alters public goods provision. Faguet



(2004) finds that decentralization reforms in Bolivia changed spending patterns in eight policy areas due in part to the greater awareness local officials had of local needs when compared to past priorities driven by national interests. This finding comports with one of the core theoretical motivations of the decentralization strategy – bringing government closer to the people will make that government more responsive to the needs of the community. Conversely, others have found that electoral competition merely heightens the role of highly visible expenditures, with the goal of garnering public support even if the project(s) do not address the most pressing local needs. Harding and Stasavage (2014) find that democracy increases spending on the more visible parts of education provision (e.g., reducing access fees), while less visible expenses, like education operating costs, do not receive a similar boost. Similarly, others find that building roads or electricity grids are viewed as means to offer clear signals of a politician’s ability to “deliver the goods,” and that politicians facing intense electoral competition will exploit that opportunity at the expense of less visible but more necessary projects (Drazen and Eslava 2010, Joanis 2011, Zelner and Henisz 2000, Mejía Guinand, Botero, and Rodríguez Raga 2008).

This dissertation revisits the question of whether electoral competition induces officials to be more responsive to the welfare of most citizens by focusing on necessary areas of development or whether greater competition leads more often to pandering behavior on the part of officials targeting narrow constituencies. In the course of exploring the spending and development impact of decentralization, I highlight one recent trend in decentralization efforts that I argue has led increasingly to more negative outcomes in highly competitive electoral contexts. More and more, we find in developing countries pursuing decentralization that local governments have less fiscal autonomy than in years past but have preserved the political autonomy granted to them by decentralization reforms. This combination of political autonomy, and limited fiscal capacity, I

argue, leads to divergent spending choices across electoral contexts, thus undermining the development goals of decentralization. In other words, more electoral competition is not the one-size-fits-all factor inducing officials to address most local problems. Politicians pursuing their political survival but having limited fiscal autonomy face a trade-off between addressing most problems of fewer citizens and benefiting most citizens with solutions to fewer needs. Such trade-off gives rise to somewhat paradoxical developmental outcomes. While more electoral competition could induce officials to address a wider range of demands (although benefiting narrower constituencies), having less competitive elections could be beneficial to the general welfare (although only regarding select demands).

Already some works identify ways in which national restrictions on local fiscal decisions harm the ability of local governments to satisfy citizens' needs and creates a perverse set of incentives that bring about uneven local government performance. First, such constraints reduce the capacity of local governments to expand existing services and to offer new programs, which may in turn affect their ability to effectively respond to local demands (Dickovick 2011, Loayza, Rigolini, and Calvo-González 2011). Second, and related to this first point, central governments' attempts to dictate local fiscal policy discourages local governments from identifying public goods that produce the greatest improvements in local living conditions. In Colombia, in areas where mandated funding in education and health is high, students' educational achievement and the proportion of the poor with health insurance tends to be lower (Salinas 2014, Faguet and Sánchez 2014). In the U.S. as well, this lack of fiscal autonomy has been shown to prevent local governments from implementing policies that represent the preferences of their citizenry. Bunch (2014), for example, found that liberal non-chartered counties were less likely to increase redistributive spending when compared to chartered counties with similar liberal preferences.

Finally, recentralization tends to favor greater spending in areas important to the national government. For example, in Vietnam, this tendency led to favoring state-owned enterprises with increased spending on transportation and communications infrastructure rather than satisfying local demands for greater spending on education and healthcare (Malesky, Viet Nguyen, and Tran 2014). Similarly, in Colombia, although Escobar-Lemmon and Ross (2014) are not explicit about the existence of spending constraints, they find in an analysis of citizens' perceptions of local government that individuals see their departmental governments as more accountable when those governments are financed with local revenue. Despite these important insights, we still know little about whether local electoral conditions motivate local governments to provide better public services even when they lack the autonomy to make spending decisions.

I argue that variation in government spending choices across municipalities in Colombia reflects differences in local electoral conditions. Despite following similar electoral rules, elections exhibit great variation in the number candidates running for public office and the level of electoral competition for those offices. This variation in the number of candidates is consequential for the provision of public goods through its impact on the number of votes needed to be elected. Given a certain number of candidates, local politicians running for mayor might adapt their spending offerings in ways that benefit just enough supporters to succeed electorally. In this sense, my argument departs from those that focus solely on the closeness of elections in terms of influencing government choices. Such emphasis on the uncertainty brought about by competitive elections misses the possibility that similarly tight elections may result from contests involving a disparate number of candidates. Thus, although the degree of competition still should affect an incumbent's behavior in office, the exact nature of that impact will depend in large part on the absolute number of votes needed to gain a plurality victory. We should expect those incumbents facing just a few

competitors to seek to develop broad support coalitions across most of the population, while those facing many competitors will pursue a more targeted strategy because they will likely need fewer absolute votes to result elected. In the remainder of this dissertation, I first develop these ideas further and then evaluate them through analysis of municipal-level data from Colombia.

## **A Roadmap**

Chapter 1 presents my argument about how electoral conditions impacts local spending choices. Next, I put to a test the first implication of my theory of the political economy of local distributive spending patterns – that the effective number of candidates has a significant impact on the distribution of electoral support for a mayor. Chapter 2 begins with an overview of the Colombian experience with decentralization and recentralizing reforms. I highlight how common it is for local governments to lack spending and administrative autonomy to solve local needs. I then explain how, under conditions of fiscal and administrative recentralization, it is necessary to revise expectations from the baseline theory of distributive politics. I then posit that local governments should use three main strategies to adapt spending decisions to their electoral contexts, depending on where these contexts fall on the unitary-factional spectrum.

In Chapter 3, I test these ideas through an analysis of local government spending patterns in the area of education. Specifically, I look at whether local governments manipulate earmarked spending for education in response to their electoral contexts. Because of its great value and the limited ways municipalities can manipulate its delivery, education spending provides a useful window into the ways in which decentralization can and cannot work in a context of efforts to recentralize local finances and make local spending decisions more efficient. I show that local

governments in factional contexts are more likely than those in unitary contexts to invest in building new schools, and to offer additional goods (e.g., lunches, free tuition, transportation). However, they are also likely to compensate a more diverse spending “portfolio” investing significantly less. In contrast, local governments in unitary contexts are more likely to avoid investing in additional expenses of education provision (e.g., having well-trained teachers, or school transportation), focusing instead on basic expenses maintaining existing schools. But, if they choose to invest, they put to the task significantly more funding thus aiming to have a greater reach.

Chapter 4 focuses on the use of discretionary funds. Here I show that electorally motivated spending decisions have a limited scope. Local governments in factional contexts are more likely than those in unitary contexts to fund targetable goods in specific policy areas, and to finance administrative reforms and administrative enhancement efforts. I also find that local governments in unitary contexts use discretionary funds to provide education and water supply to a greater extent than local governments in factional contexts. However, like results in chapter 3, investments by local governments in factional contexts are significantly smaller than those made by local governments in unitary contexts. Finally, I do not find evidence of a tradeoff between targetable and collective goods. Overall, spending portfolios appear to be more specific to each policy area than previously thought.

In Chapter 5, I explore whether local electoral conditions influence who applies for funding from projects financed by the national government. I find that local governments in factional contexts are not generally more likely to apply for funding than local governments in unitary contexts. Moreover, national authorities are equally likely to support proposals made by local governments in unitary contexts as to support proposals made by local governments in factional

contexts. However, proposals made by local governments in factional contexts request significantly less funding than those coming from officials in unitary contexts. Thus, national politicians, rather than supporting co-partisans or projects from places with a greater number of potential supporters, allocate just enough national funding to persuade supporters of local officials to back electorally politicians at the national level sponsoring their projects.

Finally, chapter 6 examines the extent to which local service evaluations are distorted by citizens' expectations about local service provision. I show that citizens in factional contexts perceiving their governments as responsive (i.e. to deliver targetable goods) are less likely to evaluate positively local public services (e.g., education, health, trash collection). In contrast, I find that citizens in unitary contexts that perceive local officials as responsive (i.e. to deliver public goods) are more inclined to evaluate positively local public services. Overall, these patterns suggest that public service provision will be rewarded with good service evaluations only when those services are what citizens expect from their local governments. Otherwise, public approval is unlikely to motivate elected officials to provide better services.

## **CHAPTER 1**

### **DEVELOPMENTAL IMPACT OF LOCAL ELECTORAL CONTEXTS**

#### **Introduction**

The idea that democracy has a variety of positive outcomes, among others, promoting the welfare of citizens is still under intense scrutiny (Przeworski et al. 2000, Haggard and Kaufman 2008). Despite positive evidence, it is possible for democracy to lead to undesirable outcomes. Among other possibilities, increased electoral competition may push incumbents to focus on the interests of narrower constituencies at the expense of the wellbeing of most citizens (Lizzeri and Persico 2005). Although possible for democratic governments at all levels, this possibility is particularly troubling subnationally. At this level, narrow constituencies are going to be even narrower in absolute terms compared to nationally elected officials. Furthermore, this potential drawback of increased electoral competition could dilute the expected benefits of political decentralization.

The purpose of this chapter is to lay out my theory about the potential impact that increased electoral competition may have on government spending choices. Specifically, differences in the number of voters needed to result elected should push incumbents to prioritize spending alternatives reaching enough potential supporters with as many goods as fiscally possible. Such adaptations would result in governments solving basic needs of the population at a rate that also advances their electoral goals.

The next section discusses existing notions of electoral competition and distinguishes local electoral contexts based on the extent of electoral fragmentation. Then, I present my argument about how local electoral conditions impact spending choices. Afterward, I explore the distribution of municipal electoral contexts in Colombia using data from mayoral elections from 1997 until 2011. Finally, I assess the geographic and demographic characteristics of the winning candidates' constituencies across a range of electoral contexts that vary based on the number of candidates for local office.

### **Differentiating Local Electoral Contexts**

Standard approaches to studying the impact of electoral competition on government performance postulate that greater electoral competition in a current election is understood by the victor of that election as a predictor of greater uncertainty in future contests. Elected officials, anticipating those uncertain conditions, adjust their behavior to improve the chances of getting reelected (Mayhew 1974). There are two types of behavioral responses to uncertain electoral prospects. The first aims to increase the chances of future electoral victories by introducing highly visible programs and policies that will enhance an incumbent's governing reputation, while simultaneously cutting funding on programs that are less visible to the public. A classic example of this comes from Africa, where researchers have found that elected officials favored programs that offer free schooling but not those focused on hiring more teachers (Harding and Stasavage 2014). Another electorally motivated strategy involves increasing the saliency of ethnic cleavages. In India, ethnic parties used religious mobilizations, even at the risk of sparking violent counter-mobilizations, to boost their identification with such parties (Wilkinson 2006). With an eye toward



a possible defeat, elected officials facing a significant electoral challenge may also decide to moderate their behavior, implement institutional reforms to check the power of future leaders, and seek to coopt the opposition through power-sharing measures that limit the ability of any party to exploit the state for private gain (Grzymala-Busse 2007). Similarly, electoral competition has been found to lead to administrative reforms and privatizing utility companies to prevent future opposition governments from exploiting them for patronage (Geddes 1994, Murillo 2009).

All of this work though fails to incorporate the number of candidates into their conceptualization of electoral competition. The principal thesis I am advancing in this chapter is that only when taking into account the number of candidates can we fully make sense of how electoral competition, and the uncertainty that comes with it, affects an incumbent's policymaking behavior. The size of the electorate one must appeal to in order to win an election in large part is a product of the number of electoral options facing voters. Moreover, these differences may lead to different spending choices and strategies to attract supporters (Luna 2014). For example, although ethnic favoritism in Kenya and Malawi influences education provision, it does not have the same impact in Mali and Senegal (Kramon and Posner 2013). Similar differences exist in Ghana, where performance evaluations and clientelistic benefits influence voters to different extents. Under these conditions, elected officials combine both strategies according to what each individual values the most (i.e., collective or private goods) (Weghorst and Lindberg 2013).

Among the many political conditions that may produce close elections, I focus on the extent of electoral fragmentation. Each electoral context has its own pattern of political organization, with a range of viable parties operating at the local level, yet election outcomes in these distinct contexts will appear similar if looking solely at the margin of victory for the winning candidate. For example, in a mayoral election with four candidates who receive 26%, 25%, 24, and 23% of the

votes respectively, the vote margin for the winning candidate would be equal to that of the winner of a two-candidate race in which the winner receives 50% and the loser 49%. Clearly though, these two elections are significantly distinct in a number of ways. Most importantly, supporters of the winning candidate in the first example will be less numerous than supporters of the winner in the second example. Consequently, we should expect the incumbents to behave differently in pursuit of their goal of having a successful political career (Stonechash 1987).

Subnational political contexts differ according to the number of candidates taking part in a given election (i.e., fragmentation) (Sartori 1976). At one extreme, there are contexts with a dominant candidate where challengers receive far fewer voters. In these cases, electoral competition is close to being *unitary*, and electoral support for the leading candidate is widespread among voters. Conversely, we can find contexts in which there are numerous viable electoral alternatives. In these cases, electoral competition is *factional*, and electoral support for any one candidate will be based in fewer constituencies. This range of electoral contexts will have important implications for the policy and spending decisions of an incumbent government. In sum, the particular characteristics of an incumbent's past and expected future electoral coalitions should help us identify and better understand the specific distributive strategies she pursues while in office.

## **A Baseline Theory of Distributive Politics**

In developing this theory, I build my argument upon distributive politics models and the core voter vs. swing voter debate (Dixit and Londregan 1996, Cox and McCubbins 1986, Cox 2009, Lizzeri and Persico 2001). However, I put less emphasis on the role played by partisan attachments and more on the role of the provision of material benefits between elections as opposed to the more explicit vote buying that takes place during an election season. By maintaining a relationship based on material benefits with constituents throughout their term, politicians may keep electoral support coalitions over time in local contexts where ideological attachments often play a limited role. The continued expectation of receiving some benefit from government dissuades supporters from moving to opposition candidates. In this sense, distributive strategies can both build and preserve loyalties (Díaz-Cayeros, Estévez, and Magaloni 2016).

The intuition behind this approach is that politicians create “spending portfolios” based on a strategy of attracting and retaining just enough voters to win elections, particularly in a highly constrained fiscal environment. In its classical formulation, spending portfolios consist of a mixture of private and collective goods. Private goods such as cash benefits, subsidies, scholarships, dietary supplements, and supplies for agriculture can be used to target supporters and to punish opponents. In contrast, public infrastructures, and nonexcludable policies (e.g., education improvement, environmental protection, or building a water treatment plant) benefit communities in general. Depending on the number of voters that politicians need to reach, which is in part a product of the number of viable challengers, spending portfolios should entail a specific mix of private and public goods.

Budgetary limits shape feasible mixtures of public and private goods to satisfy electoral needs in each context. On the one hand, the cost of private benefits will increase as the number of recipients does, while the electoral payoff of such benefits tends to be confined to only those individuals that receive them. In contrast, the costs of public goods are far less sensitive to the number of beneficiaries, and, theoretically at least, the entire community benefits so the electoral payoff may be greater, albeit less certain, than the provision of private benefits. Thus, as the number of votes needed to be elected increases, it will become increasingly expensive to rely on the provision of private goods and more likely that incumbents will focus their strategy on public goods provision. Under these circumstances, elected officials should provide a greater share of public goods and fewer private goods. In contrast, when the number of votes necessary to be elected is lower, in an electoral context with numerous viable challengers for example, we should expect local authorities to focus more on the provision of private goods than collective goods.

These distributive offers will achieve their goal of gaining recipients' support if the perceived benefits are equal to or greater than any potential offer by opponents. One factor affecting this calculation is the strength of recipients' ideological or partisan affiliation. For those recipients with particularly strong ideological or partisan attachments, distributive offers will need to also outweigh these preferences. If, however, voters do not have strong ideological preferences, the vote calculus will revolve largely around the assessment of which candidate offers a more beneficial portfolio of goods.

An additional consideration is the varying levels of material need among voters. Those who are less sensitive to material offers likely will need bigger offers to be compelled to support a given candidate than someone with a high level of need for such items. Wealthier individuals

then should be less influenced by a basket of groceries than poor individuals (Bueno de Mesquita et al. 2003).

Besides the implications for spending composition, this theory also speaks to the distribution of electoral support within a particular political unit. Our expectation for distributive strategies in factional contexts with a high number of viable candidates is that an incumbent will be more targeted in her spending strategy than she would in a unitary context where she must capture a much larger percentage of voters in order to secure a victory. As a consequence, the resultant electoral support for mayors in factional contexts should be more concentrated in specific geographic areas of the community than it would for an incumbent operating in a unitary context.

### **Varieties of Local Electoral Contexts in Colombia**

In order to evaluate these theoretical implications, I now turn to an analysis of local electoral contexts in Colombia. As discussed in previous sections, subnational electoral contexts may range from those involving a dominant candidate to a two-candidate race to one with many viable candidates. I assess these differences using the *effective number of candidates* running for mayor in Colombia. This measure captures “the number of hypothetical *equal-size* parties that would have the same total *effect* on fractionalization of the system as have the actual parties of *unequal size*” (Laakso and Taagepera 1979, 4). The effective number of candidates would be equal to the raw number of candidates if they received the same vote share. However, when candidates receive unequal support, the effective number of candidates will be weighted based on each candidate’s actual vote share. Values closer to one, then, would reflect a unitary electoral context in which there is a single dominant candidate. Values between two and three reflect a context

where electoral support is split between two and three competitive candidates (regardless of the actual number of candidates competing); and values greater than three suggest that electoral support is factionalized among more than three effective vote-getting candidates.

The following table exemplifies these scenarios using data from three Colombian municipalities in the 2011 local elections.

Table 1.1 Effective Number of Candidates in Three Colombian Mayoral Elections

Municipality	C. 1	C. 2	C. 3	C. 4	C. 5	C. 6	C. 7	C. 8	MV	ENC
Amagá	25.59	18.25	13.27	13.27	13.16	7.05	3.67	3.28	7.34	6.22
Guadalupe	51.54	44.07	2.08	1.31					7.47	2.17
Toledo	76.93	20.57							56.36	1.57

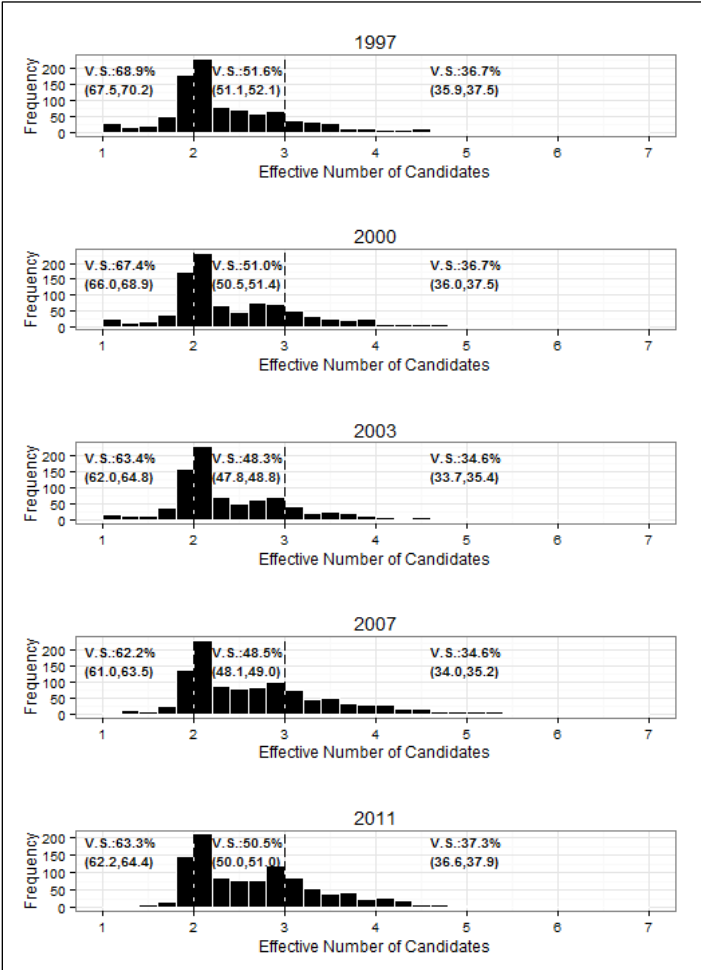
Source: Registraduría Nacional del Estado Civil.

C=Candidate; MV=Margin of Victory; ENC=Effective Number of Candidates

The first row in **Error! Reference source not found.** shows that mayoral elections in Amagá involved eight candidates, and several of them received a sizeable vote share. In contrast, electoral support in Guadalupe concentrated in two out of four candidates. Despite differences in the effective number of candidates (ENC), elections in both municipalities had a similar margin of victory (MV). However, Amagá’s mayor had a smaller following compared to Guadalupe’s. While Amagá’s elections involved 6.22 effective vote-getting candidates and the mayor received 25.59% of vote share, Guadalupe had just 2.17 effective candidates and its elected mayor received 51.54% of the votes. Thus, although elections in these two municipalities are similarly close, they are examples of how we can arrive at similar electoral outcomes from very different electoral contexts. Amagá is a case of factional electoral competition, while Guadalupe’s elections are more akin to a two-candidate competition. On the other extreme, large margins of victory reflect unambiguously the existence of a unitary electoral context as we see in the case of Toledo where the winning candidate recorded a 56.36% margin of victory with just 1.57 effective vote-getting candidates.

These differences in the level of fragmentation across mayoral elections will influence the number of votes needed to be elected. The following graph presents the distribution of electoral fragmentation (i.e., the effective number of candidates) for each mayoral election held in Colombia's 1,122 municipalities between 1997 and 2011. Also included is the average vote share (V.S.) received by the winning candidate for those elections with less than two effective candidates, between two and three, and more than three effective vote-getting candidates. Also, between parenthesis is the corresponding 95% confidence interval.

Figure 1.1 Distribution of Effective Number of Candidates in Colombia, 1997-2011



As should be expected, the vote share of winning candidates appears tightly connected to the effective number of candidates running for mayor in Colombia (see Figure 1.1).

Unsurprisingly, candidates in unitary contexts win elections with the largest support while the winning vote share for elections in more factionalized contexts is far lower. These figures also reveal the gradual decline in the number of unitary elections across time. In 1997, 55 mayoral elections involved less than 1.5 effective vote-getting candidates, while in 2011 that number had dropped to eight. Consequently, there is a gradual increase in the number of elections involving higher numbers of effective candidates. While in 1997, only 167 elections involved more than three effective candidates, 347 municipalities had highly factional elections in 2011. These trends highlight the importance of understanding and incorporating variations in the local electoral context when identifying the spending strategies of local governments.<sup>1</sup>

### **Different Subnational Electoral Contexts, Different Constituencies**

Though the larger goal of this project is to explain the mix of private and public goods that politicians offer to entice supporters, the most immediate implication of the theory outlined above is that different electoral contexts (e.g. factional or unitary) will be associated with distinct electoral support distributions that will range from highly concentrated to diffuse. The clear expectation is that electoral support will be more concentrated in factional contexts, and distributed more evenly in unitary contexts.

I test these implications by taking advantage of the way elections are conducted in Colombia, with most municipalities having several polling places spread geographically to ease access to most citizens.<sup>2</sup> As is the case in many countries, voters must cast their vote at the polling

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<sup>1</sup> Mayors in Colombia may run for reelection only after a term. However, it is not uncommon for them to run for a seat in the local legislature or at the departmental or national level.

<sup>2</sup> In 2007, there were 9853 polling places across Colombia. Only 143 municipalities, out of 1100, had only one polling place.



place where they are registered, and this typically is the poll closest to their home. Furthermore, inside each polling place, voters ought to cast their vote at the polling station (*mesa de votación*) corresponding to their national identification number. Importantly, each polling station serves groups of citizens determined by ordering identification numbers in ascending order and dividing them at regular intervals (typically, every 300 or 400 individuals).

This arrangement, that obliges voters to go to a specific polling place and to a specific polling station within it, allows me to assess how electoral support distributes in two ways. First, I can compare vote patterns across voting places, providing an indication of the spatial distribution of electoral support patterns across a municipality. Therefore, for example, if a candidate receives greater support in rural compared with urban polling places, such differences would suggest that electoral support is not uniform but concentrated in rural areas. Second, identification numbers correlate with individuals' age, and gender. When citizens reach 18 years, they receive their identification number consecutively as they apply for it. In addition, citizens that reached 18 years before 2003 got a number within a range of numbers for females and within a different range for males. Thus, vote patterns across polling stations within each polling place should also tell us whether there are differences in support across gender and age cohorts.

I exploit these features of elections in Colombia to assess differences in support across locations and demographic groups. According to the argument outlined above, politicians in different electoral contexts should offer a mix of private and public goods depending on the number of votes needed to get elected.<sup>3</sup> Therefore, electoral support should distribute more

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<sup>3</sup> Although candidates cannot anticipate an exact number, past elections provide a good estimate of the number of votes needed to have a chance to result elected. Overall, the effective number of candidates across elections remains relatively stable. Between 2003 and 2015, the standard deviation of the effective number of candidates is just 0.6.

unevenly in more factional contexts, where targeted appeals should be more common, than in a more unitary context where distributive offers should be cast more widely.

In order to determine the distribution of electoral support across a municipality I rely on work done on the question of party nationalization (e.g. Caramani (2004)). Although existing measures of party nationalization focus on electoral support across a country, the logic is the same. A party is considered nationalized if its electoral support is similar across districts (Caramani 2004). Thus, rather than comparing support across electoral districts in a country, I compare support levels across polling places and polling stations in each Colombian municipality.

Although there are several measures of party nationalization, Gini-based measures are the most accepted. In one of its versions, party nationalization is equal to subtracting 1 from the Gini coefficient calculated on a candidate's vote share across districts. Therefore, a value of 1 means that a given candidate received the same vote share in every district. In contrast, values closer to 0 mean that a given party received 100% of its votes in just one district and none in others (Jones and Mainwaring 2003). Here, I use a variant of this Gini-based measures that weights the size of each district and their quantity (Bochsler 2010). Again, for this measure, I will compare electoral results across polling places and polling stations in each Colombian municipality. For this analysis, I use electoral data from the 2007 and 2011 mayoral elections in Colombia.

Figure 1.2 Distribution of Electoral Support in Two Colombian Mayoral Elections, 2007 and 2011

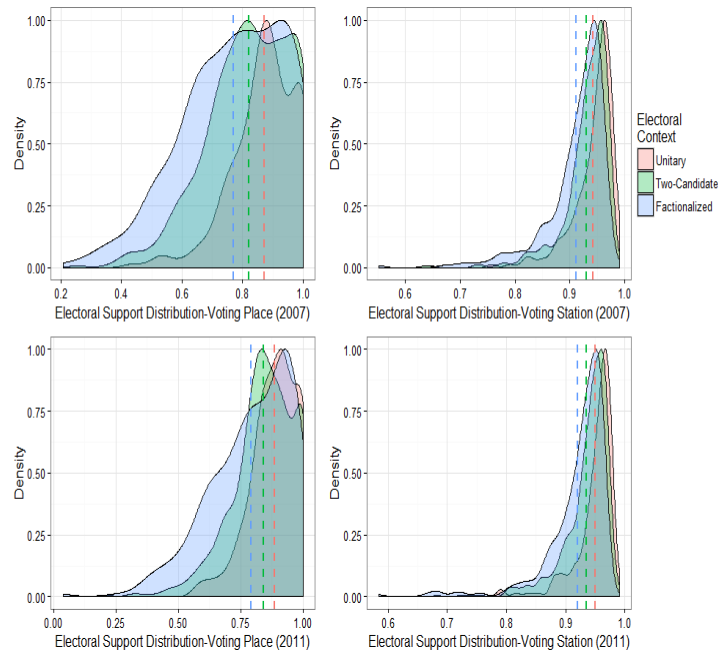


Figure 1.2 shows the results for my assessment of electoral support distribution for all municipalities during the 2007 and 2011 mayoral elections. The x-axis of each graph represents the measure of party nationalization based on votes for the winning candidate across polling places (first column) and across polling stations (second column). Again, values closer to 1, mean that the elected mayor received similar levels of support across all voting places and polling stations. Those closer to 0 represent cases where electoral support for the winning candidate was highly concentrated in certain polling sites. I divide municipalities into three categories: (1) places with less than two effective candidates (unitary); (2) those with more than two and less than three effective candidates (Two-candidate), and (3) places with more than three effective candidates (Factionalized). I also present as dotted lines the mean of this measure of support distribution for each of these electoral contexts.

As my theory suggest, we find from these results that that more factional a municipality's electoral context is the higher the level of constituency concentration. This is the case when comparing geographic constituencies grouped by voting place, but it also applies across what we might call "demographic constituencies" using the grouping by age and gender across polling stations. It is remarkable that we see similar patterns using both measures. While the place where citizens vote is mostly a function of their place of residence, the polling station they use is determined by their identification number, which reflects individual's age and gender. Consequently, these results provide a first step in supporting the larger argument that candidates will adjust the scope of their distributive offers to their electoral contexts.

Table 1.2 Linear Regression Models Predicting Support Distribution

	<b>Support Distribution, Voting Places 2007</b>	<b>Support Distribution, Polling Station 2007</b>	<b>Support Distribution, Voting Places 2011</b>	<b>Support Distribution, Polling Station 2011</b>
Effective Number of Candidates	-0.045 (0.005) *	-0.018 (0.001) *	-0.0473 (0.005) *	-0.017 (0.001) *
Poverty	-0.001 (0.000) *	-0.000 0.000*	-0.001 (0.000) *	-0.000 (0.000) *
Partisan attachment	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)
Logged Voting Population	0.050 (0.010) *	0.027 (0.003) *	0.050 (0.009) *	0.024 (0.002) *
Constant	0.7844 (0.041) *	0.892 (0.012) *	0.803 (0.039) *	0.900 (0.011) *
N	1088	1088	978	978
R-squared	0.104	0.227	0.121	0.208

Note: \*: p<0.001

Observed mean differences for support distribution across electoral contexts are statistically significant in all four analyses. Results in Table 1.2 confirm this, even after controlling for poverty<sup>4</sup>, logged voting population, and a measure of partisan attachment that uses the difference between the vote share of elected mayors and the share received by the mayor's party

<sup>4</sup> I measure poverty using the unsatisfied basic needs index.

list for municipal council (Mainwaring and Scully 1995). OLS results reveal that, for the 2011 mayoral elections, each additional effective party is associated with a decrease of 0.047 in the measure of support distribution across voting places, and with a decrease of 0.017 across polling stations. These same analyses for 2007 reveal a decrease of 0.045 for the measure of support distribution across voting places, and of 0.018 across polling stations. In more simple terms, let us set the value for the measure of support distribution for mayors in unitary contexts at 0.88 (the mean in 2011). This is equivalent to having every voter in 88% of voting places supporting them. For every additional effective candidate, support for elected mayors would decline by 5% of the total number of voting sites. That is, votes for mayors become far more concentrated across geographic areas and demographic groups as the number of candidates increases.

## **Conclusion**

Electoral competition involves much more than just uncertain outcomes. I argue that an additional, but critical component of highly competitive contexts is the possibility of greater electoral fragmentation. Although both factors are correlated, the political dynamics stimulated by each of them are completely different. While electoral uncertainty fosters both political responsiveness and preemptive measures to a possible loss, greater electoral fragmentation should shape the scope of distributive choices.

I explore the role of electoral fragmentation in shaping distributive choices through the analysis of the geographic and demographic distribution of local electoral support in Colombia. I find that Colombian mayors that faced a greater number of competitors are more likely to have supports concentrated both geographically and demographically. In contrast, mayors elected in

contexts where there is are fewer competitive candidates are elected by citizens more evenly distributed across a municipality and demographic groups.

Although indicative of the role of the extent of electoral fragmentation in shaping local distributive choices, it is necessary to adapt this general frame to the distributive choices available in a context like Colombia that is facing increasing fiscal and administrative recentralization, while maintain vibrant electoral competition. The strategies used by mayors in Colombia to advance their political goals under these conditions are the topic of the next chapter.

## CHAPTER 2

### FISCAL AND ADMINISTRATIVE RECENTRALIZATION IN COLOMBIA

#### Introduction

Before moving on to assess the question of how different electoral contexts affect the spending choices of local governments across Colombia, it is important to first situate Colombia's municipalities in the larger trend of decentralization that has prevailed across Latin America since the late 1980s. In great contrast to the early years of this regional strategy, recent trends among decentralized regimes in Latin America increasingly involve some degree of recentralizing rules that have served to reduce local autonomy. Fiscal and administrative constraints are far from uncommon across Latin America, and Colombia offers just one of many examples of this move toward the recentralization of the power of the purse that local governments had more control of during the 1990s (Eaton 2014, Dickovick 2011). By underscoring these constraints on local autonomy, I highlight an issue in recent research on decentralization where there has been a tendency among scholars continue to downplay the significance of differences in the source of funding for local government operations (Bonvecchi and Lodola 2010). I argue that the rules governing each funding source are crucial to understanding how local electoral contexts shape local government spending decisions. Recognizing these nuances of decentralization is a critical step towards understanding the larger question of how local democratic competition affects

development outcomes in the context of increasing constraints on local administrative and fiscal autonomy.

### **Decentralization in Latin America in a Context of Recentralizing Regulations**

Throughout the 1980s, to varying degrees Latin American countries began to decentralize political, administrative and fiscal power to subnational units of government (Falleti 2010). This wave of decentralization reforms led to the election of subnational authorities, devolution of authority over certain policy areas, and the transferal of funds from the national treasury to local authorities. With these reforms came an assortment of goals and aspirations among proponents of the decentralization strategy including the more effective delivery of public services, development policies that were better tailored to the demands of the local citizenry, better citizen oversight over local officials, and shifting many municipality-specific development responsibilities away from national officials in order to allow them to focus more on planning and implementing larger-scale development strategies and policies (Rondinelli, Nellis, and Cheema 1983). Among these different goals, each country had a different experience in the timing, order, and reach of their decentralization reforms.

When looking at the region-wide implementation of this broad strategy, we first must recognize that there is no country that is completely centralized or decentralized. Also, the scope of local administrative responsibilities, amount of intergovernmental transfers, and whether citizens have the power to elect local officials can all change over time, particularly in unitary systems where such powers are not constitutionally guaranteed (Rodden 2005). For example, recentralizing reforms in many of the Southern Cone countries during the Great Depression greatly



affected local powers to collect revenue, but also contributed to the consolidation of power of authoritarian regimes during the 1960s and 1970s (Eaton 2004). However, more recent efforts by the central government to recover control from subnational levels of government are a response in many ways to the fundamental contradiction of decentralization. While devolving authority to subnational governments may foster policy innovation and participation, it also opens the opportunity for subnational governments to incur debt that ultimately are the responsibility of the national government. This tendency resulted in, for example, enormous budgetary shortages in Brazil and Argentina during the 1980s and 1990s. Faced with this risk, national governments set hard-budget constraints that prevented local governments from engaging in fiscal decisions that could erode national budgetary stability. These restrictions include the reduction of local spending discretion and the ability of local governments to borrow money. Through these instruments national authorities have constrained the fiscal powers of local governments without having to exert much oversight and, at the same time, avoid the need to commit themselves to bailing out local governments in need (Rodden, Eskeland, and Litvack 2003). Overall, recent recentralization reforms have been in response to the fiscal imbalances of recent years which led local governments to sacrifice their autonomy in order to at least partially resolve their dire economic conditions (Dickovick 2011).

As a result of these recentralizing efforts, what I identify as the fundamental contradiction of decentralization makes conditioned national transfers the norm rather than the exception across Latin America. Local governments across the region now have a wide but generally limited range of fiscal autonomy, and with most of that discretion allowed for an increasingly limited percentage of total national transfers. For example, the percentage of national transfers available for local discretionary spending in Argentina and Chile amounts to 83% and 75% respectively, while in

Ecuador only 5% of national transfers are for discretionary use. The remaining portion of national transfers then are those with targeted policy areas and specific spending conditions attached (Rezende and Veloso 2012). In this context of efforts to limit local spending autonomy, Colombia exhibits many of the challenges that emerge when local governments with democratically elected officials try, with these extensive fiscal constraints, to fulfill the role decentralization assigns to them of bringing government closer to the people.

### **Fiscal and Administrative Recentralization in Colombia**

Decentralization efforts in Colombian began during the late 1960s. The 1968 constitutional reform mandated that the national government be required to share its revenue with subnational governments. Since 1973, subnational governments began to receive a growing share of national funds, moving from 13% in 1973 to 15% in 1975 (Bonet, Pérez V., and Ayala 2014) although local spending autonomy remained limited, with 74% of these funds directed toward education, and the other 26% toward health care. Opportunities for greater fiscal autonomy appeared during the 1970s (Law 46 of 1971) and 1980s (Law 14 of 1983) when local taxation received a significant push, allowing local authorities to tax property, commercial activities, the use of cars, and consumption of gasoline, liquors, and cigarettes. Building on these early efforts of fiscal decentralization, the 1991 Constitution kept existing local taxes and restrictions on the use of national transfers in place but altered distribution formulas. Under this new scheme, much of national transfers to municipalities were targeted specifically to education, health, water supply, and recreation.

The fundamental contradictions of decentralization without fiscal autonomy did not take long to manifest themselves. The new scheme of national transfers did not promote local effort to

collect their own revenue. On the contrary, local spending on personnel and debt grew enormously. Overspending in personnel was financed with debt that went from 1.1% of the national GDP in 1990 to 3.5% in 1999. In addition to local deficit spending, Colombia faced during the late-1990s a severe economic recession and a rapid growth in expenditures on pensions, transfers to local governments, and debt interests. Under these dire conditions, in 1999 the Colombian government signed an agreement with the IMF to receive loans, conditioned on carrying out a series of reforms. Overall, the Colombian government committed to reduce spending and to increase the overall revenue through new taxes (Amador Cabra 2007).

Adjustments included increasing taxes on gasoline, restricting local governments' ability to acquire new debt<sup>5</sup> or to use it to pay for personnel, and reforming transfers to local governments. Also, new regulations clarified competencies of national, departmental and municipal authorities on each policy area. Overall, most transfers continued to be earmarked to ensure that subnational governments used the transfers to effectively provide the most basic services. Particularly, most transfers were targeted to health and education services, and beginning in 2007, to fund water supply projects. These reforms also set goals for health and education that local governments ought to prioritize. Municipalities failing to reach these nationally set goals were forced to implement a special improvement plan designed by the Ministry of Finance, and in extreme cases, departmental authorities were granted the power to take control of transfers to failing municipalities. As should be clear in all of these reforms, the recentralizing efforts on the part of the national government ran directly counter to much of the theoretical rationale for decentralization that centered on bringing government closer to the people and empowering citizens with a greater role in oversight and decision-making processes.

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<sup>5</sup> Law 358 of 1997

From the perspective of proponents of these recentralizing reforms, the driving logic was that the new rules would increase funding for health and education, and relieve local fiscal deficits. Also, these reforms were expected to improve the quality of education, health, and other local services by bringing about a reorganization of the administrative apparatus charged with basic service delivery. Finally, legislators believed that by forcing local governments to manage more expenses and responsibilities, they were increasing their administrative autonomy. In compensation for these reforms reducing local fiscal and administrative autonomy, local governments benefited with a one-time authorization to use savings from oil extraction to pay local debt.<sup>6</sup>

The resulting transfers system included specific spending options allowed for each source of funding. Table 2.1 presents each policy area where municipal governments have responsibilities and potential funding sources for projects in each of them. Overall, the new transfers scheme creates three distinct choices for local governments. First, given that discretionary funds could be used in any number of policy areas, local authorities willing to build a road, for example, would have to spend much of their limited discretionary funds on it at the expense of other potential projects. Thus, choosing which actions would be prioritized, at the expense of other possible actions, become a central strategic decision for local authorities. Second, since funding for education, health and water are the targets for most national transfers, and local budgets in general, spending decisions in those areas become a central part of local affairs and an important tool to achieve electoral goals. Finally, local authorities must decide how much effort and resources they are willing to expend in order to secure additional financial support from national or departmental governments for local projects.

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<sup>6</sup> Decree 1939, 2001.

Table 2.1 Possible Funding Sources for Projects in Each Policy Area, Colombia

<b>Policy area</b>	<b>Potential Funding</b>
<b>Education</b>	58.5% of National Transfers/ Own resources/Additional funding from Projects funded by the National and Departmental Governments.
<b>Health</b>	24.5% of National Transfers/ Own resources/Additional funding from Projects funded by the National and Departmental Governments.
<b>Water supply and sanitation</b>	11.6% of National Transfers/ Own resources/Additional funding from Projects funded by the National and Departmental Governments.
<b>Education, Health, Water Supply and Sanitation, Public utilities, Culture, Tourism, Housing, Social Security, Transportation, Environment, Sports and Recreation, Disaster Prevention and Relief, Public Security, Land Use Planning, and Support for Victims of Political Violence</b>	Remaining 5.4% of National Transfers/ Own resources/Additional funding from Projects funded by the National and Departmental Governments.

The partition of local spending decisions into three distinct choices allows us to categorize potential distributive spending portfolios in Colombia. To restrict local spending alternatives, national authorities use at least three mechanisms. First, fiscal reforms shape local choices by earmarking most of national transfers. Through this mechanism, local governments must spend earmarked national transfers on predefined areas. Such restrictions reduce the range of collective and constituency-specific projects and goods local governments may offer. Second, the devolution of many responsibilities to local authorities without parallel funding, in other words unfunded mandates, has come to characterize the situation many local governments in Colombia now face. Although assuming new responsibilities seemingly expands local authority, these competencies overcrowd available funds to the point where there is little room for local initiative. Finally,

national authorities actively approve or discard local initiatives to receive additional funding for programs funded by the national government. National authorities get to design and grant funding for projects that promote their interests, while local authorities are subject to an oftentimes arbitrary grant application process in their efforts to secure funding for specific projects.

These mechanisms limiting local autonomy in Colombia are another expression of existing strategies used by national authorities to relocate the power of the purse back in the national capital. Other strategies include creating new subnational institutions with which local governments have to bargain, or mobilizing social support for national programs (Dickovick and Eaton 2013). For example, national authorities in Senegal, Uganda and Nepal have limited the autonomy of local governments to manage forest resources by selectively devolving control over some areas, while keeping control over the most profitable (Ribot, Agrawal, and Larson 2006). National authorities may also have the final say over local affairs. Peruvian national authorities have made access to additional funding for local governments conditional on their satisfaction of national demands for the implementation of local territorial regulations (Eaton 2015). Also, national governments can also limit the reach of local policy decisions by reducing the administrative and fiscal resources necessary to actually implement those policies. Through this strategy, local governments depend on receiving national support to manage complex administrative tasks and to fund programs that satisfy their constituencies' needs (Wunsch 2001).

### **Strategies to Manipulate Local Spending in a Context of Recentralization**

Distributive offers amid recentralization reforms go beyond a simple choice between collective and private goods. In contexts like Colombia, where fiscal and administrative

recentralization coexists with lively electoral competition, local authorities face a range of choices when determining what type of distributive strategy will reap the most useful electoral benefits. These options include an exclusive focus on private or public goods or a mix of both. Moreover, the menu of private and collective that a local government is equipped to provide are not equally useful in terms of gaining electoral support. Delivering books to children may be less effective than delivering cash subsidies, for example, even if their monetary cost were equal. Finally, some scholars argue that politicians also have an eye toward capturing unused government monies for their personal benefit, though in a context of limited resources this seems unlikely to be too common (Gervasoni 2010). Because of these considerations, and building on existing theories of distributive politics, I argue that local governments may respond to their limited spending alternatives using one or several of three strategies to construct the most useful, in electoral terms, spending portfolio.

First, local governments that depend to a great extent on earmarked national transfers can prioritize certain areas within the more general mandated policy areas. Thus, even though local governments are required to spend national transfers in specific policy areas, they still have some flexibility to direct funds to specific targets within the broader mandated area. For example, in the area of education, a mayor facing multiple points of electoral opposition and thus seeking to maximize the electoral returns on education spending may choose to build schools in certain places rather than improve the quality of education through better staffing and supplies. In contrast, mayors in more unitary contexts will likely focus on sustaining the provision of education services to most of the population, even if that entails less visible expenses. This choice should also prevent them from funding the most visible expenses of education provision. I will refer to this as the “local adaptation strategy.”

Another approach local incumbents may follow when faced with tight fiscal constraints and a competitive electoral context is to spend their few discretionary funding in a way that has the most potential of boosting their short-term public approval. Given the combination of a wide range of governance responsibilities alongside limited budgets, we should expect an incumbent to focus her manipulation efforts on a narrow range of specific spending projects that are certain to produce results rather than undertaking a wide range of possibly less effective actions. In factional contexts, we should see the former approach with a high degree of targeting. This might include, for example, small sums of money on public events (e.g., celebrating Mother's Day, or Peasant's Day), the distribution of low cost items such as tools for agriculture, or clothing to a small group of individuals. Since the winning electoral coalition for politicians in these contexts will likely be more concentrated geographically we may see more of these smaller, low-cost, but highly targeted spending project. In such a context, we may also see more emphasis on the prioritization of spending alternatives away from public sight that, for example, benefit local bureaucracies.

In contrast, we should expect local governments that face fewer electoral competitors to spend on projects that may be less visible but are designed to benefit a larger number of constituents. This includes guaranteeing with additional funds the provision of education and health services. Also, needing to reach a greater number of individuals, local governments in more unitary contexts should be less likely to allot funds to less visible actions, such as taking steps to improve local bureaucracies. I will refer to this strategy as the "targeted pandering strategy".

The third strategy local politicians may pursue as they face diverse electoral contexts amidst fiscal recentralization efforts is to highlight as much as possible their involvement in the execution of nationally funded programs. Such efforts at credit-claiming will likely result in an increased politicization of the program but exploits the fact that national governments increasingly



control the execution of major social programs while local authorities still retain some role in the implementation stage (Dickovick and Eaton 2013). For example, in Brazil, mayors benefit from the nationally controlled program Bolsa Escola, as evidenced by work that shows mayors exert more effort executing the program when running for reelection (de Janvry, Finan, and Sadoulet 2012). The involvement of mayors executing national programs is also common in Colombia, where public documents and presentations of local governments' executions make frequent reference to how they are supported by the governor or the national government.

Importantly, local governments are not always passive recipients of these resources. Although it varies by program, using this strategy requires that local governments exert some effort, for example, applying for national grants or contributing local resources to the execution of the program. Local governments following this strategy then have an incentive to support the electoral success of national authorities to the extent that further enjoying the benefits of important national programs is contingent on who is ruling at the national level. The pursuit of this strategy, then, can lead to the loss, or deterioration, of the independent political voice of local officials as their electoral success becomes dependent on the electoral success of the incumbent national government. Moreover, local electoral needs are likely to shape the reach of national programs. Particularly, local governments facing highly factional competition should be more likely to apply to national programs but requesting fewer funding than public officials in contexts with more unitary electoral support. I will refer to this strategy as the "local appropriation strategy" of responding to the electoral incentives in a context of reduced spending autonomy.

The extent to which local governments exploit each of these three strategies depends on the type of electoral context they face and the degree of flexibility they have. For example, local governments who are forced to supplement education funding from the national government with

their own funding should be less likely to invest in improving local bureaucracies. Therefore, their emphasis on the provision of education with earmarked funds also shapes spending of discretionary funds and ultimately harms their administrative capacity to apply for projects funded by the national government. In contrast, local governments in factional contexts likely will be less interested in having an extensive reach when using earmarked and discretionary funds. These choices should allow them to invest in having local bureaucracies better equipped to navigate the technicalities of presenting projects to national agencies.

## **Conclusion**

Decentralization reforms are increasingly facing recentralizing efforts to avoid the risks of having local autonomy to foster local innovation, but at the same time, opening the opportunity for damaging fiscal deficits. In this context of shrinking autonomy, local governments face varying choice sets depending on the rules governing their various funding sources. In consequence, local officials facing different electoral contexts ranging from factional to unitary are expected to implement any of three spending strategies. Local adaptations to earmarked funds, targeted pandering of supporters, and the local appropriation of national programs are possible local responses to national efforts to limit local spending choices. These strategies may be relevant to many countries around the world to the extent that existing decentralization efforts are plagued with restrictions beyond what proponents of this development strategy anticipate.

Coming chapters evaluate how Colombian local officials under disparate electoral contexts adapt their behavior to advance their electoral goals. In contrast to existing theories of distributive politics, proposed response strategies consider national efforts to limit local autonomy through

earmarked funding, overcrowding local responsibilities, and making final decisions about nationally funded projects. Under these challenging conditions, expected benefits of greater electoral competition may become an unfulfilled promise.

## CHAPTER 3

### LOCAL ADAPTATION TO RECENTRALIZATION IN COLOMBIA

#### Introduction

The provision of education services in a highly constrained fiscal environment places a premium on the few decisions local political officials make with respect to the limited spending discretion available to them. Although electoral considerations may motivate these choices, recentralizing rules also determine which areas of education spending are most vulnerable to political manipulation. In the case of Colombia, contrary to the widely publicized decentralization of education services carried out during the 1990s, the country's municipalities now confront a classic case of unfunded mandates in which they are still stuck with the responsibilities of providing education but have very limited fiscal autonomy with which to carry out these duties (Falleti 2010). Recentralizing reforms in 2001 earmarked 58.5% of national transfers to education provision. However, only large cities and departmental governments are provided sufficient fiscal autonomy with which to manage these funds. Most Colombian municipalities are far more constrained, having spending discretion for only 2% of earmarked transfers for education. Despite such enormous financial limitations, municipalities are responsible for improving the quality of education being offered to the vast majority of students who attend public schools. In such a context, local officials have a limited choice set with respect to how they might go about addressing the quality of education in their communities. These include building and maintaining schools,

buying supplies and didactic materials, offering school transportation, and training teachers. These alternatives, although limited, still offer the opportunity to strategically direct the limited available funds to one area over another and it is this question of the political strategies employed in a context with a highly limited menu of options that I explore in the following pages.

Using evidence from disaggregated spending information, geolocation of schools, and the number of schools and teachers across time, I find that municipal officials in Colombia do indeed respond in fairly systematic ways to their electoral contexts by manipulating the few earmarked funds for education under their control. In a context where resources for education are scarce and subject to strong restrictions, I find that incumbents facing a factional electoral context, that is one with multiple viable opposition parties, tend to prioritize spending choices that entail investments like building new schools and complimentary expenses (i.e., supplies for new schools), and programs that make local authorities' influence visible to citizens through goods benefiting individuals directly (i.e., free schooling, receiving lunches). Moreover, although investing in more components of education, I find that such a diverse spending portfolio necessarily entails dividing their limited budgets into several actions but with a limited scope. In contrast, this set of choices is electorally unfeasible to reach enough potential supporters in unitary contexts. Local governments in contexts where one party dominates tend not to undertake actions that benefit only a limited constituency, like targeting specific neighborhoods with a new school or other education infrastructure, because they would then risk losing support from their supporters in other areas of the town. Additionally, local governments in unitary contexts cannot afford to focus primarily on particularistic benefits because of the fiscal constraints they face. Thus, their preferred approach is to focus on delivering collective benefits through the continued provision of education services, even if that entails less visible actions. We therefore should expect, for example, to see fewer high

profile education projects in these contexts and more attention to the daily operation of the existing education system.

These analyses provide a fine-grained perspective on how a public service like education, subject to nationally imposed regulations, is manipulated to satisfy the needs of incumbents seeking to advance their political careers across distinct local electoral contexts. Although political motivations are often obscured by the universal nature of access to education and the fact that the recentralization of most education expenditures in Colombia has greatly reduced the discretion of local officials, I find that these factors only make more significant the political manipulation of local spending on public goods like education (Min 2015).

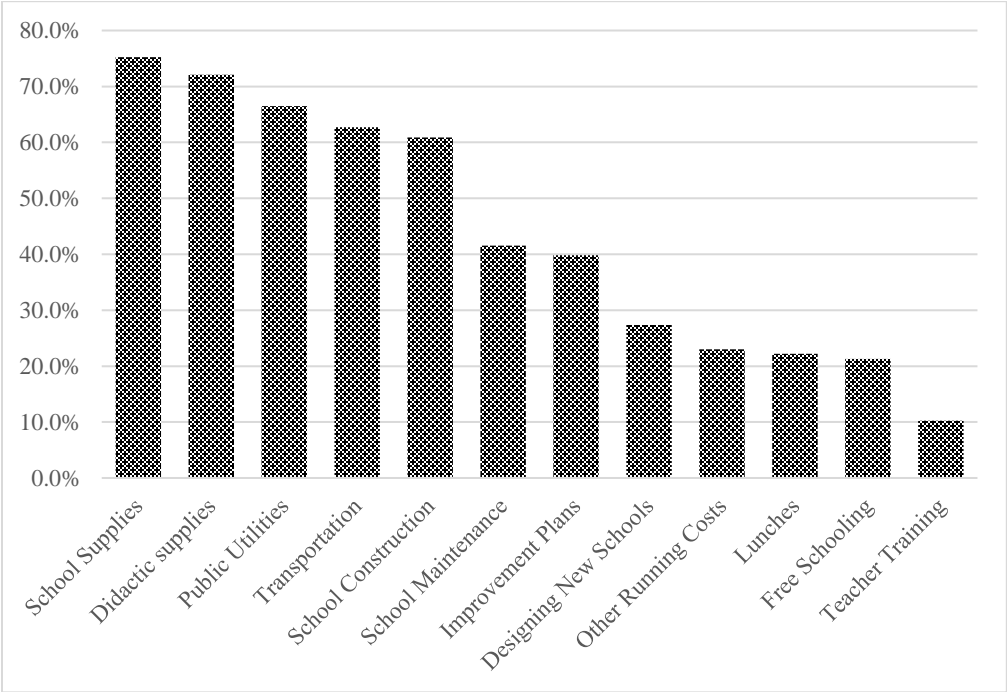
### **Local Adaptation in Education Provision in Colombia**

Decentralization of education provision in Colombia started in 1987, when municipalities were granted both the fiscal and administrative capacity to oversee and manage the construction, supply, and maintenance of the local education system. Not under their control during this period were teachers and administrative staff, an area of responsibility assigned to department governments. This changed in 1988 when municipal authorities were given these powers as well.

In 1993, new legislation established the basic framework that continues to exist today. Departments were granted the authority to certify whether municipal authorities have the capacity to manage national transfers, teachers, and administrative personnel. Otherwise, the corresponding department controls those functions. This plan became further consolidated in 2001, when new rules for national transfers established that, beginning in 2004, national transfers for education would have two lines of funding. One of them would go exclusively toward the funding of the

operation of local schools. This includes the salaries of teachers and administrative personnel. However, only departmental capitals and municipalities with more than 100,000 inhabitants or adequate administrative capacity manage these funds. Thus, departmental authorities were charged with overseeing the payment of teachers’ salaries and other operation costs in municipalities lacking this authority. The second line of funding falls under a more discretionary category of “quality improvements” that allows municipal officials greater flexibility in terms of where those funds are directed. Spending options include designing new schools, school construction and maintenance, supplies and didactic materials, financing for public utilities of schools, student transportation, teacher training, providing meals to students, education quality improvement plans, and student scholarships and subsidies

Figure 3.1 Average Percentage of Municipalities that Spent Money on Each Component, 2008-2015



Despite existing regulations, Colombian mayors control spending decisions dealing with a limited number of education expenses. One way mayors exercise their limited autonomy is by

allotting no funding to some expenses. Figure 3.1 displays the average proportion of municipalities between 2008 and 2015 allotting any funds in each allowed expense of education provision. Overall, most expenses in control of municipalities are financed by a large proportion of municipalities. The most salient exception is paying for free schooling. This national policy began in 2008, but only was put into practice in 2011. Although national authorities transferred new resources to finance this policy, not all municipalities took advantage of those funds. It is also notable that there are about 40% of municipalities that do not allot any funds to building new schools, and about 90% that do not spend any money on teacher training. Through analysis of these choices, I hope to gain insight into the political motivations of local authorities that opt to target spending choices that have a limited number of beneficiaries versus those that use their limited discretion to sustain widespread education services.

One implication of the theory I laid out above is that we should find more attention to targeted, limited beneficiary spending in factional electoral contexts where incumbents must secure the electoral support of a limited but specific constituency. Also, lower costs of reaching limited constituencies allows to have funding for alternative components of education provision. Thus, we should see more of a focus in these contexts on building schools and a greater inclination to invest at improving local education (e.g., training teachers). In more unitary contexts, conversely, we should see attention to less visible expenses associated to the daily operation of schools. Similarly, regarding a second choice that local officials face, governments in factional contexts should invest in the more visible components of education provision (e.g., free schooling, building new schools) at the expense of school inputs (e.g., school supplies). In contrast, local governments in unitary contexts should be more likely to finance less visible components of



education provision at the expense of more visible actions that benefit selected groups (Harding and Stasavage 2014).

Local officials in Colombia face a third choice regarding these discretionary funds. In addition to selecting where to target funds, these officials must also decide how much to spend in those areas they do target. In this regard, the amount should be a function of the reach it is expected to have. Thus, officials in more unitary contexts should spend more on those areas that have a wider reach, while officials in more factional contexts will not only target, but also spend smaller amounts on projects that have a more limited number of beneficiaries.

These strategic choices imply that spending efficiency goes beyond whether local or central authorities make spending decisions. Most decentralized contexts involve a mixture where both local and national authorities play a role in shaping local spending patterns. In this interaction, while national rules may define a constrained set of spending alternatives, local governments may still respond to their electoral contexts by prioritizing certain areas and the amount spent, at the expense of other components. These choices that I view as at least in part driven by local electoral conditions are what I refer to as the local adaptation strategy.

Classic theories of fiscal federalism posit that local governments are more efficient and effective in spending decisions than central authorities since they have better information about local needs. Also, local governments are expected to compete among themselves to provide better public goods and services (Tiebout 1956). Such competition would prevent corruption and wasteful spending decisions. However, effective competition also requires that local governments have enough discretion over expenditures to be able to effectively ensure implementation of whatever policies they decide to pursue. Lacking such fiscal autonomy, local officials will be unable to effectively tailor spending decisions to solve local needs.

Additionally, when local revenue generation simply is funneled into the coffers of the national government, and then re-distributed back to local governments, this will reduce the incentives to increase local revenue. If local governments were to try to increase their revenue, they would receive only a fraction of additional funds collected through their effort. Very often, national authorities redistribute funds without considering the contribution made by any given local government to generate additional revenue. This outcome, known as the common-pool problem, has an additional implication for the local provision of goods and services. Distribution of national transfers becomes a coalition-building tool that incentivizes national authorities to allocate funds in a way that does not reflect the needs of the population. To the contrary, spending restrictions are designed to favor national policy goals.

Finally, the resulting influence of the national government on local policymaking distorts local accountability. Local governments may blame national authorities for failures and claim credit for policies initiated by the national government (Weingast 2009). These effects of fiscal recentralization on the behavior of local authorities curtails the possibility that spending decisions respond efficiently to local needs. On the contrary, in contexts where national authorities control funding, policy, and credit-claiming opportunities while at the same time, local authorities continue to depend on the public approval to advance their political careers, local governments will prioritize spending choices that advance their electoral goals over efforts to maintain and improve the quality of local services.

## Data and Methods

I assess the extent to which the local adaptation strategy I describe above is used in Colombia with information from two mayoral terms (2008-2011 and 2012-2015) for which I have detailed spending and electoral data.<sup>7</sup> My empirical approach addresses several challenges to studying political manipulations of spending decisions. Most studies testing the political use of public spending have two critical weaknesses: incompleteness and clustering. Incompleteness occurs when scholars focus on specific programs and neglect others. These choices, many times based on convenience, produce different conclusions depending on which expenses scholars choose to analyze (Kramon and Posner 2013).<sup>8</sup> On the other hand, clustering refers to a situation where researchers combine or compare various sources of revenue without considering whether each of the component spending areas conforms to similar or different rules (Bonvecchi and Lodola 2010). To avoid using handpicked types of spending (e.g., education, health, or infrastructure), I analyze all of the spending areas related to education provision that municipal governments control. Also, I restrict analyses in this chapter to expenses paid with funds earmarked to education.

Another challenge comes from the possibility that past spending patterns influence the number of candidates that decide to compete for local office. Existing strategies to address the possibility of reverse causation include taking advantage of natural experiments such as off-cycle elections (Fukumoto, Horiuchi, and Tanaka 2011), or using the size of municipal legislatures as an instrumental variable (Arvate 2013). This chapter and the following chapters in this dissertation

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<sup>7</sup> Although electoral data is available since 1997, information detailing the source of funding for each payment exists only since 2008. Nonetheless, available information covers enough time to uncover general patterns.

<sup>8</sup> This selectiveness also raises the possibility of publication bias by which we only get to know about spending choices that support the possibility of electoral manipulation.

rely on the fact that the number of seats in Colombian municipal legislatures (*Consejos municipales*) reflect the population size of the municipality. For example, municipalities with populations between 5,001 and 10,000 people elect nine councilors, while those between 10,001 and 20,000 elect eleven.<sup>9</sup> This arrangement allows me to exploit the fact that one effect of having larger electoral districts is to incentivize more candidates to participate (Cox 1997). Importantly, population ranges defining the size of local legislatures and the resulting increase in electoral fragmentation are independent of past spending patterns (Arvate 2013). In consequence, the resulting instrumented effective number of candidates reflects the average change in electoral fragmentation due to this somewhat arbitrary population thresholds. It is important to emphasize that although the number of seats in municipal legislatures reflect larger populations, the specific thresholds at which the number of seats changes are completely exogenous to future spending patterns. Moreover, given such institutional setup, it is very unlikely that municipalities will manipulate their populations to have a desired number of seats. In this study, that possibility is completely discarded since the number of seats during the period of study (2008-2015) was defined, and remained fixed, based on the 2005 Census. Although enabling, this strategy requires us to be cognizant of its limitations. Following analysis refer to the impact of increased electoral fragmentation due to changes in the number of seats in local legislatures rather than to the overall electoral fragmentation. Although the later involves a more complete assessment of local electoral contexts, they involve many unobservable determinants that may bias any estimation of the impact of greater electoral fragmentation on local spending patterns.<sup>10</sup>

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<sup>9</sup> For the two terms studied here (2008-2011 and 2012-2015), the size of local councils reflects the 2005 census.

<sup>10</sup> In most analyses, I present results for the instrumented effective number of candidates. The use of instrumental variable estimation and results for the instrumented independent variable are clearly noted. Otherwise, I am using the raw effective number of candidates.

Given that mayors are making a series of distinct choices with respect to education funding at the local level, I employ separate models of local spending decisions. The first model assesses whether mayors spend any funds on a given area of education spending (see Figure 3.1) or decide not to fund it at all. In a second stage of the analysis, for those municipalities that do spend money on a given area, I analyze variations in how much they spend (measured in thousands Colombian pesos per capita). With the first analysis, I test whether local governments in more factional contexts are more likely to target certain areas of education than mayors in unitary contexts due to their need to direct limited funds to specific constituencies. Through the second analysis, I look at whether officials in factional electoral contexts spend significantly different amounts than officials in unitary contexts.

A third analysis explores the degree to which local authorities finance some education projects at the expense of underfunding systematically other components of education provision (i.e., build schools at the expense of training teachers). To capture these dynamics, I use existing tools for compositional analysis. Proportions of funds spent in each component of education services are transformed into log-ratios before using regular statistical techniques. Specifically, I use as my dependent variable the ratio of the proportion spent in any two education expenses. This is known in compositional analysis as balances. For example, I compare the proportion spent in school construction versus buying supplies. A positive balance means that project investments for the numerator receives greater emphasis than expenses in the denominator (with the reverse for negative balances). Through this analysis, I will test whether local governments in factional contexts put greater emphasis on the larger and more visible components of education provision at the expense of the less visible components of education compared to mayors in unitary contexts. I also examine whether local governments in unitary contexts emphasize sustaining education

services for most of the population at the expense of more visible investments that I expect mayors in more factional contexts will be more likely to pursue.

In these three analyses, I use the same set of control variables in a series of instrumental variable analyses. My main independent variable is the effective number of candidates running for mayor to measure the extent of local electoral fragmentation. However, I rely on the shifts in the number of seats in the local legislature (i.e., instrumental variable) to estimate exogenous variation in the effective number of candidates. Additionally, I include a series of controls for other factors influencing spending choices. First, I control for the margin of victory to assess the extent to which local electoral fragmentation has an impact on spending decisions independent of how close are electoral outcomes. Also, I control for the size of discretionary budgets. Larger budgets should allow local governments to spend greater amounts across policy areas, and citizens should feel more compelled to keep their governments accountable for what they paid in local taxes (Paler 2013). I also control for local turnout in the previous mayoral election. I expect that if those who abstain are different from those voting, then electoral outcomes should reflect the preferences of the voting population to a greater extent when turnout is higher (Fowler 2015). Also, places with a more engaged citizenry are more likely to make effective demands to their governments (Cleary 2007). I control for the partisan affiliation of the mayor, coded as 1 if the mayor's party aligns with the party of the president and 0 otherwise. Co-partisan mayors should be more willing to advance national policies through local decisions. I also include a measure of local partisan loyalties that consists of the difference between the vote share for mayor and for his party's list running for the local legislature. Spending manipulations should be more frequent in contexts where partisan attachments are weaker than in places where electoral choices follow partisan loyalties (Luna 2014, Bueno de Mesquita et al. 2003). Finally, I also control for poverty, using an index of

unsatisfied basic needs based on census data; the logged population density; the proportion of rural population; whether a municipality is a departmental capital; and year fixed effects.

### **Local Adaptation of Education Spending in Colombia**

Table 3.1 summarizes results of a series of instrumental variable probit analyses testing the effect of the instrumented effective number of candidates on the probability that local governments spend any funds in each of the education expense categories (first column). I note whether the effect is positive or negative if coefficients were statistically significant, and I leave cells shaded with blue when the effect is null. In general, compared with unitary contexts, local governments in factional contexts are more likely to allot funds to design and build new schools, train teachers, operation costs, and school improvement plans. Conversely, local governments in unitary contexts are more likely to leave these areas without funding and instead devote funds to maintenance costs for existing schools. Overall, these results support my expectation that local officials in factional contexts are more likely to invest in the targeted improvement of education provision with new schools, training teachers, and actions to improve education quality. Given lower costs to reach targeted populations, local officials in factional contexts are significantly more likely to invest in several components of education provision. Conversely, local officials in unitary contexts choose to simply upkeep existing infrastructures.

Table 3.1 Models Predicting Education Priorities and the Amount Spent

<b>Education Expense (Effect of the I.V. ENP)</b>	<b>IV. Probit Whether Local Governments Spent any Funds</b>	<b>IV. Regression Amount Spent</b>
Designing New Schools	+	
School Construction	+	-
School Maintenance	-	-
School Supplies		-
Didactic Supplies		-
Public Utilities		-
Transportation		-
Training	+	-
Other Running Costs	+	-
Lunches		-
Improvement Plans	+	
Free Schooling		-

Running a second set of analyses using instrumental variable regressions predicting the amount spent I find that the effective number of candidates influences the amount spent in every spending category except for designing new schools and actions to improve local education (see Table 3.1). All other categories receive greater funding in more unitary contexts. This is consistent with the idea that local governments in less fragmented contexts, in an effort to reach a broader segment of the population, attempt to distribute the available funds more widely.

Table 3.2 Effect of the Instrumented Effective Number of Candidates on the Balance of Spending Priorities

	1	2	3	4	5	6	7	8	9	10	11	12
1. Designing New Schools		-	-	-	-	-	-	-	-	-	-	-
2. School Construction	+		+	+	+	+	+	+	+	+	+	+
3. School Maintenance	+	-				-				-	-	-
4. School Supplies	+	-				-				-	-	-
5. Didactic Supplies	+	-				-				-	-	-
6. Public Utilities	+	-	+	+	+		+	+	+	+	+	
7. Transportation	+	-				-				-		-
8. Training	+	-				-				-	-	-
9. Other Running Costs	+	-				-				-		-
10. Lunches	+	-	+	+	+	-	+	+				-
11. Improvement Plans	+	-	+	+	+	-		+				-
12. Free Schooling	+	-	+	+	+		+	+	+	+	+	



Table 3.2 summarizes the results of a series of regressions with an instrumental variable predicting the balance across pairs of spending alternatives in education. Since we are dealing with 132 pairs (i.e., 132 different regressions), I focus on the results for the effective number of candidates in each of them. I indicate with cells colored in blue that balances between pairs of expenses are equal across electoral contexts (i.e., null effects). Cells with a positive (+) sign indicate that a greater number of effective candidates is associated with a greater emphasis on the category in each row compared to the corresponding column category. On the contrary, a negative (-) sign indicates that greater electoral fragmentation is associated with a greater emphasis on the expense in the column compared to the expense in the row.

Through these series of analyses, we can gain insight into those areas that certain local governments systematically ignore in exchange for spending in other categories. Local governments in factional contexts systematically favor the construction of schools over every other spending categories (see the positive sign along the second row). Similarly, local officials in factional contexts prioritize spending for public utilities, lunches, and free tuition at the expense of most components of education provision. Local governments facing less electoral fragmentation finance their spending priorities by underfunding school construction, public utilities (given that there will be fewer schools), and the possibility of offering free tuition.

Overall, these results suggest that electoral needs in places with more factional competition leads to a focus on more visible spending alternatives like building new schools and paying more on public utilities, and tangible benefits like free lunches and tuition. However, reflecting the number of voters needed to result elected, such investments have a significantly narrower scope. These choices appear to be inappropriate for unitary contexts given that it would take away significant funds that are necessary to reach a broader segment of constituents with regular

education services. This approach allows local governments in factional contexts to deliver benefits to credibly signal a politician's commitment to the interests of some constituencies. Prioritizing these more durable and visible expenses in education (i.e., building new schools and offering free tuition) becomes central to the efforts of politicians in factional context to build loyalties (Albertus 2013). In contrast, since politicians in unitary contexts face the need to reach more voters with limited resources, they prioritize those expenditures categories that are guided by the effort to provide regular access to education services to most of the population without risking its funding by increasing the number of schools or offering free tuition to a few.

### **Impact on Education Access of the Local Adaptation Strategy**

To summarize, the local adaptation strategy manifests itself in distinct ways across factional and unitary electoral contexts. In the former, we find a focus on more durable and visible spending targets, while local governments in unitary contexts focus on sustaining regular education services. These choices also have important implications for the quality of local education. In factional contexts, where the building of new schools takes precedence over the proper staffing and maintenance of existing schools, the quality of education will suffer. The geographic distribution of schools should in many ways be a reflection of these political choices to benefit some groups over others

We can explore this implication a bit more through the analysis of geolocation data of schools in each municipality.<sup>11</sup> Using this information, I construct a version of the Clark and Evans aggregation index that captures the extent to which points (i.e., schools) are clustered or distanced

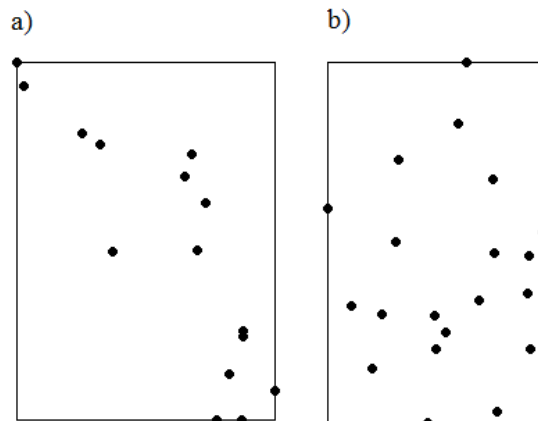
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<sup>11</sup> I was able to access the geolocation of schools in 853 out of 1100 municipalities as of 2012.

to a greater extent than what would happen at random (Clark and Evans 1954). According to this measure, values lower than 1 represent a more clustered geographic distribution of schools than what we would find if they were distributed randomly across the municipality. We should expect schools to be clustered around specific places, mainly inside the urban center. As an example, Figure 3.2 charts the distribution of schools according to their longitude (x-axis) and latitude (y-axis) for two municipalities. The area of the rectangle is determined based on the farthest school in each direction. Panel A depicts the location of the 22 schools in La Paz (Santander), where the Clark and Evans aggregation index is equal to 0.49.

In contrast, when this index is higher than 1, it means that schools are, on average, further away from each other compared to what a random distribution would produce. This is the case in panel B that represents the location of the 20 schools in Achí (Bolívar). Here we have a Clark and Evans index score of 1.37.

Figure 3.2 Geographic Distribution of Schools in Two Colombian Municipalities



Note: x-axis reflects schools' longitude, y-axis corresponds to schools' latitude. Squared areas comprise the space between the farthest schools in each direction within a given municipality.

Using the Clark and Evans aggregation index as my dependent variable, I run a linear regression with an instrumental variable for the effective number of candidates and use the control

variables included in previous analyses, along with the number of schools per municipality. Results for this model appear in the first column of Table 3.3. I find that, on average, for each additional effective candidate, schools are 17% closer to each other than what is expected if schools were located at random. This is consistent with the tendency of local governments in factional contexts to benefit some groups, while local governments in less fragmented contexts spread schools across their municipalities.

Table 3.3 Models Predicting Schools Geographic Distribution of Schools, and the Availability of Teachers

	<b>Clark and Evans Aggregation Index</b>	<b>Teachers per 1000 students- 2008 term</b>	<b>Teachers per 1000 students- 2012 term</b>
Effective Number of Candidates	-0.831 (0.284)*	-17.813 (6.273)*	-6.976 (2.385)*
Teachers per 1,000 students at the end of the previous term		0.513 (0.067)*	0.718 (0.038)*
Number of Schools	-0.001 (0.000)*		
Margin of Victory	-0.017 (0.007)*	-0.431(0.161)*	-0.134 (0.056)*
Turnout	-0.807 (0.609)	-18.663 (9.510)*	-2.119 (4.203)
Partisan Loyalty	-0.005 (0.002)*	-0.003 (0.015)	-0.040 (0.017)*
Mayor aligned	-0.178 (0.127)	0.150 (0.865)	-2.313 (0.909)*
Poverty	0.001 (0.002)	-0.041 (0.028)	-0.040 (0.016)*
Logged Population Density	0.128 (1.789)	-47.859 (24.089)*	-19.916 (12.942)*
Department Capital	0.231 (0.219)	0.567 (2.761)	2.497 (1.563)
Proportion of Rural Population	-0.423 (0.309)	0.889 (3.829)	0.654 (2.030)
Constant	4.621 (1.482)*	89.969 (29.209)*	44.549 (12.922)*
N	714	1094	982
R-squared	0.419	0.899	0.407

Note: \*p<0.05

In addition to shaping the location of schools, the tendency for local officials in factional contexts to underfund less visible aspects of education provision also should manifest itself in variations in the number of teachers per student we find. All else equal, factional contexts should have lower teacher-student ratios than unitary contexts given their tendency to invest in the more

visible components of education rather than securing a regular provision of education for most of the population. I run two regression models with instrumental variable predicting the number of teacher per 1000 students for two mayoral terms (2008 and 2012).<sup>12</sup> In these models, I control for the same set of variables used in previous models, but I include the number of teachers per 1000 students at the end of the previous administration to assess the increase during each term in the number of teachers.

On average, by 2013,<sup>13</sup> for each additional effective candidate, public schools have almost 7 fewer teachers per 1000 students. Similarly, holding constant the number of teachers per 1000 students at the end of the previous term in 2007, on average, by the end of that term in 2011, for every additional effective candidate, schools had 17 fewer teachers per 1000 students. So, consistent with my expectations, we find in factional contexts a situation where more schools have been built but fewer teachers have been hired. Also, efforts to limit local governments from using teacher positions for patronage require that new hires ought to be funded with local revenue. Such limitations produce this gap between building new schools and undertaking the additional effort needed to hire new teachers.

## **Conclusion**

Overall, varying needs to reach citizens across electoral contexts produces completely different ways to provide education services. Municipalities with more factional electoral competition offer a greater number of schools that are clustered close together but have fewer

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<sup>12</sup> Data on the number of teachers and students per school come from the CEDE municipal panel, available here: <https://datoscede.uniandes.edu.co/microdatos-detalle.php/263/panel-municipal-del-cede/>

<sup>13</sup> Although this term ends in 2015, I do not have information on the number of teachers for that year. However, during two years in office, there is already a sizable difference in the availability of teachers.

teachers staffing them. Such deficiency of teachers results from a general inclination to spend systematically less on every component of education provision than local officials in unitary contexts. In contrast, municipalities in unitary contexts are more likely to distribute schools more widespread and to guarantee the operation of regular education services. This approach to education provision results from prioritizing education expenses associated with the daily workings of schools, and from investing greater sums.

These results suggest that local governments have a limited capacity to shape the provision of services subject to earmarking rules. However, different emphases are still visible across electoral contexts. The ability of local governments to adapt spending choices to varying electoral contexts should be even more apparent in the next chapter which explores spending choices under complete spending autonomy.

## CHAPTER 4

### TARGETED PANDERING IN A RECENTRALIZED CONTEXT

#### Introduction

Local governments in Colombia face a limited set of spending choices even when using discretionary funds. Although discretionary funding should offer local governments the opportunity to solve local needs effectively by directing money toward those areas most in need, the trend toward increased local government responsibilities and decreased fiscal autonomy has created a situation where the goals of decentralization are being undermined. Instead of targeting money to those areas most in need, local officials in competitive electoral contexts target these limited funds toward areas they expect will generate the most political returns in terms of votes on election day. The implication of this approach is that, contrary to what proponents of decentralization expected, electoral incentives are going to have a limited impact promoting solutions to most local problems. I refer to making electorally motivated spending choices with a limited scope as the *targeted pandering strategy*.

As I did with the education in the previous chapter, in the following pages I expand my analysis of local spending decisions and the prevalence of this local pandering strategy by empirically evaluating whether local governments prioritize specific types of goods as a function of the local electoral context, how much of available funds are spent on specific areas, and the degree to which non-priority areas of local government responsibility are ignored. Overall, I find

that local electoral conditions influence a likelihood of addressing more problems and scope of those efforts. In particular, local officials in more factional contexts are more likely to address problems with a broader set of actions across policy areas, but they devote significantly less funding than officials in more unitary contexts. In contrast, officials elected in more unitary contexts tend to pursue a more expansive political spending strategy in education than those officials in factional contexts. Beyond these findings, however, evidence of a systematic preference for collective or targeted goods is limited.

### **Targeted Pandering in Colombia**

The 2001 reforms of national transfers identified and targeted problems in fifteen of eighteen policy areas in which municipal governments depend almost exclusively on their own revenue to fund. Facing numerous responsibilities but having limited budgets, local governments must make strategic choices about how to divide their budgets in a way that does not jeopardize the support of their electoral constituents. Specifically, Colombian local politicians face three distinct choices. Initially, local officials decide how to address problems in each policy area. Here, I classify every possible expense into four types of goods that encompasses common features across policy areas. First, investments to build new or to upkeep existing infrastructures. These actions include, for example, building new roads, schools, parks, public spaces, or new water pipes. Second, projects that can be targeted to some individuals. They include welfare programs benefiting specific groups (i.e., the elderly, peasants) or programs providing agriculture supplies. Third, projects that benefit entire communities. This includes projects related to environmental protection or health services. Finally, other expenses associated with the operation local



administrations. Although central to the work of local bureaucracies, these investments remain unnoticed to the population. They include, among others, training of local bureaucrats, advancing administrative reforms, social security costs of local employees, or paying for past deficits.

Overall, from 2008 to 2015, local governments spent discretionary funds on 474 different budgetary items. Of these, 263 were collective projects, 74 involved building infrastructure, 51 fell under administrative expenses, and 86 entailed actions that benefitted individuals directly. Given these alternatives, politicians elected by a large following should select collective goods with the potential to benefit most of the population to a greater extent than politicians in factional contexts. In contrast, local politicians in factional contexts who need to be more strategic in their “pandering efforts” should be more likely to prioritize targetable goods than governments in unitary contexts. For example, a mayor winning an office with only 20% of the vote due to the presence of multiple competitive candidates should be more likely to pursue direct cash subsidies that benefit specific groups than a mayor who entered office with the support of 50% of voters. In the latter case, such a selective targeting strategy would be of limited use and would possibly generate opposition among those not receiving the targeted benefits. Mayors elected in crowded elections therefore will have greater flexibility in deciding to whom they should target limited funds while those elected in a two-person race ought to commit most of their discretionary budgets to provide collective goods to their many supporters.

The second question facing local officials in Colombia is how much they should spend on their preferred policy areas. Following distributive politics theories, I expect that mayors in factional contexts will need to spend less on their preferred areas than governments in more unitary contexts due to the more limited constituency size of the former. This should be the case independent of whether mayors deliver targetable or collective goods because the cost of both will

be higher for officials in unitary contexts who are trying to reach a larger (in relative terms) constituency.

Finally, mayors must make a choice in terms of how much they want to finance their preferred types of goods by systematically underfunding less electorally effective alternatives. I expect that local governments in factional contexts will be more likely to focus on targetable goods at the expense of collective goods in each policy area. In contrast, local governments in unitary contexts should privilege collective goods, which benefit more people, at the expense of targetable alternatives. This choice should result in distinct approaches to address local problems. For example, when addressing health needs, unitary contexts should enjoy better equipped hospitals, but at the same time they should underfund programs subsidizing health insurance for the poorest.

## **Data and Methods**

As I did in the previous chapter's analysis of education spending, I proceed here with an analysis first of the overall spending patterns of local governments with the expectation that mayors in factional contexts will be more likely to focus on targetable goods than mayors in unitary contexts. I then turn to an analysis of the amount spent in specific policy areas. Here I test whether local governments in factional governments spend fewer funds on the areas they decide to target than officials in unitary contexts. The expectation, again, is that once deciding on an area to target, officials in unitary contexts will have to devote a higher level of spending (per capita) in order to reap the expected electoral benefits because they must target a broader constituency. Conversely, in more factional contexts, officials can get away with spending less on a specific area and still benefit electorally. The third set of analyses follows the approach I applied in the previous chapter

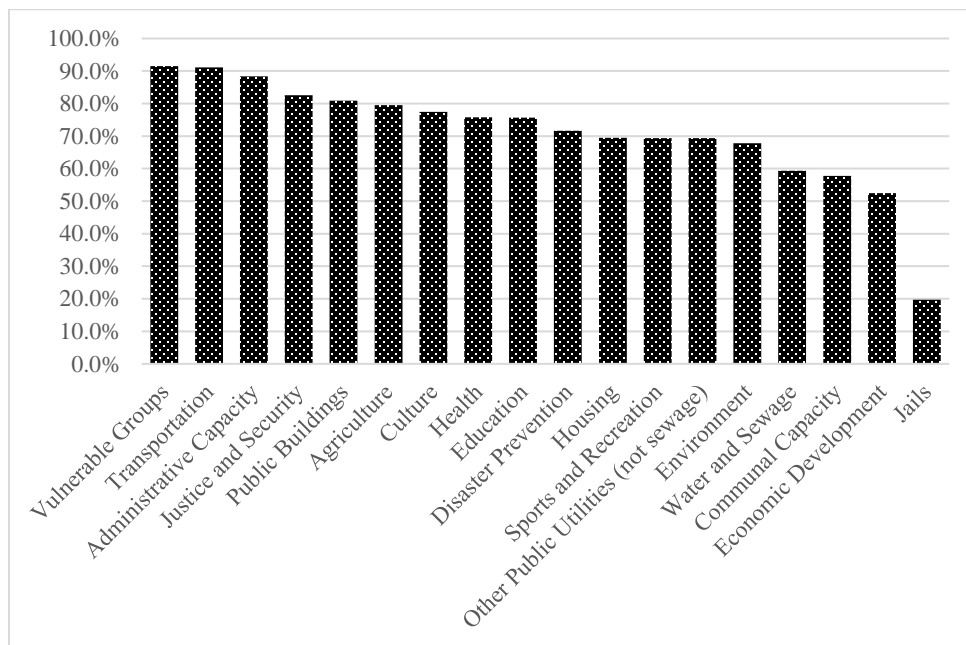
in order to explore whether local governments systematically fund some goods at the expense of others in any given policy area (i.e., collective versus targetable goods). Here, I use as dependent variable the ratio between the share of discretionary budgets spent in any given type of goods and the share spent in any of the other three alternatives. For example, I compare the proportion spent on targetable goods versus collective, or infrastructure expenses. A positive balance means that expenses in goods in the numerator receive greater emphasis than goods in the denominator (and conversely for negative balances). Through these analyses, I test whether local governments in factional contexts spend in targetable goods by cutting expenses in collective goods more frequently than mayors in unitary contexts. Also, whether local governments in unitary contexts finance collective goods at the expense of targetable goods compared to mayors in more factional contexts.

Overall, these sets of analyses go beyond past studies that focus solely on how political conditions affect the amount spent in a specific policy area (Golden and Min 2013). In order to provide a more comprehensive assessment of local spending strategies, I include every expense grouped into four types of goods across the eighteen policy areas over which local governments have responsibilities. Also, I restrict analyses in this chapter to discretionary funds to avoid combining funding types subject to different rules. That is, this chapter focuses on expenses paid with local taxes and fully discretionary national transfers. Finally, these three sets of analyses also exploit the exogenous nature of the number of seats in local legislatures (*consejos municipales*), using it as an instrumental variable to exogenously estimate the effect of the effective number of candidates on various spending choices. Consistent with analyses in chapter 3, I use the same set of control variables throughout this chapter.

## Evidence of Targeted Pandering in Colombia

Colombian mayors do not allot funds on every policy area to the same extent. Figure 4.1 reveals the extent to which mayors in Colombia have invested in each of the 18 policy areas between 2008 and 2015. Through this period, almost every municipality spent some funds in social programs for vulnerable groups, transportation, efforts to improve local administrative, and security. In contrast, less than 60% of municipalities invested in strengthening communal organizations, economic development, and water supply. Unless these places benefit from programs funded by national and departmental authorities, many citizens are likely to see their needs in many areas unmet by their local governments.

Figure 4.1 Average Percentage of Colombian Municipalities Making Any Investment by Policy Area, 2008-2015



Although the number of municipalities making any investments in every policy area has been growing, their prevalence is very similar throughout this period. Consequently, if local governments manipulate spending decisions for electoral reasons, such manipulations are likely to

take place within each policy area rather than prioritizing some areas over others. Otherwise, we should observe greater variation across policy priorities through time associated with swings of electoral conditions. I assess the extent to which local governments facing different electoral contexts approach each policy area using particular goods in the first set of models. These models predict whether local governments spend any money at all on a given type of goods (coded as 1) or not (coded as 0) to address the needs of each policy area. Given the binary nature of the dependent variable and the possibility of reverse causality, I use instrumental variable probit models.

Table 4.1 summarizes the results related to whether the effective number of candidates influences the probability of approaching problems in each policy area with a particular type of goods. Given that this set of analyses involves 61 different I.V. probit regressions, I represent results for the main variable of interest (i.e., the instrumented effective number of candidates) in the following way. Cells in black represent those areas in which no local governments spent discretionary funds, and cells in blue represent those areas in which the effective number of candidates had an insignificant effect on the probability that a government devoted funds there. In those cases where there was a significant effect, I note whether the effect is positive (+) or negative (-).

Table 4.1 Effect of the Instrumented Effective Number of Candidates on Whether Local Governments Spent in Specific Types of Goods, by Policy Area

	Types of Goods			
	Infrastructure	Administrative	Targetable	Collective
Education		+	-	-
Health	+		+	
Water and Sewage				-
Sports and Recreation				
Culture				
Other Public Utilities (not sewage)	-		-	+
Housing	-			
Agriculture		+		
Transportation				+

Environment		+	+	+
Jails	+	-		+
Disaster Prevention		+	+	+
Economic Development		+	+	
Vulnerable Groups	+			
Public Buildings		+		
Communal Capacity			+	
Administrative Capacity				+
Justice and Security	+	+		

Overall, and largely consistent with the findings from the previous chapter, I find that local governments in more unitary contexts are more likely to allot funds to education services than governments in factional contexts. This includes teachers’ salaries, lunches, equipment for schools, and offering school transportation, among other items. Additionally, local governments in more unitary contexts are more likely to invest in public illumination, subsidizing electricity bills, and expanding electric grids to rural areas. Finally, governments in less fragmented contexts are more likely to invest in subsidizing housing projects, and paying for debts of jails. All of these areas tend to be ones with a wide range of beneficiaries across the entire municipality. Conversely, these officials are less likely than those in more factional contexts to spend any funds on hospitals, health insurance for the poor, natural disaster preparation, environmental protection activities, or improving local bureaucracies. These areas, among others, are more likely to get funding by local governments in more factional contexts.

These patterns are somewhat inconsistent with the idea that local governments in factional contexts should prioritize targetable goods while governments in more unitary contexts should emphasize collective goods. Although I find that local governments in unitary contexts are more likely to use discretionary funding to ensure the regular provision of education services, local governments in more factional contexts are left with funds to allot to any of the existing spending alternatives rather than just on targetable goods. Consequently, although local governments in more unitary contexts are more likely to offer regular education services, they are also more likely

to abstain from addressing local problems in other policy areas. In sum, it appears that education is a sector that best reveals the distinct spending priorities and strategies of officials in unitary and factional electoral contexts. It remains to be seen, however, whether a more nuanced assessment of spending priorities will further reveal these strategic differences.

My second set of analyses assesses whether the amount spent in each type of goods vary across electoral contexts. Here, my dependent variable is the amount of money (per capita) spent on a particular area among those municipalities that decided to spend at least some money on a particular type of good. For these analyses, I use instrumental variable regressions and the same set of control variables as in past analysis. Again, since we are dealing with 62 different regressions, Table 4.2 presents results for the impact of the effective number of candidates on the amount per capita spent in each type of good by policy area. Cells in blue indicate insignificant results, and in those cases where there was a significant effect, I note whether the effect is positive (+) or negative (-).

Table 4.2 Effect of the Instrumented Effective Number of Candidates on the Amount Spent in Each Type of Goods, by Policy Area

	Types of Goods			
	Infrastructure	Administrative	Targetable	Collective
Education	-	-	-	-
Health	-		-	-
Water and Sewage	-		-	-
Sports and Recreation	-	-		-
Culture	-	-	-	-
Other Public Utilities (not sewage)	-	-	-	-
Housing	-		-	
Agriculture	-		-	
Transportation	-	-		-
Environment		-		-
Jails	-			-
Disaster Prevention	-	-	-	-
Economic Development			-	-
Vulnerable Groups	-		-	
Public Buildings	-	-		
Communal Capacity			-	-

Administrative Capacity		-		-
Justice and Security	-			-

Overall, when investing in a given type of good, local governments in factional contexts spend on average less than governments in more unitary contexts. Although there are a couple of goods, particularly administrative expenses, that do not seem to respond to electoral considerations, there is consistent evidence that the amount local governments spend in any given activity is associated with size of the electoral coalition that put them in power. Moreover, although local governments in factional contexts are more likely to invest in most of these spending alternatives, their actions are going to have a limited scope.

The final set of analyses seeks to test theories of distributive politics asserting that preferences for some goods entail underfunding other goods. That is, governments offering collective goods should also underfund targetable goods. I test this possibility, as before, classifying spending items within each policy area into four general types of goods: infrastructure, targetable, collective, and administrative. Within each policy area, using a measure of their relative balance, I assess if local governments, for example, allot a greater proportion of funds to targetable projects and underfunded new infrastructures. I ran independent models for each pair of types of goods in each policy area. That is, I run twelve models for each of the eighteen policy areas predicting the extent to which the effective number of candidates influences the balance of funds allotted to pairs of types of goods (e.g., targetable versus collective). The following table presents the policy areas in which the effective number of candidates have a significant effect on the balance between the type of good in the row relative to the good in the column. For clarity, I do not note analysis resulting in null effects for the effective number of candidates. In parenthesis, I note whether the effect is positive (+) or negative (-).



Table 4.3 Effect of the Instrumented Effective Number of Candidates on the Balance between Types of Goods by Policy Area

	Targetable	Collective	Infrastructure	Administrative
Targetable		Education(-) Health(+) Water(+) Environment(-) Disaster Prevention(-) Economic Development(+)	Education (-) Health(+) Water(+) Environment(-) Disaster Prevention(-) Economic Development(+)	Education (-) Health(+) Water(+) Environment(-) Disaster Prevention(+) Economic Development(+)
Collective	Education(+) Health(-) Water(-) Environment (+) Disaster Prevention (+) Economic Development(-)		Education(+) Transportation(-) Environment(+) Jails(+) Economic Development (-) Security(+)	Education(+) Transportation(-) Jails(+) Disaster Prevention(+) Economic Development(-) Vulnerable Groups(-) Administrative Capacity(-) Security(+)
Infrastructure	Education(+) Health(-) Water(-) Environment(+) Disaster Prevention (+) Economic Development(-)	Education (-) Transportation (+) Environment(-) Jails(-) Economic Development(+) Security(-)		Health(+) Transportation(+) Jails(-) Disaster Prevention (+) Security(-)
Administrative	Education(+) Health(-) Environment(+) Disaster Prevention(-) Economic Development(-)	Education (-) Water(-) Transportation(+) Jails(-) Disaster Prevention(-) Economic Development(+) Vulnerable Groups(+) Administrative Capacity(+) Security(-)	Health(-) Transportation(-) Jails(+) Disaster Prevention(-) Security(+)	

It is important to keep in mind that some policy areas do not involve some types of spending alternatives (black cells in Table 4.1). There are six policy areas that do not involve targetable goods, three that do not involve building infrastructures, and two that do not include any collective goods. Also, results summarized in

Table 4.3 indicates that local governments in factional contexts prioritize the type of goods in the rows over the type of goods in the columns when the effect is positive (+). On the contrary, local governments in more unitary contexts prioritize the type of goods in the rows over the type of goods in the columns when the effect is negative (-). Overall, this set of analysis reveals that there does not seem to exist a tradeoff between collective and targetable goods. While sometimes local governments in factional contexts spend in targetable at the expense of collective goods (e.g., when dealing with health, water supply, and economic development), other times it is local

governments in unitary contexts make that choice (e.g., when dealing with education, environment, and disaster prevention). Overall, tradeoffs between types of goods seem contingent on the policy area. Contrary to theories of distributive politics, electoral conditions do not appear to affect in a systematic way the mixture of various types of goods being offered by local governments across Colombia. This is far from surprising given that distributive politics theories assume that governments only allot collective and private goods. In that setup, it is a necessary implication that increasing spending in collective goods is going to decrease spending in targetable goods. But, once we incorporate more alternatives (i.e., infrastructure building and administrative costs) and assess different policy areas, there is no evidence of consistent substitution between different types of goods.

## **Conclusion**

Overall, we have evidence that local governments do indeed adjust discretionary spending decisions to their electoral conditions. However, spending decisions appear to be less structured than expected. Electoral conditions shape local officials' flexibility to undertake additional projects without risking their public approval. Lower electoral needs in factional contexts allow local officials a chance to act on the various policy areas under their purview. However, even if electoral conditions in factional contexts do not seem favor specific spending choices, it systematically favors a greater emphasis on education provision among local officials in unitary contexts. Efforts to reach a large number of supporters with regular education services with the local adaptation strategy are complemented with discretionary spending choices.

Local officials in factional contexts generate distinct spending patterns in a different way. Investments are systematically smaller than those of local officials in unitary contexts. This is the case of infrastructure projects, administrative, targeted, and collective expenses. Thus, although local electoral context allows innovative spending choices, their reach is generally limited. Moreover, I find that any given action does not systematically undermine others, increasing the opportunities for any innovative action.

Among the spending alternatives that local governments in factional contexts may prioritize are actions reforming local institutions, training local bureaucrats to comply with national regulations, and improving their equipment. The possibility of initiating administrative improvement actions appears to be a way through which electoral competition impacts local administrative modernization efforts (Grindle 2009). Moreover, this effect of local electoral conditions has important implications for how local governments perform administratively in general, but also, for their ability to look for additional funding from national authorities. Efforts to get new funding supposes having the technical ability to develop a project, knowledge of national regulations, and having the necessary equipment to exchange information online. The extent to which local governments succeed at fulfilling these conditions is the topic of the next chapter.

## CHAPTER 5

### LOCAL APPROPRIATION IN COLOMBIA

#### Introduction

I now turn to an evaluation of what I have referred to as the “local appropriate strategy.” One consequence of the increasing re-centralization of fiscal authority in Colombia has been the need for local elected officials in the country to appropriate, or credit-claim, whenever possible national-level programs. To successfully carry out such a strategy, local officials must ensure such national programs devote sufficient program resources to their locality in order to reap any electoral benefits that may come from the program. And while there is ample evidence that national politicians use their discretion to allocate public resources for political purposes, there is very little research on the role that local governments play in actively seeking to capture national program funds as part of incumbents’ local electoral strategies. This chapter addresses the impact of local governments on the allocation of national programs suggesting that often national distributive choices depend on local governments *self-selecting* themselves as possible beneficiaries of national funds. While I am only able to offer indirect evidence in support of this posited role for local officials in capturing national monies, I do put forth a set of results that indicates such a role does indeed exist. Thus, although national authorities make final decisions with respect to resource allocation, local officials appear to be active participants in capturing resources from nationally administered programs. These findings support the works of scholars like Grindle who focused on

the lobbying efforts of local officials as a key to successful local governance in Mexico. Here I find that such efforts are shaped in part by the local electoral context incumbents confront, with those operating in unitary contexts appearing to pursue a higher level of resources from national programs than their counterparts in factional contexts.

Through analysis of a unique set of municipal government fund solicitations and approvals for two nationally administered programs, I am able to explore these questions in ways that shed light not only on what local governments receive from national governments, but also what local officials ask for in the first place. Analysis of these data then offer a far more nuanced picture of the determinants of program fund allocations between national and local governments than we have seen before. I find first that local electoral conditions do not appear to influence the extent to which local governments seek funding from other levels of government, nor do they directly affect the spending decisions of national authorities. Rather, local electoral conditions influence the amount that local governments *request* from programs funded by the national government, and in this way, influence indirectly the final deployment of national programs. I find that local politicians in factional contexts who rely on the support of fewer voters tend to ask for significantly less funds than local governments with a broader electoral support.

Thus, although this process is driven by local demands, both national and local politicians advance their interests. On the one hand, local governments receive funding proportional to what they asked, and national programs get distributed in a way that is proportional to the number of supporters that local politicians could persuade to support national politicians. This pattern suggests an alternative account to the role of partisan alignment across administrative levels. In fact, I find that, in the contexts of the two demand-based programs I examine, partisan alignments do not seem to influence approval decisions, nor the amount being delivered.

## **National Distributive Politics**

Most studies on distributive politics focus on the electorally motivated choices by national politicians (Díaz-Cayeros, Estévez, and Magaloni 2016, De la O 2013, Blaydes 2011). Although their portrayal of distributive politics offers a general frame useful to understand the drivers behind local distributive choices, missing from this research is attention to the needs and demands of local officials themselves. Rather than focus solely on the strategic concerns of national officials, then, I highlight the role that local officials, and their electoral concerns, play in the distributive choices of national officials when allocating program funds.

National distributive politics involve choices about which locales receive national transfers. These choices many times involve electoral considerations that result in targeting places with greater electoral potential for national incumbents. In this context, a large body of work has debated over which political strategy we should most likely find – one that targets the incumbent’s core followers or her swing voters (Dixit and Londregan 1996, Cox and McCubbins 1986, Díaz-Cayeros, Estévez, and Magaloni 2016, Stokes et al. 2013). According to one perspective, politicians should target core supporters. Risk-averse politicians should deliver material rewards to those they are most certain will return the favor with electoral support rather than targeting swing voters with unknown preferences and unreliable loyalties (Cox and McCubbins 1986). The alternative side of this debate argues that politicians should in fact target swing voters because loyalists will vote for the incumbent regardless and the support of swing voters is “cheaper” than that of voters whose partisan attachments are hard to sway using material rewards. Given that swing voters are likely less ideologically committed, material rewards can be decisive to increase electoral support beyond loyal core followers (Dixit and Londregan 1996).

Although these theories are centered on the exchange between incumbents and individual voters, when looking at program allocation decisions, national officials will be likely to consider the political leaning of entire localities rather than individuals. Thus, while national politicians could focus on the aggregate political preferences in a place, local allies may take care of the finer targeting of distributive efforts. Distributive efforts at this higher level, therefore, will leverage national discretion embedded in social policies (either formally or informally) to reward or punish local allies based either on a common partisan leaning of the community or the community's electoral profile from previous elections. Under this logic, distributive rewards are offered in hopes of local electoral support, but also promote the persistence of local electoral conditions. On the other hand, when national politicians avoid transferring additional funds to particular places, they are also preventing potential challengers from rising by exploiting the electoral returns of offering the benefits of nationally funded programs (Giraudy 2010)<sup>14</sup>.

Overall, there is an agreement that partisan alignments between politicians at different levels of government plays a critical role in the distribution of monies for nationally funded programs. However, past studies portray local governments as inert receivers of funding from the national government. This depiction of the passive role of local authorities in distributive processes neglects the local political challenges politicians face, particularly in an era of recentralization, and how this can affect the degree to which local officials actively lobby for national level funds. For many local incumbents, their ability to secure support from other administrative levels becomes a key asset to succeed electorally. That was the case in Chile before the ascent of Pinochet, where legislative brokers were key in setting meeting between mayors and national authorities (Valenzuela 1977). In Zambia as well, Baldwin (2013) found that the ability of traditional chiefs

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<sup>14</sup> More generally, distributive choices can be used to prevent potentially destabilizing situations. For example, using national assistance to dissuade regions aiming to secede, or that threatened civil unrest (Toha 2009)

to secure financial support from national politicians was a critical determinant of their electoral appeal.

The role of local demands in the spending decisions of national program officials should be most apparent in places undergoing fiscal recentralization policies. Local governments with limited spending autonomy should be more likely than those with control over sufficient resources to lobby for funding from national authorities to deliver a larger portfolio of goods and services to their constituencies. Through this strategy, that I refer as the *local appropriation strategy*, local politicians advance their political goals by claiming credit for the benefits of programs brought to their community and funded by the national government.

For many national programs that are based on fund solicitation from local governments, all local governments may submit applications for program funds, but not all do. For those that do decide to submit an application for funds, their officials also face the decision of how much to ask for. By exercising their discretion, local politicians have some influence over which programs they claim credit for, and potentially, which programs reach each locality. Although results for applicants are uncertain, local politicians actively seeking support are betting on the possibility of appropriating national programs to serve their own political needs.

This strategy implies a key compromise. While local governments may selectively seek access to more funding, their chances of using this strategy continually depend on the political success of the national authorities. In consequence, local governments that benefit from this strategy have incentives to support the agenda of the national incumbent party to some extent in order to also promote their local political goals (Diaz-Cayeros, Magaloni, and Weingast 2003). Moreover, national politicians also have an incentive to allow local demands shaped by the number of local supporters that are most persuadable to support their own electoral objectives. Thus,



national politicians, by opening opportunities for the local appropriation of national programs, take advantage of their more fine-grained knowledge of potential local supporters.

### **National Social Programs in Colombia**

The demand-based approach of many social programs, in which local actors apply for support before national authorities make a final decision about how to distribute funding, supposes that local authorities are better suited to identify local needs, even if approval decisions depend on national preferences. Under these conditions, local politics should influence the spending patterns of national programs to the extent that local politicians decide to take part in the application process and the amount of program funds they attempt to solicit.

Local governments in Colombia play a role in getting access to numerous programs funded by national authorities. In 2016, 47 national agencies offered 382 programs to which local governments could apply after complying with some requisites. As such, access to these social programs is conditional on the willingness of local officials to submit funding requests. These demands, however, do not come without costs. On the one hand, some programs are designed to benefit individuals with pre-defined characteristics set by the national program. For example, eight national agencies use a large database of eligible citizens to deliver 22 major nationally funded programs. Critically, municipal authorities are responsible for administering an eligibility survey and submit it to program officials. Yet, local efforts to collect these data and keep them updated involves substantial costs and potentially affects supporters if they move in or out of eligibility status.

Local authorities also pay additional significant costs to take part in nationally funded programs. Fiscal reforms in 2001 forbade national authorities to have regional offices fulfilling local roles. Thus, local governments have to pay for personnel and additional expenses associated with carrying out nationally funded programs. For example, the main conditional cash transfer program, *Familias en Acción*, involves an agreement between mayors and the national agency leading the program (i.e., Department of Social Prosperity). Mayors agree to do whatever the program needs in order to successfully implement it in a particular community. This agreement includes a commitment to secure health and education services in their town, to create an office with enough staff, supplies and means of communication to manage the program, and to facilitate citizen oversight of the program. By fulfilling these agreements, mayors commit local funds and their political will to benefit newly formed interest groups. Because of these costs, local authorities face a choice about whether to apply to a program, and if they apply, they are likely to limit the scope of their demands to avoid wasting local funds beyond what is necessary in their local electoral contexts.

Given these real constraints on local officials in soliciting program funds, it becomes a question, in part, of the political payoff that these officials might expect from program involvement when considering whether or not to submit an application and how much money to solicit. In this chapter, I analyze two such programs in which local governments need to apply to receive any funding from the national government: Colombia Humanitaria, and Pacto Agrario,

*Colombia Humanitaria.*

From mid-2010 until mid-2011, Colombia faced a significant increase in rainfall due to that year's *La Niña*. This phenomenon led to heightened soil saturation that caused several landslides and river breaches throughout the country. During this time, 1098 out of 1119

municipalities reported damage of some sort related to the increased rainfall, with over 3.2 million individuals, or 7% of the national population, affected. More importantly, the vast majority of those affected were among the poorest in the country, with 67% those individuals reporting being a beneficiary of some national poverty relief program.

One of the responses to this emergency was to create a temporary fund with national funding to address immediate needs and rebuild basic infrastructures. The *Colombia Humanitaria* fund administration was in the hands of a board composed of a representative of the President, four representatives of private entities selected by the President, the Minister of Finance, the Minister of the Interior, and the heads of the National Department of Planning, and the Administrative Department of the Presidency. This board handled requests for funding coming from subnational authorities.

*Colombia Humanitaria* began to work in January 2011 and by June of that same year, all applications from local governments had been submitted. Throughout this period, *Colombia Humanitaria* received 6362 municipal requests for funding, but only 3499 were approved. It is important to note that to speed up solutions to this emergency, local authorities faced fewer administrative and technical requirements to apply for funding. Thus, local authorities needed less effort in applying to this program than that required for most non-emergency social programs.

#### *Pacto Agrario*

In 2013, amid large protests by peasants across Colombia, the ministry of Agriculture agreed on a program designed to support local projects addressing the needs of rural areas. This program was intended to increase the participation of civil society groups by calling for them to propose projects that would advance agricultural production, expand rural housing, and/or provide temporary employment opportunities. However, applicants had to undertake several costs, for

example, paying at least 20% of the costs of each project. Additionally, proposals had to include a full evaluation of their technical and economic feasibility.

In the first stage of the program funding and project selection process, local organizations were to present their ideas to local selection committees headed by the mayor (*Consejos Municipales de Desarrollo Rural*). Approved proposals then went to the Ministry of Agriculture, and thereafter, to the corresponding agency to evaluate them. Agricultural production projects were considered by the Ministry of Agriculture, rural housing projects by the Agrarian Bank, and temporary employment opportunities by the Administrative Unit of the Public Service of Employment. Proposals received a score, along with other criteria including the number of beneficiaries and the availability of local funding. Those getting a passing score are then subject to a financial and technical evaluation before their final approval.

The application period resulted in 4794 municipal projects being put forward. Among the three types of projects receiving funding, 8.5% of proposals were for temporary employment opportunities, 7.9% were for proposed housing projects, and the remaining 83.6% were for agricultural production projects. Overall, only 14% of projects received approval. Yet, approval rates vary by type of project, going from 10% for agricultural projects, 22% for housing projects, and up to 46% of approval for temporary employment opportunities.

## **Method**

Although most studies about intergovernmental transfers focus on the role of national authorities, local governments play an important role in deploying demand-based national social programs. Methodologically, this setup means that local governments are self-selecting into the

pool of potential recipients of funding, that is, receiving funding is conditional on having applied for it. Any analysis failing to recognize this procedure is likely to reach biased conclusions about the distributive outcomes of these social programs. Beneficiaries can only come from the subset of local governments that submitted applications for program support.

As such, assessing the role of local governments in this process requires information about which governments applied for funding from national programs, and not just who received support from national authorities. In contrast to previous studies, I have collected a unique set of information on both applications submitted and approval decisions. Using this information, I may carry out three different sets of analyses that reflect the different stages of this process. First, I model whether or not local governments applied for funding from the two national programs. Here, I code as 1 local governments that applied for any funding, and 0 if they did not apply at all. Second, among applicants, I model if any of their proposals was approved. I code as 1 if any project received support and 0 if none. Next, I model the amount of money (per capita) requested by local officials in order to assess the role of electoral context on the fiscal ambitions of local incumbents with respect to these national programs.<sup>15</sup> Finally, I model the winners and losers of this fund application process, again focusing here only on those municipalities that actually submitted applications, and the amount of money (per capita in thousands of Colombian pesos) they received. Overall, these analyses offer a more complete assessment of the role of local authorities when looking for funding and of whether national authorities advance their own political goals by supporting specific local applicants.

Like in previous analysis, I use the number of seats at the local legislature as an instrumental variable for the effective number of mayoral candidates. In addition, I also explore

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<sup>15</sup> As an alternative, I did similar analysis using the number of projects presented by each local government. Overall, results were substantively similar.

the impact of partisan alignments between local and national authorities as a key explanatory factor of national distributive choices. Here I use a dummy variable coded as 1 when a mayor belongs to a party that is part of the national government coalition, and 0 otherwise. Finally, I use the same set of control factors used in past analysis.<sup>16</sup>

This set of analyses allows me to test the following expectations. First, since local governments in factional contexts are more likely to have additional funds to invest in projects supported by the national government, I would expect a greater inclination to appropriate national programs by applying more often than local officials in more unitary contexts. However, to the extent that local officials in factional contexts aim to reach to fewer supporters, their requests for support should be less ambitious than those coming from officials in unitary contexts. Adjusting proposals for funding to local electoral contexts is not just the best strategy for local officials, it also offers national politicians an opportunity to put supporters of local politicians on their side when elections for national office arrive. In consequence, national authorities should be more likely to approve projects coming from electoral contexts involving many more potential supporters than those proposed by officials supported by fewer voters.

### **Local Applicants to Programs Funded by the National Government**

Analysis of projects proposed as part of the *Colombia Humanitaria* relief effort centered on road repairs, fixes for landslides, building bridges, channeling water flows, improving aqueducts, building dikes, and acquiring machinery. Projects proposed in the contexts of the *Pacto Agrario* program refer to funding new businesses, rural employment opportunities, and rural

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<sup>16</sup> That is: margin of victory, a measure of partisan vote, poverty, turnout, proportion of rural population, and the logged population density.

housing projects. Given the large number of models (four models for each of seven lines of funding), Table 5.1 synthesizes results for the main variable of interest (i.e., the instrumented effective number of candidates) indicating the direction (i.e., positive or negative) and if effects are statistically significant (highlighted in orange). I run four models predicting whether local governments made any proposals, whether any of those proposals were approved, the amount per capita requested by local governments, and the amount per capita approved by national authorities.

Table 5.1 Analysis of Projects Presented to the *Colombia Humanitaria* Program

	<b>Roads</b>	<b>Landslide Fixes</b>	<b>Bridges</b>	<b>Water Channeling</b>	<b>Aqueducts</b>	<b>Dikes</b>	<b>Machinery</b>
Any Project Proposed	I.V.ENC: +	I.V.ENC: +	I.V.ENC: +	I.V.ENC: -	I.V.ENC: +	I.V.ENC: +	I.V.ENC: -
Any Project Approved	I.V.ENC: -	I.V.ENC: -	I.V.ENC: +	I.V.ENC: -	I.V.ENC: +	I.V.ENC: -	I.V.ENC: -
Funds Requested	I.V.ENC: -	I.V.ENC: -	I.V.ENC: -	I.V.ENC: -	I.V.ENC: -	I.V.ENC: -	I.V.ENC: -
Funds Approved	I.V.ENC: -	I.V.ENC: -	I.V.ENC: -	I.V.ENC: -	I.V.ENC: -	I.V.ENC: -	I.V.ENC: -

As should be evident, the findings from this analysis are less than overwhelming. Local governments in more factional contexts appear more likely to propose projects for road construction and aqueducts, and they tend to ask for less money than for similar projects coming from authorities in more unitary contexts. However, approval rates do not vary significantly across electoral contexts. To further confirm these tendencies, I offer results for projects presented to the *Pacto Agrario* program.

Table 5.2 Analysis of Projects Presented to the *Pacto Agrario* Program

	<b>New Businesses</b>	<b>Rural Employment</b>	<b>Rural Housing</b>
Any Project Proposed	I.V.ENC: -	I.V.ENC: -	I.V.ENC: +
Any Project Approved	I.V.ENC: +	I.V.ENC: -	I.V.ENC: +
Funds Requested	I.V.ENC: -	I.V.ENC: -	I.V.ENC: -
Funds Approved	I.V.ENC: -	I.V.ENC: -	I.V.ENC: +

Here again, these do not provide consistent support for my expectations. Results in Table 5.2 reinforce the idea that local electoral contexts are not consistently associated with the choice to apply for additional funding, nor with approval decisions. However, consistent with the implicit size of support coalitions, local governments in factional contexts solicit fewer funds than local governments supported by wider constituencies.

## **Conclusion**

Summing up, although electoral considerations do not seem to influence whether to apply for funding, they do appear to influence the scope of local demands, and the amount received to the extent that approved funds are significantly associated to the amount requested. Thus, although local governments facing different electoral conditions apply and receive approval for projects at a similar rate, demands coming from local governments in factional contexts tend to have a more limited reach than those proposed by local governments in more unitary contexts. Finally, these results suggest that local electoral conditions influence the extent to which local governments exploit the distribution of national programs in ways not captured by previous work on this issue that has focused exclusively on the national-level strategic calculations. Contrary to past studies on national distributive politics, the partisan alignment between mayors and the national government coalition was not a significant predictor in any of my analyses. In the end, this process by which local governments appropriate nationally funded programs coordinate efforts by local and national politicians to advance their electoral interests without preventing the other administrative level from receiving the electoral benefits of distributive choices.



Up to this point I have explored the strategies used by local governments to benefit a varying number of supporters in a context of fiscal and administrative recentralization. Although their impacts on local service provision are enormous, these set of strategies also have important effects on individuals' expectations about local services, and ultimately, on their inclination to reward the provision of local services. Such a key component of political accountability is the topic of the next chapter.

## CHAPTER 6

# EVALUATION OF LOCAL SERVICES UNDER DIFFERENT POLITICAL CONTEXTS

### Introduction

Service evaluations are critical in the process of keeping local authorities accountable for failing to fulfill citizens' expectations. However, service evaluations go beyond the objective performance of services being received by citizens. In this chapter, I evaluate the proposition that electoral contexts play a critical role in shaping citizens' assessments of local services. Specifically, as suggested by previous chapters, electoral conditions influence which spending choices are common, and as a result, they shape citizens' expectations about local services. Citizens in more unitary contexts are likely to expect and reward collective goods like education and health services than citizens in factional contexts where particularistic goods are the preferred strategy of local incumbents. Under these expectations, citizens in more unitary contexts should be more likely hold positive evaluations of local public services when they feel local governments are responsive to their demands (i.e., better collective goods), while perceptions of government responsiveness when expecting particularistic goods in factional contexts should be less likely to influence service evaluations of broad-reaching services.

Previous chapters showed that local governments needing fewer votes to result elected choose expenses of a more limited scope than governments elected by a greater following. Citizens

experiencing such spending patterns should find spending choices that benefit most of the population less valuable compared to the prospect of receiving targeted benefits (Dixit and Londregan 1998). Based on this proposition, citizens in factional contexts feeling that their local governments fulfill their expectations (i.e., officials deliver particularistic goods) should be less inclined to reward the provision of public services with more positive evaluations than citizens in places where investing in collective services is to be expected (i.e., unitary contexts).

Testing this argument supposes a methodological challenge to disentangle idiosyncratic biases in service evaluations from their real quality. Equal survey responses may correspond to different service qualities, due among other factors, to holding different expectations about local services. To address this problem, I use evaluations of national institutions to “bridge” responses about local services. Once evaluations are on the same scale, I reach two main findings. First, citizens perceiving their local government as responsive to their demands are more critical of local services in more factional than in more unitary electoral contexts. Second, I find that individuals perceiving their local government as responsive are more likely to reward it with more positive service evaluations in more unitary contexts, while evaluations of local services are not used to reward government responsiveness in factional contexts.

These results suggest that spending choices used across electoral contexts impact service evaluations. On average, citizens in factional contexts are less likely to reward or punish through their service evaluations the ability of local governments to provide basic public services. This finding implies that greater electoral competition is unlikely to promote better local services. On the contrary, citizens in unitary electoral contexts are likely to encourage local authorities to provide basic local services with the hope of getting better performance evaluations.

## **Expectations and Service Evaluations**

Performance evaluations are essential to democratic accountability. On the one hand, citizens use economic performance cues, although with a limited scope, to keep national incumbents accountable (Lewis-Beck and Paldam 2000, Healy and Lenz 2014). This is also the case for more tangible signals of performance. For example, government responsiveness to fix potholes around citizens' homes have a significant impact on support for incumbents (Burnett and Kogan 2017). Similarly, performance of school districts influences support for administrators among the least politically engaged individuals (Holbein 2016, Payson 2017).

Although important, evaluations of local services are not based purely on objective information. First, performance information has diverse impacts on citizens' evaluations. For example, performance information has a greater influence when presented in a negative way and when it involves comparisons rather than absolute levels (Oliver and Moseley 2014). A second, but critical consideration, is that citizens evaluate public services comparing performance assessments with their expectations. This is the idea behind the expectation disconfirmation theory of service evaluations. This theory claims that service evaluations reflect the gap between perceived performance and individuals' expectations. Thus, citizens express greater satisfaction when perceived performance is better than expected. On the contrary, evaluations are going to be negative when perceived performance is worse than expected, regardless of any objective assessment of those services. Even more, disconfirmed expectations have a greater influence on negative service evaluations than the impact of fulfilled expectations on positive evaluations (Oliver 2009, Van Ryzin 2004, Roch and Poister 2006).

Expectations are a product of several factors. In the U.S., for example, ideological preferences and party identification are key predictors of expectations about federal services (Morgeson III. 2012). Additionally, experiences influence future expectations. For example, citizens used to a growing economy are likely to expect continued prosperity, and therefore, to punish any setback. When dealing with Colombian local governments, citizens should become used to receiving some types of goods more often than others depending on local electoral conditions. Thus, as suggested by the findings in previous chapters, citizens in factionalized contexts are more likely to see local officials delivering particularistic benefits rather than public services. Therefore, receiving particularistic goods becomes the expectation in more factionalized contexts. In contrast, citizens immersed in more unitary electoral contexts are more likely to experience local governments delivering collective services. Thus, individuals in unitary electoral contexts should expect the continued provision of public goods rather than particularistic benefits. Consequently, I will be testing whether citizens in more factional contexts are more critical of public services that do not satisfy their expectation of receiving particularistic goods than citizens in more unitary contexts. Moreover, I test whether citizens use service evaluations to reward perceptions of government responsiveness to citizens' expectations (i.e., a continued delivery of particularistic or collective goods) to a greater extent in more unitary than in more factionalized electoral contexts.

## Data and Methods

I test my expectations about local service evaluations using data from the AmericasBarometer for Colombia between 2004 and 2007.<sup>17</sup> Although this survey is representative to the region level, I pooled four waves of the AmericasBarometer to increase as much as possible the number of interviews per municipality. The pooled dataset contains 5,788 observations for 51 different municipalities.<sup>18</sup> This sample includes diverse political conditions. The mean number of effective candidates is 2.66, ranging from a minimum of 1.25 effective electoral candidates to a maximum of 6.14. The number of observations per municipality varies according to their population size. While the national capital has 924 interviews, smaller municipalities as few as 48 observations.

In this study, I use questions asking respondents to evaluate local water, health, electricity, trash collection, and education. For each of these questions, respondents rate local services in a five-category scale going from “very good” to “very bad”. Since respondents in each municipality evaluate different service providers (i.e., these are all local services), evaluations refer to five different services in each of the 51 municipalities in the sample, for a total of 255 local service evaluations.

To disentangle the quality of local services from the impact of local expectations on service evaluations, it is necessary to address a problem known as scale invariance. Individuals facing survey questions answer in a way that reflects their idiosyncratic understanding of the starting

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<sup>17</sup> The AmericasBarometer by the Latin American Public Opinion Project (LAPOP), [www.LapopSurveys.org](http://www.LapopSurveys.org). I thank the Latin American Public Opinion Project (LAPOP) and its major supporters (the United States Agency for International Development, the Inter-American Development Bank, and Vanderbilt University) for making the data available.

<sup>18</sup> I dropped four municipalities that were not surveyed every year.

point and of each unit of the scale being used. In the context of local service evaluations, expectations about local spending choices become a point of reference to assign a score, independent of their objective quality.

In other contexts, scholars address the issue of scale invariance using survey items common to every respondent. Differences between answers to the questions of interest (i.e., service evaluation questions) are put in terms of the differences between bridging items. For this study, I use as “bridges” two survey questions asking respondents to evaluate services from two national institutions associated with the judicial system that are outside the influence of local officials. Using the common experience with the *Comisarias de familia* and the Prosecutor’s office as a benchmark across municipalities, I can put citizens’ experiences with local services on the same scale. This procedure is used to estimate legislative preferences using roll-call data (Jackman, Clinton, and Rivers 2004), or to put preferences of parties and voters on a common space (Saiegh 2015). The logic behind these studies can be extended to other areas in which citizens evaluate some common stimuli, such as local services.

I estimate a model in which service evaluations ( $\zeta_{ij}$ ) by each respondent (i) about each local service (j) result from a process in which the “true” quality of the service being assessed ( $\xi_j$ ) is adjusted depending on each individual’s understanding of the magnitude of each unit in the scale ( $\beta_i$ ), and their inclination to place service providers closer to either extreme of the scale ( $\alpha_i$ ). This later parameter will capture each respondent tendency to evaluate local services more positively when their expectations are satisfied.

Summing up, the process giving rise to service evaluations can be approximated through the following model:

$$\zeta_{ij} = \alpha_i + \beta_i \xi_j + v_{ij} \quad (1)$$

Although this model could be estimated using maximum likelihood, Bayesian techniques allow me to include interviews with missing responses to any service evaluation questions (Hare et al. 2015). Table 6.1 presents non-response rates to the items of interest, ranging from a 0.6% for electricity to a maximum of 9.5% when respondents evaluate trash collection services.

Table 6.1 Non-Response Rate of Local Service Evaluations

<b>Local Service</b>	<b>% Non-response</b>
Water	3.78
Health	3.27
Electricity	0.6
Trash collection	9.5
Education	2.97

Bayesian estimation assumes that  $\zeta_{ij}$  is normally distributed:  $\zeta_{ij} \sim N(\mu_{ij}, \tau_{ij})$

$$\mu_{ij} = \alpha_i + \beta_i \xi_j \quad (3)$$

$$\tau_{ij} = \tau_i + \tau_j \quad (4)$$

I use noninformative uniform prior distributions for  $\alpha_i$  and  $\beta_i$ :  $\alpha_i \sim U(-100, 100)$  and  $\beta_i \sim U(-100, 100)$

Also, I use a normal prior distribution for the estimated quality of local services:  $\zeta_j \sim N(0, 1)$

I use the quality of two national services (i.e., *Comisarías de familia*, and the Prosecutor's office) to set the polarity and meaning of each unit in the scale used in service evaluations. I achieve this goal setting the quality of the Prosecutor's office to -1, and that of *Comisarías de familia* to 1. Although these values are arbitrary, the numeric distance between these two institutions (i.e., two units) represents their differences in quality, and the estimated quality of local services will be measured as a fraction of those differences. An estimated service quality closer to -1 means that it is more alike to that of the Prosecutor's office, while values closer to 1 indicate that their quality



is similar to that of *Comisarias de familia*. Intermediate values indicate a middling service quality proportional to the differences in quality of the two national offices used as reference.

Finally, I estimate error parameters for each stimulus ( $\tau_j$ ) and interviewee ( $\tau_i$ ) to allow them to be heteroscedastic. I use inverse gamma distributions as priors for both errors ( $\tau_j$  and  $\tau_i$ ).

$$\tau_j \sim \text{Gamma}(0.1, 0.1)$$

$$\tau_i \sim \text{Gamma}(v, w)$$

$$v \sim \text{Gamma}(0.1, 0.1)$$

$$w \sim \text{Gamma}(0.1, 0.1)$$

I estimate this model using JAGS (Version 3.4.0). I run two chains, discarding the first 50,000 iterations, and saved one in every 10 of the following 200,000 iterations. According to Geweke diagnostics, the effective number of observations, and graphical inspection of posterior distributions, I conclude estimations converged.

In the following section I explore if citizens are systematically more critical of local services depending on their local electoral context.

## Results

Service evaluations reflect idiosyncratic perceptions of local public services. Through the model presented above and its assumptions we learn that service evaluations reflect both different experiences and different expectations about local services. That individuals experience local services differently is apparent when we put one of the model assumptions to a test.

The model presented above assumes that each individual uses the same criteria to evaluate different services and that individuals in the same municipality have the same experience with

each local service. Regarding the latter assumption, if citizens were having a similar experience with local services, we would expect a correlation between the estimated “true” quality ( $\zeta_j$ ) and objective measures of services performance. I put to a test this expectation by comparing the estimated “true” quality ( $\zeta_j$ ) of education, water, electricity and health with objective measures of performance<sup>19</sup>, but I find no correlation at all. Although puzzling, this result suggests that we cannot assume individuals have similar experiences with local services. Consequently, given that the model assumes similar experiences, answers to service evaluation questions should reflect both diverse experiences with local services and differences in the criteria used to evaluate them. Since both local service provision and expectations are shaped by local electoral contexts, we can still assess if local electoral contexts shape service evaluations through these two mechanisms.

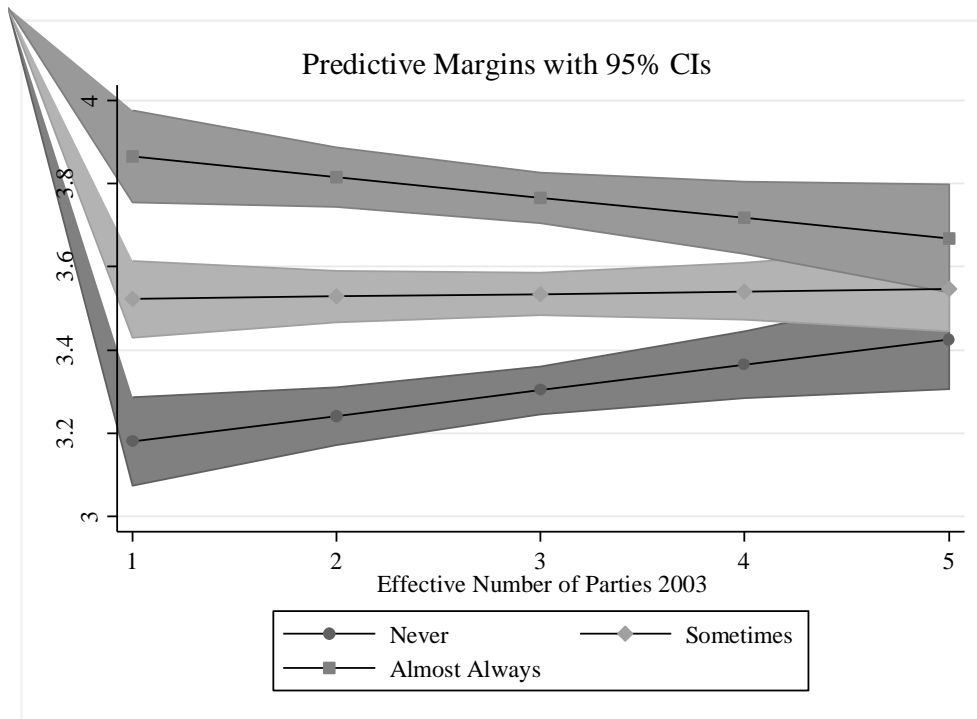
Further analysis of service evaluations (i.e. particularly on the  $\alpha$  parameter in the model) reveals that the impact of perceptions of responsiveness by municipal governments vary depending on the electoral context. Figure 6.1 is based on a hierarchical model that predicts the tendency of individuals to use a portion of the evaluation scale: higher values of the  $\alpha$  parameter indicate a tendency to express more positive evaluations. In contrast to previous analysis, I include individual sociodemographic control variables: age, gender, education level, and urban/rural residence. However, I also include the same control variables used in previous chapters: margin of victory in the 2003 mayoral elections, a measure of partisan vote, poverty, turnout in 2003, the logged population density, and year fixed effects for the period 2004-2007. This model nests individuals within regions, departments and municipalities. Overall, the point of interest is the interaction between the effective number of candidates and the perceived responsiveness of municipal

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<sup>19</sup> I used average math scores in the 2007 national standardized tests, the percentage of population without treated water, the percentage of the population with access to electricity, and the percentage of the population without access to health services.

governments in Colombia. I measure the latter variable using a question in the AmericasBarometer in Colombia prompting respondents to estimate how frequently their municipality responds to the will of the people<sup>20</sup>. Figure 6.1 presents the marginal effect of the effective number of political parties across degrees of perceived government responsiveness.

Figure 6.1 Predicted Effects for the ENC and Feelings of Gov. Responsiveness



Overall, individuals perceiving that their local government never responds to their interests do indeed evaluate local services more negatively than individuals feeling that their local governments is almost always responsive. However, these differences are greater among individuals living in more unitary contexts. This is consistent with my expectations. Since citizens in unitary contexts are more likely to experience and expect public services than particularistic

<sup>20</sup> Response options include: “Never”, “Almost Never”, “From time to time”, “Most of the time”, and “Almost Always”. For the sake of clarity, Figure 6.1 only depicts the estimated effect for individuals answering “Never”, “From time to time”, and “Almost always”.

benefits, it is natural that individuals finding their expectations confirmed (i.e., feeling their local government is responsive) are going to reward them with more positive evaluations. On the contrary, individuals in unitary contexts perceiving that their local government is never responsive are going to evaluate local public services significantly worse. As we move to more factional electoral contexts, however, citizens are less likely to reward perceptions of government responsiveness with better evaluations of public services. In factional electoral contexts, individuals should be more likely to reward government responsiveness when dealing with particularistic rewards.

These results imply that government responsiveness is not always rewarded with good service evaluations. Such unwillingness of citizens in factional contexts to reward incumbents for delivering basic public services is critical for the possibility of promoting local development. The local pandering, the local adaptation, and the local appropriation strategies translate electoral conditions into distinct spending patterns. However, these spending patterns also shape citizens' expectations, and ultimately, prevents democratic accountability from promoting developmentally good outcomes when they are not valued by citizens.

## **Conclusion**

Overall, public service evaluations appear to be systematically shaped by what citizens expect from local governments. While citizens in more unitary contexts reward government responsiveness with more positive evaluations of public services, citizens in factional contexts are less inclined to reward them for doing it. Such disconnect between citizens' expectations under factional contexts and the provision of public services makes feelings of government

responsiveness less of a factor at promoting solutions for basic needs. However, although failing to promote the general welfare, electoral conditions in factional contexts may promote better targeting of particularistic goods.

Although this dissertation focuses on the implications for local development of having electoral competition in a context of fiscal and administrative recentralization, analysis in this chapter makes clear that such a mix of conditions has far reaching implications. Critically, resulting spending patterns seem to undermine the very conditions under which electoral incentives are effective to promote better local services.

## CONCLUSION

Democracy is not a one-size-fits-all solution to most social needs. The impacts of having a democratic governance depend, among many factors, on the number of votes needed to result elected. Although a seemingly instrumental consideration, it has far reaching implications for the decisions of elected officials. Politicians looking for their electoral survival face a trade-off between addressing a wider set of demands for select groups and providing solutions to select problems that benefit most of the population. Unfortunately, such choices entail the possibility of negative impacts which are further amplified in contexts that combine electoral competition with fiscal and administrative restrictions.

This dissertation begins to explore the perils of having electoral competition when local authorities have limited fiscal and administrative autonomy. Overall, I find that local responses to a recentralized context, such as Colombia, lead to divergent spending choices across electoral contexts. While local officials in unitary contexts are more likely to prioritize education provision with both earmarked and discretionary funds, local officials facing a factional electoral context are more likely to address a wider set of local problems for a limited number of groups. Moreover, I find that differences in the scope of local efforts to address social problems also exist when it comes to programs funded by the national government. Although local officials across electoral contexts apply at similar rates to receive funding for projects in their municipalities, projects coming from officials facing a more factional electoral environment demand significantly less funding than those proposed by officials in a more unitary electoral environment. Finally, I also find that local spending choices do not underfund in a systematic way other expenses. Thus,

contrary to theories of distributive politics, when considering the full range of possible expenditures there is no evidence that collective goods are funded at the expense of targetable goods.

Overall, these spending patterns limit the ability of both local and national policies to solve citizens' more pressing needs. While in factional contexts policies that address various problems have a limited scope, spending choices in unitary contexts reach most of the citizenry but offer solutions to fewer problems. Moreover, these deficiencies are not corrected by the intervention of national agencies deploying their own programs. Programs funded by the national government simply affirm local requests to take advantage of the greater local knowledge about potential electoral supporters.

Additionally, these spending patterns also erode the effectiveness of the “electoral connection” to promote better public services in factional contexts. The inclination of local officials in factional contexts to offer targeted goods encourages citizens to expect a similar behavior in the future. Consequently, citizens in factional contexts are less likely to value and reward public services with more positive evaluations. Lacking a positive citizen response, incumbents should be less likely to feel compelled to provide better public services.

Although these results offer a negative picture of having greater electoral competition, it is important to recognize the true reach of democratic governance at promoting the well-being of citizens. Based on a more accurate appreciation of electoral competition, policy-makers may design appropriate responses to social problems; even if they are not beneficial electorally. Moreover, these results suggest that recent recentralizing reforms are unlikely to solve regional inequalities; on the contrary, the combination of electoral competition and fiscal recentralization appears to deepen developmental differences across electoral contexts.

## APPENDICES

### Appendix A for Chapter 3

Table A1. Instrumental Variable Probit Models Predicting Whether Local Governments Spend any Funds in Various Education Expenses

	Designing New Schools	School Construction	School Maintenance	School Supplies
I.V. ENP	1.121*** (0.118)	1.253*** (0.067)	-0.570* (0.244)	0.335 (0.199)
Margin of Victory	0.025*** (0.004)	0.029*** (0.002)	-0.014* (0.006)	0.005 (0.005)
Turnout	1.251*** (0.363)	1.178*** (0.332)	-1.475*** (0.375)	-0.392 (0.362)
Rural	0.765*** (0.139)	0.932*** (0.129)	-0.064 (0.214)	0.175 (0.161)
Departmental Capital	-0.009 (0.189)	0.076 (0.187)	-0.147 (0.182)	-0.039 (0.136)
Log(Total Budget)	0.081* (0.040)	0.026 (0.033)	0.047 (0.033)	0.124*** (0.031)
Partisan Attachment	0.003** (0.001)	0.003*** (0.001)	-0.002* (0.001)	0.000 (0.001)
Partisan Alignment	0.113* (0.050)	0.104* (0.050)	-0.105* (0.051)	0.005 (0.045)
Log(Pop. Density)	1.975 (1.051)	2.443** (0.937)	-1.480 (1.062)	-0.860 (1.068)
Poverty	0.009*** (0.002)	0.008*** (0.002)	-0.001 (0.002)	0.008*** (0.001)
2009	0.141* (0.057)	0.100* (0.051)	0.135 (0.070)	0.819*** (0.063)
2010	0.219*** (0.055)	0.217*** (0.050)	0.131 (0.071)	0.915*** (0.060)
2011	0.168** (0.053)	0.108* (0.048)	-0.084 (0.060)	0.394*** (0.058)
2012	0.141** (0.053)	0.197*** (0.048)	0.005 (0.064)	0.335*** (0.056)
2013	0.048 (0.038)	-0.054* (0.025)	-0.025 (0.048)	0.163** (0.056)
2014	0.061 (0.035)	0.041 (0.022)	0.072 (0.043)	0.163** (0.050)
2015	-0.007 (0.033)	-0.012 (0.021)	-0.138*** (0.039)	0.011 (0.048)
Constant	-6.631*** (0.396)	-5.895*** (0.379)	2.984** (1.013)	-2.795*** (0.807)
<hr/>				
athrho				
Constant	-1.045*** (0.222)	-1.456*** (0.205)	0.436* (0.210)	-0.223 (0.152)
<hr/>				
Insigma				
Constant	-0.336*** (0.026)	-0.336*** (0.026)	-0.336*** (0.026)	-0.336*** (0.026)
<hr/>				
Observations	7800	7800	7800	7800

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$



Table A1. Instrumental Variable Probit Models Predicting Whether Local Governments Spend any Funds in Various Education Expenses (cont.)

	Didactic Supplies	Public Utilities	Transportation	Training
I.V. ENP	0.114 (0.244)	0.412 (0.315)	-0.362 (0.286)	0.925*** (0.178)
Margin of Victory	0.002 (0.006)	0.015 (0.008)	-0.009 (0.007)	0.023*** (0.004)
Turnout	-0.946* (0.397)	1.111* (0.501)	-0.645 (0.536)	0.654 (0.452)
Rural	0.062 (0.178)	0.337 (0.233)	0.564* (0.262)	0.187 (0.218)
Departmental Capital	0.160 (0.130)	-0.020 (0.198)	-0.344 (0.175)	0.100 (0.190)
Log(Total Budget)	-0.018 (0.030)	0.112** (0.040)	0.024 (0.034)	0.163** (0.051)
Partisan Attachment	0.000 (0.001)	0.000 (0.001)	0.000 (0.001)	0.003*** (0.001)
Partisan Alignment	-0.003 (0.045)	0.102 (0.061)	0.004 (0.064)	0.096 (0.053)
Log(Pop. Density)	-0.631 (1.022)	4.824* (1.910)	-4.726*** (1.422)	3.652* (1.419)
Poverty	0.003* (0.001)	-0.001 (0.002)	-0.011*** (0.002)	0.008*** (0.002)
2009	0.228*** (0.062)	-0.157* (0.070)	-0.404*** (0.060)	0.488*** (0.078)
2010	0.296*** (0.062)	-0.090 (0.070)	-0.311*** (0.060)	0.336*** (0.058)
2011	0.533*** (0.059)	-0.159* (0.069)	-0.251*** (0.058)	0.195*** (0.056)
2012	0.444*** (0.058)	-0.099 (0.065)	-0.267*** (0.058)	0.161** (0.055)
2013	0.096 (0.052)	-0.000 (0.042)	-0.187*** (0.051)	0.017 (0.040)
2014	0.235*** (0.050)	-0.002 (0.035)	-0.023 (0.046)	0.078* (0.037)
2015	0.016 (0.044)	0.017 (0.032)	-0.086* (0.038)	0.011 (0.031)
Constant	0.303 (1.033)	-2.744* (1.340)	2.512* (1.274)	-6.229*** (0.537)
athrho				
Constant	-0.084 (0.176)	-0.316 (0.246)	0.181 (0.216)	-0.858*** (0.234)
Insigma				
Constant	-0.336*** (0.026)	-0.336*** (0.026)	-0.336*** (0.026)	-0.336*** (0.026)
Observations	7800	7800	7800	7800

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table A1. Instrumental Variable Probit Models Predicting Whether Local Governments Spend any Funds in Various Education Expenses (cont.)

	Other Running Costs	Lunches	Improvement Plans	Free Schooling
I.V. ENP	0.743*** (0.207)	0.366 (0.295)	1.023*** (0.173)	-1.004*** (0.197)
Margin of Victory	0.017*** (0.005)	0.007 (0.008)	0.026*** (0.004)	-0.021*** (0.006)
Turnout	-0.341 (0.487)	0.106 (0.507)	0.881 (0.479)	-0.474 (0.471)
Rural	0.405* (0.172)	0.344 (0.221)	0.698*** (0.174)	-0.628*** (0.184)
Departmental Capital	0.269 (0.196)	0.186 (0.198)	0.328 (0.197)	-0.361 (0.251)
Log(Total Budget)	0.060 (0.037)	0.080* (0.034)	0.046 (0.040)	0.433*** (0.064)
Partisan Attachment	0.003** (0.001)	0.002* (0.001)	0.004*** (0.001)	-0.006*** (0.001)
Partisan Alignment	0.015 (0.053)	0.035 (0.056)	0.135* (0.055)	-0.239** (0.077)
Log(Pop. Density)	1.855 (1.031)	0.775 (1.479)	1.825 (1.109)	-3.018* (1.283)
Poverty	0.003 (0.002)	0.001 (0.002)	0.003 (0.002)	-0.007*** (0.002)
2009	-0.113 (0.075)	0.004 (0.064)	0.389*** (0.078)	0.000 (.)
2010	0.002 (0.070)	-0.010 (0.067)	0.670*** (0.104)	0.000 (.)
2011	0.888*** (0.085)	-0.069 (0.068)	0.209*** (0.064)	-3.020*** (0.520)
2012	1.010*** (0.093)	0.017 (0.064)	0.076 (0.068)	0.000 (.)
2013	0.012 (0.046)	-0.051 (0.051)	-0.007 (0.053)	-0.346*** (0.086)
2014	-0.056 (0.041)	-0.066 (0.046)	0.053 (0.048)	-0.112* (0.045)
2015	-0.042 (0.037)	-0.095* (0.044)	-0.022 (0.040)	-0.002 (0.037)
Constant	-3.881*** (0.843)	-2.936* (1.238)	-6.090*** (0.583)	1.482 (1.049)
athrho				
Constant	-0.569** (0.205)	-0.252 (0.227)	-0.891*** (0.257)	0.889** (0.270)
Insigma				
Constant	-0.336*** (0.026)	-0.336*** (0.026)	-0.336*** (0.026)	-0.347*** (0.032)
Observations	7800	7800	7800	4891

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table A2. Instrumental Variable Regression Models Predicting the Amount Spent (in thousands of Colombian Pesos) in Various Education Expenses

	Designing New Schools	School Construction	School Maintenance	School Supplies
I.V. ENP	-4,382.6 (2,303.5)	-7,198.9*** (1,629.3)	-4,979.2*** (1,056.7)	-4,297.7*** (1,131.1)
Margin of Victory	-120.3 (62.6)	-178.7*** (42.8)	-116.2*** (25.7)	-107.3*** (29.7)
Turnout	-4,669.6 (3,300.2)	-7,952.0* (3,172.9)	-4,218.0* (1,801.2)	-5,320.2* (2,185.5)
Rural	-1,579.5 (1,293.9)	-2,450.9* (1,149.3)	-2,074.9** (803.2)	-1,695.2* (797.6)
Departmental Capital	-2,108.1 (1,108.7)	-2,358.4 (1,223.8)	-1,488.3 (1,019.9)	-1,099.8 (891.1)
Log(Total Budget)	1,139.2* (498.7)	1,945.7*** (287.9)	1,477.5*** (157.7)	1,003.1*** (145.0)
Partisan Attachment	-13.5 (8.3)	-17.2** (6.1)	-12.4** (4.1)	-10.2* (4.1)
Partisan Alignment	-433.3 (349.2)	-920.1* (393.0)	-349.3 (204.8)	-385.5 (224.0)
Log(Pop. Density)	-8,503.7 (6,905.4)	-13,667.5* (6,276.7)	-11,156.9* (4,430.9)	-9,215.3* (4,259.8)
Poverty	-20.1 (11.1)	-28.0** (9.9)	-15.9** (6.0)	-18.9** (6.7)
2009	127.3 (372.9)	234.3 (359.8)	353.1 (207.1)	1.6 (277.8)
2010	-123.9 (367.9)	-393.6 (354.9)	229.7 (197.4)	-265.6 (280.6)
2011	-270.1 (390.2)	-177.7 (346.8)	57.0 (207.0)	-236.4 (288.1)
2012	106.1 (419.2)	-318.5 (337.6)	44.8 (202.2)	-114.9 (269.6)
2013	257.9 (293.2)	257.6 (187.2)	163.4 (123.4)	91.5 (195.6)
2014	253.6 (273.6)	200.7 (155.0)	-92.4 (99.4)	-162.7 (195.3)
2015	134.5 (221.0)	233.0 (159.8)	-60.5 (97.1)	-104.4 (193.9)
Constant	9,810.6 (7,837.4)	14,872.7* (7,140.2)	8,056.4 (4,401.3)	10,922.6* (5,203.0)
Observations	1657	4884	5173	3232

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table A2. Instrumental Variable Regression Models Predicting the Amount Spent (in thousands of Colombian Pesos) in Various Education Expenses (cont.)

	Didactic Supplies	Public Utilities	Transportation	Training
I.V. ENP	-4,548.2*** (1,231.0)	-2,495.3*** (549.7)	-5,015.2*** (1,150.2)	-1,969.1** (644.5)
Margin of Victory	-107.5*** (30.1)	-57.1*** (13.1)	-112.1*** (26.4)	-45.0** (15.9)
Turnout	-4,416.4* (1,949.9)	-2,039.6* (852.8)	-4,305.6* (1,888.6)	-2,144.2 (1,114.5)
Rural	-1,833.0* (828.1)	-1,122.5** (423.8)	-1,649.9* (778.7)	-709.6 (458.2)
Departmental Capital	-990.7 (814.7)	-858.6* (399.6)	-1,225.9 (974.1)	-780.6* (381.1)
Log(Total Budget)	1,086.5*** (181.4)	631.1*** (88.3)	1,348.1*** (186.9)	452.6*** (93.2)
Partisan Attachment	-13.6** (4.4)	-7.0** (2.2)	-9.1* (4.0)	-4.5 (2.3)
Partisan Alignment	-663.9** (248.7)	-96.9 (100.1)	-184.6 (199.0)	-137.8 (126.5)
Log(Pop. Density)	-8,602.6* (4,254.9)	-4,983.5* (2,128.4)	-7,826.5 (5,317.2)	-6,059.9 (3,161.6)
Poverty	-10.6 (5.9)	-10.0** (3.3)	-18.6** (6.6)	-7.3* (3.6)
2009	-99.0 (239.2)	150.8 (110.0)	329.7 (202.6)	129.7 (143.1)
2010	-250.6 (242.2)	33.6 (103.5)	-172.3 (210.3)	-130.0 (152.9)
2011	-155.0 (217.5)	-105.9 (105.5)	-214.6 (202.1)	-199.7 (163.6)
2012	-278.4 (230.3)	-155.8 (104.2)	-219.6 (201.9)	25.7 (149.1)
2013	381.3* (170.0)	99.4* (40.3)	167.1* (75.1)	236.6 (122.9)
2014	11.9 (108.8)	15.4 (31.3)	59.7 (79.0)	47.1 (93.2)
2015	96.3 (114.6)	32.4 (27.8)	25.4 (68.3)	-14.9 (74.6)
Constant	10,208.1* (4,949.3)	5,055.0* (2,219.6)	8,790.3* (4,480.3)	4,563.9 (2,682.6)
Observations	4743	5640	5882	1727

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table A2. Instrumental Variable Regression Models Predicting the Amount Spent (in thousands of Colombian Pesos) in Various Education Expenses (cont.)

	Other Running Costs	Lunches	Improvement Plans	Free Schooling
I.V. ENP	-3,471.1** (1,309.3)	-3,680.4** (1,274.1)	-5,555.5 (4,231.8)	-4,919.5** (1,754.1)
Margin of Victory	-83.0* (32.3)	-88.6** (33.2)	-134.1 (105.5)	-113.1** (41.0)
Turnout	-3,873.7* (1,971.7)	-2,792.3 (1,870.9)	-5,878.0 (5,763.3)	-2,169.5 (1,939.0)
Rural	-960.8 (745.1)	-1,519.2 (917.5)	-2,096.6 (2,462.1)	-2,518.2* (1,212.7)
Departmental Capital	-1,640.0* (707.5)	-813.0 (996.4)	-716.5 (1,728.8)	-1,414.5 (1,011.5)
Log(Total Budget)	895.4*** (250.2)	882.3*** (176.9)	592.1 (369.5)	1,629.6*** (493.5)
Partisan Attachment	-9.0* (4.4)	-4.7 (4.4)	-4.0 (7.9)	-32.1** (11.7)
Partisan Alignment	-226.7 (199.2)	-207.8 (236.0)	-411.5 (565.1)	-1,151.2* (497.6)
Log(Pop. Density)	-6,328.1 (3,675.0)	-15,182.5 (8,180.7)	-9,359.1 (9,777.3)	-13,109.1* (6,391.6)
Poverty	-19.2* (8.0)	-10.5 (6.9)	-27.8 (19.5)	-19.3 (9.9)
2009	343.3 (335.9)	309.1 (261.6)	-567.9 (939.7)	
2010	-504.5 (332.9)	-66.1 (291.7)	-1,600.0 (1,590.7)	
2011	-67.0 (227.3)	-76.7 (294.8)	-484.3 (833.5)	1,958.0 (2,206.8)
2012	132.9 (221.3)	-134.7 (264.6)	-1,054.4 (1,129.1)	
2013	225.0 (180.7)	118.7 (162.9)	-873.4 (1,008.8)	233.1* (104.2)
2014	210.6 (167.1)	109.9 (156.0)	-329.6 (557.4)	2.8 (72.5)
2015	-85.8 (149.5)	128.1 (148.0)	-75.3 (372.6)	104.3 (68.6)
Constant	7,521.7 (4,517.5)	7,525.7 (5,382.1)	19,904.4 (20,073.1)	7,168.4 (5,138.2)
Observations	2222	1800	798	3074

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table A3. Instrumental Regression Models Predicting the Balance Between Expenditures in School Design and Other Education Expenses

	School Construction	School Maintenance	School Supplies	Didactic Supplies	Public Utilities
I.V. ENP	-1.085*** (0.150)	-0.263** (0.106)	-0.221** (0.097)	-0.231** (0.106)	-0.837*** (0.132)
Margin of Victory	-0.025*** (0.004)	-0.005** (0.003)	-0.005** (0.002)	-0.005* (0.003)	-0.018*** (0.003)
Turnout	-1.196*** (0.238)	0.069 (0.169)	-0.193 (0.154)	-0.161 (0.169)	-0.298 (0.211)
Rural	-0.861*** (0.108)	-0.275*** (0.076)	-0.100 (0.070)	-0.098 (0.076)	-0.053 (0.095)
Departmental Capital	0.176** (0.082)	0.087 (0.058)	0.083 (0.053)	0.040 (0.058)	-0.274*** (0.073)
Partisan Attachment	-0.003*** (0.001)	-0.001* (0.0004)	-0.001* (0.0004)	-0.001* (0.0004)	-0.002*** (0.001)
Partisan Alignment	-0.063** (0.031)	-0.034 (0.022)	-0.009 (0.020)	0.005 (0.022)	-0.078*** (0.027)
Log(Pop. Density)	-1.979*** (0.651)	0.024 (0.462)	-0.225 (0.421)	-0.931** (0.460)	-1.928*** (0.575)
Log(Total Budget)	-0.095*** (0.022)	-0.056*** (0.016)	-0.023 (0.014)	-0.023 (0.016)	-0.041** (0.020)
Poverty	-0.011*** (0.001)	-0.003*** (0.001)	-0.003*** (0.001)	-0.004*** (0.001)	0.0003 (0.001)
2009	-0.090* (0.053)	-0.257*** (0.038)	-0.122*** (0.034)	-0.264*** (0.037)	-0.128*** (0.047)
2010	-0.210*** (0.053)	-0.262*** (0.038)	-0.106*** (0.034)	-0.266*** (0.037)	-0.204*** (0.047)
2011	-0.140*** (0.052)	-0.163*** (0.037)	-0.055 (0.034)	-0.177*** (0.037)	-0.184*** (0.046)
2012	-0.215*** (0.052)	-0.154*** (0.037)	-0.035 (0.034)	-0.148*** (0.037)	-0.119*** (0.046)
2013	0.059 (0.050)	-0.046 (0.036)	-0.014 (0.032)	-0.099*** (0.035)	-0.093** (0.044)
2014	-0.052 (0.050)	-0.097*** (0.036)	-0.017 (0.032)	-0.038 (0.035)	-0.043 (0.044)
2015	0.044 (0.050)	-0.018 (0.036)	-0.029 (0.032)	-0.005 (0.035)	-0.024 (0.044)
Constant	5.848*** (0.622)	1.498*** (0.442)	1.243*** (0.403)	1.409*** (0.440)	3.479*** (0.550)
N	7800	7800	7800	7800	7800
R-squared	-0.692	-0.025	-0.034	-0.016	-0.446

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table A3. Instrumental Regression Models Predicting the Balance Between Expenditures in School Design and Other Education Expenses (cont.)

	Transportation	Training	Other Running Costs	Lunches	Improvement Plans	Free Schooling
I.V. ENP	-0.333*** (0.109)	-0.227** (0.093)	-0.410*** (0.097)	-0.567*** (0.101)	-0.474*** (0.087)	-0.815*** (0.116)
Margin of Victory	-0.009*** (0.003)	-0.005** (0.002)	-0.009*** (0.002)	-0.013*** (0.003)	-0.011*** (0.002)	-0.019*** (0.003)
Turnout	-0.567*** (0.173)	-0.424*** (0.148)	-0.699*** (0.154)	-0.697*** (0.160)	-0.618*** (0.138)	-0.837*** (0.184)
Rural	-0.715*** (0.078)	-0.102 (0.067)	-0.204*** (0.069)	-0.265*** (0.072)	-0.294*** (0.062)	-0.439*** (0.083)
Departmental Capital	0.029 (0.060)	0.051 (0.051)	-0.158*** (0.053)	-0.113** (0.055)	0.062 (0.047)	-0.037 (0.063)
Partisan Attachment	-0.001*** (0.0004)	-0.00002 (0.0004)	-0.001*** (0.0004)	-0.0005 (0.0004)	-0.001*** (0.0003)	-0.001*** (0.0004)
Partisan Alignment	-0.080*** (0.022)	-0.013 (0.019)	-0.048** (0.020)	-0.027 (0.021)	-0.025 (0.018)	-0.067*** (0.024)
Log(Pop. Density)	0.018 (0.473)	0.493 (0.405)	-0.671 (0.420)	-0.802* (0.437)	-0.564 (0.376)	-1.095** (0.502)
Log(Total Budget)	-0.025 (0.016)	0.030** (0.014)	-0.026* (0.014)	-0.041*** (0.015)	-0.017 (0.013)	-0.080*** (0.017)
Poverty	0.002** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)	-0.005*** (0.001)	-0.003*** (0.001)	-0.001* (0.001)
2009	0.128*** (0.038)	0.099*** (0.033)	-0.017 (0.034)	-0.004 (0.036)	-0.084*** (0.031)	0.661*** (0.041)
2010	0.065* (0.038)	0.042 (0.033)	-0.048 (0.034)	-0.047 (0.036)	-0.130*** (0.031)	0.608*** (0.041)
2011	0.081** (0.038)	0.065** (0.032)	-0.335*** (0.034)	-0.027 (0.035)	-0.045 (0.030)	0.621*** (0.040)
2012	0.105*** (0.038)	0.037 (0.032)	-0.336*** (0.033)	-0.009 (0.035)	-0.031 (0.030)	0.633*** (0.040)
2013	0.039 (0.036)	0.004 (0.031)	-0.072** (0.032)	0.001 (0.034)	-0.020 (0.029)	0.001 (0.039)
2014	0.021 (0.036)	0.017 (0.031)	-0.034 (0.032)	-0.002 (0.034)	-0.020 (0.029)	-0.063 (0.039)
2015	-0.027 (0.036)	-0.005 (0.031)	-0.029 (0.032)	-0.001 (0.034)	-0.022 (0.029)	-0.095** (0.039)
Constant	1.677*** (0.452)	0.822** (0.387)	2.209*** (0.402)	2.895*** (0.418)	2.283*** (0.360)	3.382*** (0.480)
N	7800	7800	7800	7800	7800	7800
R-squared	-0.078	-0.031	-0.135	-0.396	-0.367	-0.295

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table A4. Instrumental Regression Models Predicting the Balance Between Expenditures in School Construction and Other Education Expenses

	School Maintenance	School Supplies	Didactic Supplies	Public Utilities	Transportation
I.V. ENP	0.822*** (0.146)	0.864*** (0.140)	0.854*** (0.146)	0.248** (0.126)	0.752*** (0.143)
Margin of Victory	0.019*** (0.004)	0.020*** (0.004)	0.020*** (0.004)	0.007** (0.003)	0.016*** (0.004)
Turnout	1.265*** (0.232)	1.003*** (0.222)	1.035*** (0.232)	0.898*** (0.201)	0.629*** (0.227)
Rural	0.586*** (0.105)	0.761*** (0.100)	0.763*** (0.105)	0.808*** (0.091)	0.146 (0.103)
Departmental Capital	-0.089 (0.080)	-0.093 (0.077)	-0.136* (0.080)	-0.450*** (0.069)	-0.146* (0.078)
Partisan Attachment	0.002*** (0.001)	0.002*** (0.001)	0.002*** (0.001)	0.001** (0.0005)	0.002*** (0.001)
Partisan Alignment	0.029 (0.030)	0.055* (0.029)	0.068** (0.030)	-0.015 (0.026)	-0.016 (0.029)
Log(Pop. Density)	2.002*** (0.634)	1.753*** (0.607)	1.047* (0.634)	0.051 (0.549)	1.996*** (0.621)
Log(Total Budget)	0.039* (0.022)	0.071*** (0.021)	0.072*** (0.022)	0.054*** (0.019)	0.070*** (0.021)
Poverty	0.007*** (0.001)	0.008*** (0.001)	0.006*** (0.001)	0.011*** (0.001)	0.012*** (0.001)
2009	-0.167*** (0.052)	-0.032 (0.049)	-0.174*** (0.052)	-0.039 (0.045)	0.217*** (0.051)
2010	-0.053 (0.052)	0.104** (0.049)	-0.056 (0.052)	0.006 (0.045)	0.275*** (0.051)
2011	-0.023 (0.051)	0.085* (0.049)	-0.036 (0.051)	-0.043 (0.044)	0.222*** (0.050)
2012	0.061 (0.050)	0.180*** (0.048)	0.067 (0.050)	0.096** (0.044)	0.320*** (0.049)
2013	-0.105** (0.049)	-0.073 (0.047)	-0.158*** (0.049)	-0.152*** (0.042)	-0.020 (0.048)
2014	-0.045 (0.049)	0.035 (0.047)	0.014 (0.049)	0.010 (0.042)	0.073 (0.048)
2015	-0.062 (0.049)	-0.072 (0.047)	-0.049 (0.049)	-0.067 (0.042)	-0.070 (0.048)
Constant	-4.350*** (0.606)	-4.605*** (0.580)	-4.439*** (0.606)	-2.369*** (0.525)	-4.171*** (0.594)
N	7800	7800	7800	7800	7800
R-squared	-0.339	-0.441	-0.370	0.098	-0.178

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$



Table A4. Instrumental Regression Models Predicting the Balance Between Expenditures in School Construction and Other Education Expenses (cont.)

	Training	Other Running Costs	Lunches	Improvement Plans	Free Schooling
I.V. ENP	0.859*** (0.139)	0.675*** (0.123)	0.518*** (0.114)	0.611*** (0.111)	0.270*** (0.102)
Margin of Victory	0.020*** (0.003)	0.016*** (0.003)	0.012*** (0.003)	0.014*** (0.003)	0.006** (0.003)
Turnout	0.772*** (0.221)	0.497** (0.196)	0.500*** (0.181)	0.578*** (0.176)	0.360** (0.163)
Rural	0.759*** (0.100)	0.657*** (0.089)	0.596*** (0.082)	0.568*** (0.079)	0.422*** (0.074)
Departmental Capital	-0.125 (0.076)	-0.334*** (0.068)	-0.289*** (0.062)	-0.113* (0.061)	-0.213*** (0.056)
Partisan Attachment	0.003*** (0.001)	0.002*** (0.0005)	0.002*** (0.0004)	0.002*** (0.0004)	0.002*** (0.0004)
Partisan Alignment	0.051* (0.029)	0.016 (0.025)	0.037 (0.023)	0.039* (0.023)	-0.004 (0.021)
Log(Pop. Density)	2.472*** (0.604)	1.308** (0.537)	1.177** (0.495)	1.415*** (0.481)	0.883** (0.445)
Log(Total Budget)	0.125*** (0.021)	0.069*** (0.018)	0.054*** (0.017)	0.078*** (0.016)	0.015 (0.015)
Poverty	0.009*** (0.001)	0.009*** (0.001)	0.006*** (0.001)	0.008*** (0.001)	0.009*** (0.001)
2009	0.189*** (0.049)	0.073* (0.044)	0.086** (0.040)	0.005 (0.039)	0.751*** (0.036)
2010	0.251*** (0.049)	0.161*** (0.044)	0.163*** (0.040)	0.080** (0.039)	0.818*** (0.036)
2011	0.206*** (0.048)	-0.195*** (0.043)	0.114*** (0.040)	0.096** (0.038)	0.762*** (0.036)
2012	0.251*** (0.048)	-0.122*** (0.043)	0.205*** (0.039)	0.183*** (0.038)	0.848*** (0.035)
2013	-0.055 (0.047)	-0.131*** (0.041)	-0.058 (0.038)	-0.079** (0.037)	-0.057* (0.034)
2014	0.069 (0.046)	0.019 (0.041)	0.051 (0.038)	0.032 (0.037)	-0.011 (0.034)
2015	-0.049 (0.047)	-0.073* (0.041)	-0.045 (0.038)	-0.065* (0.037)	-0.138*** (0.034)
Constant	-5.026*** (0.578)	-3.639*** (0.513)	-2.953*** (0.473)	-3.566*** (0.460)	-2.466*** (0.425)
N	7800	7800	7800	7800	7800
R-squared	-0.431	-0.240	-0.134	-0.243	0.247

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table A5. Instrumental Regression Models Predicting the Balance Between Expenditures in School Maintenance and Other Education Expenses

	School Supplies	Didactic Supplies	Public Utilities	Transportation	Training
I.V. ENP	0.043 (0.109)	0.032 (0.116)	-0.574*** (0.131)	-0.069 (0.121)	0.037 (0.108)
Margin of Victory	0.0001 (0.003)	0.0004 (0.003)	-0.013*** (0.003)	-0.004 (0.003)	0.001 (0.003)
Turnout	-0.262 (0.173)	-0.230 (0.185)	-0.366* (0.208)	-0.636*** (0.192)	-0.492*** (0.171)
Rural	0.175** (0.078)	0.177** (0.084)	0.221** (0.094)	-0.440*** (0.087)	0.172** (0.077)
Departmental Capital	-0.004 (0.060)	-0.047 (0.064)	-0.361*** (0.072)	-0.058 (0.066)	-0.036 (0.059)
Partisan Attachment	0.0001 (0.0004)	-0.00001 (0.0004)	-0.001** (0.0005)	-0.0004 (0.0005)	0.001* (0.0004)
Partisan Alignment	0.025 (0.022)	0.039 (0.024)	-0.044 (0.027)	-0.046* (0.025)	0.021 (0.022)
Log(Pop. Density)	-0.249 (0.473)	-0.955* (0.506)	-1.952*** (0.569)	-0.006 (0.526)	0.469 (0.468)
Log(Total Budget)	0.032** (0.016)	0.033* (0.017)	0.015 (0.019)	0.031* (0.018)	0.086*** (0.016)
Poverty	0.001 (0.001)	-0.001* (0.001)	0.004*** (0.001)	0.005*** (0.001)	0.002** (0.001)
2009	0.135*** (0.038)	-0.007 (0.041)	0.129*** (0.046)	0.385*** (0.043)	0.356*** (0.038)
2010	0.156*** (0.038)	-0.003 (0.041)	0.059 (0.046)	0.328*** (0.043)	0.304*** (0.038)
2011	0.108*** (0.038)	-0.014 (0.040)	-0.020 (0.046)	0.245*** (0.042)	0.229*** (0.037)
2012	0.119*** (0.038)	0.006 (0.040)	0.035 (0.045)	0.259*** (0.042)	0.190*** (0.037)
2013	0.032 (0.036)	-0.053 (0.039)	-0.047 (0.044)	0.085** (0.040)	0.051 (0.036)
2014	0.080** (0.036)	0.060 (0.039)	0.055 (0.044)	0.118*** (0.040)	0.115*** (0.036)
2015	-0.011 (0.036)	0.012 (0.039)	-0.006 (0.044)	-0.009 (0.041)	0.013 (0.036)
Constant	-0.256 (0.452)	-0.089 (0.484)	1.980*** (0.544)	0.179 (0.502)	-0.676 (0.448)
N	7800	7800	7800	7800	7800
R-squared	0.008	0.005	-0.128	0.046	0.036

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table A5. Instrumental Regression Models Predicting the Balance Between Expenditures in School Maintenance and Other Education Expenses (cont.)

	Other Running Costs	Lunches	Improvement Plans	Free Schooling
I.V. ENP	-0.147 (0.103)	-0.304*** (0.103)	-0.210** (0.092)	-0.552*** (0.110)
Margin of Victory	-0.004 (0.003)	-0.008*** (0.003)	-0.006** (0.002)	-0.014*** (0.003)
Turnout	-0.768*** (0.164)	-0.765*** (0.165)	-0.687*** (0.146)	-0.905*** (0.174)
Rural	0.071 (0.074)	0.010 (0.074)	-0.019 (0.066)	-0.164** (0.079)
Departmental Capital	-0.245*** (0.056)	-0.200*** (0.057)	-0.025 (0.050)	-0.124** (0.060)
Partisan Attachment	-0.0004 (0.0004)	0.0002 (0.0004)	-0.0003 (0.0003)	-0.001 (0.0004)
Partisan Alignment	-0.014 (0.021)	0.007 (0.021)	0.009 (0.019)	-0.033 (0.023)
Log(Pop. Density)	-0.695 (0.448)	-0.826* (0.450)	-0.588 (0.398)	-1.119** (0.476)
Log(Total Budget)	0.029* (0.015)	0.015 (0.015)	0.039*** (0.014)	-0.024 (0.016)
Poverty	0.001* (0.001)	-0.001** (0.001)	0.001 (0.001)	0.002*** (0.001)
2009	0.240*** (0.036)	0.253*** (0.037)	0.173*** (0.032)	0.918*** (0.039)
2010	0.214*** (0.036)	0.215*** (0.037)	0.133*** (0.032)	0.870*** (0.039)
2011	-0.172*** (0.036)	0.136*** (0.036)	0.119*** (0.032)	0.785*** (0.038)
2012	-0.183*** (0.036)	0.144*** (0.036)	0.122*** (0.032)	0.787*** (0.038)
2013	-0.025 (0.034)	0.047 (0.035)	0.027 (0.031)	0.048 (0.037)
2014	0.064* (0.034)	0.096*** (0.035)	0.077** (0.031)	0.035 (0.037)
2015	-0.011 (0.034)	0.017 (0.035)	-0.004 (0.031)	-0.077** (0.037)
Constant	0.711* (0.428)	1.396*** (0.430)	0.784** (0.381)	1.883*** (0.456)
N	7800	7800	7800	7800
R-squared	0.032	-0.070	-0.034	0.091

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table A6. Instrumental Regression Models Predicting the Balance Between Expenditures in School Supplies and Other Education Expenses

	Didactic Supplies	Public Utilities	Transportation	Training
I.V. ENP	-0.011 (0.108)	-0.617*** (0.127)	-0.112 (0.113)	-0.006 (0.098)
Margin of Victory	0.0003 (0.003)	-0.013*** (0.003)	-0.004 (0.003)	0.0005 (0.002)
Turnout	0.032 (0.172)	-0.105 (0.202)	-0.374** (0.179)	-0.231 (0.156)
Rural	0.002 (0.078)	0.047 (0.091)	-0.615*** (0.081)	-0.002 (0.070)
Departmental Capital	-0.043 (0.059)	-0.357*** (0.070)	-0.053 (0.062)	-0.032 (0.054)
Partisan Attachment	-0.0001 (0.0004)	-0.001** (0.0005)	-0.001 (0.0004)	0.001 (0.0004)
Partisan Alignment	0.014 (0.022)	-0.069*** (0.026)	-0.071*** (0.023)	-0.004 (0.020)
Log(Pop. Density)	-0.706 (0.470)	-1.703*** (0.553)	0.243 (0.490)	0.719* (0.426)
Log(Total Budget)	0.001 (0.016)	-0.017 (0.019)	-0.001 (0.017)	0.053*** (0.014)
Poverty	-0.002*** (0.001)	0.003*** (0.001)	0.004*** (0.001)	0.001* (0.001)
2009	-0.142*** (0.038)	-0.007 (0.045)	0.249*** (0.040)	0.221*** (0.035)
2010	-0.160*** (0.038)	-0.097** (0.045)	0.171*** (0.040)	0.148*** (0.035)
2011	-0.122*** (0.038)	-0.129*** (0.044)	0.137*** (0.039)	0.121*** (0.034)
2012	-0.113*** (0.037)	-0.083* (0.044)	0.141*** (0.039)	0.072** (0.034)
2013	-0.085** (0.036)	-0.079* (0.043)	0.053 (0.038)	0.019 (0.033)
2014	-0.021 (0.036)	-0.025 (0.043)	0.038 (0.038)	0.034 (0.033)
2015	0.023 (0.036)	0.005 (0.043)	0.002 (0.038)	0.024 (0.033)
Constant	0.166 (0.449)	2.236*** (0.529)	0.434 (0.469)	-0.420 (0.407)
N	7800	7800	7800	7800
R-squared	0.008	-0.195	0.023	0.016

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table A6. Instrumental Regression Models Predicting the Balance Between Expenditures in School Supplies and Other Education Expenses (cont.)

	Other Running Costs	Lunches	Improvement Plans	Free Schooling
I.V. ENP	-0.189* (0.098)	-0.347*** (0.098)	-0.253*** (0.085)	-0.595*** (0.106)
Margin of Victory	-0.004 (0.002)	-0.008*** (0.002)	-0.006*** (0.002)	-0.014*** (0.003)
Turnout	-0.506*** (0.156)	-0.504*** (0.157)	-0.425*** (0.136)	-0.644*** (0.169)
Rural	-0.104 (0.070)	-0.165** (0.071)	-0.194*** (0.061)	-0.339*** (0.076)
Departmental Capital	-0.241*** (0.054)	-0.196*** (0.054)	-0.020 (0.047)	-0.120** (0.058)
Partisan Attachment	-0.001 (0.0004)	0.0001 (0.0004)	-0.0004 (0.0003)	-0.001 (0.0004)
Partisan Alignment	-0.039* (0.020)	-0.018 (0.020)	-0.016 (0.018)	-0.058*** (0.022)
Log(Pop. Density)	-0.445 (0.427)	-0.576 (0.428)	-0.339 (0.370)	-0.870* (0.462)
Log(Total Budget)	-0.003 (0.014)	-0.017 (0.015)	0.006 (0.013)	-0.056*** (0.016)
Poverty	0.001 (0.001)	-0.002*** (0.001)	0.0002 (0.0005)	0.001** (0.001)
2009	0.105*** (0.035)	0.118*** (0.035)	0.037 (0.030)	0.783*** (0.038)
2010	0.058* (0.035)	0.059* (0.035)	-0.024 (0.030)	0.714*** (0.038)
2011	-0.280*** (0.034)	0.028 (0.034)	0.011 (0.030)	0.676*** (0.037)
2012	-0.301*** (0.034)	0.026 (0.034)	0.004 (0.029)	0.668*** (0.037)
2013	-0.057* (0.033)	0.015 (0.033)	-0.005 (0.029)	0.016 (0.036)
2014	-0.017 (0.033)	0.015 (0.033)	-0.003 (0.028)	-0.046 (0.035)
2015	-0.001 (0.033)	0.027 (0.033)	0.007 (0.029)	-0.066* (0.036)
Constant	0.966** (0.408)	1.652*** (0.409)	1.040*** (0.354)	2.139*** (0.442)
N	7800	7800	7800	7800
R-squared	0.007	-0.137	-0.098	-0.014

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table A7. Instrumental Regression Models Predicting the Balance Between Expenditures in Didactic Supplies and Other Education Expenses

	Public Utilities	Transportation	Training	Other Running Costs
I.V. ENP	-0.606*** (0.134)	-0.101 (0.122)	0.005 (0.108)	-0.178* (0.107)
Margin of Victory	-0.013*** (0.003)	-0.004 (0.003)	0.0001 (0.003)	-0.004 (0.003)
Turnout	-0.137 (0.214)	-0.406** (0.195)	-0.263 (0.171)	-0.538*** (0.171)
Rural	0.045 (0.096)	-0.617*** (0.088)	-0.004 (0.077)	-0.106 (0.077)
Departmental Capital	-0.314*** (0.074)	-0.010 (0.067)	0.011 (0.059)	-0.198*** (0.059)
Partisan Attachment	-0.001** (0.001)	-0.0004 (0.0005)	0.001* (0.0004)	-0.0004 (0.0004)
Partisan Alignment	-0.083*** (0.028)	-0.085*** (0.025)	-0.018 (0.022)	-0.053** (0.022)
Log(Pop. Density)	-0.997* (0.584)	0.949* (0.532)	1.425*** (0.468)	0.261 (0.467)
Log(Total Budget)	-0.018 (0.020)	-0.002 (0.018)	0.053*** (0.016)	-0.004 (0.016)
Poverty	0.005*** (0.001)	0.006*** (0.001)	0.003*** (0.001)	0.002*** (0.001)
2009	0.135*** (0.048)	0.391*** (0.043)	0.363*** (0.038)	0.247*** (0.038)
2010	0.062 (0.048)	0.331*** (0.043)	0.307*** (0.038)	0.217*** (0.038)
2011	-0.007 (0.047)	0.258*** (0.043)	0.242*** (0.037)	-0.158*** (0.037)
2012	0.029 (0.046)	0.253*** (0.042)	0.185*** (0.037)	-0.188*** (0.037)
2013	0.006 (0.045)	0.138*** (0.041)	0.103*** (0.036)	0.027 (0.036)
2014	-0.005 (0.045)	0.059 (0.041)	0.055 (0.036)	0.004 (0.036)
2015	-0.018 (0.045)	-0.021 (0.041)	0.0004 (0.036)	-0.024 (0.036)
Constant	2.070*** (0.558)	0.268 (0.508)	-0.587 (0.448)	0.800* (0.446)
N	7800	7800	7800	7800
R-squared	-0.144	0.046	0.035	0.018

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table A7. Instrumental Regression Models Predicting the Balance Between Expenditures in Didactic Supplies and Other Education Expenses (cont.)

	Lunches	Improvement Plans	Free Schooling
I.V. ENP	-0.336*** (0.105)	-0.242*** (0.093)	-0.584*** (0.115)
Margin of Victory	-0.008*** (0.003)	-0.006*** (0.002)	-0.014*** (0.003)
Turnout	-0.535*** (0.167)	-0.457*** (0.148)	-0.676*** (0.183)
Rural	-0.167** (0.076)	-0.196*** (0.067)	-0.341*** (0.083)
Departmental Capital	-0.153*** (0.058)	0.023 (0.051)	-0.077 (0.063)
Partisan Attachment	0.0002 (0.0004)	-0.0003 (0.0004)	-0.001 (0.0004)
Partisan Alignment	-0.032 (0.022)	-0.030 (0.019)	-0.072*** (0.024)
Log(Pop. Density)	0.130 (0.457)	0.367 (0.405)	-0.164 (0.500)
Log(Total Budget)	-0.018 (0.016)	0.006 (0.014)	-0.057*** (0.017)
Poverty	-0.0003 (0.001)	0.002*** (0.001)	0.003*** (0.001)
2009	0.260** (0.037)	0.180*** (0.033)	0.925*** (0.041)
2010	0.219*** (0.037)	0.136*** (0.033)	0.874*** (0.041)
2011	0.150*** (0.037)	0.132*** (0.032)	0.798*** (0.040)
2012	0.139*** (0.036)	0.117*** (0.032)	0.781*** (0.040)
2013	0.100*** (0.035)	0.079** (0.031)	0.101*** (0.039)
2014	0.036 (0.035)	0.018 (0.031)	-0.025 (0.038)
2015	0.004 (0.035)	-0.016 (0.031)	-0.089** (0.039)
Constant	1.486*** (0.437)	0.873** (0.387)	1.973*** (0.478)
N	7800	7800	7800
R-squared	-0.088	-0.051	0.074

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table A8. Instrumental Regression Models Predicting the Balance Between Expenditures in Public Utilities and Other Education Expenses

	Transportation	Training	Other Running Costs	Lunches	Improvement Plans	Free Schooling
I.V. ENP	0.504*** (0.129)	0.611*** (0.126)	0.427*** (0.112)	0.270*** (0.104)	0.363*** (0.097)	0.022 (0.095)
Margin of Victory	0.009*** (0.003)	0.013*** (0.003)	0.009*** (0.003)	0.005* (0.003)	0.007*** (0.002)	-0.001 (0.002)
Turnout	-0.269 (0.205)	-0.126 (0.201)	-0.401** (0.178)	-0.399** (0.165)	-0.321** (0.155)	-0.539*** (0.152)
Rural	-0.662*** (0.092)	-0.049 (0.091)	-0.151* (0.080)	-0.212*** (0.074)	-0.240*** (0.070)	-0.386*** (0.069)
Departmental Capital	0.303*** (0.071)	0.325*** (0.069)	0.116* (0.061)	0.161*** (0.057)	0.336*** (0.053)	0.237*** (0.052)
Partisan Attachment	0.001 (0.0005)	0.002*** (0.0005)	0.001 (0.0004)	0.001*** (0.0004)	0.001* (0.0004)	0.0004 (0.0004)
Partisan Alignment	-0.002 (0.026)	0.065** (0.026)	0.030 (0.023)	0.051** (0.021)	0.053*** (0.020)	0.011 (0.020)
Log(Pop. Density)	1.945*** (0.559)	2.421*** (0.548)	1.257*** (0.486)	1.126** (0.451)	1.364*** (0.423)	0.833** (0.415)
Log(Total Budget)	0.016 (0.019)	0.071*** (0.019)	0.014 (0.016)	-0.0002 (0.015)	0.024* (0.014)	-0.039*** (0.014)
Poverty	0.001 (0.001)	-0.002*** (0.001)	-0.002*** (0.001)	-0.005*** (0.001)	-0.003*** (0.001)	-0.002*** (0.001)
2009	0.256*** (0.045)	0.228*** (0.045)	0.112*** (0.040)	0.125*** (0.037)	0.044 (0.034)	0.790*** (0.034)
2010	0.269*** (0.046)	0.245*** (0.045)	0.155*** (0.040)	0.156*** (0.037)	0.074* (0.034)	0.811*** (0.034)
2011	0.265*** (0.045)	0.249*** (0.044)	-0.151*** (0.039)	0.157*** (0.036)	0.139*** (0.034)	0.805*** (0.033)
2012	0.224*** (0.044)	0.155*** (0.044)	-0.218*** (0.039)	0.109*** (0.036)	0.087*** (0.034)	0.752*** (0.033)
2013	0.132*** (0.043)	0.097** (0.042)	0.021 (0.037)	0.094*** (0.035)	0.073** (0.033)	0.095*** (0.032)
2014	0.063 (0.043)	0.060 (0.042)	0.009 (0.037)	0.041 (0.035)	0.022 (0.032)	-0.020 (0.032)
2015	-0.003 (0.043)	0.018 (0.042)	-0.006 (0.037)	0.022 (0.035)	0.002 (0.033)	-0.071** (0.032)
Constant	-1.802*** (0.534)	-2.656*** (0.524)	-1.269*** (0.464)	-0.584 (0.431)	-1.196*** (0.404)	-0.097 (0.396)
N	7800	7800	7800	7800	7800	7800
R-squared	-0.005	-0.181	-0.063	0.026	-0.021	0.272

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$



Table A9. Instrumental Regression Models Predicting the Balance Between Expenditures in Transportation and Other Education Expenses

	Training	Other Running Costs	Lunches	Improvement Plans	Free Schooling
I.V. ENP	0.106 (0.110)	-0.077 (0.104)	-0.235** (0.103)	-0.141 (0.091)	-0.483*** (0.101)
Margin of Victory	0.004 (0.003)	0.00003 (0.003)	-0.004 (0.003)	-0.002 (0.002)	-0.010*** (0.003)
Turnout	0.143 (0.175)	-0.132 (0.165)	-0.129 (0.163)	-0.051 (0.145)	-0.269* (0.161)
Rural	0.613*** (0.079)	0.511*** (0.074)	0.450*** (0.074)	0.421*** (0.066)	0.276*** (0.073)
Departmental Capital	0.021 (0.060)	-0.188*** (0.057)	-0.143** (0.056)	0.033 (0.050)	-0.066 (0.056)
Partisan Attachment	0.001*** (0.0004)	0.00001 (0.0004)	0.001* (0.0004)	0.0001 (0.0003)	-0.0001 (0.0004)
Partisan Alignment	0.067*** (0.023)	0.032 (0.021)	0.053** (0.021)	0.055*** (0.019)	0.013 (0.021)
Log(Pop. Density)	0.476 (0.477)	-0.688 (0.450)	-0.819* (0.446)	-0.581 (0.397)	-1.113** (0.440)
Log(Total Budget)	0.055*** (0.016)	-0.002 (0.015)	-0.016 (0.015)	0.008 (0.013)	-0.055*** (0.015)
Poverty	-0.003*** (0.001)	-0.004*** (0.001)	-0.006*** (0.001)	-0.004*** (0.001)	-0.003*** (0.001)
2009	-0.028 (0.039)	-0.144*** (0.037)	-0.131*** (0.036)	-0.212*** (0.032)	0.534*** (0.036)
2010	-0.024 (0.039)	-0.114*** (0.037)	-0.112*** (0.036)	-0.195*** (0.032)	0.543*** (0.036)
2011	-0.016 (0.038)	-0.417*** (0.036)	-0.108*** (0.036)	-0.126*** (0.032)	0.540*** (0.035)
2012	-0.069* (0.038)	-0.442*** (0.036)	-0.115*** (0.036)	-0.137*** (0.032)	0.528*** (0.035)
2013	-0.034 (0.037)	-0.110*** (0.035)	-0.037 (0.034)	-0.058* (0.031)	-0.037 (0.034)
2014	-0.004 (0.037)	-0.054 (0.035)	-0.023 (0.034)	-0.041 (0.030)	-0.084** (0.034)
2015	0.021 (0.037)	-0.003 (0.035)	0.025 (0.034)	0.005 (0.031)	-0.068** (0.034)
Constant	-0.855* (0.456)	0.532 (0.431)	1.218*** (0.427)	0.605 (0.379)	1.705*** (0.421)
N	7800	7800	7800	7800	7800
R-squared	0.006	0.076	0.015	0.033	0.057

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table A10. Instrumental Regression Models Predicting the Balance Between Expenditures in Training and Other Education Expenses

	Other Running Costs	Lunches	Improvement Plans	Free Schooling
I.V. ENP	-0.183* (0.094)	-0.341*** (0.095)	-0.247*** (0.083)	-0.589*** (0.105)
Margin of Victory	-0.004* (0.002)	-0.008*** (0.002)	-0.006*** (0.002)	-0.014*** (0.003)
Turnout	-0.275* (0.150)	-0.273* (0.151)	-0.195 (0.132)	-0.413** (0.167)
Rural	-0.102 (0.068)	-0.163** (0.068)	-0.191*** (0.059)	-0.337*** (0.076)
Departmental Capital	-0.209*** (0.052)	-0.164*** (0.052)	0.012 (0.045)	-0.088 (0.058)
Partisan Attachment	-0.001*** (0.0004)	-0.0005 (0.0004)	-0.001*** (0.0003)	-0.001*** (0.0004)
Partisan Alignment	-0.035* (0.019)	-0.014 (0.020)	-0.012 (0.017)	-0.054** (0.022)
Log(Pop. Density)	-1.164*** (0.409)	-1.295*** (0.413)	-1.057*** (0.359)	-1.589*** (0.457)
Log(Total Budget)	-0.056*** (0.014)	-0.071*** (0.014)	-0.047*** (0.012)	-0.110*** (0.016)
Poverty	-0.0005 (0.001)	-0.003*** (0.001)	-0.001* (0.0005)	0.0004 (0.001)
2009	-0.116*** (0.033)	-0.103*** (0.034)	-0.184*** (0.029)	0.562*** (0.037)
2010	-0.090*** (0.033)	-0.089*** (0.034)	-0.172*** (0.029)	0.566*** (0.037)
2011	-0.400*** (0.033)	-0.092*** (0.033)	-0.110*** (0.029)	0.556*** (0.037)
2012	-0.373*** (0.033)	-0.046 (0.033)	-0.068** (0.029)	0.597*** (0.036)
2013	-0.076** (0.031)	-0.003 (0.032)	-0.024 (0.028)	-0.003 (0.035)
2014	-0.051 (0.031)	-0.019 (0.032)	-0.037 (0.028)	-0.080** (0.035)
2015	-0.024 (0.032)	0.004 (0.032)	-0.016 (0.028)	-0.089** (0.035)
Constant	1.387*** (0.391)	2.072*** (0.395)	1.460*** (0.344)	2.559*** (0.437)
N	7800	7800	7800	7800
R-squared	0.011	-0.143	-0.097	-0.089

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table A11. Instrumental Regression Models Predicting the Balance Between Expenditures in Other Running Costs and Other Education Expenses

	Lunches	Improvement Plans	Free Schooling
I.V. ENP	-0.158* (0.086)	-0.064 (0.074)	-0.405*** (0.094)
Margin of Victory	-0.004* (0.002)	-0.002 (0.002)	-0.010*** (0.002)
Turnout	0.003 (0.137)	0.081 (0.118)	-0.137 (0.150)
Rural	-0.061 (0.062)	-0.089* (0.054)	-0.235*** (0.068)
Departmental Capital	0.045 (0.047)	0.221*** (0.041)	0.122** (0.052)
Partisan Attachment	0.001* (0.0003)	0.0001 (0.0003)	-0.0002 (0.0004)
Partisan Alignment	0.021 (0.018)	0.023 (0.015)	-0.019 (0.019)
Log(Pop. Density)	-0.131 (0.373)	0.107 (0.324)	-0.425 (0.409)
Log(Total Budget)	-0.015 (0.013)	0.009 (0.011)	-0.053*** (0.014)
Poverty	-0.003*** (0.001)	-0.0004 (0.0004)	0.001 (0.001)
2009	0.013 (0.030)	-0.067** (0.026)	0.678*** (0.033)
2010	0.001 (0.030)	-0.081*** (0.026)	0.656*** (0.033)
2011	0.308*** (0.030)	0.290*** (0.026)	0.956*** (0.033)
2012	0.327*** (0.030)	0.305*** (0.026)	0.969*** (0.033)
2013	0.073** (0.029)	0.052** (0.025)	0.073** (0.032)
2014	0.032 (0.029)	0.013 (0.025)	-0.029 (0.031)
2015	0.028 (0.029)	0.008 (0.025)	-0.065** (0.032)
Constant	0.686* (0.357)	0.073 (0.309)	1.173*** (0.391)
N	7800	7800	7800
R-squared	0.014	0.062	0.203

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table A12. Instrumental Regression Models Predicting the Balance Between Expenditures in Lunches and Other Education Expenses

	Improvement Plans	Free Schooling
I.V. ENP	0.094 (0.069)	-0.248*** (0.081)
Margin of Victory	0.002 (0.002)	-0.006*** (0.002)
Turnout	0.078 (0.110)	-0.140 (0.130)
Rural	-0.028 (0.050)	-0.174*** (0.058)
Departmental Capital	0.176*** (0.038)	0.077* (0.045)
Partisan Attachment	-0.001** (0.0003)	-0.001** (0.0003)
Partisan Alignment	0.002 (0.014)	-0.040** (0.017)
Log(Pop. Density)	0.238 (0.301)	-0.294 (0.354)
Log(Total Budget)	0.024** (0.010)	-0.039*** (0.012)
Poverty	0.002*** (0.0004)	0.003*** (0.0005)
2009	-0.081*** (0.025)	0.665*** (0.029)
2010	-0.083*** (0.025)	0.655*** (0.029)
2011	-0.018 (0.024)	0.648*** (0.028)
2012	-0.022 (0.024)	0.643*** (0.028)
2013	-0.021 (0.023)	0.0004 (0.027)
2014	-0.018 (0.023)	-0.061** (0.027)
2015	-0.020 (0.023)	-0.093*** (0.027)
Constant	-0.612** (0.288)	0.487 (0.338)
N	7800	7800
R-squared	-0.001	0.240

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table A13. Instrumental Regression Models Predicting the Balance Between Expenditures in Improvement Plans and Other Education Expenses

	<b>area11_38</b>
I.V. ENP	-0.342*** (0.074)
Margin of Victory	-0.008*** (0.002)
Turnout	-0.218* (0.118)
Rural	-0.146*** (0.053)
Departmental Capital	-0.099** (0.041)
Partisan Attachment	-0.0003 (0.0003)
Partisan Alignment	-0.042*** (0.015)
Log(Pop. Density)	-0.531* (0.322)
Log(Total Budget)	-0.062*** (0.011)
Poverty	0.001*** (0.0004)
2009	0.745*** (0.026)
2010	0.738*** (0.026)
2011	0.666*** (0.026)
2012	0.665*** (0.026)
2013	0.021 (0.025)
2014	-0.043* (0.025)
2015	-0.073*** (0.025)
Constant	1.099*** (0.308)
N	7800
R-squared	0.257

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

## Appendix B for Chapter 4

Table B1. Instrumental Variable Probit Models Predicting Whether Local Governments Spend Any Discretionary Funds in Each Type of Goods in Education

	Durable	Invisible	Targeted	Collective
I.V. ENP	-0.101 (0.288)	1.050** (0.134)	-1.102*** (0.118)	-0.720** (0.203)
Margin of Victory	0.001 (0.007)	0.025*** (0.004)	-0.022*** (0.004)	-0.014** (0.005)
Turnout	0.385 (0.426)	1.164** (0.365)	-0.263 (0.432)	-0.943** (0.359)
Rural	0.281 (0.210)	0.291 (0.193)	-0.014 (0.226)	-0.406* (0.177)
Departmental Capital	0.107 (0.141)	0.356 (0.185)	-0.037 (0.176)	-0.172 (0.195)
Log(Total Budget)	0.614*** (0.062)	0.160** (0.054)	0.237*** (0.039)	0.368*** (0.050)
Partisan Attachment	-0.001 (0.001)	0.004*** (0.001)	-0.002* (0.001)	-0.001 (0.001)
Partisan Alignment	-0.039 (0.061)	0.096 (0.056)	-0.116* (0.053)	-0.131* (0.055)
Log(Pop. Density)	-0.108 (1.155)	4.159*** (0.841)	-2.177* (0.923)	2.191 (1.472)
Poverty	-0.005*** (0.002)	0.003* (0.002)	-0.014*** (0.002)	-0.008*** (0.002)
2009	-1.498*** (0.092)	0.291*** (0.066)	0.001 (0.061)	-0.098 (0.085)
2010	0.174* (0.070)	0.083 (0.063)	0.098 (0.064)	-0.309*** (0.081)
2011	0.317*** (0.073)	-0.197* (0.086)	0.168* (0.080)	-0.183* (0.092)
2012	0.048 (0.060)	-0.294*** (0.078)	0.314*** (0.080)	-0.205* (0.091)
2013	-0.053 (0.057)	-0.413*** (0.088)	0.362*** (0.085)	-0.210* (0.094)
2014	-0.056 (0.054)	-0.429*** (0.090)	0.388*** (0.089)	-0.211* (0.094)
2015	0.000 (.)	-0.408*** (0.089)	0.398*** (0.093)	-0.278** (0.097)
Constant	-5.592*** (1.119)	-6.680*** (0.415)	1.708 (0.959)	0.986 (1.003)
<hr/>				
athrho				
Constant	0.058 (0.204)	-0.956*** (0.207)	1.068*** (0.211)	0.563** (0.193)
<hr/>				
Insigma				
Constant	-0.356*** (0.026)	-0.351*** (0.026)	-0.351*** (0.026)	-0.351*** (0.026)
<hr/>				
Observations	5804	6292	6292	6292

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table B2. Instrumental Variable Probit Models Predicting Whether Local Governments Spend Any Discretionary Funds in Each Type of Goods in Health

	Durable	Invisible	Targeted	Collective
I.V. ENP	0.923*** (0.201)	0.171 (0.320)	0.928*** (0.172)	0.277 (0.317)
Margin of Victory	0.022*** (0.005)	0.004 (0.008)	0.023*** (0.004)	0.009 (0.008)
Turnout	1.071* (0.478)	2.260*** (0.484)	1.422*** (0.338)	0.908 (0.477)
Rural	0.461 (0.242)	0.255 (0.246)	0.649*** (0.159)	-0.186 (0.256)
Departmental Capital	0.114 (0.208)	0.223 (0.157)	0.185 (0.158)	0.489** (0.171)
Log(Total Budget)	0.142* (0.062)	0.126** (0.039)	0.033 (0.039)	0.279*** (0.055)
Partisan Attachment	0.002 (0.001)	0.001 (0.001)	0.002* (0.001)	0.001 (0.001)
Partisan Alignment	0.115 (0.067)	-0.036 (0.058)	0.078 (0.055)	0.009 (0.058)
Log(Pop. Density)	1.818 (1.170)	0.355 (1.354)	2.942* (1.215)	0.536 (1.324)
Poverty	0.004 (0.002)	-0.002 (0.002)	0.001 (0.002)	-0.004* (0.002)
2009	0.133 (0.121)	0.091 (0.071)	0.088 (0.059)	0.225** (0.072)
2010	0.254* (0.112)	0.347*** (0.071)	0.278*** (0.060)	0.250*** (0.069)
2011	0.314** (0.113)	-0.106 (0.076)	0.427*** (0.068)	0.509*** (0.075)
2012	0.016 (0.119)	-0.244*** (0.073)	0.295*** (0.085)	0.342*** (0.080)
2013	0.290* (0.125)	-0.520*** (0.076)	0.105 (0.075)	0.403*** (0.081)
2014	0.115 (0.119)	-0.466*** (0.077)	0.001 (0.072)	0.463*** (0.086)
2015	0.345** (0.131)	-0.458*** (0.078)	-0.250*** (0.074)	0.495*** (0.085)
Constant	-6.926*** (0.547)	-3.450** (1.298)	-4.686*** (0.675)	-3.852** (1.182)
athrho				
Constant	-0.863*** (0.257)	-0.073 (0.231)	-0.754*** (0.211)	-0.223 (0.235)
Insigma				
Constant	-0.342*** (0.028)	-0.342*** (0.028)	-0.342*** (0.028)	-0.342*** (0.028)
Observations	6370	6370	6370	6370

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table B3. Instrumental Variable Probit Models Predicting Whether Local Governments Spend Any Discretionary Funds in Each Type of Goods in Water supply

	Durable	Invisible	Targeted	Collective
I.V. ENP	0.054 (0.245)	0.043 (0.253)	0.338 (0.269)	-0.725*** (0.181)
Margin of Victory	0.003 (0.006)	-0.004 (0.007)	0.010 (0.007)	-0.017*** (0.005)
Turnout	1.223** (0.383)	1.653*** (0.501)	1.270* (0.506)	-0.831* (0.392)
Rural	0.346 (0.193)	0.051 (0.208)	-0.695** (0.256)	-0.058 (0.185)
Departmental Capital	-0.094 (0.146)	0.242 (0.136)	-0.359* (0.146)	-0.007 (0.168)
Log(Total Budget)	0.323*** (0.053)	0.294*** (0.040)	0.310*** (0.053)	0.264*** (0.038)
Partisan Attachment	-0.001 (0.001)	0.001 (0.001)	0.001 (0.001)	-0.000 (0.001)
Partisan Alignment	-0.016 (0.058)	-0.025 (0.069)	0.064 (0.068)	-0.129* (0.058)
Log(Pop. Density)	-1.213 (1.069)	-0.223 (1.264)	0.769 (1.249)	-2.984** (0.993)
Poverty	-0.005** (0.002)	0.000 (0.002)	-0.008*** (0.002)	-0.010*** (0.002)
2009	0.006 (0.094)	-0.127 (0.108)	0.045 (0.104)	0.052 (0.091)
2010	0.006 (0.090)	0.313** (0.102)	0.088 (0.101)	0.028 (0.090)
2011	0.430*** (0.102)	-0.546*** (0.112)	0.392*** (0.098)	-0.175* (0.089)
2012	-1.622*** (0.093)	-0.208 (0.107)	0.396*** (0.103)	1.416*** (0.147)
2013	-1.669*** (0.097)	-0.259* (0.113)	0.311** (0.106)	1.526*** (0.154)
2014	-1.683*** (0.098)	-0.188 (0.108)	0.270** (0.104)	1.554*** (0.158)
2015	-1.712*** (0.097)	-0.186 (0.111)	0.329** (0.103)	1.729*** (0.172)
Constant	-3.172** (0.980)	-5.092*** (1.131)	-5.437*** (1.116)	-0.034 (1.067)
athrho				
Constant	-0.044 (0.179)	-0.021 (0.185)	-0.201 (0.203)	0.564** (0.179)
Insigma				
Constant	-0.325*** (0.026)	-0.325*** (0.026)	-0.325*** (0.026)	-0.325*** (0.026)
Observations	5293	5293	5293	5293

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$



Table B4. Instrumental Variable Probit Models Predicting Whether Local Governments Spend Any Discretionary Funds in Each Type of Goods in Sports

	Durable	Invisible	Collective
I.V. ENP	0.444 (0.269)	0.092 (0.462)	-0.380 (0.267)
Margin of Victory	0.011 (0.007)	0.001 (0.012)	-0.007 (0.007)
Turnout	0.507 (0.406)	-0.032 (0.850)	-1.205** (0.408)
Rural	0.338 (0.214)	-0.079 (0.371)	-0.376 (0.204)
Departmental Capital	-0.182 (0.149)	0.355* (0.169)	-0.283 (0.183)
Log(Total Budget)	0.272*** (0.058)	0.182*** (0.051)	0.183*** (0.043)
Partisan Attachment	0.001 (0.001)	0.003 (0.002)	-0.000 (0.001)
Partisan Alignment	0.024 (0.056)	0.110 (0.095)	-0.010 (0.060)
Log(Pop. Density)	0.309 (1.135)	1.603 (1.438)	-0.694 (1.314)
Poverty	-0.006*** (0.002)	0.000 (0.003)	-0.011*** (0.002)
2009	0.184* (0.075)	-0.060 (0.136)	0.163 (0.088)
2010	0.078 (0.074)	0.438*** (0.117)	0.058 (0.083)
2011	0.278*** (0.081)	-0.576*** (0.150)	0.102 (0.090)
2012	-0.003 (0.080)	-0.676*** (0.163)	0.219** (0.083)
2013	0.078 (0.080)	-0.866*** (0.178)	0.466*** (0.088)
2014	0.101 (0.080)	-0.783*** (0.163)	0.361*** (0.087)
2015	0.272** (0.084)	-1.033*** (0.194)	0.458*** (0.091)
Constant	-4.043*** (0.988)	-3.772* (1.907)	1.387 (1.132)
athrho			
Constant	-0.331 (0.216)	-0.072 (0.333)	0.253 (0.207)
Insigma			
Constant	-0.336*** (0.027)	-0.336*** (0.027)	-0.336*** (0.027)
Observations	5848	5848	5848

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table B5. Instrumental Variable Probit Models Predicting Whether Local Governments Spend Any Discretionary Funds in Each Type of Goods in Culture

	Durable	Invisible	Targeted	Collective
I.V. ENP	0.448 (0.271)	0.182 (0.472)	-0.123 (0.328)	-0.244 (0.261)
Margin of Victory	0.014* (0.007)	0.003 (0.012)	0.002 (0.008)	-0.006 (0.007)
Turnout	0.518 (0.443)	-0.050 (0.883)	0.089 (0.501)	-0.489 (0.430)
Rural	0.214 (0.218)	0.001 (0.375)	0.284 (0.238)	-0.150 (0.201)
Departmental Capital	-0.169 (0.149)	0.114 (0.174)	-0.187 (0.174)	-0.211 (0.160)
Log(Total Budget)	0.227*** (0.053)	0.246*** (0.053)	0.198*** (0.058)	0.216*** (0.037)
Partisan Attachment	0.001 (0.001)	0.004* (0.002)	-0.001 (0.001)	0.001 (0.001)
Partisan Alignment	-0.041 (0.062)	0.175 (0.100)	-0.052 (0.064)	-0.091 (0.055)
Log(Pop. Density)	2.350 (1.207)	0.464 (1.798)	0.721 (1.521)	0.540 (1.183)
Poverty	-0.002 (0.002)	-0.000 (0.003)	-0.008*** (0.002)	-0.009*** (0.002)
2009	0.182* (0.082)	-0.283 (0.153)	0.036 (0.083)	0.324*** (0.077)
2010	0.138 (0.078)	0.439*** (0.116)	0.074 (0.090)	0.123 (0.072)
2011	0.314*** (0.080)	-0.865*** (0.183)	0.069 (0.093)	0.239** (0.079)
2012	0.233* (0.095)	-0.537*** (0.158)	0.153 (0.093)	0.341*** (0.076)
2013	0.294** (0.093)	-0.793*** (0.171)	0.309*** (0.092)	0.451*** (0.077)
2014	0.256** (0.091)	-0.712*** (0.171)	0.276** (0.094)	0.354*** (0.076)
2015	0.308*** (0.094)	-0.744*** (0.171)	0.411*** (0.099)	0.479*** (0.078)
Constant	-4.849*** (0.921)	-4.771* (1.943)	-0.460 (1.294)	-0.764 (1.146)
athrho				
Constant	-0.343 (0.219)	-0.068 (0.341)	0.091 (0.238)	0.239 (0.197)
Insigma				
Constant	-0.337*** (0.027)	-0.337*** (0.027)	-0.337*** (0.027)	-0.337*** (0.027)
Observations	6245	6245	6245	6245

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table B6. Instrumental Variable Probit Models Predicting Whether Local Governments Spend Any Discretionary Funds in Each Type of Goods in Other Public Utilities

	Durable	Invisible	Targeted	Collective
I.V. ENP	-0.921*** (0.201)	0.340 (0.422)	-0.945*** (0.179)	0.928*** (0.207)
Margin of Victory	-0.020*** (0.006)	0.002 (0.012)	-0.025*** (0.005)	0.023*** (0.005)
Turnout	-1.603*** (0.361)	0.548 (0.756)	-0.747 (0.479)	1.913*** (0.367)
Rural	-0.078 (0.248)	-0.086 (0.348)	-0.466* (0.220)	1.074*** (0.170)
Departmental Capital	-0.228 (0.192)	-0.107 (0.291)	0.090 (0.204)	0.000 (0.196)
Log(Total Budget)	0.159*** (0.041)	0.122* (0.061)	0.182*** (0.040)	0.011 (0.046)
Partisan Attachment	-0.004*** (0.001)	0.005*** (0.002)	-0.002 (0.001)	0.004*** (0.001)
Partisan Alignment	-0.136* (0.059)	0.203* (0.100)	-0.022 (0.076)	0.071 (0.064)
Log(Pop. Density)	-3.390** (1.106)	-0.866 (2.451)	-3.195** (1.213)	5.198*** (1.305)
Poverty	-0.004* (0.002)	0.010*** (0.003)	-0.002 (0.002)	0.000 (0.002)
2009	0.123 (0.079)	0.168 (0.168)	0.019 (0.097)	-0.055 (0.073)
2010	0.100 (0.076)	0.695*** (0.155)	0.034 (0.097)	-0.094 (0.079)
2011	0.319** (0.106)	-0.219 (0.169)	0.175 (0.106)	0.131 (0.072)
2012	0.389*** (0.092)	-0.498** (0.187)	0.166 (0.104)	0.025 (0.082)
2013	0.427*** (0.097)	-0.703*** (0.200)	0.348** (0.107)	0.083 (0.085)
2014	0.378*** (0.094)	-0.648*** (0.189)	0.128 (0.105)	0.151 (0.089)
2015	0.355*** (0.093)	-0.675*** (0.180)	0.326** (0.108)	0.149 (0.089)
Constant	3.274*** (0.935)	-5.030** (1.545)	1.090 (1.228)	-5.721*** (0.665)
athrho				
Constant	0.731** (0.240)	-0.257 (0.323)	0.897*** (0.245)	-0.764** (0.255)
Insigma				
Constant	-0.343*** (0.029)	-0.343*** (0.029)	-0.343*** (0.029)	-0.343*** (0.029)
Observations	5940	5940	5940	5940

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table B7. Instrumental Variable Probit Models Predicting Whether Local Governments Spend Any Discretionary Funds in Each Type of Goods in Housing

	Durable	Invisible	Targeted
I.V. ENP	-0.587** (0.210)	0.250 (0.340)	-0.415 (0.231)
Margin of Victory	-0.015** (0.005)	0.006 (0.009)	-0.008 (0.006)
Turnout	-1.564*** (0.312)	0.172 (0.554)	-1.212** (0.369)
Rural	-0.077 (0.209)	0.096 (0.314)	0.492* (0.222)
Departmental Capital	-0.226 (0.157)	0.152 (0.214)	0.081 (0.154)
Log(Total Budget)	0.157*** (0.036)	0.105* (0.049)	0.251*** (0.047)
Partisan Attachment	-0.001 (0.001)	0.001 (0.001)	-0.002 (0.001)
Partisan Alignment	-0.081 (0.052)	0.124 (0.083)	-0.037 (0.055)
Log(Pop. Density)	-2.741* (1.159)	-1.157 (1.792)	-1.277 (1.202)
Poverty	-0.005** (0.001)	0.001 (0.003)	-0.012*** (0.001)
2009	0.206* (0.093)	-0.060 (0.118)	0.239** (0.084)
2010	0.198* (0.090)	0.638*** (0.110)	0.096 (0.080)
2011	0.409*** (0.093)	-0.678*** (0.133)	0.511*** (0.093)
2012	0.358*** (0.088)	-0.731*** (0.144)	0.246** (0.084)
2013	0.568*** (0.091)	-0.738*** (0.141)	0.479*** (0.089)
2014	0.390*** (0.089)	-0.842*** (0.145)	0.247** (0.086)
2015	0.477*** (0.092)	-0.892*** (0.153)	0.396*** (0.089)
Constant	0.755 (0.977)	-3.508* (1.376)	0.477 (0.999)
athrho			
Constant	0.448* (0.180)	-0.127 (0.246)	0.284 (0.179)
Insigma			
Constant	-0.349*** (0.025)	-0.349*** (0.025)	-0.349*** (0.025)
Observations	6476	6476	6476

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table B8. Instrumental Variable Probit Models Predicting Whether Local Governments Spend Any Discretionary Funds in Each Type of Goods in Agriculture

	Durable	Invisible	Targeted	Collective
I.V. ENP	-0.418 (0.273)	0.837*** (0.211)	-0.116 (0.307)	-0.462 (0.298)
Margin of Victory	-0.007 (0.007)	0.018** (0.006)	-0.000 (0.008)	-0.009 (0.008)
Turnout	0.629 (0.541)	1.502** (0.510)	0.037 (0.516)	-0.828 (0.540)
Rural	0.122 (0.238)	0.414 (0.246)	0.206 (0.250)	-0.104 (0.241)
Departmental Capital	0.218 (0.187)	0.271 (0.191)	-0.265 (0.210)	-0.607** (0.227)
Log(Total Budget)	0.229*** (0.038)	0.068 (0.053)	0.148* (0.060)	0.190*** (0.043)
Partisan Attachment	0.001 (0.001)	0.004** (0.001)	-0.001 (0.001)	0.000 (0.001)
Partisan Alignment	-0.005 (0.071)	0.131 (0.073)	-0.054 (0.073)	-0.130 (0.072)
Log(Pop. Density)	-0.209 (1.491)	3.329* (1.593)	-1.366 (1.788)	-0.920 (1.620)
Poverty	-0.000 (0.002)	0.008*** (0.002)	-0.008*** (0.002)	-0.003 (0.002)
2009	0.057 (0.110)	0.190 (0.119)	0.230* (0.096)	-0.148 (0.112)
2010	-0.165 (0.106)	0.787*** (0.136)	0.139 (0.094)	-0.065 (0.109)
2011	0.017 (0.099)	-0.376* (0.149)	0.991*** (0.118)	0.186 (0.111)
2012	0.011 (0.098)	-0.303* (0.136)	1.105*** (0.113)	0.136 (0.102)
2013	0.126 (0.096)	-0.558*** (0.158)	1.170*** (0.121)	0.150 (0.102)
2014	-0.146 (0.102)	-0.485** (0.148)	1.034*** (0.115)	0.105 (0.105)
2015	-0.143 (0.103)	-0.654*** (0.167)	1.164*** (0.122)	0.058 (0.107)
Constant	-2.528 (1.434)	-6.476*** (0.671)	0.073 (1.265)	-0.826 (1.469)
athrho				
Constant	0.323 (0.213)	-0.663** (0.222)	0.101 (0.218)	0.302 (0.231)
Insigma				
Constant	-0.352*** (0.026)	-0.352*** (0.026)	-0.352*** (0.026)	-0.352*** (0.026)
Observations	6442	6442	6442	6442

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table B9. Instrumental Variable Probit Models Predicting Whether Local Governments Spend Any Discretionary Funds in Each Type of Goods in Transportation

	Durable	Invisible	Collective
I.V. ENP	-0.548 (0.337)	0.525 (0.303)	0.855*** (0.179)
Margin of Victory	-0.016 (0.009)	0.010 (0.008)	0.023*** (0.004)
Turnout	-1.116* (0.503)	1.227* (0.505)	0.629 (0.400)
Rural	0.496 (0.309)	-0.019 (0.278)	0.692*** (0.151)
Departmental Capital	-0.175 (0.205)	0.528*** (0.159)	0.325 (0.169)
Log(Total Budget)	0.375*** (0.073)	0.114* (0.050)	0.189*** (0.049)
Partisan Attachment	-0.002 (0.001)	0.003** (0.001)	0.003** (0.001)
Partisan Alignment	-0.051 (0.076)	0.105 (0.066)	0.144** (0.051)
Log(Pop. Density)	-0.740 (2.061)	1.724 (1.587)	2.142* (0.985)
Poverty	-0.013*** (0.002)	0.006** (0.002)	-0.006** (0.002)
2009	0.005 (0.095)	-0.163 (0.090)	0.394*** (0.074)
2010	0.377** (0.127)	0.534*** (0.075)	0.292*** (0.071)
2011	0.940*** (0.207)	-0.696*** (0.131)	0.458*** (0.073)
2012	0.943*** (0.180)	-0.752*** (0.114)	0.345*** (0.088)
2013	0.921*** (0.178)	-0.824*** (0.125)	0.536*** (0.098)
2014	0.815*** (0.167)	-0.920*** (0.128)	0.479*** (0.094)
2015	0.954*** (0.194)	-0.931*** (0.126)	0.378*** (0.090)
Constant	0.627 (1.436)	-4.986*** (1.093)	-6.136*** (0.559)
athrho			
Constant	0.397 (0.276)	-0.364 (0.248)	-0.667*** (0.195)
Insigma			
Constant	-0.343*** (0.024)	-0.343*** (0.024)	-0.343*** (0.024)
Observations	7235	7235	7235

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table B10. Instrumental Variable Probit Models Predicting Whether Local Governments Spend Any Discretionary Funds in Each Type of Goods in Environment Protection

	Invisible	Targeted	Collective
I.V. ENP	0.819** (0.263)	0.486 (0.249)	0.655** (0.217)
Margin of Victory	0.020** (0.007)	0.008 (0.007)	0.016** (0.005)
Turnout	0.932 (0.578)	-0.872 (0.632)	0.167 (0.421)
Rural	0.631* (0.252)	0.544* (0.275)	0.490** (0.173)
Departmental Capital	0.015 (0.218)	0.220 (0.213)	0.326 (0.208)
Log(Total Budget)	0.085 (0.054)	0.144* (0.062)	0.148* (0.058)
Partisan Attachment	0.006*** (0.001)	0.004** (0.001)	0.002* (0.001)
Partisan Alignment	0.258*** (0.076)	0.093 (0.090)	0.066 (0.057)
Log(Pop. Density)	3.621* (1.602)	3.432** (1.120)	2.403* (1.146)
Poverty	0.003 (0.003)	-0.004 (0.003)	-0.003 (0.002)
2009	0.173 (0.114)	0.086 (0.138)	0.205* (0.081)
2010	0.625*** (0.123)	0.014 (0.131)	0.120 (0.079)
2011	-0.465** (0.160)	0.044 (0.127)	0.583*** (0.089)
2012	-0.355** (0.130)	-0.134 (0.140)	0.231** (0.088)
2013	-0.622*** (0.153)	-0.216 (0.148)	0.471*** (0.099)
2014	-0.800*** (0.205)	-0.259 (0.147)	0.393*** (0.094)
2015	-0.744*** (0.191)	-0.235 (0.144)	0.463*** (0.098)
Constant	-6.390*** (0.853)	-4.343*** (1.060)	-3.352*** (0.864)
athrho			
Constant	-0.603* (0.267)	-0.375 (0.202)	-0.525** (0.199)
Insigma			
Constant	-0.348*** (0.025)	-0.348*** (0.025)	-0.348*** (0.025)
Observations	6248	6248	6248

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table B11. Instrumental Variable Probit Models Predicting Whether Local Governments Spend Any Discretionary Funds in Each Type of Goods in Jails

	Durable	Invisible	Collective
I.V. ENP	0.635* (0.306)	-0.826* (0.363)	0.802*** (0.232)
Margin of Victory	0.018* (0.008)	-0.024** (0.008)	0.021*** (0.006)
Turnout	-0.123 (0.652)	-1.856* (0.840)	-1.547* (0.776)
Rural	0.189 (0.388)	-0.898* (0.404)	0.481 (0.298)
Departmental Capital	0.201 (0.212)	-0.073 (0.315)	-0.062 (0.193)
Log(Total Budget)	0.072 (0.071)	0.168 (0.091)	0.045 (0.061)
Partisan Attachment	0.002 (0.002)	0.002 (0.003)	0.001 (0.002)
Partisan Alignment	0.098 (0.104)	-0.083 (0.195)	0.082 (0.087)
Log(Pop. Density)	2.634 (1.610)	-3.091 (1.896)	2.778 (1.614)
Poverty	0.002 (0.003)	-0.004 (0.005)	-0.000 (0.003)
2009	0.111 (0.152)	-0.184 (0.258)	-0.031 (0.136)
2010	-0.240 (0.166)	0.347 (0.269)	-0.158 (0.151)
2011	-0.129 (0.162)	-0.615* (0.261)	-0.246 (0.151)
2012	-0.244 (0.153)	-0.463 (0.325)	-0.285* (0.140)
2013	-0.139 (0.154)	-0.428 (0.306)	-0.237 (0.140)
2014	-0.118 (0.150)	-0.643 (0.340)	-0.196 (0.138)
2015	-0.021 (0.154)	-0.531 (0.321)	-0.050 (0.137)
Constant	-3.980** (1.384)	1.345 (2.503)	-2.327 (1.368)
athrho			
Constant	-0.508 (0.289)	0.730 (0.439)	-0.640* (0.256)
Insigma			
Constant	-0.309*** (0.046)	-0.309*** (0.046)	-0.309*** (0.046)
Observations	2763	2763	2763

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$



Table B12. Instrumental Variable Probit Models Predicting Whether Local Governments Spend Any Discretionary Funds in Each Type of Goods in Disaster Prevention

	Durable	Invisible	Targeted	Collective
I.V. ENP	0.344 (0.299)	0.920*** (0.163)	0.714*** (0.196)	0.526* (0.225)
Margin of Victory	0.006 (0.008)	0.018*** (0.005)	0.017** (0.005)	0.014* (0.006)
Turnout	-0.243 (0.490)	0.592 (0.495)	-0.507 (0.468)	0.133 (0.388)
Rural	-0.257 (0.253)	0.404* (0.193)	0.562*** (0.163)	0.414* (0.185)
Departmental Capital	-0.046 (0.201)	0.338 (0.194)	0.133 (0.158)	-0.070 (0.186)
Log(Total Budget)	0.144** (0.046)	0.108* (0.055)	0.075 (0.045)	0.072 (0.043)
Partisan Attachment	0.002 (0.001)	0.005*** (0.001)	0.002 (0.001)	0.003** (0.001)
Partisan Alignment	0.027 (0.066)	0.150 (0.081)	0.088 (0.054)	0.109 (0.056)
Log(Pop. Density)	3.239* (1.283)	2.892* (1.339)	1.695 (1.010)	0.721 (1.546)
Poverty	0.003 (0.002)	0.002 (0.002)	0.001 (0.002)	-0.006** (0.002)
2009	0.317** (0.118)	0.016 (0.126)	0.184* (0.082)	0.177* (0.087)
2010	0.373** (0.114)	0.464*** (0.121)	0.214** (0.078)	0.071 (0.083)
2011	0.403*** (0.110)	-0.581*** (0.167)	0.702*** (0.093)	0.326*** (0.080)
2012	0.663*** (0.118)	-0.089 (0.124)	0.146 (0.086)	0.440*** (0.093)
2013	0.592*** (0.117)	-0.057 (0.123)	0.108 (0.082)	0.560*** (0.095)
2014	0.558*** (0.121)	-0.068 (0.124)	0.107 (0.085)	0.620*** (0.098)
2015	0.611*** (0.118)	-0.129 (0.126)	0.118 (0.085)	0.633*** (0.098)
Constant	-3.774** (1.166)	-6.318*** (0.585)	-3.063*** (0.822)	-2.927** (0.922)
athrho				
Constant	-0.242 (0.226)	-0.735*** (0.192)	-0.582** (0.191)	-0.415* (0.189)
Insigma				
Constant	-0.341*** (0.025)	-0.341*** (0.025)	-0.341*** (0.025)	-0.341*** (0.025)
Observations	6171	6171	6171	6171

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table B13. Instrumental Variable Probit Models Predicting Whether Local Governments Spend Any Discretionary Funds in Each Type of Goods in Economic Development

	Durable	Invisible	Targeted	Collective
I.V. ENP	0.496 (0.337)	0.689** (0.229)	0.752*** (0.200)	-0.307 (0.261)
Margin of Victory	0.009 (0.009)	0.018** (0.007)	0.019*** (0.005)	-0.006 (0.007)
Turnout	0.265 (0.565)	1.297* (0.559)	0.268 (0.412)	-0.716 (0.439)
Rural	0.512 (0.269)	0.120 (0.283)	-0.023 (0.226)	0.448 (0.249)
Departmental Capital	0.352 (0.180)	0.411* (0.180)	0.320* (0.157)	0.395* (0.175)
Log(Total Budget)	0.144* (0.065)	0.140* (0.063)	0.099 (0.054)	0.272*** (0.042)
Partisan Attachment	0.000 (0.002)	0.004* (0.002)	0.002 (0.001)	0.001 (0.001)
Partisan Alignment	0.061 (0.088)	0.100 (0.097)	0.044 (0.061)	-0.001 (0.066)
Log(Pop. Density)	0.967 (1.591)	3.317* (1.500)	3.402* (1.330)	-0.923 (1.283)
Poverty	-0.006 (0.003)	0.008** (0.003)	-0.001 (0.002)	-0.021*** (0.002)
2009	0.107 (0.128)	0.060 (0.160)	-0.049 (0.088)	0.390*** (0.105)
2010	0.130 (0.128)	0.724*** (0.148)	-0.036 (0.088)	0.339** (0.104)
2011	0.117 (0.120)	-0.567** (0.193)	0.032 (0.083)	0.269** (0.100)
2012	0.023 (0.126)	-0.335* (0.168)	-0.079 (0.087)	0.403*** (0.101)
2013	-0.007 (0.131)	-0.517** (0.189)	-0.096 (0.089)	0.573*** (0.101)
2014	-0.144 (0.130)	-0.665** (0.208)	-0.205* (0.089)	0.702*** (0.103)
2015	0.004 (0.130)	-0.624** (0.199)	-0.194* (0.088)	0.649*** (0.104)
Constant	-4.479*** (1.130)	-6.727*** (0.853)	-3.317*** (0.807)	-1.258 (1.187)
athrho				
Constant	-0.394 (0.288)	-0.432* (0.201)	-0.646** (0.209)	0.254 (0.202)
Insigma				
Constant	-0.328*** (0.028)	-0.328*** (0.028)	-0.328*** (0.028)	-0.328*** (0.028)
Observations	5102	5102	5102	5102

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table B14. Instrumental Variable Probit Models Predicting Whether Local Governments Spend Any Discretionary Funds in Each Type of Goods in Vulnerable Groups

	Durable	Invisible	Targeted	Collective
I.V. ENP	0.848*** (0.153)	-0.649 (0.384)	-0.352 (0.361)	0.243 (0.357)
Margin of Victory	0.019*** (0.004)	-0.017 (0.010)	-0.009 (0.009)	0.010 (0.009)
Turnout	0.701 (0.358)	-2.339*** (0.613)	-0.685 (0.577)	0.035 (0.777)
Rural	0.467*** (0.140)	-0.949*** (0.274)	-0.125 (0.279)	-0.456 (0.338)
Departmental Capital	-0.042 (0.146)	0.175 (0.217)	-0.166 (0.236)	0.012 (0.230)
Log(Total Budget)	0.109* (0.047)	0.218*** (0.055)	0.281*** (0.064)	-0.078 (0.099)
Partisan Attachment	0.002* (0.001)	-0.003 (0.002)	0.001 (0.001)	0.002 (0.002)
Partisan Alignment	0.042 (0.052)	0.066 (0.120)	-0.081 (0.079)	0.043 (0.136)
Log(Pop. Density)	2.125 (1.131)	-1.502 (1.767)	0.074 (1.827)	-1.668 (2.565)
Poverty	0.006*** (0.001)	0.006 (0.004)	-0.010*** (0.002)	0.010*** (0.002)
2009	0.356*** (0.061)	-0.336* (0.171)	-0.004 (0.092)	0.000 (.)
2010	-0.103 (0.062)	-0.275 (0.155)	0.002 (0.098)	0.000 (.)
2011	-0.143* (0.066)	-0.114 (0.140)	1.445*** (0.272)	0.000 (.)
2012	-0.408*** (0.058)	0.152 (0.124)	0.996*** (0.164)	4.255 (.)
2013	0.005 (0.041)	0.167 (0.115)	1.265*** (0.199)	4.597 (.)
2014	-0.216*** (0.045)	-0.031 (0.104)	1.705*** (0.320)	4.893 (.)
2015	0.000 (.)	0.000 (.)	1.236*** (0.204)	5.310 (.)
Constant	-4.796*** (0.590)	-0.130 (2.093)	0.750 (1.513)	-6.948*** (1.436)
athrho				
Constant	-0.697*** (0.169)	0.465 (0.343)	0.251 (0.275)	-0.184 (0.260)
Insigma				
Constant	-0.340*** (0.027)	-0.340*** (0.027)	-0.339*** (0.027)	-0.351*** (0.034)
Observations	6665	6665	7229	4436

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table B15. Instrumental Variable Probit Models Predicting Whether Local Governments Spend Any Discretionary Funds in Each Type of Goods in Equipment

	Durable	Invisible
I.V. ENP	-0.329 (0.291)	0.634* (0.255)
Margin of Victory	-0.007 (0.008)	0.014* (0.007)
Turnout	-0.953* (0.481)	1.192* (0.521)
Rural	-0.412* (0.206)	0.102 (0.253)
Departmental Capital	-0.001 (0.186)	0.276 (0.181)
Log(Total Budget)	0.164* (0.065)	0.064 (0.045)
Partisan Attachment	-0.001 (0.001)	0.006*** (0.001)
Partisan Alignment	-0.138* (0.068)	0.110 (0.076)
Log(Pop. Density)	0.534 (1.775)	2.778 (1.482)
Poverty	-0.006** (0.002)	0.007*** (0.002)
2009	0.197 (0.102)	0.052 (0.104)
2010	0.251* (0.103)	0.624*** (0.099)
2011	0.747*** (0.135)	-0.482*** (0.135)
2012	0.844*** (0.122)	-0.582*** (0.131)
2013	0.768*** (0.117)	-0.755*** (0.147)
2014	0.726*** (0.115)	-0.920*** (0.163)
2015	0.693*** (0.119)	-0.920*** (0.161)
Constant	1.685 (1.236)	-5.399*** (0.943)
athrho		
Constant	0.254 (0.221)	-0.445* (0.225)
Insigma		
Constant	-0.335*** (0.026)	-0.335*** (0.026)
Observations	6659	6659

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table B16. Instrumental Variable Probit Models Predicting Whether Local Governments Spend Any Discretionary Funds in Each Type of Goods in Civic Capacity

	Invisible	Targeted	Collective
I.V. ENP	0.368 (0.288)	0.665** (0.208)	0.021 (0.253)
Margin of Victory	0.006 (0.008)	0.017** (0.005)	0.001 (0.007)
Turnout	0.062 (0.700)	-0.682 (0.514)	-0.769 (0.470)
Rural	0.098 (0.285)	0.381 (0.196)	-0.061 (0.226)
Departmental Capital	0.217 (0.181)	0.123 (0.137)	-0.151 (0.170)
Log(Total Budget)	0.145** (0.053)	0.089 (0.054)	0.165*** (0.045)
Partisan Attachment	0.003 (0.002)	0.002* (0.001)	0.002 (0.001)
Partisan Alignment	0.225* (0.101)	0.079 (0.064)	0.007 (0.074)
Log(Pop. Density)	2.010 (1.331)	1.601 (1.245)	-1.347 (1.244)
Poverty	0.007* (0.003)	-0.002 (0.002)	-0.001 (0.002)
2009	-0.130 (0.179)	0.261* (0.105)	0.001 (0.129)
2010	0.390** (0.151)	0.013 (0.101)	0.221 (0.125)
2011	-0.655*** (0.190)	0.055 (0.097)	0.225 (0.116)
2012	-0.675*** (0.189)	0.157 (0.100)	0.276* (0.121)
2013	-0.540** (0.171)	0.142 (0.099)	0.133 (0.126)
2014	-0.684*** (0.186)	0.046 (0.098)	0.246* (0.122)
2015	-0.781*** (0.198)	0.075 (0.100)	0.178 (0.124)
Constant	-4.855*** (1.192)	-2.208* (1.006)	-2.339* (1.130)
athrho			
Constant	-0.251 (0.229)	-0.573** (0.201)	-0.012 (0.184)
Insigma			
Constant	-0.327*** (0.029)	-0.327*** (0.029)	-0.327*** (0.029)
Observations	5398	5398	5398

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table B17. Instrumental Variable Probit Models Predicting Whether Local Governments Spend Any Discretionary Funds in Each Type of Goods in Institutional Capacity

	Invisible	Collective
I.V. ENP	-0.114 (0.447)	0.824*** (0.172)
Margin of Victory	-0.005 (0.012)	0.020*** (0.005)
Turnout	-0.091 (0.647)	0.116 (0.436)
Rural	0.010 (0.301)	0.436** (0.162)
Departmental Capital	0.281 (0.260)	0.413* (0.177)
Log(Total Budget)	0.224** (0.071)	0.165*** (0.049)
Partisan Attachment	0.003 (0.002)	0.003** (0.001)
Partisan Alignment	0.074 (0.094)	0.030 (0.052)
Log(Pop. Density)	2.251 (2.237)	3.184** (1.002)
Poverty	-0.000 (0.003)	-0.005* (0.002)
2009	0.279* (0.110)	0.346*** (0.067)
2010	0.454*** (0.114)	0.199** (0.064)
2011	0.780*** (0.137)	0.319*** (0.064)
2012	0.988*** (0.139)	0.613*** (0.099)
2013	0.973*** (0.140)	0.393*** (0.084)
2014	0.789*** (0.125)	0.254*** (0.075)
2015	0.896*** (0.133)	0.266*** (0.076)
Constant	-0.661 (1.855)	-4.837*** (0.639)
athrho		
Constant	0.056 (0.321)	-0.664*** (0.187)
Insigma		
Constant	-0.335*** (0.027)	-0.335*** (0.027)
Observations	6999	6999

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table B18. Instrumental Variable Probit Models Predicting Whether Local Governments Spend Any Discretionary Funds in Each Type of Goods in Justice and Security

	Durable	Invisible	Targeted
I.V. ENP	0.698* (0.302)	0.986*** (0.168)	-0.088 (0.424)
Margin of Victory	0.017* (0.008)	0.020*** (0.005)	-0.002 (0.011)
Turnout	0.730 (0.534)	1.038* (0.487)	-0.428 (0.663)
Rural	0.418 (0.257)	0.236 (0.237)	0.297 (0.304)
Departmental Capital	0.251 (0.148)	0.230 (0.170)	-0.341 (0.262)
Log(Total Budget)	0.105 (0.055)	0.068 (0.050)	0.247*** (0.072)
Partisan Attachment	0.003** (0.001)	0.005*** (0.001)	0.000 (0.002)
Partisan Alignment	0.080 (0.066)	0.264*** (0.070)	0.007 (0.086)
Log(Pop. Density)	3.013* (1.308)	3.281** (1.060)	2.893 (2.010)
Poverty	0.001 (0.002)	0.007** (0.002)	-0.005* (0.002)
2009	-0.888*** (0.169)	-0.152 (0.099)	1.002*** (0.105)
2010	-0.710*** (0.144)	0.119 (0.082)	0.884*** (0.096)
2011	-1.220*** (0.215)	-0.818*** (0.182)	1.728*** (0.131)
2012	-1.450*** (0.201)	-0.728*** (0.139)	1.642*** (0.120)
2013	-1.507*** (0.208)	-0.724*** (0.140)	2.065*** (0.169)
2014	-1.531*** (0.214)	-0.894*** (0.164)	2.037*** (0.155)
2015	-1.395*** (0.196)	-0.937*** (0.167)	2.094*** (0.166)
Constant	-4.347*** (1.074)	-6.123*** (0.592)	-1.338 (1.687)
<hr/>			
athrho			
Constant	-0.541 (0.287)	-0.826*** (0.222)	0.013 (0.306)
<hr/>			
Insigma			
Constant	-0.334*** (0.028)	-0.334*** (0.028)	-0.334*** (0.028)
<hr/>			
Observations	6601	6601	6601

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table B19. Instrumental Variable Regression Models Predicting the Amount Spent (in thousands of Colombian Pesos) in Each Type of Goods in Education

	Durable	Invisible	Targeted	Collective
I.V. ENP	-8,135.1*** (1,655.4)	-572.9*** (167.1)	-1,886.3*** (440.4)	-4,007.6*** (766.8)
Margin of Victory	-188.5*** (39.3)	-13.3*** (4.0)	-44.6*** (10.5)	-90.4*** (18.2)
Turnout	-6,049.9* (2,481.8)	-380.2 (250.5)	-1,324.2* (660.3)	-3,274.0** (1,149.6)
Rural	-2,342.3* (1,056.7)	-71.2 (106.6)	-285.3 (281.2)	-1,166.9* (489.5)
Departmental Capital	-3,506.4*** (769.9)	-187.7* (77.7)	-628.2** (204.8)	-1,724.1*** (356.6)
Log(Total Budget)	4,188.9*** (399.2)	271.1*** (40.3)	886.9*** (106.2)	2,036.4*** (184.9)
Partisan Attachment	-16.6** (6.2)	-1.4* (0.6)	-4.6** (1.7)	-8.5** (2.9)
Partisan Alignment	-694.5 (358.5)	-34.1 (36.2)	-238.7* (95.4)	-374.9* (166.1)
Log(Pop. Density)	-25,869.5*** (6,655.6)	-1,995.0** (671.7)	-5,340.9** (1,770.8)	-12,876.9*** (3,082.8)
Poverty	-26.6* (11.0)	-3.2** (1.1)	-10.6*** (2.9)	-13.9** (5.1)
2009	473.0 (1,046.0)	60.1 (105.6)	101.4 (278.3)	295.2 (484.5)
2010	848.4 (504.5)	66.2 (50.9)	189.7 (134.2)	589.0* (233.7)
2011	-233.3 (485.0)	2.6 (48.9)	31.8 (129.0)	-134.8 (224.7)
2012	432.1 (484.1)	38.2 (48.9)	112.3 (128.8)	441.3* (224.2)
2013	338.1 (489.9)	55.7 (49.4)	132.8 (130.3)	286.1 (226.9)
2014	170.4 (493.2)	25.7 (49.8)	82.3 (131.2)	187.0 (228.4)
Constant	-6,743.9 (5,375.2)	-283.2 (542.5)	-723.8 (1,430.2)	-2,913.4 (2,489.7)
Observations	2895	2895	2895	2895

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$



Table B20. Instrumental Variable Regression Models Predicting the Amount Spent (in thousands of Colombian Pesos) in Each Type of Goods in Health

	Durable	Invisible	Targeted	Collective
I.V. ENP	-3,902.5*	-3.7	-3,769.3*	-4,116.8*
	(1,700.8)	(3.3)	(1,650.1)	(1,801.8)
Margin of Victory	-67.7*	-0.1	-65.3*	-71.2*
	(34.2)	(0.1)	(33.1)	(36.2)
Turnout	-3,498.2	9.6	-3,362.6	-3,662.9
	(3,432.5)	(6.7)	(3,330.2)	(3,636.4)
Rural	-1,654.3	-1.5	-1,608.3	-1,765.8
	(1,226.0)	(2.4)	(1,189.5)	(1,298.9)
Departmental Capital	-2,544.2**	-1.1	-2,475.2**	-2,714.4**
	(946.1)	(1.9)	(917.9)	(1,002.3)
Log(Total Budget)	1,562.6***	1.3	1,521.2***	1,674.7***
	(389.8)	(0.8)	(378.2)	(413.0)
Partisan Attachment	-19.6*	-0.0	-18.9*	-20.9*
	(9.3)	(0.0)	(9.0)	(9.9)
Partisan Alignment	153.5	-0.1	145.8	159.0
	(446.0)	(0.9)	(432.7)	(472.5)
Log(Pop. Density)	-9,227.5	-16.8	-8,994.3	-9,829.4
	(6,104.8)	(12.0)	(5,922.9)	(6,467.5)
Poverty	-16.1	-0.0	-15.4	-16.8
	(15.1)	(0.0)	(14.7)	(16.0)
2009	-1,683.1	-0.6	-1,618.3	-1,764.8
	(1,489.6)	(2.9)	(1,445.3)	(1,578.1)
2010	-1,451.4	4.3	-1,399.1	-1,524.9
	(1,295.3)	(2.5)	(1,256.7)	(1,372.3)
2011	-1,817.6	-1.8	-1,756.7	-1,921.8
	(1,338.9)	(2.6)	(1,299.0)	(1,418.5)
2012	-1,917.0	-1.0	-1,854.4	-2,033.7
	(1,343.7)	(2.6)	(1,303.6)	(1,423.5)
2013	-1,459.8	-1.1	-1,413.9	-1,551.3
	(1,170.5)	(2.3)	(1,135.6)	(1,240.1)
2014	-1,801.0	-0.3	-1,746.3	-1,914.3
	(1,258.9)	(2.5)	(1,221.4)	(1,333.7)
2015	-1,992.0	-1.0	-1,940.6	-2,123.3
	(1,248.9)	(2.5)	(1,211.7)	(1,323.1)
Constant	3,209.1	-1.9	2,976.2	3,131.3
	(7,844.8)	(15.4)	(7,611.1)	(8,311.0)
Observations	322	322	322	322

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table B21. Instrumental Variable Regression Models Predicting the Amount Spent (in thousands of Colombian Pesos) in Each Type of Goods in Water Supply

	Durable	Invisible	Targeted	Collective
I.V. ENP	-15,532.8*** (3,886.8)	-111.3 (69.2)	-509.1*** (143.9)	-747.3** (246.5)
Margin of Victory	-377.1*** (98.9)	-2.9 (1.8)	-12.5*** (3.7)	-18.5** (6.3)
Turnout	-12,745.5* (6,345.8)	-63.8 (112.9)	-353.1 (234.9)	-686.7 (402.4)
Rural	-8,629.5** (2,949.5)	-24.8 (52.5)	-169.6 (109.2)	-316.8 (187.0)
Departmental Capital	-8,090.8*** (2,072.0)	-69.9 (36.9)	-315.2*** (76.7)	-388.4** (131.4)
Log(Total Budget)	6,111.5*** (625.6)	79.1*** (11.1)	268.0** (23.2)	295.9*** (39.7)
Partisan Attachment	-1.3 (14.0)	-0.4 (0.2)	-0.1 (0.5)	-0.5 (0.9)
Partisan Alignment	35.1 (768.3)	-21.0 (13.7)	-48.4 (28.4)	11.2 (48.7)
Log(Pop. Density)	-31,585.4* (15,393.8)	-205.4 (273.9)	-1,232.8* (569.9)	-1,610.7 (976.2)
Poverty	-24.5 (26.7)	0.5 (0.5)	-1.6 (1.0)	-2.7 (1.7)
2009	-2,898.9* (1,380.4)	-79.5** (24.6)	-156.7** (51.1)	-113.0 (87.5)
2010	-3,650.2** (1,362.3)	-82.3*** (24.2)	-178.6*** (50.4)	-148.5 (86.4)
2011	-4,176.8** (1,362.4)	-116.9*** (24.2)	-231.0*** (50.4)	-212.8* (86.4)
2012	-5,357.8** (1,831.3)	-89.9** (32.6)	-259.8*** (67.8)	124.9 (116.1)
2013	-4,331.4* (1,876.6)	-73.4* (33.4)	-219.5** (69.5)	-140.7 (119.0)
2014	-4,162.4* (1,897.5)	-95.5** (33.8)	-226.1** (70.3)	-139.1 (120.3)
2015	-4,941.9** (1,860.1)	-105.1** (33.1)	-252.1*** (68.9)	-166.3 (118.0)
Constant	9,464.5 (15,931.2)	-233.5 (283.5)	-283.3 (589.8)	478.8 (1,010.3)
Observations	2546	2546	2546	2546

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table B22. Instrumental Variable Regression Models Predicting the Amount Spent (in thousands of Colombian Pesos) in Each Type of Goods in Recreation

	Durable	Invisible	Collective
I.V. ENP	-2,835.8*** (539.3)	-1.9** (0.7)	-564.7*** (81.0)
Margin of Victory	-72.0*** (13.9)	-0.0 (0.0)	-13.5*** (2.1)
Turnout	-2,046.2* (927.9)	-1.3 (1.1)	-614.1*** (139.4)
Rural	-1,201.4** (459.6)	-0.6 (0.6)	-206.9** (69.1)
Departmental Capital	-1,408.8*** (311.7)	-0.6 (0.4)	-200.4*** (46.8)
Log(Total Budget)	1,536.5*** (114.6)	0.8*** (0.1)	272.2*** (17.2)
Partisan Attachment	-3.6 (2.4)	-0.0 (0.0)	-1.3*** (0.4)
Partisan Alignment	-244.9 (132.7)	-0.0 (0.2)	-51.9** (19.9)
Log(Pop. Density)	-9,520.3*** (2,431.5)	-5.2 (3.0)	-1,587.0*** (365.4)
Poverty	-5.5 (3.5)	-0.0 (0.0)	-1.0 (0.5)
2009	-787.5** (286.1)	-0.3 (0.4)	-201.4*** (43.0)
2010	-1,131.8*** (281.9)	0.5 (0.3)	-243.8*** (42.4)
2011	-1,439.1*** (276.5)	-0.7* (0.3)	-310.5*** (41.6)
2012	-1,113.7*** (274.8)	-0.5 (0.3)	-225.5*** (41.3)
2013	-1,126.5*** (270.6)	-0.5 (0.3)	-231.0*** (40.7)
2014	-1,227.7*** (271.4)	-0.6 (0.3)	-249.6*** (40.8)
2015	-1,315.1*** (267.2)	-0.6 (0.3)	-265.0*** (40.2)
Constant	-1,683.6 (2,153.1)	0.4 (2.7)	120.2 (323.6)
Observations	3680	3680	3680

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table B23. Instrumental Variable Regression Models Predicting the Amount Spent (in thousands of Colombian Pesos) in Each Type of Goods in Culture

	Durable	Invisible	Targeted	Collective
I.V. ENP	-1,002.6*** (232.5)	-18.4* (8.1)	-990.1*** (199.4)	-1,179.0*** (288.5)
Margin of Victory	-20.3*** (5.8)	-0.2 (0.2)	-23.2*** (5.0)	-28.7*** (7.2)
Turnout	-583.2 (400.2)	-8.8 (14.0)	-561.0 (343.2)	-1,062.8* (496.5)
Rural	-472.1** (183.2)	-2.1 (6.4)	-335.5* (157.1)	-559.4* (227.3)
Departmental Capital	-504.4*** (144.3)	-7.4 (5.1)	-426.2*** (123.7)	-414.7* (179.0)
Log(Total Budget)	469.5*** (52.2)	9.5*** (1.8)	520.3*** (44.8)	399.2*** (64.8)
Partisan Attachment	-1.6 (1.1)	-0.0 (0.0)	-2.8** (0.9)	-3.3* (1.3)
Partisan Alignment	24.8 (56.3)	2.7 (2.0)	8.2 (48.3)	65.8 (69.8)
Log(Pop. Density)	-3,364.4** (1,078.9)	-71.4 (37.8)	-3,153.8*** (925.3)	-3,924.8** (1,338.5)
Poverty	-2.2 (1.6)	-0.0 (0.1)	-0.2 (1.4)	-3.4 (2.0)
2009	-220.6 (141.5)	-3.8 (5.0)	-112.9 (121.4)	-646.7*** (175.6)
2010	-12.9 (137.8)	6.5 (4.8)	-66.8 (118.2)	-516.8** (171.0)
2011	-339.2* (132.7)	-5.1 (4.6)	-199.0 (113.8)	-671.0*** (164.7)
2012	-276.1* (135.1)	-4.0 (4.7)	-193.6 (115.8)	-610.4*** (167.6)
2013	-353.4** (134.2)	-5.7 (4.7)	-283.2* (115.1)	-695.5*** (166.5)
2014	-297.9* (134.0)	-4.4 (4.7)	-222.0 (115.0)	-625.1*** (166.3)
2015	-326.2* (133.7)	-5.3 (4.7)	-188.8 (114.6)	-647.6*** (165.8)
Constant	-244.6 (888.3)	-21.6 (31.1)	-898.1 (761.9)	1,849.3 (1,102.2)
Observations	1668	1668	1668	1668

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table B24. Instrumental Variable Regression Models Predicting the Amount Spent (in thousands of Colombian Pesos) in Each Type of Goods in Other Public Utilities

	Durable	Invisible	Targeted	Collective
I.V. ENP	-2766.752*** (443.565)	-32.846** (11.840)	-79.873*** (23.815)	-336.110*** (72.164)
Margin of Victory	-68.146*** (10.999)	-0.823** (0.294)	-1.977*** (0.591)	-7.611*** (1.789)
Turnout	-2735.675*** (662.814)	-27.541 (17.693)	-59.197 (35.586)	-334.411** (107.834)
Rural	-1026.685** (337.146)	-11.775 (9.000)	-24.436 (18.101)	-178.771** (54.851)
Departmental Capital	-610.454* (259.689)	-10.280 (6.932)	-14.119 (13.942)	-128.104** (42.249)
Log(Total Budget)	1,339.148*** (81.743)	16.538*** (2.182)	31.669*** (4.389)	150.398*** (13.299)
Partisan Attachment	-6.870*** (1.633)	-0.083 (0.044)	-0.167 (0.088)	-0.544* (0.266)
Partisan Alignment	-311.366*** (93.505)	-6.820** (2.496)	-4.371 (5.020)	-36.375* (15.212)
Log(Pop. Density)	-9020.157*** (1,913.115)	-95.286 (51.069)	-123.328 (102.713)	-849.273** (311.247)
Poverty	-9.498*** (2.406)	-0.055 (0.064)	-0.263* (0.129)	-1.130** (0.392)
2009	-433.577* (194.763)	-16.911** (5.199)	11.588 (10.457)	-16.339 (31.686)
2010	-424.458* (188.142)	-16.663*** (5.022)	-5.335 (10.101)	-13.315 (30.609)
2011	-838.867*** (181.419)	-19.952*** (4.843)	-10.282 (9.740)	-68.105* (29.515)
2012	-533.505** (181.116)	-16.314*** (4.835)	-4.946 (9.724)	-8.067 (29.466)
2013	-633.879*** (180.804)	-17.448*** (4.826)	-6.087 (9.707)	-32.290 (29.415)
2014	-612.176*** (182.081)	-17.033*** (4.860)	-6.011 (9.776)	-33.123 (29.623)
2015	-760.822*** (182.441)	-18.935*** (4.870)	-6.464 (9.795)	-50.275 (29.682)
Constant	110.239 (1,680.503)	1.148 (44.859)	33.405 (90.224)	92.155 (273.403)
Observations	4699	4699	4699	4699

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table B25. Instrumental Variable Regression Models Predicting the Amount Spent (in thousands of Colombian Pesos) in Each Type of Goods in

	Durable	Invisible	Targeted
I.V. ENP	-2,105.3*** (480.3)	-0.8 (0.6)	-3,090.9** (1,152.3)
Margin of Victory	-43.6*** (12.9)	-0.0 (0.0)	-87.6** (31.0)
Turnout	-946.3 (789.4)	0.6 (0.9)	-1,551.9 (1,893.8)
Rural	-886.0* (400.3)	-0.8 (0.5)	115.6 (960.3)
Departmental Capital	-771.0* (337.7)	-0.2 (0.4)	-1,790.0* (810.1)
Log(Total Budget)	1,312.0*** (108.4)	0.1 (0.1)	2,788.0*** (260.0)
Partisan Attachment	-0.6 (2.1)	0.0 (0.0)	-2.6 (5.1)
Partisan Alignment	-465.3*** (139.8)	0.1 (0.2)	-642.0 (335.5)
Log(Pop. Density)	-9,057.3** (2,854.5)	-6.7* (3.4)	-14,835.7* (6,848.0)
Poverty	-8.1* (3.2)	-0.0 (0.0)	-14.7 (7.7)
2009	-342.3 (338.3)	0.1 (0.4)	-2,807.7*** (811.6)
2010	-369.3 (326.9)	1.0** (0.4)	-3,084.9*** (784.3)
2011	-858.7** (304.6)	0.2 (0.4)	-3,433.1*** (730.8)
2012	-464.2 (317.1)	0.0 (0.4)	-2,719.6*** (760.8)
2013	-563.8 (312.8)	0.0 (0.4)	-2,956.6*** (750.4)
2014	-554.7 (319.4)	-0.0 (0.4)	-2,903.8*** (766.3)
2015	-702.3* (314.6)	-0.0 (0.4)	-3,027.7*** (754.8)
Constant	-3,355.5 (1,923.7)	1.4 (2.3)	-11,108.6* (4,615.1)
Observations	1599	1599	1599

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table B26. Instrumental Variable Regression Models Predicting the Amount Spent (in thousands of Colombian Pesos) in Each Type of Goods in

	Durable	Invisible	Targeted	Collective
I.V. ENP	-2,022.2** (653.1)	-28.0 (15.7)	-1,720.5** (541.1)	-11.9* (5.1)
Margin of Victory	-40.0** (14.4)	-0.5 (0.3)	-32.6** (11.9)	-0.3* (0.1)
Turnout	-1,231.4 (1,069.7)	13.4 (25.8)	-1,470.8 (886.2)	-11.1 (8.4)
Rural	-535.2 (494.0)	-8.4 (11.9)	-136.2 (409.3)	-3.2 (3.9)
Departmental Capital	-1,769.3*** (450.4)	20.3 (10.8)	-1,406.4*** (373.1)	-8.5* (3.5)
Log(Total Budget)	1,216.6*** (149.1)	13.8*** (3.6)	1,032.2*** (123.6)	5.6*** (1.2)
Partisan Attachment	-10.6** (3.5)	-0.1 (0.1)	-6.9* (2.9)	-0.0 (0.0)
Partisan Alignment	-482.2* (238.0)	-4.6 (5.7)	-377.7 (197.2)	-3.8* (1.9)
Log(Pop. Density)	-2,910.6 (4,241.8)	-181.6 (102.2)	-7,720.3* (3,514.4)	-37.0 (33.2)
Poverty	-6.9 (5.0)	-0.2 (0.1)	-6.2 (4.2)	-0.0 (0.0)
2009	512.2 (385.6)	-18.4* (9.3)	0.6 (319.4)	4.0 (3.0)
2010	847.7* (386.5)	-22.1* (9.3)	-365.5 (320.2)	2.5 (3.0)
2011	95.0 (339.5)	-23.2** (8.2)	-536.9 (281.3)	4.0 (2.7)
2012	333.2 (368.6)	-20.6* (8.9)	-256.8 (305.4)	3.7 (2.9)
2013	225.0 (365.5)	-21.5* (8.8)	-339.3 (302.8)	3.3 (2.9)
2014	352.4 (409.3)	-20.2* (9.9)	-203.4 (339.1)	4.3 (3.2)
2015	36.7 (372.6)	-24.1** (9.0)	-368.5 (308.7)	2.6 (2.9)
Constant	-3,303.1 (2,444.6)	-13.5 (58.9)	-2,159.7 (2,025.4)	-5.1 (19.1)
Observations	777	777	777	777

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table B27. Instrumental Variable Regression Models Predicting the Amount Spent (in thousands of Colombian Pesos) in Each Type of Goods in

	Durable	Invisible	Collective
I.V. ENP	-19,256.2*** (2,323.4)	-426.7*** (111.1)	-1,078.3*** (211.3)
Margin of Victory	-467.4*** (59.2)	-10.4*** (2.8)	-27.8*** (5.4)
Turnout	-17,624.9*** (3,711.6)	-339.5 (177.6)	-1,073.2** (337.5)
Rural	-8,206.7*** (1,681.8)	-136.8 (80.5)	-306.9* (152.9)
Departmental Capital	-5,642.0*** (1,207.7)	-85.5 (57.8)	-307.8** (109.8)
Log(Total Budget)	7,913.1*** (392.5)	173.5*** (18.8)	526.4*** (35.7)
Partisan Attachment	-46.1*** (8.7)	-1.5*** (0.4)	-4.0*** (0.8)
Partisan Alignment	-1,688.6*** (487.3)	-52.4* (23.3)	-141.5** (44.3)
Log(Pop. Density)	-52,973.0*** (10,081.2)	-1,442.8** (482.3)	-2,463.4** (916.8)
Poverty	-50.8*** (13.5)	-1.6* (0.6)	-2.6* (1.2)
2009	-3,660.2*** (942.3)	-182.7*** (45.1)	-56.4 (85.7)
2010	-4,550.5*** (920.0)	-181.2*** (44.0)	-258.0** (83.7)
2011	-6,424.9*** (921.7)	-209.7*** (44.1)	-339.3*** (83.8)
2012	-3,933.9*** (890.6)	-170.1*** (42.6)	-204.7* (81.0)
2013	-4,185.8*** (894.4)	-186.3*** (42.8)	-274.7*** (81.3)
2014	-5,087.8*** (897.1)	-187.7*** (42.9)	-279.0*** (81.6)
2015	-5,689.5*** (904.3)	-204.0*** (43.3)	-332.5*** (82.2)
Constant	13,057.7 (9,359.2)	377.6 (447.7)	13.6 (851.2)
Observations	6982	6982	6982

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$



Table B28. Instrumental Variable Regression Models Predicting the Amount Spent (in thousands of Colombian Pesos) in Each Type of Goods in

	Invisible	Targeted	Collective
I.V. ENP	-912.4** (346.4)	-2,833.9 (1,867.8)	-3,440.2*** (715.3)
Margin of Victory	-13.1 (8.9)	-90.6 (52.1)	-78.4*** (18.0)
Turnout	90.1 (744.4)	-3,350.0 (3,719.9)	-3,046.3** (1,143.2)
Rural	171.4 (339.7)	1,068.5 (906.5)	-1,682.3** (527.9)
Departmental Capital	-848.8** (321.8)	-2,082.1** (771.0)	-1,418.2*** (379.6)
Log(Total Budget)	648.2*** (106.4)	1,571.5*** (303.8)	1,763.0*** (140.3)
Partisan Attachment	-6.1* (3.0)	-1.3 (7.3)	-10.8*** (3.1)
Partisan Alignment	-82.3 (152.6)	-595.3 (491.3)	-294.0 (169.7)
Log(Pop. Density)	-7,776.6 (4,011.0)	-7,244.7 (3,898.1)	-11,393.0*** (3,199.7)
Poverty	-11.2 (6.5)	-11.1 (11.3)	-2.2 (4.7)
2009	-316.2 (264.3)	-3,818.5** (1,175.0)	-741.6 (381.3)
2010	-326.2 (236.2)	-3,988.1** (1,217.2)	-205.6 (371.5)
2011	-194.6 (346.2)	-4,140.1*** (1,150.4)	-1,327.9*** (353.7)
2012	-179.1 (301.8)	-2,573.4** (783.5)	-719.4* (344.8)
2013	-479.7 (370.3)	-3,105.9*** (879.8)	-953.8** (342.8)
2014	-740.5 (454.1)	-2,961.0*** (839.1)	-974.2** (344.0)
2015	-513.9 (413.8)	-3,726.5*** (923.3)	-1,173.9*** (346.1)
Constant	-2,139.6 (1,751.1)	257.1 (7,323.2)	-1,089.2 (2,876.8)
Observations	199	225	5209

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table B29. Instrumental Variable Regression Models Predicting the Amount Spent (in thousands of Colombian Pesos) in Each Type of Goods in

	Durable	Invisible	Collective
I.V. ENP	-781.6* (346.2)	1,173.1 (854.2)	-310.9*** (64.0)
Margin of Victory	-20.5* (9.6)	28.7 (34.3)	-9.1*** (2.0)
Turnout	260.9 (368.7)	-1,115.8 (3,020.2)	-172.6 (110.1)
Rural	-1,162.5* (573.5)	1,794.7 (1,350.8)	-193.0** (70.4)
Departmental Capital	-69.0 (109.6)	-508.2 (910.0)	-130.2*** (37.7)
Log(Total Budget)	211.9*** (57.6)	853.8** (304.1)	158.8** (15.2)
Partisan Attachment	-3.1 (1.9)	4.8 (11.1)	-1.7*** (0.4)
Partisan Alignment	-220.1 (120.5)	183.0 (557.3)	-84.1** (26.7)
Log(Pop. Density)	-3,923.9* (1,832.2)	36,937.9 (23,691.0)	-1,592.3*** (409.4)
Poverty	1.7 (1.9)	44.0 (33.5)	-1.3* (0.6)
2009	-1.3 (149.1)	1,370.0 (954.8)	-46.7 (44.9)
2010	-98.2 (165.8)	-784.7 (826.7)	-46.6 (44.9)
2011	-130.1 (138.6)	-1,253.2 (1,254.6)	-99.2* (40.3)
2012	-45.7 (146.5)	-1,800.6 (1,502.8)	-30.6 (41.7)
2013	-54.1 (141.0)	255.2 (1,216.4)	-39.7 (41.9)
2014	-32.6 (142.5)	-1,634.6 (2,054.8)	-63.6 (40.9)
2015	-170.3 (131.1)	-239.7 (1,374.1)	-79.0* (39.6)
Constant	1,346.6 (1,261.5)	-14,409.9* (5,723.5)	23.9 (299.9)
Observations	365	30	1283

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table B30. Instrumental Variable Regression Models Predicting the Amount Spent (in thousands of Colombian Pesos) in Each Type of Goods in

	Durable	Invisible	Targeted	Collective
I.V. ENP	-501.0** (170.4)	-127.0** (46.8)	-1,055.7*** (158.8)	-574.8*** (113.2)
Margin of Victory	-12.7** (4.4)	-3.4* (1.6)	-26.5*** (4.1)	-14.3*** (2.9)
Turnout	-163.1 (329.7)	-123.0 (125.3)	-851.8*** (239.9)	-302.4 (171.5)
Rural	-70.4 (162.5)	43.6 (55.3)	-286.3* (114.9)	-149.2 (84.6)
Departmental Capital	-366.5** (117.4)	-63.6* (31.2)	-321.2*** (80.2)	-289.5*** (59.3)
Log(Total Budget)	377.0*** (43.2)	81.0*** (16.5)	511.0*** (31.6)	338.7*** (26.1)
Partisan Attachment	-4.3** (1.4)	-0.9 (0.5)	-4.1*** (0.8)	-2.5*** (0.5)
Partisan Alignment	-190.0** (68.6)	-1.3 (20.1)	-126.8*** (38.3)	-55.6* (26.7)
Log(Pop. Density)	-1,733.9 (913.8)	-570.1 (332.3)	-2,982.4*** (650.4)	-1,935.2*** (518.3)
Poverty	-0.7 (1.6)	-1.4 (0.9)	-3.7*** (1.0)	-2.2** (0.7)
2009	-27.7 (169.1)	14.3 (47.1)	-454.5*** (89.8)	-17.7 (66.1)
2010	196.8 (162.9)	-56.9 (38.8)	-374.1*** (84.8)	-49.6 (64.9)
2011	-135.1 (155.3)	-111.9 (67.4)	-457.5*** (78.7)	-176.5** (59.5)
2012	-5.6 (156.6)	-32.5 (43.4)	-330.8*** (79.8)	-77.2 (58.9)
2013	-34.6 (159.0)	-49.5 (42.3)	-386.3*** (80.1)	-102.3 (58.3)
2014	-36.0 (159.3)	-73.1 (41.9)	-390.3*** (80.4)	-109.4 (58.2)
2015	-59.4 (159.8)	-98.4* (43.8)	-458.1*** (80.4)	-122.5* (58.3)
Constant	-1,396.3 (795.2)	-124.3 (329.4)	81.1 (614.6)	-724.8 (408.8)
Observations	1245	278	3756	3395

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table B31. Instrumental Variable Regression Models Predicting the Amount Spent (in thousands of Colombian Pesos) in Each Type of Goods in

	Durable	Invisible	Targeted	Collective
I.V. ENP	-4,902.6 (3,234.8)	-13,299.3 (8,393.7)	-1,466.3*** (228.8)	-1,429.5*** (299.6)
Margin of Victory	-108.5 (74.2)	-343.0 (260.1)	-38.9*** (6.1)	-34.6*** (7.5)
Turnout	-2,704.1 (3,514.3)	13,486.1 (22,922.7)	-1,238.2** (393.1)	-753.6 (430.3)
Rural	-3,343.1 (2,611.0)	2,095.3 (8,991.0)	-382.5* (191.4)	-560.5** (217.4)
Departmental Capital	-676.4 (744.3)	-9,047.9 (5,621.1)	-566.6*** (124.1)	-275.5* (129.7)
Log(Total Budget)	1,039.5** (357.9)	9,504.3*** (2,108.8)	754.6*** (52.4)	565.9*** (70.1)
Partisan Attachment	-6.4 (7.2)	-66.6 (53.7)	-3.5** (1.2)	-5.6*** (1.4)
Partisan Alignment	-334.0 (543.8)	402.4 (2,813.1)	-166.0** (62.1)	-221.4** (82.2)
Log(Pop. Density)	-28,777.0 (19,427.5)	-52,717.5 (48,702.8)	-4,743.0*** (1,037.4)	-5,638.9*** (1,345.1)
Poverty	-26.5 (23.4)	-96.8 (113.3)	-6.2*** (1.7)	-4.9* (2.2)
2009	-3,202.9 (1,816.6)	-10,064.0 (6,217.5)	-647.0*** (144.4)	-824.7*** (189.3)
2010	-2,764.7 (1,584.8)	-12,293.7* (5,200.8)	-774.8*** (140.5)	-772.0*** (180.4)
2011	-3,025.8 (1,630.0)	-14,305.7 (7,505.5)	-859.8*** (130.7)	-962.4*** (181.6)
2012	-1,967.4 (1,054.4)	-18,731.2** (7,002.8)	-654.8*** (129.2)	-677.8*** (169.2)
2013	-1,801.5 (1,000.4)	-15,569.1* (7,269.6)	-725.8*** (129.2)	-727.1*** (166.5)
2014	-1,334.1 (975.7)	-14,347.1 (8,007.5)	-651.8*** (130.5)	-750.1*** (166.1)
2015	-1,902.2 (1,007.0)	-7,148.4 (8,070.4)	-784.9*** (131.1)	-783.7*** (167.2)
Constant	13,162.7 (13,601.8)	-34,865.1 (52,973.5)	-151.9 (913.3)	1,424.1 (1,054.8)
Observations	438	134	3071	2187

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table B32. Instrumental Variable Regression Models Predicting the Amount Spent (in thousands of Colombian Pesos) in Each Type of Goods in

	Durable	Invisible	Targeted	Collective
I.V. ENP	-2,904.4*** (518.5)	-274.6 (327.7)	-4,116.5*** (473.7)	-70.6 (172.7)
Margin of Victory	-74.2*** (13.5)	-6.3 (8.1)	-99.1*** (12.0)	-1.7 (4.3)
Turnout	-3,591.0*** (937.1)	61.2 (198.7)	-3,478.7*** (789.4)	-194.5 (485.7)
Rural	-1,026.8** (379.4)	-162.8 (252.5)	-1,656.1*** (365.9)	-87.1 (227.1)
Departmental Capital	-725.2** (263.7)	8.5 (118.8)	-978.4*** (272.1)	-64.7 (146.4)
Log(Total Budget)	1,272.7*** (84.3)	29.7 (39.7)	1,813.2*** (81.7)	29.3 (56.2)
Partisan Attachment	-9.2*** (2.1)	0.7 (1.2)	-13.0*** (2.0)	-0.4 (0.8)
Partisan Alignment	-501.5*** (134.8)	80.9 (101.8)	-496.2*** (111.8)	-20.3 (47.8)
Log(Pop. Density)	-8,972.6*** (2,379.9)	-2,182.2 (2,679.8)	-13,095.7*** (2,250.5)	-142.9 (415.2)
Poverty	-4.3 (3.3)	-1.7 (2.4)	-10.4*** (2.9)	0.1 (0.2)
2009	484.3** (175.3)	11.2 (92.7)	-617.8** (212.2)	
2010	192.5 (184.5)	-78.3 (151.0)	-908.2*** (208.7)	
2011	-254.5 (173.0)	102.7 (126.6)	-1,259.8*** (206.2)	
2012	167.1 (180.8)	54.2 (77.8)	-807.8*** (204.8)	21.9 (60.2)
2013	161.5 (157.5)	39.7 (59.3)	-911.0*** (205.1)	9.7 (27.4)
2014	143.2 (167.9)	46.2 (83.4)	-978.2*** (205.1)	-3.4 (10.1)
2015			-1,173.3*** (207.0)	
Constant	1,051.8 (2,491.0)	607.7 (1,476.7)	1,620.9 (1,996.1)	149.0 (529.9)
Observations	2951	113	6985	172

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table B33. Instrumental Variable Regression Models Predicting the Amount Spent (in thousands of Colombian Pesos) in Each Type of Goods in

	Durable	Invisible
I.V. ENP	-3,895.0*** (458.4)	-1,061.1** (357.4)
Margin of Victory	-95.1*** (11.7)	-25.8* (11.7)
Turnout	-4,027.6*** (764.8)	-795.9 (852.0)
Rural	-1,600.0*** (353.0)	-313.2 (371.4)
Departmental Capital	-950.2*** (251.4)	-245.7 (264.7)
Log(Total Budget)	1,673.7*** (86.8)	574.6*** (96.2)
Partisan Attachment	-13.1*** (2.0)	-3.0 (2.1)
Partisan Alignment	-486.8*** (109.7)	-70.8 (123.9)
Log(Pop. Density)	-12,066.6*** (2,143.5)	-5,529.5 (3,413.3)
Poverty	-12.1*** (2.8)	-7.4 (4.9)
2009	-738.2** (225.2)	-224.7 (227.8)
2010	-999.7*** (216.9)	-336.1 (195.2)
2011	-1,436.3*** (212.6)	-326.7 (284.4)
2012	-886.7*** (207.5)	-242.5 (286.7)
2013	-1,098.8*** (208.3)	-196.4 (336.1)
2014	-1,044.1*** (208.7)	-476.0 (378.2)
2015	-1,259.2*** (210.4)	-738.7 (385.1)
Constant	2,710.8 (1,893.5)	-398.4 (1,974.4)
Observations	6260	338

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table B34. Instrumental Variable Regression Models Predicting the Amount Spent (in thousands of Colombian Pesos) in Each Type of Goods in

	Invisible	Targeted	Collective
I.V. ENP	743.4 (6,105.0)	-601.8*** (90.2)	-560.8** (187.4)
Margin of Victory	16.9 (131.3)	-15.5*** (2.4)	-12.4** (4.4)
Turnout	439.5 (3,345.0)	-367.5* (156.3)	-691.8* (309.3)
Rural	688.6 (5,564.9)	-108.4 (76.5)	-91.9 (104.5)
Departmental Capital	50.8 (532.6)	-175.7** (56.3)	68.6 (92.2)
Log(Total Budget)	-46.8 (515.1)	330.1*** (20.0)	222.1*** (37.8)
Partisan Attachment	-0.9 (7.9)	-2.7*** (0.5)	-1.4* (0.7)
Partisan Alignment	245.1 (2,010.8)	-92.2*** (27.3)	-86.8 (44.8)
Log(Pop. Density)	-305.8 (2,425.4)	-1,740.4*** (472.0)	-1,388.3 (881.9)
Poverty	2.2 (17.2)	-1.6* (0.6)	-1.8 (1.1)
2009	160.0 (1,330.6)	-283.1*** (60.5)	-25.8 (108.0)
2010	156.8 (1,412.3)	-288.3*** (58.9)	-54.4 (95.9)
2011	-5.6 (266.0)	-426.0*** (55.7)	-96.0 (92.4)
2012	98.7 (955.7)	-308.1*** (54.5)	9.3 (91.0)
2013	283.9 (2,478.1)	-308.2*** (54.8)	-4.4 (93.8)
2014	129.9 (1,210.7)	-338.6*** (54.9)	-43.8 (90.8)
2015	-104.5 (826.8)	-369.3*** (55.1)	-86.3 (91.7)
Constant	-2,849.1 (22,066.0)	-297.3 (388.1)	401.8 (662.4)
Observations	119	4240	864

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table B35. Instrumental Variable Regression Models Predicting the Amount Spent (in thousands of Colombian Pesos) in Each Type of Goods in

	Invisible	Collective
I.V. ENP	-6,296.9*** (775.3)	-1,735.7*** (317.8)
Margin of Victory	-158.7*** (20.0)	-43.4*** (8.3)
Turnout	-5,566.2*** (1,305.1)	-1,104.0* (459.4)
Rural	-2,610.4*** (588.0)	-757.2** (278.2)
Departmental Capital	-1,859.0*** (435.1)	-634.3*** (148.5)
Log(Total Budget)	2,772.9*** (140.7)	802.9*** (64.8)
Partisan Attachment	-16.4*** (3.3)	-6.1*** (1.5)
Partisan Alignment	-603.6** (183.9)	-217.9** (82.7)
Log(Pop. Density)	-18,632.4*** (3,623.3)	-6,555.3*** (1,356.7)
Poverty	-16.2*** (4.8)	-6.9*** (2.0)
2009	-952.7** (366.9)	-445.2** (170.6)
2010	-1,098.2** (352.7)	-447.7** (165.7)
2011	-1,495.4*** (353.7)	-657.8*** (161.0)
2012	-994.5** (347.1)	-268.3 (155.4)
2013	-1,257.3*** (348.1)	-290.9 (158.2)
2014	-1,352.7*** (348.3)	-369.0* (162.2)
2015	-1,618.6*** (351.3)	-466.0** (161.9)
Constant	2,294.7 (3,240.8)	289.8 (1,229.1)
Observations	6736	3201

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$



Table B36. Instrumental Variable Regression Models Predicting the Amount Spent (in thousands of Colombian Pesos) in Each Type of Goods in

	Durable	Invisible	Targeted
I.V. ENP	-814.2* (335.1)	-374.3 (252.4)	-2,313.5*** (262.2)
Margin of Victory	-14.9 (7.6)	-13.0 (8.7)	-56.8*** (6.7)
Turnout	-298.6 (626.2)	-17.4 (269.9)	-2,034.2*** (442.8)
Rural	-152.9 (209.4)	-100.7 (181.6)	-799.2*** (206.5)
Departmental Capital	-367.7* (144.1)	-183.5* (84.7)	-851.5*** (153.8)
Log(Total Budget)	417.4*** (55.9)	170.0*** (38.3)	1,136.7*** (50.6)
Partisan Attachment	-3.3* (1.5)	-1.6 (1.4)	-8.1*** (1.2)
Partisan Alignment	-173.7* (87.4)	29.6 (51.9)	-278.6*** (63.2)
Log(Pop. Density)	-2,402.7 (1,243.2)	-828.2 (736.9)	-7,282.8*** (1,229.2)
Poverty	-5.3 (3.6)	-2.9 (2.4)	-8.1*** (1.7)
2009	-85.0 (115.4)	-118.8 (74.7)	-425.3** (149.2)
2010	-235.8* (98.0)	-80.1 (66.4)	-501.0*** (144.2)
2011	-492.4*** (125.7)	5.0 (148.5)	-690.7*** (139.3)
2012	-382.9** (143.9)	10.9 (126.5)	-344.8* (138.5)
2013	-346.1* (150.6)	-142.5 (94.9)	-485.7*** (138.3)
2014	-187.1 (168.0)	-357.2* (165.9)	-482.4*** (138.3)
2015	-220.3 (160.8)	-204.8 (123.2)	-584.0*** (139.1)
Constant	-398.9 (1,325.8)	8.0 (904.8)	-132.5 (1,088.6)
Observations	503	243	6289

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

## Appendix C for Chapter 5

Table C1. Models Predicting Projects Proposed to the *Colombia Humanitaria* Program for Road Construction

	Any Project Proposed	Any Project Approved	Funds Requested	Funds Approved
I.V. ENP	0.635* (0.263)	-0.366 (0.507)	-447.196** (145.189)	-241.011** (78.988)
Margin of Victory	0.016* (0.007)	-0.002 (0.014)	-9.539* (3.725)	-6.042** (2.076)
Turnout	4.053*** (0.430)	-0.378 (1.162)	-498.330 (308.334)	-235.989 (169.990)
Rural	1.452*** (0.212)	0.651 (0.539)	-204.806 (115.642)	-147.476* (70.523)
Capital City	0.052 (0.239)	-0.308 (0.363)	-39.750 (102.682)	-27.632 (67.697)
Partisan Attachment	0.000 (0.001)	-0.002 (0.002)	-0.582 (0.486)	-0.125 (0.265)
Partisan Alignment	-0.047 (0.079)	0.047 (0.110)	22.425 (27.854)	9.060 (15.469)
Log(Pop. Density)	0.296*** (0.083)	0.115 (0.134)	-57.190 (32.553)	-41.916* (18.944)
Poverty	0.005* (0.002)	-0.010** (0.003)	-1.860* (0.856)	-0.845 (0.489)
Total Requested				0.114* (0.048)
Number of Projects				8.565 (4.690)
Constant	-5.638*** (1.015) (0.253)	2.062 (2.439) (0.333)	2,064.710** (705.381)	1,114.023** (388.621)
athrho				
Constant	-0.482* (0.243)	0.418 (0.406)		
Insigma				
Constant	-0.323*** (0.021)	-0.337*** (0.026)		
Observations	1095	725	722	592

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table C2. Models Predicting Projects Proposed to the *Colombia Humanitaria* Program for Landslide Fixes

	Any Project Proposed	Any Project Approved	Funds Requested	Funds Approved
I.V. ENP	0.143 (0.347)	-0.286 (0.566)	-191.589 (101.517)	-19.451 (27.485)
Margin of Victory	-0.000 (0.010)	-0.013 (0.014)	-4.093 (2.590)	-0.354 (0.714)
Turnout	2.285*** (0.651)	-2.082 (1.486)	-316.914 (273.778)	-23.928 (56.255)
Rural	0.434 (0.297)	-0.242 (0.605)	-61.294 (109.028)	-18.594 (28.198)
Capital City	0.272 (0.266)	0.119 (0.533)	18.254 (84.840)	13.173 (10.573)
Partisan Attachment	-0.000 (0.002)	0.000 (0.003)	-0.448 (0.531)	-0.059 (0.113)
Partisan Alignment	-0.010 (0.085)	-0.018 (0.161)	31.993 (27.462)	-1.634 (3.788)
Log(Pop. Density)	0.273** (0.097)	0.227 (0.206)	-12.346 (33.830)	-4.252 (4.580)
Poverty	0.002 (0.003)	-0.001 (0.005)	-0.494 (0.808)	-0.009 (0.131)
Total Requested				0.737*** (0.077)
Number of Projects				-5.507*** (1.537)
Constant	-3.338* (1.552)	2.312 (2.829)	898.620 (517.032)	107.043 (138.187)
athrho				
Constant	-0.193 (0.259)	0.213 (0.403)		
Insigma				
Constant	-0.323*** (0.021)	-0.402*** (0.044)		
Observations	1095	261	259	152

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table C3. Models Predicting Projects Proposed to the *Colombia Humanitaria* Program for Bridges

	Any Project Proposed	Any Project Approved	Funds Requested	Funds Approved
I.V. ENP	0.097 (0.370)	1.205* (0.538)	-675.321 (809.626)	-35.173 (121.958)
Margin of Victory	0.002 (0.010)	0.035** (0.012)	-18.230 (21.504)	-0.947 (3.370)
Turnout	2.079** (0.731)	2.058 (1.651)	-1164.561 (1,624.311)	-72.765 (306.528)
Rural	0.177 (0.319)	1.024 (0.546)	-528.442 (686.385)	-30.809 (77.427)
Capital City	0.167 (0.284)	-0.317 (0.617)	-20.757 (219.710)	8.703 (51.651)
Partisan Attachment	-0.001 (0.002)	0.001 (0.003)	-0.485 (1.275)	-0.094 (0.096)
Partisan Alignment	-0.025 (0.085)	-0.035 (0.180)	62.583 (91.761)	6.942 (18.126)
Log(Pop. Density)	0.042 (0.101)	-0.125 (0.326)	-86.150 (98.351)	-2.773 (16.285)
Poverty	0.007* (0.003)	0.005 (0.007)	-0.765 (1.824)	0.167 (0.267)
Total Requested				0.920*** (0.073)
Number of Projects				-0.391 (11.830)
Constant	-2.771 (1.762)	-5.491 (3.289)	3,363.277 (4,024.098)	171.158 (613.605)
athrho				
Constant	-0.042 (0.271)	-1.152 (1.336)		
Insigma				
Constant	-0.323*** (0.021)	-0.328*** (0.044)		
Observations	1095	258	257	174

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table C4. Models Predicting Projects Proposed to the *Colombia Humanitaria* Program for Water Channeling

	Any Project Proposed	Any Project Approved	Funds Requested	Funds Approved
I.V. ENP	-0.094 (0.360)	-0.091 (0.728)	-187.004 (148.919)	-108.378 (56.616)
Margin of Victory	-0.011 (0.010)	-0.004 (0.021)	-6.363 (4.265)	-2.463 (2.557)
Turnout	1.250 (0.793)	-2.115 (1.585)	-126.819 (339.800)	-65.996 (134.109)
Rural	-0.096 (0.327)	-0.888 (0.825)	-278.274 (180.363)	-56.440 (68.095)
Capital City	0.000 (.)	0.000 (.)		
Partisan Attachment	-0.001 (0.002)	0.002 (0.004)	-1.170 (0.742)	-0.352 (0.352)
Partisan Alignment	0.066 (0.096)	0.016 (0.213)	-61.915 (43.319)	-13.321 (22.173)
Log(Pop. Density)	0.201 (0.115)	-0.611* (0.268)	-61.516 (54.304)	-17.722 (26.152)
Poverty	0.009** (0.003)	-0.000 (0.006)	-0.730 (1.259)	-0.220 (0.572)
Total Requested				-0.011 (0.110)
Number of Projects				-1.077 (11.011)
Constant	-2.101 (1.783)	3.026 (3.450)	1,119.894 (746.536)	512.141 (308.587)
athrho				
Constant	0.081 (0.266)	0.200 (0.519)		
Insigma				
Constant	-0.324*** (0.022)	-0.372*** (0.055)		
Observations	1064	164	164	74

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table C5. Models Predicting Projects Proposed to the *Colombia Humanitaria* Program for Aqueducts

	Any Project Proposed	Any Project Approved	Funds Requested	Funds Approved
I.V. ENP	0.575* (0.289)	0.095 (1.113)	-16.226 (13.410)	-16.226 (13.410)
Margin of Victory	0.015 (0.008)	0.007 (0.025)	-0.380 (0.337)	-0.380 (0.337)
Turnout	2.391*** (0.549)	0.050 (1.889)	4.110 (36.379)	4.110 (36.379)
Rural	0.675** (0.262)	0.788 (0.812)	-16.562 (16.946)	-16.562 (16.946)
Capital City	-0.154 (0.311)	0.000 (.)	6.628 (15.745)	6.628 (15.745)
Partisan Attachment	-0.001 (0.002)	0.007 (0.005)	0.013 (0.090)	0.013 (0.090)
Partisan Alignment	0.107 (0.086)	0.130 (0.212)	-4.801 (4.997)	-4.801 (4.997)
Log(Pop. Density)	0.074 (0.097)	-0.386 (0.270)	-4.318 (6.271)	-4.318 (6.271)
Poverty	0.002 (0.003)	-0.007 (0.006)	0.117 (0.141)	0.117 (0.141)
Total Requested			0.778*** (0.057)	0.778*** (0.057)
Number of Projects			-15.533*** (3.401)	-15.533*** (3.401)
Constant	-4.726*** (1.192)	-0.030 (5.072)	86.680 (64.160)	86.680 (64.160)
athrho				
Constant	-0.502 (0.261)	-0.122 (0.741)		
Insigma				
Constant	-0.323*** (0.021)	-0.423*** (0.049)		
Observations	1095	207	127	127

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table C6. Models Predicting Projects Proposed to the *Colombia Humanitaria* Program for Dikes

	Any Project Proposed	Any Project Approved	Funds Requested	Funds Approved
I.V. ENP	0.231 (0.345)	-0.895 (0.555)	-1310.185 (1,414.786)	-75.062 (101.727)
Margin of Victory	0.002 (0.010)	-0.011 (0.018)	-30.097 (33.623)	-1.838 (2.560)
Turnout	1.214 (0.659)	-2.546** (0.875)	415.278 (2,008.856)	-7.009 (61.150)
Rural	0.144 (0.306)	-1.341** (0.460)	-432.318 (1,376.244)	-38.770 (46.088)
Capital City	0.045 (0.278)	0.041 (0.588)	218.833 (821.210)	-21.621 (42.202)
Partisan Attachment	-0.001 (0.002)	-0.003 (0.003)	-5.378 (5.312)	-0.200 (0.307)
Partisan Alignment	0.022 (0.085)	0.076 (0.158)	308.215 (255.372)	4.315 (10.157)
Log(Pop. Density)	-0.005 (0.100)	-0.336 (0.201)	-193.497 (386.853)	-17.377 (17.491)
Poverty	0.004 (0.003)	-0.008 (0.004)	-2.096 (9.356)	-0.557 (0.832)
Total Requested				0.615** (0.228)
Number of Projects				-2.911 (7.023)
Constant	-2.430 (1.588)	6.234** (2.001)	4,514.192 (6,807.589)	330.334 (425.236)
<hr/>				
athrho				
Constant	-0.216 (0.262)	0.808 (0.644)		
<hr/>				
Insigma				
Constant	-0.323*** (0.021)	-0.379*** (0.046)		
<hr/>				
Observations	1095	241	240	150

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table C7. Models Predicting Projects Proposed to the *Colombia Humanitaria* Program for Machinery

	Any Project Proposed	Any Project Approved	Funds Requested	Funds Approved
I.V. ENP	-0.700* (0.279)	-1.453*** (0.179)	-178.879 (104.469)	-23.278* (9.685)
Margin of Victory	-0.012 (0.008)	-0.032*** (0.007)	-4.137 (2.517)	-0.563* (0.238)
Turnout	1.351 (0.905)	-2.122 (1.101)	-210.468 (221.214)	6.876 (22.972)
Rural	0.091 (0.331)	-0.438 (0.562)	-98.241 (80.154)	-2.197 (8.230)
Capital City	0.150 (0.284)	0.550 (0.609)	-12.975 (74.022)	1.151 (12.046)
Partisan Attachment	0.001 (0.001)	-0.005 (0.003)	-0.711 (0.419)	-0.113* (0.047)
Partisan Alignment	-0.045 (0.084)	0.148 (0.159)	38.451 (22.795)	5.888 (3.295)
Log(Pop. Density)	0.061 (0.106)	0.188 (0.205)	-11.768 (26.440)	-1.885 (3.994)
Poverty	-0.001 (0.003)	-0.003 (0.005)	-0.450 (0.499)	-0.168 (0.112)
Total Requested				0.671*** (0.045)
Number of Projects				-10.844*** (2.484)
Constant	0.335 (1.769)	6.075*** (1.229)	819.902 (473.177)	99.598* (43.684)
athrho				
Constant	0.573* (0.277)	1.584** (0.590)		
Insigma				
Constant	-0.323*** (0.021)	-0.477*** (0.047)		
Observations	1095	222	218	150

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$



Table C8. Models Predicting Projects Proposed to the *Pacto Agrario* Program for New Businesses

	Any Project Proposed	Any Project Approved	Funds Requested	Funds Approved
I.V. ENP	-0.258 (0.227)	0.552 (0.360)	-122.912*** (26.404)	-2.031 (4.468)
Margin of Victory	-0.000 (0.006)	0.011 (0.008)	-1.884** (0.578)	0.039 (0.088)
Turnout	0.589 (0.632)	0.999 (1.001)	-6.043 (67.798)	9.176 (9.589)
Rural	-0.237 (0.295)	0.468 (0.491)	-74.557* (33.499)	-5.408 (5.016)
Capital City	0.354 (0.267)	0.228 (0.415)	1.768 (27.968)	-0.416 (3.965)
Partisan Attachment	-0.003 (0.002)	0.003 (0.004)	-0.817** (0.283)	-0.016 (0.044)
Partisan Alignment	-0.240* (0.117)	0.172 (0.207)	-26.701 (13.709)	0.309 (2.016)
Log(Pop. Density)	-0.172 (0.092)	0.183 (0.157)	-35.391*** (9.804)	1.499 (1.483)
Poverty	0.001 (0.003)	0.006 (0.004)	-0.749** (0.282)	0.030 (0.043)
Total Requested				0.071*** (0.017)
Number of Projects				0.562 (0.895)
Constant	0.918 (1.286)	-4.387* (1.846)	600.102*** (142.296)	-1.743 (22.575)
athrho				
Constant	0.149 (0.167)	-0.338 (0.260)		
Insigma				
Constant	-0.365*** (0.023)	-0.479*** (0.035)		
Observations	910	413	413	413

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table C9. Models Predicting Projects Proposed to the *Pacto Agrario* Program for Rural Employment

	Any Project Proposed	Any Project Approved	Funds Requested	Funds Approved
I.V. ENP	-0.549* (0.226)	-0.447 (0.528)	-93.596** (31.257)	5.702 (8.909)
Margin of Victory	-0.010 (0.006)	-0.005 (0.014)	-1.526* (0.746)	0.323 (0.201)
Turnout	-1.155 (0.642)	2.480 (1.678)	-37.997 (70.646)	49.296** (18.748)
Rural	0.325 (0.343)	0.593 (0.651)	-35.653 (30.434)	13.390 (8.191)
Capital City	-0.450 (0.384)	0.868 (0.913)	21.202 (50.249)	8.913 (13.399)
Partisan Attachment	-0.001 (0.002)	0.007 (0.006)	-0.436 (0.257)	0.141* (0.070)
Partisan Alignment	-0.069 (0.130)	0.220 (0.296)	-17.131 (14.385)	4.210 (3.877)
Log(Pop. Density)	0.017 (0.105)	-0.150 (0.260)	4.590 (12.875)	-5.746 (3.392)
Poverty	-0.009*** (0.003)	-0.017** (0.006)	-0.624* (0.313)	-0.189* (0.092)
Total Requested				0.455*** (0.059)
Number of Projects				-8.189** (2.761)
Constant	2.062 (1.318)	-0.313 (2.804)	393.860** (142.590)	-41.513 (39.871)
athrho				
Constant	0.314 (0.183)	0.460 (0.392)		
Insigma				
Constant	-0.365*** (0.023)	-0.449*** (0.048)		
Observations	910	218	218	218

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table C10. Models Predicting Projects Proposed to the *Pacto Agrario* Program for Rural Housing

	Any Project Proposed	Any Project Approved	Funds Requested	Funds Approved
I.V. ENP	0.219 (0.257)	0.606 (0.558)	-177.889** (67.406)	42.651 (30.983)
Margin of Victory	0.004 (0.007)	0.038** (0.013)	-4.374* (1.964)	1.613 (0.842)
Turnout	-0.172 (0.700)	0.010 (1.493)	48.632 (150.009)	36.882 (52.611)
Rural	0.242 (0.331)	2.214*** (0.574)	-159.517* (79.565)	51.092 (33.192)
Capital City	-0.354 (0.320)	0.000 (.)	-6.568 (71.534)	15.045 (25.075)
Partisan Attachment	0.000 (0.003)	0.004 (0.006)	-1.120 (0.592)	0.198 (0.243)
Partisan Alignment	0.093 (0.134)	-0.083 (0.306)	-45.440 (29.245)	2.799 (11.482)
Log(Pop. Density)	-0.003 (0.104)	0.532* (0.213)	-89.668*** (23.424)	17.505 (11.487)
Poverty	-0.003 (0.003)	0.007 (0.006)	-0.633 (0.602)	0.523* (0.227)
Total Requested				0.323*** (0.071)
Number of Projects				-7.574 (6.079)
Constant	-1.430 (1.440)	-5.393 (2.757)	938.633* (378.565)	-251.905 (168.950)
athrho				
Constant	-0.147 (0.188)	-0.519 (0.470)		
Insigma				
Constant	-0.365*** (0.023)	-0.395*** (0.052)		
Observations	910	188	192	192

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

## Appendix D for Chapter 6

Table D1. Hierarchical Model Predicting the Tendency to Give Positive Service Evaluations

	Tendency to Provide Positive Service Evaluations ( $\alpha$ )
Female	0.006 (0.016)
Age	-0.002* (0.001)
Education Level	-0.006** (0.002)
Rural	-0.034 (0.023)
Effective Number of Candidates	0.078** (0.029)
Perceived Responsiveness	0.199*** (0.021)
Effective Number of candidates * Perceived Responsiveness	-0.028*** (0.008)
Margin of Victory	0.002 (0.001)
Partisan Alignment	-0.001** (0.000)
Poverty	-0.004*** (0.001)
Turnout	-0.388 (0.212)
Log (Pop. Density)	-0.046 (0.034)
2004	0.000 (.)
2005	0.070** (0.022)
2006	0.062** (0.024)
2007	0.049* (0.023)
Constant	3.544*** (0.212)
Region Constant	-22.517 (22.038)
Department Constant	-2.344*** (0.307)
Municipality Constant	-2.855*** (0.428)
Residual Constant	-0.711*** (0.023)
Observations	3740

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

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