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Governance from Below in Bolivia: A Theory of Local Government with Two Empirical Tests

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Governance from Below in Bolivia: A Theory of Local Government with Two Empirical Tests\*

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#### 1. INTRODUCTION

Over the past few decades, decentralization has become one of the most debated policy issues throughout both developing and developed worlds. It is seen as central to the development efforts of countries as far afield as Chile, China, Guatemala, and Nepal. And in the multiple guises of subsidiarity, devolution, and federalism, it is also squarely in the foreground of policy discourse in the U.S., UK, and EU. But surprisingly, there is little agreement concerning the effects of decentralization in the empirical literature. Optimists (e.g., Ostrom et al. 1993, Putnam 1993, Wallis and Oates 1988, World Bank 1994, UNDP 1993) argue that decentralization can make government more responsive to the governed by increasing "citizen participation and governmental accountability while improving allocative efficiency and equity in service distribution" (Kubal 2006). Pessimists (e.g. Crook and Sverrisson 1999, Prud'homme 1995, Samoff 1990, Smith 1985, Tanzi 1995) dispute this, arguing that local governments are too susceptible to elite capture and too lacking in technical, human, and financial resources to produce a heterogeneous range of public services that are both reasonably efficient and responsive to local demand. Neither side has been able to win over the other with convincing empirical evidence.

Consider the broadest surveys of decentralization experiences. In a wide-ranging survey, Rondinelli, Cheema and Nellis (1983) note that decentralization has usually disappointed. Most developing countries implementing decentralization have experienced serious administrative problems. Although few comprehensive evaluations of the benefits and costs of decentralization efforts have been conducted, those that were indicate limited success in some countries but not others. A decade and a half later, surveys by Piriou-Sall (1998), Manor (1999), and Smoke (2001) come to cautiously positive conclusions but with caveats about the strength of the evidence in decentralization's favor. Smoke asks whether there is empirical justification for pursuing decentralization and finds the evidence mixed and anecdotal. More recently still, Shah, Thompson, and Zou (2004) reviewed fifty-six recent studies of decentralization and found that reform has in some cases improved, but in others worsened, service delivery, macroeconomic stability, corruption, and growth across a large range of countries. The lack of consensus is striking.

Under closer examination, this inconclusiveness is less surprising. Empirical work on decentralization can be divided into two broad groups: Qualitative (small sample) work and Quantitative (large sample) work. The former (e.g. Blanchard and Shleifer 2000, Parker 1995, Slater 1989, Treisman 1999, and Weingast 1995) usually focus on a single country or develop comparisons between a small set of countries, relying primarily on descriptive and qualitative evidence. This analysis is often careful, deep, and nuanced. But the methodology implies low levels of generality and an excess of variables over observations, making it difficult to control for exogenous factors. On the other hand, quantitative studies (e.g. de Mello 2000, Fisman and Gatti 2000, Huther and Shah 1998, and Zax 1989), benefit from the high degree of generality, consistency, and empirical transparency that statistical approaches provide. But they necessarily suffer problems with the quantification of nuanced concepts and data comparability across diverse countries (or regions). The combination of such methodological difficulties with the widely varying definitions of "decentralization" adopted by different countries, often followed by poor or incomplete implementation of whatever definition is chosen, goes a long way toward explaining why empirical studies of both types have been unable to clearly pin down its effects.

This paper attempts to overcome such difficulties by attacking its research question with a blend of qualitative and quantitative evidence and by focusing on a single country, Bolivia, where decentralization was clearly defined and vigorously pursued. The question is: Why do some local governments perform well and others badly? As we shall see below, this question transforms itself rapidly into: How does (democratic) local governance work, and what are the major ways in which it can be deformed? The paper's empirical strategy combines deep insight into the causes of government quality in two extreme cases of municipal performance with national data on all of the country's municipalities. In this way, we can approach the

elusive goal of an explanation that has both generality and deep understanding. We can avoid problems of cross-country comparison (e.g. institutions, political regimes, idiosyncratic shocks) while still benefiting from the formal rigor of large-N studies. And, we can retain a central focus on complex, nuanced, explanatory factors—such as accountability, trust, and political entrepreneurialism—that are hard to treat with quantitative data alone.

I argue that the "outputs" of decentralization within any given country are largely determined by local-level political and institutional dynamics. This is a significant departure from the bulk of the decentralization literature, where the analytical approach is top-down, treating reform as an essentially national phenomenon. This paper takes the opposite tack, approaching decentralization as a single reform that sets into motion a number of largely independent local processes. The effects of decentralization are, to a great extent, the sum of the effects of these local dynamics, which inevitably diverge as much as local conditions do. To understand decentralization, we must first understand how local government works and, in particular, when it works well and when badly. It is worth noting that neither approach, top-down or bottom-up, is somehow "right" to the exclusion of the other. Rather, each is well-suited to certain kinds of questions. If a top-down approach is well suited to analyzing variations across countries in relations between center and periphery (e.g. Eaton 2006), then a bottom-up approach should be well suited to understanding in-country variations in local government responsiveness and accountability.

This paper explores the deep causes of good and bad municipal performance in two Bolivian municipalities. I seek to go beyond a descriptive account of how these results came about, to their underlying economic and social determinants. The results of this inquiry mirror broader results from qualitative work in nine Bolivian municipalities, which gives confidence in the conclusions. From these qualitative results we derive a theory of local government that integrates a variety of well-established insights on the role of elections and lobbying in democratic politics with more recent ideas about civic organizations and social linkages. The framework provides a structure for understanding how economic interests, political actors, and civic organizations interact to make policy decisions. I derive predictions based on local characteristics and then test them with extensive quantitative evidence from the universe of Bolivian municipalities. Bolivia is particularly deserving of study because reform there consisted of a significant change in policy at a discrete point in time. The data available are of surprising scope and quality for a country so poor and include information on the political, social, civic, economic, institutional, and administrative characteristics of all of Bolivia's municipalities.

The rest of the paper is organized as follows. Section 2 presents the qualitative methodology and explores the causes of government responsiveness and accountability in two highly divergent cases. Using these insights, Section 3 develops a theory of local government and derives predictions. Section 4 tests the predictions using econometric models of public investment and a database that comprises all Bolivian municipalities. Section 5 concludes.

#### 2. LOCAL GOVERNMENT AT THE EXTREMES: CHARAGUA VS. VIACHA

#### 2.1 CONTEXT AND METHODOLOGY

Until 1994, Bolivia was counted amongst the most centralized countries in Latin America. Spurred on first by the nationalist revolution of 1952-53 and then by a combination of ideology and political convenience, successive civilian and military governments built up one of the most centralized state structures in the region with the avowed aim of "transforming social relations" and promoting development. It was against this background that Bolivian decentralization reform was announced in January 1994 and implemented that July. The core of the law consists of four points: (i) Resource Allocation. Funds devolved to municipalities doubled to 20 percent of all national tax revenue and allocation amongst them switched from highly political criteria to a simple per capita basis. (ii) Responsibility for Public Services. Ownership of education, health, irrigation, roads, sports, and culture infrastructure was given to municipalities, with the allied responsibility to maintain these facilities and invest in new ones. (iii) Oversight Committees (Comités de Vigilancia) were established to provide an alternative channel for popular demand. Composed of representatives from grassroots groups, these bodies propose projects and oversee municipal expenditure. Their ability to have central disbursements suspended if they find funds being misused can paralyze local government and gives them real power. (iv) Municipalization. Existing municipalities were expanded to include suburbs and surrounding rural areas, and 198 new municipalities (out of 311 in all) were created.

The change in local affairs that these measures catalyzed was immense. Before the reform, local government was absent throughout the vast majority of Bolivian territory; the state's presence was limited to, at most, a military garrison, schoolhouse, or health post, each reporting to its respective ministry. After the reform, elected local governments accountable to local voters spread throughout the land.

We turn now to detailed qualitative evidence from two extreme cases of local government performance in Bolivia. These emerge from a broader study, involving six months of field work in nine municipalities chosen to broadly represent Bolivia in terms of size, region, local economy, rural vs. urban setting, and cultural and ethnic characteristics. In each of these, a small research team conducted a systematic program of semi-structured and unstructured interviews of public and private leaders, key informants, and citizens at the grassroots level. Interviews were carried out in the main city or town and throughout rural catchment areas. The majority of the interviews by number were with members and representatives of grassroots organizations.

But let us first quickly review the institutional context of local government in Bolivia. The Ley de Participación Popular (Law of Popular Participation, LPP) stipulates that municipal council members be elected from party lists in single-constituency elections. The council then elects the mayor indirectly from the top vote-getters. Bolivia's European-style, fragmented political culture, grafted onto an American-style presidential system, ensures that most municipal (and national) governments are coalitions.<sup>1</sup>

The third institution of local government is the oversight committee (OC), composed of grassroots representatives who propose projects and oversee municipal expenditure. OCs provide

an alternative and continuous channel for representing popular demand in the policy-making process. Once elected, OC members name one of their own as president; their president's legal status is comparable to the mayor's. The OC's power lies in its natural moral authority as well as its ability to freeze central transfers to local government if it judges that funds are being misused. Oversight committees thus comprise a parallel, corporatist form of social representation similar to an upper house of parliament, enforcing accountability on the mayor and municipal council.

The municipalities we now examine in detail, Charagua and Viacha, sit at opposite extremes of local government responsiveness and accountability. The information that follows comes from seventy-seven interviews with 111 respondents conducted in 1997, plus additional statistical and budgetary data, covering the period 1992-97 (i.e. pre- and post-reform). Two elections took place during this period, in 1993 and 1995. I focus on extremes of municipal performance in order to place in stark relief the systematic differences in decision-making that characterize each, leading to their very different outcomes. The two municipalities have similar numbers of political parties, similar vote shares for the ruling coalition and opposition, similar levels of electoral absenteeism, similar rates of illiteracy, and similar levels of rural, urban, and total unsatisfied basic needs. This allows us to rule out such factors as alternative explanations. Where other basic characteristics differ between them (e.g. Viacha is larger, richer, and located close to a major city), the predicted effect on performance would favor Viacha. In fact, the opposite was the case. Charagua is an object lesson in responsive government, and hence we begin there.

#### 2.2 Charagua

Located in the scrub grass and low twisted bushes of Bolivia's arid Chaco, Charagua's 60,000 km2 make it larger than Costa Rica and twice the size of Belgium. One-eighth of its 20,000 inhabitants live in Charagua town, with the rest scattered across eighty indigenous and rural communities. The economy is based on agriculture, cattle-ranching, and a teacher-training college. Only cattle-ranching achieves a respectable scale, with a few families raising huge herds on tens of thousands of hectares. Most of Charagua's agricultural sector is pre-modern:

communal lands farmed by Guaraní peasants who break the earth with their traditional stick method. The population of Charagua is overwhelmingly Guaraní. Townsfolk think of themselves as either white or mestizo, in strict opposition to Guaraní peasants. While the town has no industry and little commerce, its public services greatly surpass those of surrounding communities.

By mid-1997 Charagua had acquired a reputation for being well-run. The mayor came top in a departmental ranking. "He is a very good administrator," said the Social Investment Fund's regional head. "He has a very good image—even people from rival parties recognize this."<sup>2</sup> Council members were also judged hard-working, honest, and effective, and villagers were pleased with the outcome of their work. Decentralization had increased municipal resources by some 6,500 percent year-on-year, and yet the funds appeared to be well-spent. Local government had managed to keep operating costs to just 4 percent of total budget. National government audits concurred (Secretaría Nacional de Participación Popular 1997), as did our research: primary evidence abounds that local government in Charagua was responsive and accountable to local voters.

At a time when public disaffection with Bolivian politicians was high, dozens of hours of interviews with authorities and citizens from all walks of life did not produce a single accusation of official corruption. Grassroots respondents from all over Charagua reported satisfaction with their local government and felt that their concerns were being addressed. Working in concert with the municipal council and the OC, the mayor had implemented an investment planning system which authorities and villagers alike agreed was transparent, equitable, and highly participative. Projects resulting from this process pleased citizens because they responded to real needs and incorporated local concerns from the start. A wide range of public officials and business and civic leaders agreed that municipal authorities were well-meaning and effective and the quality of the services provided was high.

The foundation of good local government in Charagua was a political covenant in which the center-left Movimiento Bolivia Libre (Free Bolivia Movement, MBL) party allowed the Asamblea del Pueblo Guaraní (Guaraní People's Assembly, APG) to choose its candidates and write important parts of its platform in exchange for Guaraní votes in municipal elections. The covenant—a notable piece of political entrepreneurialism—allowed the MBL to quadruple its share of the vote and move from the perennial shadows of Charaguan politics to center stage.

The deeper background to Charagua's municipal dynamics is a Guaraní cultural renaissance which began in the early 1980s. Having survived Spanish colonialism for over three centuries, the Guaraníes succumbed throughout the 1800s to a potent mix of Christian conversion, land accumulation by cattle ranchers, and government annexations, all backed by the repression of the Bolivian army (Albó 1990, 19-22). With their spears and arrows, the Guaraníes were no match for the firearms of the state, and at Kurujuky in 1892 an indigenous uprising led to a massacre which almost destroyed the Guaraní community.<sup>3</sup> Kurujuky cast Guaraníes onto the margins of society where they survived as indebted slaves confined to vast estates or subsistence farmers in isolated rural communities. They spent the better part of a hundred years in material and spiritual deprivation, a once proud and bellicose people lost in a sort of collective amnesia triggered by defeat (Medina 1994, 19-30).

The 1980s witnessed a rebirth of Guaraní consciousness and pride. The APG was formed in 1986-87 to coordinate Guaraní affairs, foment cooperation amongst communities, and articulate Guaraní interests. Building upon the foundation of existing Guaraní institutions of community self-government, the APG constructed a national organization with departmental, regional, and municipal units, mirroring the administrative structure of the country. The moment was ripe: aided by consensual decision-making and high levels of solidarity amongst Guaraníes, the APG flourished and quickly established a central role throughout the Guaraní world, from mundane community tasks to regional and national affairs.

#### 2.3 VIACHA

Viacha squats under the fierce altiplano sun, a large, rural municipality with a dusty, medium-sized city in one corner (total population 54,000). Wealthy by Bolivian standards, it is home to numerous textile and construction-related firms, as well as a large bottling plant of the Cervecería Boliviana Nacional (Bolivian National Brewing Company, CBN), Bolivia's largest brewery. Municipal income is higher and more broadly based than most Bolivian cities. Yet by mid-1997, Viacha was a troubled town. After three consecutive electoral victories, the populist Unión Cívica de Solidaridad (Civic Solidarity Union, UCS) party had lost its sheen in a hail of accusations of corruption and incompetence. Dozens of communities' investment requests went unsatisfied, yet the 1996 budget under-spent by Bs.2 million. The participative planning process broke down as the city became polarized between groups supporting the mayor and those demanding his resignation. Because the UCS was founded by the owner of the brewery and in many ways operated as the political wing of the city's largest employer, the stakes in Viacha were high.

Primary evidence from personal testimony, municipal accounts, and facts on the ground confirm that local government was unresponsive and unaccountable. The institutions of government varied between ineffective and fully corrupt, producing policy outputs that were unsatisfying to local voters. There is substantial evidence that Mayor Callisaya was inadequate as a manager. He expanded his payroll by over 100 percent without significantly increasing the municipality's administrative ability or technical skills. And, he squandered huge sums of money on pet projects, like an unfinished, over-budget municipal coliseum; a high, twisting playground slide whose main panels soon began to fall off, threatening children with severe injury; and an expensive municipal sewerage system which exploded, throwing feces onto the streets of the city. Public officials, municipal councilmen, and even the mayor's political boss testified to Callisaya's corruption, and a national audit of municipal accounts charged him with malfeasance. The mayor's example spread throughout his administration, forming a web of corruption that enveloped the municipality.

Across the hall from the mayor's office, members of the municipal council readily admitted scarce knowledge of their own responsibilities and displayed no interest in finding out. Respondents from across Viachan society considered them unsophisticated, unresponsive, and easily manipulated. Increasingly, their loyalties belonged to just one party. When opposition representatives began to question municipal policy, the UCS hired them and members of their family, and the criticism stopped. The situation of the OC was more dire. Viacha suffered two OCs: OC1, the "official" OC recognized by local and national governments, was uninformed and inert. Its president, a recently arrived migrant from distant Potosí, was unaware of the financial details of projects he had approved and ignorant of basic facts like how many people the municipality employed and how much it spent per year. Almost no one in the city knew who he was. The opposition OC2, by contrast and despite the mayor's efforts, was considerably more active and well-informed. Unrecognized by the national and local state, however, and excluded from official deliberations, OC2 was powerless to intervene in official decisions.

The ructions of Viachan politics occur within a broader tide of urban migration which flows around and through the city. Perched on the edge of the La Paz–El Alto metropolis, Viacha is the first stop for many peasants fleeing the subsistence agriculture of the altiplano. Some move on, but others stay, pushing the city's adobe neighborhoods farther and farther outwards. They take little pride in the traditions of a city that defines itself in opposition to the countryside; they stay, having found jobs in the capital, because the living is cheap.<sup>4</sup>

#### 2.4 Theorizing Local Government at the Extremes

Now let us step back from the proximate causes of government responsiveness and accountability—the mayor, municipal council, and oversight committee—to consider the problem at a higher level of theoretical abstraction. This section contrasts the social and institutional characteristics of Charagua and Viacha under three headings: the local economy, local politics, and local civil society, in order to understand the deeper currents at work in each.

#### The Local Economy

The economic differences between Charagua and Viacha are huge. Even though Viacha's brewery comprises a considerably smaller share of the local economy than Charagua's ranchers, the single-minded exploitation of its resources and distribution network, combined with skillful political tactics, allowed it to dominate the city's political life to a remarkable degree. The CBN financed not only the UCS but indeed the entire local political party system, with abusive and monopsonistic effects. With fiercely partisan aggression, the CBN mounted integrated advertising campaigns for politics and beer, pushed political propaganda through its distribution network, and rallied its staff to work political rallies where beer was given away. And, once the UCS was in power, it bribed, hired, and intimidated other party leaders so as to neutralize opposition.<sup>5</sup> Beneath this lay a simple strategy designed to capture votes and promote the UCS–CBN brand. It generated, for a time at least, a political monopoly in which the UCS raised the price of dissent and won repeated reelection.

By contrast, Charagua's ranchers favored a more diverse approach better suited to a pluralistic group of business people. Unlike the CBN, Asociación de Ganaderos de la Provincia Cordillera (Cattle Ranchers Association of the Cordillera Province, AGACOR) was an association of entrepreneurs who did not face identical business conditions and, accordingly, did not act politically or commercially with a single will. Cattle ranchers contributed to, and could be found in, all of Charagua's political parties. In this way, they encouraged competition in the political system and created conditions whereby entrepreneurship could flourish. AGACOR also helped Guaraní farming communities to drill wells and gave nonmember farmers technical and veterinary assistance. And, when their rivals won power, ranchers found an accommodation.

#### Local Politics

Consider systemic issues first. In the 1980s and '90s, Bolivia enacted a number of national reforms that improved the transparency, secrecy, and independent oversight of the voting process. Additional reforms simplified voter registration, increased the number of rural

polling stations, and greatly extended rural literacy programs (especially amongst women). Their collective effects were a broad increase in voter registration and participation. Charagua provides a case study of this process. Registered voters increased by 72 percent between the 1993 and 1995 elections, and suffrage rose 139 percent.

The impact of these reforms was greatly multiplied by the decentralization program that followed soon after. The LPP redrew municipal boundaries so as to bring rural areas into the municipal system and then devolved significant resources and political responsibility to them. Whereas rural dwellers had previously voted, if at all, for cantonal officials who had neither resources nor political power, now fully-fledged municipal governments with real authority were at stake. The prospect of controlling them drove political parties into the countryside in search of votes. The prospect of benefiting from them pushed villagers and farmers into municipal politics and the voting booth.

The reforms that opened politics to a new electorate also promoted fairness and openness. The old methods of bribery and intimidation could no longer be counted on. To give one example, an attempt to bribe a council member from the Acción Democrática Nacionalista (Nationalist Democratic Action, ADN) party in Charagua to confirm the Movimiento Nacionalista Revolucionario (Nationalist Revolutionary Movement, MNR) mayoral candidate failed because, given electoral transparency, the transaction would have been apparent and would have exposed the ADN to the voters' wrath.<sup>6</sup> In this political aperture, the parties that underwent comparable openings benefited most; those which attempted to carry on as before suffered. Thus the MBL, previously irrelevant in Charagua, struck a deal with the APG and won the majority of new votes, while the MNR lost its preeminence and was thrown out of government.

The process was very different in Viacha. Although voter registration also increased, Viacha's gain of 22 percent was an order of magnitude lower than Charagua's. This reflected the fact that Viacha's politics remained closed to the concerns and priorities of the rural majority. This, in turn, was mostly due to the CBN and, in particular, to the head of the local bottling plant, Juan Carlos Blanco. Blanco, a swearing bear of a man, threw all of UCS–CBN's resources behind the effort to deliver large local majorities. He took the fused politics-and-beer strategy to comical lengths and bribed and intimidated opposition parties into meek submission.

The lamentable consequence was that the legal-electoral reforms detailed above were insufficient to counter the UCS–CBN's capture of local government. Under normal conditions, political competition and openness could be expected to catalyze a cleansing of the political system. But a substantive political choice is required for this mechanism to operate, and in Viacha there was none. The local political system was uncompetitive, unrepresentative, and incapable of innovation. Voters offered a "choice" of the UCS or toothless, dormant alternatives eschewed politics altogether and dropped out of the system. Political oversight of government fell away, and the municipality became unresponsive and corrupt.

#### Civil Society

The conspicuous differences between Viacha and Charagua extend to the social arena as well. In Charagua the Guaraní majority form a large network of rural villages with homogeneous social characteristics and self-governing community structures. Townspeople, the other important group, had their own organizational structures but proved pragmatic and willing to work with the Guaraní majority.

By contrast, Viachan civil society is a heterogeneous mix of groups with strong and divergent identities and a long history of mutual antagonism, marked by episodic outbreaks of violence. Rural Viacha is divided between the Machaqas in the west and the remainder, closer to the city. The former is a distinct region where the Aymará language predominates and communities are organized into traditional, pre-Columbian Ayllus and Mallkus. The latter see themselves as more modern, speak a mixture of Spanish and Aymará, and base their social organization on the peasant union's general secretariats. Rural and urban worlds collide in the city's markets and peri-urban areas and in adjacent rural communities, and the resulting frictions lead to social tensions.

It is easy to see why civil society was a significant benefit to local government in Charagua and a significant liability in Viacha. Charagua benefited from a highly structured and coherent civil organization in which communication was fluid and norms of trust and responsibility strong. Through it, civic and municipal authorities found it easy to stay in touch with local demands at the village level as well as to mobilize support for collective efforts. By promoting local authorities up through its hierarchy, the APG developed its own leaders internally. In Viacha, by contrast, civil society was essentially broken. Its constituent parts did not trust each other and in many cases could not speak to each other. Government travesties in the countryside went unreported in the city, where civil authorities of all extractions ignored village requests. Civic leaders with proven effectiveness at the village level were overwhelmed by the scale and pressures of municipal government. With no budget of their own and depending on official generosity for their sustenance in the city, they were easily neutralized as independent actors by government authorities. In Charagua, a civil society which functioned organically essentially took over local government and made it work. In Viacha, society was a bubbling cauldron of resentment and discontent, composed of people so mutually suspicious of each other as to make social oversight virtually impossible.

It is instructive to note that Charagua, while in some ways more homogeneous than Viacha, is itself a heterogeneous society, with minority white, Mennonite, Quechua, and Aymará populations. Even with a well-functioning APG, it would have been feasible for Guaraní politicians to assume authority and ignore or exploit rival ethnic groups. That they did not must in part be due to enlightened leadership. But it is also due to the value of fairness in such a district. The fact that Guaraníes form a majority of the population implies that the question of how to allocate public investment is essentially a problem of how to share out municipal resources amongst themselves. An investment scheme that produced unequal distributions would lead to strife amongst the Guaraníes, an outcome they would seek to avoid. Allocations that were fair amongst Guaraní communities but systematically lower for minority groups might be technically feasible but would alienate criollo townspeople and thereby risk the Guaraníes access to the technical and financial resources they controlled.

In Olson's (2000) terms, there existed in Charagua an "encompassing interest," i.e. one whose incentives were consistent with the growth of the collectivity. Viacha, on the other hand, had no encompassing interest, only narrow, antagonistic interests that sought to exploit power for the short-term gain of narrowly-defined groups. This explains why the role of history varies so much between the two districts. For centuries both had suffered from state oppression, extremes of inequality, and periodic outbursts of civil violence. Charagua's history was if anything more repressive and more cruel than Viacha's, leaving a potentially deeper reservoir of resentment. And yet it was in Charagua that the victims of oppression were able to overcome their past sufficiently to reach an accommodation with the urban elite, whereas in Viacha lingering social tensions contributed to government breakdown. In Charagua the group that stood to benefit most from government had an encompassing interest in its success. In Viacha, groups that lacked such interest fought for and abused municipal power to the point of disaster.

#### 3. A THEORY OF LOCAL GOVERNMENT

#### 3.1 THE STRUCTURE OF LOCAL GOVERNMENT: ECONOMY, POLITICS, SOCIETY

Local government produces local services and policies at the crux of a complex, dynamic environment. It is necessary to understand this environment in order to explain why some municipalities respond effectively to local needs and others do not. We consider first a structural model of the relationships out of which local government emerges, followed by an analytical model of the determinants of government responsiveness and accountability.

Local government's environment is defined by three distinct institutional relationships. The first of these—voting—occurs between voters and political parties or candidates. Parties compete with promises and ideas to attract individual voters, who vote for the party or candidate they prefer. Elections select governments, and thus are implicated in the responsiveness of those governments. How exactly does this work? Elections do not establish a contract (explicit or implicit) between government and governed, nor do they set a specific policy agenda. This is due to two problems: political contracting and cycling. The former, emerging from the incomplete contracts literature (e.g. Hart 1995, Hart and Moore 1990), refers to the impossibility of writing a comprehensive platform that links politicians' actions to voters' policy preferences. Specific responses to all possible contingencies cannot be contracted for the simple reason that all possible contingencies cannot be foreseen. The latter, well-known problem of cycling in multidimensional space (Condorcet 1785, Dodgson 1884, Black 1948, Mueller 1989) further limits elections' ability to convey information with anywhere near enough detail to inform specific policy decisions (Verba et al. 1993). Hence, elections serve instead to allocate control over governing institutions to the "team" (Downs 1957) most trusted by voters. Elections are about the allocation of power—power to take future decisions that affect society's welfare.

I assume that voters vote for their preferences or interests. That is to say, citizens vote for the candidate whose actions, once in office, they think will benefit some combination of their own interests and the community's. Different voters may weight these two factors differently. The process by which such voting decisions are made is nonlinear, imprecise, and variable by individual. Voters themselves may not be aware of how their own voting intentions form. Hence, I do not try to model it. The variability of this process means that it can be expressed in a number of ways, such as voting for a candidate's policy proposals, party affiliation, personal history, or ethnic or other background. Each of these criteria can, and probably often does, operate as a utility proxy—"a candidate like me is more likely to choose policies good for me." This assumption does not deny that other individuals' voting decisions may be truly orthogonal to calculative (utility maximizing) voting. Rather, we assume that if the vote is free and elections regular and repeated, the strongest tendency over large numbers of votes will favor candidates and parties whose future actions voters think will improve their welfare.<sup>7</sup>

Secondly, I assume that voters vote individually. Although interest groups and organizations may try to influence voters' decisions, the technology of voting—each adult casts one vote in

secret—implies that these decisions are ultimately exercised at the most disaggregated level. Where voting is concerned, there are no intervening organizations that aggregate preferences. Hence, the process of preference aggregation should be a simple, mechanical, and ex-post transparent one: many secret ballots are cast, votes are tallied, and a winner is declared. The winner should represent the electoral option that most voters judge best for their collective welfare. In other words, the election winner should, in some fuzzy, nonlinear way, represent the "will of the majority."

For this to occur, two further conditions must hold. The first is that elections must be open, free, and fair: open to registered voters and politicians/parties, based on the free participation of both, and fairly administered, counted and reported. Where some citizens are prevented from voting or their decisions constrained at the ballot box, or where vote counting is manipulated, we can expect the authorities elected to respond poorly to the wishes of the majority. The second condition is that, given the above, voters be presented with a range of options that substantively address the needs and challenges facing them. In other words, elections must be substantively competitive.

The logic is similar for both conditions. Where voters are not free to choose or are "free" to choose amongst options that are externally constrained in the policy dimensions most important to them, the competitive dynamic will tend to operate in dimensions different from citizens' needs. Governments elected on such criteria have little incentive to address voter needs, especially when this is costly, because they can expect reelection without doing so. By contrast, free and fair elections that are substantively competitive support policy innovation. Innovation happens when parties actively canvass local society, identifying pockets of voters, currents of opinion, or particular interests that are under-represented, and propose policies that respond to these and other changing voter needs. Policy innovation of this sort can be termed political entrepreneurship.

Substantively competitive politics is characterized by a greater diversity of ideas and policy proposals competing for public favor and hence a broader representation of the

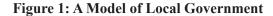
public's needs. A direct result of this is improved responsiveness and public accountability of government officials, as opposition parties continuously search for advantage over their rivals. By contrast, a substantively uncompetitive politics leads to lower levels of policy innovation and entrepreneurialism, which in turn reduce the level of oversight that local government institutions are subject to. This will tend to result in a less responsive, less accountable local government.

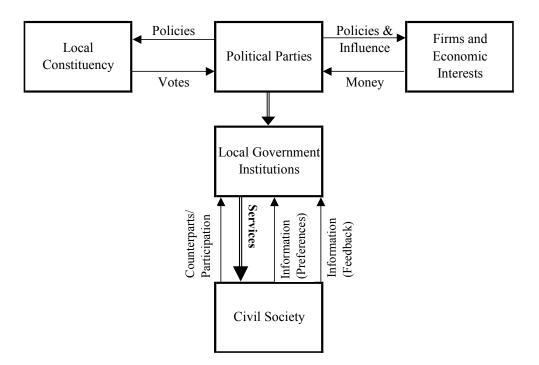
The second relationship—lobbying—connects parties to private firms, producer associations, and other economic and issue-oriented interest groups. Following the pressure group politics work of Bentley (1908), Finer (1997), and Truman (1951), it can be thought of as a secondary, or wholesale, political "market" in which specific policies or entire policy bundles, as well as broader influence over legislators and the policy-making process, are exchanged for resources from interest groups. The rationale for this relationship is derivative but compelling: even where they are all-volunteer organizations, political parties require resources to fund election campaigns and sustain party operations. And because of the incomplete contracts problem, firms are interested in a continuing influence over government decisions and the policy environment in which they operate (Kitschelt 2000). Such wholesale exchanges, combined with gifts from the faithful, are how parties finance themselves.<sup>8</sup> Ben-Zion and Eytan (1974), Palda and Palda (1985), Poole and Romer (1985), and many others have tested the relationship between campaign contributions and policy-making empirically, with positive results.

The third relationship involves civil society conceived as a collectivity or set of collectivities—as opposed to atomized individuals—and their relationships with the institutions of government. Where governance is concerned, local civil society operates as a complex of organizations. These aggregate preferences and represent community needs, mediate community participation in the production of certain services, facilitate social expression and the assertion of local identity, mobilize voters and attempt to sway their opinions, and enforce political accountability on the institutions of government. It is not useful to conceive of this interaction

as a quasi-market, either internally or in its dealings with government, as its dynamics are not founded on buying and selling. It is rather a set of social organizations that generate their own norms of behavior and responsibility organically and over time may develop stores of trust and credibility that enhance capacity or may not (Putnam 1993, 2000).

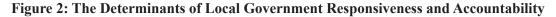
Local government depends on the relationships that collectively comprise civil society to elicit information necessary to the policy-making process, judge the efficacy of previous interventions, and plan for the future (Bardhan 1996). Politicians also depend on these relationships to gauge public satisfaction with their performance between elections. The organizational dynamic of civil society is thus intrinsic to the process of local governance. Figure 1 illustrates how these three institutional relationships combine to give rise to local government. In this diagram, the political parties which are most successful in competing for resources and votes win control of government institutions. These institutions then enter into a separate, more complex interaction with civic organizations that features varying degrees of feedback and social participation.

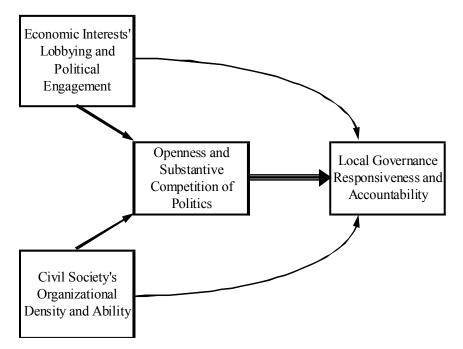




#### $3.2\ A\ D\textsc{ynamic}\ Model \ of\ Responsiveness\ and\ Accountability$

Figure 1 describes how local governments are selected and what sorts of social relationships they then enter into. But why are some better than others? To understand why some governments are responsive and accountable to their voters while others are not, we must place our model in a dynamic context. Let us redraw the structural model of government presented above as a dynamic model that depicts how voting, lobbying, and civic organizations interact over time to produce government decision-making that is responsive and accountable to voters or not. Figure 2 depicts the key relationships involved. As opposed to Figure 1, where the focus was on the actors involved, our focus here is on actors' behavior over time and how the actions of some actors change the environment in which others operate.





The quality of a municipality's politics is at the center of the model. This is for two reasons. The first is simply that elections select governments, and hence the quality of a municipality's political competition—as explained above—is the single most important determinant of a government's responsiveness and accountability. Once governments are in office, both economic and civic organizations try to influence their decision-making, exerting second-order effects (thin arrows) as depicted in Figure 2. The second, more subtle reason is that the degree of political openness and substantive competition emerge endogenously as the joint products of the political engagement and lobbying efforts of firms and other economic interests and the institutional coherence and organizational ability of civil society.

To understand this, step back for a moment and consider the exogeneity or endogeneity of our three explanatory factors. Within the context and time-frame of a political economy model of government decision-making, it is easy to see that the characteristics of the local economy are essentially given. They are part of the superstructure within which politics and civic organizations operate, and—short of revolution or expropriation—change too slowly to be determined in any useful sense by the other factors in the model. The institutional capacity of civil society is also exogenous. Although it will develop and change over time, internalizing the incentives generated by its environment more rapidly than economic structure can, it is ultimately dependent on characteristics such as culture, history, language, and trust characteristics that also change slowly and so should remain exogenous in a political economy model of government.

An open, competitive political system, on the other hand, is dependent upon the constellation of economic and other interests at the local level as well as on the institutional attributes and engagement of civil society. Consider first how lobbying interacts with voting. Figure 1 suggests a political analogue of the neoclassical argument that open and competitive markets lead to efficient resource allocations. In a diverse, heterogeneous local economy a variety of economic actors with competing interests will tend to support a variety of political expressions. This in turn promotes competition in local politics which then spurs policy innovation as parties vie to win both votes and financial backing.

Where a municipality's economic landscape is dominated by a hegemon, by contrast, that hegemon may be able to increase the efficiency of its political finance by focusing resources on

the success of a single party. Competing parties will find it difficult to finance their activities and may be actively undermined by an abusive hegemon. Monopsony in the provision of political funds thus encourages monopoly in the party system. Note that this does not refer to the simple number and size of firms, nor to broader characteristics of product or labor markets, but rather to local firms' engagement with politics. A diverse local economy where one firm is significantly engaged and other similars stand aside, such as Viacha, will tend to produce such outcomes, as will economies where the hegemon is much larger than the rest.

In fact, municipalities like Viacha may be more likely to feature distorted politics than those economically dominated by one very large firm—"one-company towns." This is because when a single firm's share of economic activity is large enough, that firm is likely to have an encompassing interest in the political and economic health of the town. In such municipalities, the well-being of the town plays a large role in the firm's prosperity, via for example its workforce, the quality of public services it receives, and the level of taxation. Such firms will tend not to abuse or distort local politics because it is in their own interests not to do so. Instead, they will tend to support competing political parties to ensure that major currents of local opinion are represented and voters do not become resentful. And between elections they will seek accommodation with local government, searching out policy options that benefit both town and firm mutually. For reasons that are symmetric and obvious, the fortunes of the town also depend on those of the firm, giving local authorities a strong incentive to reciprocate. In such places, virtuous circles of cooperation and mutually-beneficial investment can sometimes persist over extended periods.

Hence, a diverse, heterogeneous local economy will tend to support openness and competition in politics. But so, curiously, will the presence of a single, dominant firm when that firm has an encompassing interest in the well-being of the municipality. How do civil society dynamics interact with voting?

The insertion of civil society into the framework occurs both during elections, as organizations vie to sway the votes of their own members and others, and afterwards, once

a given political team has assumed control over the institutions of local government. Civic organizations' core functions include the revelation and aggregation of individual preferences into coherent collective positions, coordination amongst members, and information transmission upwards to authority and downwards to the grass roots. In so doing, they constitute a system of representation parallel to that carried out by parties within the context of political competition. The pursuit of these functions makes civic organizations natural vehicles for imposing accountability on government from the grass roots.

Civil society supports an open, substantively competitive local politics when its various, naturally occurring currents<sup>9</sup> form organizations that compete with economic interests and each other to voice demands and affect policy; that is to say, when groups of citizens with similar needs and political preferences organize into groups and: (a) try to sway elections and (b) try to sway ex-post policy-making. In such cases, different civic organizations can ally with different parties to refine policy platforms and mobilize voter turnout. Civic groups in effect subsidize politics by lowering the cost of political mobilization for parties and acting as interlocutors. Doing so can increase the substance of political competition as demands are taken up from the grass roots by civic groups, transmitted to candidates and parties, and injected into a broader policy debate. This, in turn, promotes participation in policy discussions and in elections by making political competition relevant to ordinary voters even in far-flung localities.

But a homogeneous, even monolithic civil society can perform a similar function, albeit in a different way. When civil society is sufficiently homogeneous that similar groups organize vertically into an encompassing interest, as happened with the APG in Charagua, then much of the preference revelation, aggregation, and debate about policy trade-offs that would otherwise occur between competing political parties happens instead within civil society, moderated by the "peak" civic organization. Unlike a private sector encompassing interest, a civil society encompassing interest would probably see little point in supporting competing political parties, given that it carries out much of the policy discussion internally. In such municipalities the logic of political competition would be replaced by the logic of consensus and reciprocity natural to associational life, with possibly beneficial effects for policy implementation. But the levels of information and debate typical of open, competitive politics would nevertheless obtain.

The civic dynamic can fail in at least two ways. The first occurs where civil society is lacking in competent organizations and hence defined by largely atomized individuals. The second occurs where competent civic organizations are so antagonistic towards each other as to be unable to work together. In both cases, collective action failures will abound, and society will lack the intermediating capability necessary to aggregate preferences, transfer information upwards and downwards, and enforce accountability on elected authorities.

Hence, we have a theory of government responsiveness and accountability. Where local politics are nourished by a diverse, heterogeneous local economy and an active civil society rich in organized groups, political competition will tend to be open and substantive. Such politics will tend to lead, in turn, to responsive, accountable local government. Alternatively, where a single firm or group is sufficiently dominant to constitute an encompassing interest, politics will again tend to be characterized by open debate and the substantive competition of ideas and demands. This may not be led by political parties in such cases but rather catalyzed and subsidized by the encompassing interest, which has a large interest in the well-being of the collectivity. Responsive and accountable government will once more be the result.

The problem can be viewed another way: assume politicians are distributed along a quality continuum between "good" and "bad" extremes, and the distribution is similar for all municipalities in a country. That is to say, the pool of potential mayors is no better in any one place than anywhere else. Figure 3 shows one possible distribution, where the average politician's ability is scaled to 0, and the x-axis shows deviations from the mean. What are the characteristics of municipalities where dishonest or incapable politicians gain control of public institutions (the L tail)? Where and why do honest, capable politicians prevail (the H tail)?

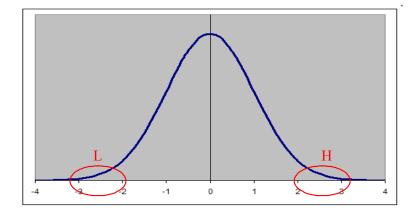


Figure 3: The Distribution of Politician Quality (National and Local Levels)

Low quality politicians will have far more opportunities to enrich themselves in municipalities where government oversight and accountability are crippled by closed, uncompetitive politics. In districts where politics is open, vigorous, and devoted to substance, politicians will face strong incentives to satisfy voters' needs. Bad political agents will dedicate themselves to other pursuits or leave.

#### 3.3 AN APPLICATION AND A POSTSCRIPT

It is instructive to apply the framework to our two districts. Charagua's economy consisted of heterogeneous cattle ranchers who supported competing political parties. Its civic organizations were mostly run by the majority Guaraníes through the APG, an organization as structured and disciplined as it is legitimate in the eyes of most residents. The APG constituted an encompassing interest in Charagua and supported an open, substantive political debate with strong grassroots participation. Accountable local government responsive to both rural communities and the cattle-ranching town was the result.

In Viacha, monopsony in the market for political finance allowed the UCS–CBN to snuff out competition in the local political system. Civil society was divided along ethnic and historical lines and riven with hostilities and mistrust, rendering its organizations incapable of cooperation and unable to engage substantively with government institutions. Political debate effectively shut down as a result, with paltry competition focusing on issues extraneous to local concerns. The local government that resulted proved corrupt, unresponsive, and unaccountable.

The framework thus provides a succinct, coherent explanation of government quality in both districts. Its completeness is underlined by the final, dramatic denouement in Viacha. In late March of 1997, following a series of town meetings that aired their grievances, the people of Viacha rose up against their mayor.<sup>10</sup> On March 22, a crowd of several hundred people<sup>11</sup> marched through town and then massed in the central square opposite Callisaya's office, loudly and angrily denouncing him. A few days later he resigned. In the process of entrenching itself, the UCS–CBN had so comprehensively distorted the local political system that no resolution could occur through this channel. Only a large, extra-systemic shock could break the party's hold, in this case through direct citizen action.

#### 4. A QUANTITATIVE TEST—NATIONAL EVIDENCE

The framework explains outcomes in Viacha and Charagua well. But does it have more general implications? We turn now to a large-N database in search of broad support. If, as argued above, the outcomes of decentralization are largely the sum of the many local processes that it sets into motion, then a framework that models such processes should help us understand the national results of decentralization in Bolivia. Faguet (2004) shows that decentralization caused important policy changes in Bolivia: public investment shifted from economic infrastructure to social services, and human capital formation and resources were distributed much more equally across space. He finds evidence that local government was more responsive to local needs but does not explain how this came about. Can our framework explain these outcomes?

#### 4.1 Methodology

The theory proposes that economic actors interact with civic organizations to produce open, substantive political competition, which in turn lead to responsive, accountable government. Noncompetitive political systems, by contrast, produce governments that are less accountable to voters and less responsive to their needs. Exceptions can occur where an encompassing interest supports preference revelation and policy debate outside multiparty competition in ways that also lead to responsive, accountable government. Unfortunately, the role of encompassing interests cannot be tested due to insufficient data. There are no natural indicators of encompassing interests in either civil society or the private sector, and the synthetic variables I attempted to construct from tangentially related data produced very large standard errors, implying low measurement precision. Hence, the issue is left for future research.

I thus restrict myself to the main thrust of the theory. An ideal test would model the accountability of local government as a function of the interactions between the diversity of economic interests in a locality and their degree of political engagement and the institutional coherence and ability of its civic groups. But there are no obvious measures of government accountability, economic actors' diversity and engagement, or civic groups' institutional ability for Bolivia, nor indeed for many far richer and more data-abundant countries. So instead I adopt a second-best strategy that models key policy outputs as a function of characteristics of the private sector and civil society. The policy outputs in question are local investment decisions in education, urban development, and health. We focus on these sectors because of their importance to municipal budgets—together they account for two-thirds of total local public investment and because qualitative evidence from the case studies shows them to be consistently amongst ordinary citizens' top priorities. Our approach attempts to measure the extent to which private sector actors and civic organizations interact with the municipality and each other to make investment more, or less, responsive to real local needs. Using local investment as the dependent variable has three advantages: investment data are copious and reliable; investment flows are measured in noncontroversial units; and observed variation in investment levels and composition is high.

Rather than attempting to construct measures of the complex causal variables involved in the theory, I prefer to stick to raw data and simple, relatively transparent estimation techniques.

Hence, the main explanatory variables used include the number of firms and grassroots organizations (GROs) registered in a municipality, which are interpreted below. Because the quality of local politics emerges endogenously in the model, political variables are excluded from the right-hand side. I also include indicators of local need, mimicking Faguet's (2004) test of whether decentralization made government more or less responsive to local conditions. Because the theory stresses the importance of interactions between economic and civic actors, I include interaction terms between indicators of need, firms, and GROs as explanatory variables. If firms and GROs matter, they should matter not only because they are present in a municipality but by their ability to make government more or less sensitive to local needs. These interaction terms are accordingly the most important explanatory variables in the model.

The theory's predictions are tested with an original database that marries investment data for all of Bolivia's municipalities during the decade 1987-96 with a rich set of indicators of local institutional and decision-making characteristics. The database includes the universe of Bolivia's 300+ municipalities. Because need indicators are specific to each sector, I disaggregate municipal investment flows by sector and for each sector estimate the model

$$G_{m} = \alpha + \beta N_{m} + \gamma F_{m} + \delta C_{m} + \zeta N_{m} F_{m} + \eta N_{m} C_{m} + \theta F_{m} C_{m} + \lambda N_{m} F_{m} C_{m} + \xi Z_{m} + \varepsilon_{m}$$
(1)

where G is investment per capita; the need variable, N, is a scalar of the existing stock of public goods of that type (variously defined) at an initial period; F is a scalar or vector of the number of private sector firms in a municipality; C is a scalar measure of the number of civil society organizations present in a municipality; and Z is a vector of regional, demographic, economic, and institutional controls, all subscripted by municipality. A summary of the variables used can be found in the appendix.

My use of the F, C and Z terms to model public investment decisions follows Bergstrom and Goodman (1973) and Rubinfeld, Shapiro, and Roberts (1987) within the context of the available data; my use of the N term follows Faguet (2004). And to the extent that potential multicollinearity problems allow, I follow Brambor, Clark, and Golder's (2005) criteria in my use of interaction terms. In order to compare like with like and smooth natural discontinuities, I sum municipal investment flows during 1994-96 and run cross-sectional regressions. I assume that N, F, C and Z are all constant over these three years—a necessary assumption due to the lack of time-series data for these variables. Because  $G_m$  is left-censored at 0, I use Tobit estimations for equation (1).

The test proceeds as follows. I first estimate a simple, base regression (1'), without interaction terms. We then add needs\*firms and needs\*civic organizations interactions terms, as in (1''). Then we add a firms\*civic organizations term, as in (1''). And finally, we estimate the full model in (1) above.

$$G_{m} = \alpha + \beta N_{m} + \gamma F_{m} + \delta C_{m} + \xi Z_{m} + \varepsilon_{m}$$
<sup>(1')</sup>

$$G_{m} = \alpha + \beta N_{m} + \gamma F_{m} + \delta C_{m} + \zeta N_{m} F_{m} + \eta N_{m} C_{m} + \xi Z_{m} + \varepsilon_{m}$$
(1")

$$G_{m} = \alpha + \beta N_{m} + \gamma F_{m} + \delta C_{m} + \zeta N_{m} F_{m} + \eta N_{m} C_{m} + \theta F_{m} C_{m} + \xi Z_{m} + \varepsilon_{m}$$
(1''')

$$G_{m} = \alpha + \beta N_{m} + \gamma F_{m} + \delta C_{m} + \zeta N_{m}F_{m} + \eta N_{m}C_{m} + \theta F_{m}C_{m} + \lambda N_{m}F_{m}C_{m} + \xi Z_{m} + \varepsilon_{m}$$
(1)

Proceeding in this way allows us, first, to determine whether municipal investment was responsive to objective measures of local need in a particular sector, or not, and whether private firms and civic organizations appear to matter at all—i.e. whether their presence correlates with investment levels. Gradually adding interaction terms  $(1' \rightarrow 1'' \rightarrow 1''')$  allows us to examine whether coefficients  $\beta$ ,  $\gamma$  and  $\delta$  remain significant and to compare their magnitude to those of the interaction terms. This permits a much more careful exploration of the particular ways that firms and civic organizations affect the responsiveness of government investment decisions. For example, it is possible that firms and/or civic groups mediate information flows, support political competition, or otherwise influence decision-makers' priorities individually. Or, they may affect public decisions jointly through some mutual interaction but not individually. Theory leaves the question open, and hence we explore the possibilities empirically here.

Coefficient  $\beta$  characterizes central and local investment patterns according to need, where "need" is defined as the marginal utility arising from a particular type of public service, U'(g). This is based on an assumption of decreasing marginal utility of a public service as the level of provision of that service increases. Hence, need falls as the stock of g rises and vice versa. We expect  $\beta$  to be positive and significant when N is measured by a relevant public "bad" (e.g. illiteracy, malnutrition), and negative and significant when measured by the per-capita stock of a particular type of infrastructure (e.g. markets per capita).

Coefficients  $\gamma$  and  $\delta$  correspond to the civic and economic factors that underpin local governance. At the simplest level we expect both to be significant, but we can also predict their signs. Our measure of the economic heterogeneity and engagement, F, is the number of private sector firms in a municipality. We use total firms, and subtotals for certain sectors. Ideally, we would measure the concentration of business activity in a municipality's firms and their political engagement, which evidence from Viacha and Charagua suggests are what matter. But information on individual firm size (sales, profits, payroll, etc.) is publicly available for very few cities in Bolivia. Hence, we must rely on simpler measures that count firms.

We expect F to have two distinct effects: a sector-specific effect and a systemic effect. Sector-specific effects refer to firms' preferences over investments in certain sectors. Hence, construction firms, for example, will tend to prefer investment in urban development over other sectors. We expect these coefficients to be significant, with sign varying by sector and firm type. Systemic effects refer to the assumption that municipalities with more firms are likely to support a larger number of political parties and hence greater competition in the local party system. This, in turn, will better allow for the transmission of voters' preferences upwards to policy-makers. From this effect, we expect  $\gamma$  to be positive. We measure the degree of civic engagement in the policy process, C, by the number of grass roots organizations officially registered in each municipality. Registration is with the prefecture (departmental government) and confers upon a GRO the status of formal representative of the people living in a particular geographic area. Registered GROs are invited to participate in the election of the oversight committee and help draw up a district's municipal development plan, as we saw in Charagua. Case study evidence strongly supports the view that ordinary citizens value investment in education foremost, followed by urban development and health. Hence we expect  $\delta$  to be positive.

The main coefficients of interest, in accordance with the theory, are those of the interaction terms—especially  $\lambda$ , but also  $\zeta$ ,  $\eta$  and  $\theta$ . In order of estimation,  $\zeta$  captures the extent to which local investment is sensitive to need when many private sector firms are present in the local economy. If government responsiveness to local need is dependent on a strong private sector because of its role in lobbying, funding political parties, or otherwise mediating information flows and political competition, then  $\zeta$  will be significant and have the same sign as  $\gamma$ . This is the fundamental difference between our interpretations of  $\gamma$  and  $\zeta$ : whereas  $\gamma$  provides general evidence that the presence of firms is a determinant of investment levels,  $\zeta$  indicates that firms are engaged in the policy-making process, affecting government's response to need.

Similarly,  $\eta$  captures the extent to which municipalities are sensitive to local need as the density of civic organizations increases in society. If government responsiveness to need is dependent on the presence of many civic organizations because of their role in mobilizing voters and mediating political dialogue or otherwise facilitating political competition and information flows, then  $\eta$  will be significant, with the same sign as  $\delta$ . Whereas  $\delta$  indicates that the mere presence of civic groups affects investment levels,  $\eta$  is an indicator of civic organizations' engagement with public officials in the formation of local policy.

It is possible that a competitive, responsive local government is dependent on the presence of both factors—many diverse firms and a highly organized civil society—and that neither alone is sufficient. The next term we add,  $\theta$ , captures this by measuring the effect of interactions between civil society and private firms on per capita investment levels. The theory implies that this condition is sufficient but does not clarify whether it is necessary. Our model tests these propositions by adding the term sequentially. If firm-GRO interactions are necessary for responsive government, then  $\theta$  should be significant and larger in magnitude than  $\gamma$  or  $\delta$ .<sup>12</sup>

Lastly,  $\lambda$  captures the extent to which interactions between firms and civic organizations affect the responsiveness of local government to objective indicators of need. This coefficient is the single clearest test of the theory laid out above. If heterogeneous firms and the organizational density of civil society matter, as in the model, their effect is to jointly make municipalities more responsive to local needs as their numbers increase. We expect  $\lambda$  to be significant. Its sign will vary depending on whether the N variable is a positive or negative indicator of need (as explained above), but the sense should consistently be of increasing sensitivity to need as the numbers of firms and GROs in a municipality rise.

## 4.2 Results

I examine investment patterns in education, urban development, and health. Similar results, omitted for brevity, were obtained for agriculture and water and sanitation.

## Education

Figure 4 presents results for education investment; let us begin with Model 1. The illiteracy rate is positive and significant at the 10 percent level. This implies that local governments invest more in education where the illiteracy rate is higher. I interpret this as evidence that local

governments are sensitive to local needs, in line with Faguet's (2004) findings. The number of financial firms is negative and significant (1 percent), implying that investment decreases as firms become more numerous. The number of GROs, by contrast, is positive and significant (5 percent), implying the opposite. The two coefficients are the same order of magnitude. They imply that a one-standard deviation increase in the number of firms reduces investment by Bs. 6,889 per thousand inhabitants, while the same increase in GROs increases education investment by Bs. 6,290 per thousand, implying that the two are reasonably evenly matched.

Model 2 adds NF and NC interaction terms but must drop F and C due to multicollinearity with NF and NC. The illiteracy rate is no longer significant on its own, but both interaction terms are significant (1 percent and 5 percent), repeating the previous pattern. This implies that firms intervene in the policy debate to dampen sensitivity to educational need, presumably because it is of little direct benefit to them. GROs, by contrast, prefer education investment and succeed in pressing municipalities to produce it. In Model 3 the FC interaction term is positive and significant (10 percent), while NF and NC retain their signs and continue to be significant (both 5 percent now).

Model 4 adds the three-way interaction term (NFC), using school attendance as the N variable in order to avoid multicollinearity with the other three interaction terms. Because attendance is a negative indicator of need, we expect  $\lambda$  to be negative; it is—significant at the 1 percent level. The NF term becomes insignificant, and the N term continues to be, implying that firms no longer have an independent effect on investment, only influencing it through their interactions with civil society. Civil society, by contrast, retains its independent effect, and the effect is positive. The FC term gains considerably in magnitude and significance (1 percent).

	Model				
	1	2	3	4	
Need Variable					
Il literacy rate	496.70 *	320.30	337.20	327.90	
	(1.840)	(1.080)	(1.140)	(1.110)	
Firms and GROs					
No. of firms (financial)	-258.00 ***				
	(-3.150)				
No. of GROs (legally	119.80 **				
registered)	(2.100)				
Interaction Terms					
Illiteracy*Firms		-31.10 ***	-89.30 **	-38.50	
(interaction term)		(-2.720)	(-2.150)	(-0.600)	
Illiteracy*GROs		4.59 **	4.66 **	4.69 **	
(interaction term)		(2.390)	(2.430)	(2.390)	
Firms*GROs		· · ·	1.75 *	22.30 ***	
(interaction term)			(1.810)	(3.420)	
School attendance*Firms*GROs			( )	-0.29 ***	
(interaction term)				(-2.960)	
Control Variables				· · ·	
Altiplano regional dummy	7161.60	7060.20	7032.10	7470.50	
1 5 5	(1.220)	(1.210)	(1.200)	(1.280)	
Eastern regional dummy	1984.40	911.90	183.10	-25.20	
6	(0.310)	(0.140)	(0.030)	(0.000)	
Rural population (%)	-35.70	-62.20	-80.00	-75.00	
T T T T T T T T T T T	(-0.390)	(-0.700)	(-0.890)	(-0.800)	
Population speaking indigenous	-116.30	-158.90	-176.00	-177.40	
languages only (%)	(-0.510)	(-0.690)	(-0.760)	(-0.770)	
High-income households, by	-93.40	-79.00	-75.50	-103.50	
housing category (%)	(-0.700)	(-0.590)	(-0.570)	(-0.760)	
Percentage of households	300.30	281.60	281.60	285.00	
having a kitchen	(1.590)	(1.480)	(1.480)	(1.490)	
Economically inactive	-201.20	-204.30	-186.70	-184.40	
population (%)	(-0.810)	(-0.820)	(-0.750)	(-0.740)	
Central government investment	10868.10 ***	10028.00 **	10009.90 **	10118.30 **	
project (FIS) dummy	(2.640)	(2.490)	(2.490)	(2.510)	
Local education authority	7824.20 *	7961.30 *	8161.20 *	8045.60 *	
dummy	(1.690)	(1.730)	(1.770)	(1.740)	
constant	11582.30	20824.20	21861.80	21412.40	
constant	(0.470)	(0.830)	(0.870)	(0.840)	
Wald $\Xi^2$	41.41	40.10	41.21	57.43	
Prob> $\Xi^2$	-		0.0001	0.0000	
N	0 293	0.0001 293	293	293	

Figure 4: Education (dependent variable: education investment (Bs.) per 1000 population)

Tobit estimation with robust standard errors; z-statistics in parentheses. \*, \*\*, \*\*\* = coefficients significant at the 10%, 5% and 1% levels.

These results imply that where education is concerned, private firms and civic organizations interact to make government more responsive to objective local needs. GROs raise educational investment both independently and through their interactions with firms. They also make investment more responsive to local need. Interactions between private and civic actors are the single most important determinant of municipal responsiveness and behavior. A one-standard deviation increase in firm-GRO interactions yields a huge increase of Bs. 133,733 per thousand inhabitants. A one-standard deviation decrease in enrollment—given a rich context of firm-GRO interactions—yields an even larger Bs. 152,488 rise in educational investment per thousand inhabitants. All of these results are robust to different specifications, including larger and smaller sets of controls. Evidence from education thus strongly supports the theoretical model of government developed above.

#### Urban Development

Our measure of need in urban development is markets per capita, a negative indicator, which is positive and significant (5 percent) in all four models. This implies that investment was lower in places less endowed with urban infrastructure—a regressive pattern. The positive, highly significant coefficient on the high-income household control variable confirms this finding. Construction firms are associated with increasing investment, as are GROs, albeit at a lower rate and with less statistical significance (10 percent vs. 1 percent). A one-standard deviation increase in the number of firms is associated with an investment increase of Bs. 8,210 per thousand inhabitants; a one-standard deviation increase in GROs is associated with a Bs. 6,290 increase in investment per thousand inhabitants. The regressive effect is confirmed when we add NF and NC interaction terms (the F variable must be dropped due to multicollinearity), due especially to the effect of firms on municipal assessments of need.

This effect curiously disappears when we add the FC term, itself highly significant (1 percent) but then reappears with bigger size in Model 4 when the three-way interaction term is added. Model 4—the full test of our theory—shows that firms<sup>13</sup> have a large independent effect on urban investment, and GROs have none. But the interaction of firms, GROs, and need is notable not only for its size—more than half the size of N on its own—but more so because of its sign. While firms are pressing municipalities strongly to increase investments in urban infrastructure that are regressive, civic organizations mostly succeed in counteracting that through their interactions with firms. A one-standard deviation increase in the total number of firms leads to Bs. 14,998 more of urban investment per thousand inhabitants. By comparison, a one-standard deviation increase in the number of firms and GROs, leads to a Bs. 11,099 decrease per thousand.

This must occur through the political system, the forum where competing demands meet each other, trade-offs are made, and bargains struck. GROs' intent is presumably to reduce budget allocations for urban development to the benefit of other sectors, such as education. The system of public decision-making, therefore, has built-in mechanisms for moderating the ability of particular actors to pursue their self-interest. All of these results are robust to different specifications, including larger and smaller sets of controls. Evidence from urban development also strongly supports the theoretical model of government developed above.

		Model			
	1	2	3	4	
Need Variable					
No. of markets per capita	190360.20 **	285425.90 ***	246215.80 **	229153.20 **	
	(2.370)	(2.990)	(2.460)	(2.210)	
Firms and GROs					
No. of firms (construction)	220.10 ***				
	(5.420)				
No. of firms (total)				6.80 **	
				(2.390)	
No. of GROs (legally	127.70 *	187.60 ***	125.80 *	93.30	
registered)	(1.850)	(2.630)	(1.810)	(1.490)	
nteraction Terms					
Markets*Firms (construction)		3344349.00 **	1315206.00	4323294.00 *	
(interaction term)		(2.000)	(0.940)	(1.690)	
Markets*GROs		-8143.90	-5588.10	-5147.50	
(interaction term)		(-1.340)	(-0.880)	(-0.780)	
Firms*GROs		· · · ·	1.03 ***	0.15	
(interaction term)			(6.820)	(0.370)	
Markets*Firms*GROs				-138560.90 **	
(interaction term)				(-2.190)	
Control Variables					
Altiplano regional dummy	-12527.80 **	-12327.60 **	-12996.90 **	-13338.40 **	
	(-2.250)	(-2.150)	(-2.290)	(-2.360)	
Eastern regional dummy	-4559.90	-4758.80	-5513.70	-6793.00	
	(-0.710)	(-0.730)	(-0.850)	(-1.030)	
Rural population (%)	-5.26	-6.05	-5.64	-6.18	
	(-0.420)	(-0.440)	(-0.450)	(-0.510)	
Population speaking indigenous	-93.10	-102.80	-92.30	-108.60	
languages only (%)	(-0.800)	(-0.880)	(-0.790)	(-0.940)	
High-income households, by	895.20 ***	959.20 ***	894.50 ***	791.40 **	
housing category (%)	(5.690)	(6.140)	(5.670)	(5.060)	
Percentage of households	-20.50	-46.00	-26.40	-18.00	
having a kitchen	(-0.130)	(-0.280)	(-0.160)	(-0.110)	
Economically inactive	-234.70	-223.90	-235.10	-245.10	
population (%)	(-0.950)	(-0.880)	(-0.950)	(-1.010)	
Central government investment	-10244.70 **	-12283.20 ***	-10404.40 **	-10520.10 **	
project (FIS) dummy	(-2.310)	(-2.690)	(-2.320)	(-2.400)	
constant	45394.90 ***	44299.20 ***	46595.70 ***	50290.80 **	
	(2.820)	(2.700)	(2.890)	(3.160)	
Wald $\Xi^2$	155.43	105.17	288.39	110.89	
$Prob>\Xi^2$	0.0000	0.0000	0.0000	0.0000	
N	293	292	292	292	

## Figure 5: Urban Development (dependent variable: urban development investment (Bs.) per 1000 population

N293292Tobit estimation with robust standard errors; z-statistics in parentheses.

\*, \*\*, \*\*\* = coefficients significant at the 10%, 5% and 1% levels.

#### Health

Like education, health investment is responsive to objective indicators of need, rising as child malnutrition<sup>14</sup> increases. The presence of GROs is associated with higher investment, while firms have no apparent effect. A one-standard deviation increase in GROs leads to an estimated Bs. 2,410 more health investment per thousand inhabitants. The addition of a term for total firms in Model 2, however, results in both firm variables becoming significant (1 percent) and GROs losing their significance. I interpret the negative firm coefficient as evidence of a sector-specific effect, as financial firms try to redirect resources from health to other sectors that benefit them more. The positive coefficient on total firms indicates a systemic effect that counteracts this and presumably operates via support for competition in the political system. The aggregate resource impact of the two effects is broadly similar in size, notwithstanding the large disparity in coefficients: a one-standard deviation increase in financial firms yields Bs. 4,472 less investment, while a similar change in total firms yields Bs. 3,242 more investment.<sup>15</sup> Multicollinearity problems between F and NF and C and NC prevent us from including all in our regression models. Used alone, the interaction terms produced no significant results, and hence we do not report them.

Independent effects of firms and GROs on investment disappear when the FC term is added, which is itself positive and significant (5 percent), albeit relatively small in size. This is confirmed in Model 4, which includes the three-way interaction term—also positive and significant at the 5 percent level, and also of small size. A one-standard deviation increase in firm-GRO interactions yields an estimated Bs. 3,578 more health investment per thousand inhabitants. An increase of one standard deviation in the malnutrition rate, given a dense population of firms and GROs, leads to Bs. 4,885 more investment per thousand.

The evidence thus implies that firms and civic organizations have opposing preferences for investment in health. The primary way that they affect local policy is through their interactions with each other, which result in an unambiguous collective preference for greater health investment. These interaction effects are larger in resource terms than the residual impact of the need variable on investment (Bs. 3,396 per standard deviation). This implies that whatever

else makes investment sensitive to health needs is somewhat less important than the interaction between economic and civic actors through the political system. All of these results are robust to different specifications, including larger and smaller sets of controls. Thus evidence from health also strongly supports the theoretical model of government developed above.

1	Model					
	1	2	3	4		
Need Variable						
Child malnutrition rate (total)	289.50 *	286.50 *	288.20 *	287.80 *		
	(1.840)	(1.830)	(1.850)	(1.850)		
Firms and GROs						
No. of firms (financial)	-54.10	-167.50 ***	-260.50	-358.90		
	(-1.300)	(-4.520)	(-1.000)	(-1.420)		
No. of firms (total)		1.47 ***				
		(3.280)				
No. of GROs (legally	45.90 *	30.80	26.70	25.40		
registered)	(1.720)	(1.200)	(0.990)	(0.930)		
Interaction Terms						
Firms*GROs			0.0083 **			
(interaction term)			(2.100)			
Malnutrition*Firms*GROs				0.0006 **		
(interaction term)				(2.520)		
Control Variables						
Altiplano regional dummy	-7368.70 **	-7614.70 **	-7504.30 **	-7523.10 **		
	(-2.260)	(-2.320)	(-2.300)	(-2.310)		
Eastern regional dummy	-3468.20	-3657.20	-4139.10	-4042.40		
	(-0.870)	(-0.920)	(-1.030)	(-1.000)		
Rural population (%)	15.00	27.60	12.20	12.40		
	(0.390)	(0.700)	(0.290)	(0.300)		
Population speaking indigenous	-246.10 **	-249.10 **	-250.20 **	-250.50 **		
languages only (%)	(-2.420)	(-2.450)	(-2.470)	(-2.470)		
High-income households, by	-37.30	-58.50	-52.60	-53.50		
housing category (%)	(-0.570)	(-0.870)	(-0.790)	(-0.810)		
Percentage of households	114.50	117.90	115.70	115.20		
having a kitchen	(1.370)	(1.410)	(1.380)	(1.370)		
Economically inactive	-156.60	-150.80	-145.90	-146.70		
population (%)	(-1.610)	(-1.550)	(-1.500)	(-1.510)		
Central government investment	1011.60	1182.70	1268.50	1271.70		
project (FIS) dummy	(0.520)	(0.610)				
constant	5981.80	5470.40	6911.60	7041.90		
	(0.600)	(0.540)	(0.670)	(0.690)		
Wald $\Xi^2$	24.15	42.32	25.04	26.89		
$Prob>\Xi^2$	0.0121	0.0000	0.009	0.0048		
N	283	283	283	283		

Figure 6: Health	(dependent variabl	e: health investment	(Bs.) per	1000 population
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Tobit estimation with robust standard errors; z-statistics in parentheses.

\*, \*\*, \*\*\* = coefficients significant at the 10%, 5% and 1% levels.

#### 5. CONCLUSION

The qualitative information set out above provides rich, nuanced evidence that our theory can indeed explain the quality of government in Viacha and Charagua. Quantitative evidence from the universe of Bolivian municipalities constitutes a less detailed but much more extensive and general argument that the theory can explain municipal behavior throughout the country. By weaving the two strands together, we can achieve a higher-order empirical test of the theory than either alone can achieve.

The theory proposes that local government responsiveness and accountability is primarily the product of the openness and substantive competition of its politics. The quality of a municipality's politics, in turn, emerges endogenously as the joint product of the lobbying and political engagement of its firms and other economic actors and the organizational density and ability of its civil society. Where many, diverse economic interests support a variety of political currents, and society is organized into intermediating groups capable of solving the collective action problem, government will have a strong tendency towards responsiveness and accountability to citizens. The presence of an encompassing interest in either the economy or society can also sustain responsive government, although this is much harder to test quantitatively.

Hence, we saw how in Viacha a dominant CBN, acting as monopsonistic provider of finance to the local party system, was able to stamp out political competition, ultimately driving voters away from the polls. A mutually suspicious civil society divided between urban and rural, and again between traditional and modern peasant communities, lacked the organizational capacity to counter this pernicious influence. And so, local government became unaccountable, ineffective, and corrupt. In Charagua, by contrast, heterogeneous cattle ranchers comprised a competitive private sector, which nurtured competition and entrepreneurialism in politics. This led to political accountability and hence responsive, equitable policies, themselves informed and abetted by a coherent and highly organized civil society given shape in the APG. In less detail, but on a much larger scale, these results are mirrored nationwide. Large-N evidence shows that where a significant number of firms interacted through the political system with an organizationally rich civil society, local policy decisions were responsive to the objective needs and subjective preferences of voters. Econometric models corroborate that firms and civic organizations are important determinants of local decision-making, and our empirical strategy allows us to identify how. Both firms and GROs affected how local governments prioritized local needs: via lobbying, voter mobilization, or otherwise mediating information flows and helping to sustain political competition. They not only pressed local governments for the specific policies they preferred, often at cross purposes, but also interacted directly with each other in the policy-making process.

These interactions are independently significant, not only in the narrow statistical sense, but substantively as well, in the sense that they resolved the competing priorities of different actors. For example, firms worked to de-prioritize investment in education and health, while GROs did the opposite. The tensions were resolved when firms and GROs interacted directly through the local political system, resulting in investment increases in both sectors that were positively related to local need and, in the case of education, huge. In urban development, by contrast, both firms and GROs worked to increase investment in a sector that was regressive in terms of need. But the effect of their mutual interactions went in the opposite direction, increasing investment where infrastructure was scarce and decreasing it where infrastructure was abundant. This suggests a realistic picture of a healthy local democracy in which different interests compete through the political system, wielding varying amounts of influence over different issues, and voters are able to influence government through their civil institutions, providing an effective counterweight to the power of private firms and economic interests.

The data also provide significant evidence that a combination of many heterogeneous economic actors and an organizationally rich, capable civil society is not only sufficient but necessary for government to be responsive to citizens' needs. This is apparent for education, where our results imply that a municipality endowed with both factors will respond to need with large investment flows. The independent effects of GROs and firms on need-responsiveness are respectively small and nil, and the need variable on its own becomes insignificant. The case is even stronger for urban development, where the influence of firms and GROs on investment only shows responsiveness to local need (i.e. the sign turns negative) with the addition of the three-way interaction term in Model 4. The evidence shows that firms press municipalities for urban investments that are regressive. The channel through which GROs' counter this—with a surprisingly large effect—is the joint channel and no other.

The evidence is similar, although less dramatic, for health. In resource terms, the larger part of municipalities' needs-responsiveness operates through GRO-firm interactions, although there is a significant residual. Adding firm-GRO interaction terms (Models 3 and 4) causes other firm and GRO terms to lose their significance, implying that our estimate of these coefficients is 0 as the theory predicts. And in resource terms, firms' and GROs' joint effects on investment are larger than their independent effects. Remember, however, that multicollinearity problems prevented the inclusion of a full range of variables in Models 3 and 4. We conclude that, in health, the combination of economic and civic actors is sufficient for responsive government, but not strictly necessary, and that the evidence is weaker than for education or urban development.

At this stage, it is important to acknowledge that the data come from one of the poorest countries, and one of the weakest public bureaucracies, in the Western hemisphere. In a sense, it is remarkable that such data can say anything at all about a set of nuanced, complex relationships between disparate social actors and the responsiveness of municipal policy. More abundant, higher-quality data from richer countries should, if anything, produce stronger results.

The combination of qualitative and quantitative evidence provides support for the model of local government set out above that is not only analytically deep and detailed but also broad. The framework holds not only for two obscure towns but for the whole of Bolivia. Indeed, it is crucial for understanding the effects of reform more generally. Bolivian decentralization confounded the opponents of reform by empowering local governments that—not always but more often than not—proved responsive to citizens' objective needs. Our results point to why. By creating local institutional spaces where civic and economic interests could compete to influence policy, decentralization made many local authorities beholden to local voters. It put real power over public resources in the hands of ordinary citizens throughout the national territory. These citizens took advantage of the competitive dynamics between firms and civil society to hold their governments to account.

## APPENDIX—DATA SUMMARY

$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Variable	Obs	Mean	Std. Dev.	Min	Max
Education investment per 1000 pop Urban development investment per 1000 pop Health investment per 1000 pop296 $47,145.3$ $37,361.7$ $0$ $240,435.1$ Need Variables Illitenacy rate No. of markets per capita Child malnutrition rate (total)310 $30.5$ $15.8$ $5.5$ $78.7$ No. of firms (finance) No. of firms (construction)310 $20.6$ $20.6$ $0.001$ $0.011$ $0$ $0.152$ Firms and GROs No. of firms (total)310 $2.6$ $26.7$ $0$ $454$ No. of firms (total)310 $3.37,6$ $2205.6$ $0$ $26,666$ No. of GROs (legally registered)310 $337.6$ $2205.6$ $0$ $26,6666$ No. of GROs (legally registered)310 $24.7$ $187.2$ $0$ $3165.4$ Illitenacy*GROs303 $0.00018$ $0.0019$ $0.032$ Markets*Firms (construction)303 $0.00018$ $0.0019$ $0.032$ Markets*GROs304 $0.025$ $0.153$ $1.8$ Firms (total)*GROs310 $807.2$ $7934$ $0$ $105840$ Firms (total)*GROs310 $807.2$ $7934$ $0$ $124000000$ Control Variables310 $0.474$ $0.500$ $0$ $1.1$ Altiplano regional dummy $310$ $0.474$ $0.500$ $0$ $1.1$ Markets*Firms*GROs $304$ $0.025$ $0.438$ $0$ $1$ Markets*Firms*GROs $304$ $0.025$ $0.138$ $0$ $1.1$ Markets*Firms*GROs	Dependent Variables (Bs.)					
Health investment per 1000 pop2969,997.0 $16,830.3$ 0 $198,589.3$ Need VariablesIlliteracy rate310 $30.5$ $15.8$ $5.5$ $78.7$ No. of markets per capita $304$ $0.001$ $0.011$ $0$ $0.152$ Child malnutrition rate (total) $294$ $32.4$ $11.8$ $2.9$ $64.9$ Firms and GROs $310$ $2.6$ $26.7$ $0$ $454$ No. of firms (construction) $310$ $33.7.3$ $0$ $540$ No. of firms (total) $305$ $43.9$ $52.5$ $0$ $416$ Interaction Terms $310$ $24.7$ $187.2$ $0$ $3165.4$ Illiteracy*GROs $303$ $0.0018$ $0.0019$ $0$ $0.322$ Markets*Firms (construction) $303$ $0.0018$ $0.0019$ $0$ $0.322$ Markets*GROs $304$ $0.255$ $0.153$ $1.8$ Firms (finance)*GROS $310$ $807.2$ $7934$ $0$ $105840$ Firms (total)*GROs $304$ $45306.5$ $525818.8$ $8700211$ Markets*Firms*GROs $304$ $45306.5$ $525818.8$ $0$ $124000000$ Control Variables $310$ $0.474$ $0.500$ $0$ $1$ Altiplano regional dummy $310$ $0.252$ $0.9$ $81.4$ Rural population (%) $308$ $89.5$ $110.0$ $0$ $1.947.4$ Population speaking indigenous languages only (%) $310$ $23.2$ $20.9$ $0$ $81.4$ <	· · · · ·	296	47,145.3	37,361.7	0	240,435.1
Health investment per 1000 pop2969,997.0 $16,830.3$ 0 $198,589.3$ Need VariablesIlliteracy rate310 $30.5$ $15.8$ $5.5$ $78.7$ No. of markets per capita $304$ $0.001$ $0.011$ $0$ $0.152$ Child malnutrition rate (total) $294$ $32.4$ $11.8$ $2.9$ $64.9$ Firms and GROs $310$ $2.6$ $26.7$ $0$ $454$ No. of firms (construction) $310$ $33.7.3$ $0$ $540$ No. of firms (total) $305$ $43.9$ $52.5$ $0$ $416$ Interaction Terms $310$ $24.7$ $187.2$ $0$ $3165.4$ Illiteracy*GROs $303$ $0.0018$ $0.0019$ $0$ $0.322$ Markets*Firms (construction) $303$ $0.0018$ $0.0019$ $0$ $0.322$ Markets*GROs $304$ $0.255$ $0.153$ $1.8$ Firms (finance)*GROS $310$ $807.2$ $7934$ $0$ $105840$ Firms (total)*GROs $304$ $45306.5$ $525818.8$ $8700211$ Markets*Firms*GROs $304$ $45306.5$ $525818.8$ $0$ $124000000$ Control Variables $310$ $0.474$ $0.500$ $0$ $1$ Altiplano regional dummy $310$ $0.252$ $0.9$ $81.4$ Rural population (%) $308$ $89.5$ $110.0$ $0$ $1.947.4$ Population speaking indigenous languages only (%) $310$ $23.2$ $20.9$ $0$ $81.4$ <		296	47,134.7		0	331,996
Illiteracy rate       310       30.5       15.8       5.5       78.7         No. of markets per capita       304       0.001       0.011       0       0.152         Child malnutrition rate (total)       294       32.4       11.8       2.9       64.9         Firms and GROs       310       2.6       26.7       0       454         No. of firms (finance)       310       2.6       26.7       0       454         No. of firms (total)       310       337.6       2205.6       0       26,666         No. of GROs (legally registered)       305       43.9       52.5       0       416         Interaction Terms       310       24.7       187.2       0       3165.4         Illiteracy*GROs       305       1365.1       1650.1       0       9018         Markets*Firms (construction)       303       0.00018       0.0019       0       0.032         Markets*GROs       305       537.2       5997.0       0       97156         Firms (total)*GROs       304       0.025       0.153       0       1.8         Firms (total)*GROs       304       45306.5       525818.8       0       8700211         Markets*Fi		296	9,997.0	16,830.3	0	198,589.3
No. of markets per capita Child malnutrition rate (total) $304$ $0.001$ $0.011$ $0$ $0.152$ <i>Firms and GROs</i> No. of firms (tinance) $310$ $2.6$ $26.7$ $0$ $454$ No. of firms (construction) $310$ $4.3$ $37.3$ $0$ $540$ No. of firms (total) $310$ $4.3$ $37.3$ $0$ $540$ No. of GROs (legally registered) $310$ $337.6$ $2205.6$ $0$ $26,666$ No. of GROs (legally registered) $310$ $34.9$ $52.5$ $0$ $416$ Interaction Terms $310$ $24.7$ $187.2$ $0$ $3165.4$ Illiteracy*GROs $305$ $1365.1$ $1650.1$ $0$ $9018$ Markets*Firms (construction) $303$ $0.00018$ $0.0019$ $0.032$ Markets*GROs $305$ $1365.1$ $1650.1$ $0$ $9118$ Firms (finance)*GROs $303$ $0.00018$ $0.0019$ $0.032$ Markets*GROs $304$ $0.025$ $0.153$ $0$ $1.8$ Firms (total)*GROs $308$ $42836.4$ $431066.4$ $0$ $7039824$ School attendance *Firms*GROs $304$ $0.0085$ $0.0801$ $0$ $1.1$ Markets*Firms*GROs $310$ $0.474$ $0.500$ $0$ $1$ Markets*Firms*GROs $310$ $0.228$ $0.438$ $0$ $1$ Malnutrition*Firms*GROs $310$ $0.228$ $0.438$ $0$ $1$ Malnutrition*Firms*GROs $310$ $0.228$ $0.438$ $0$	Need Variables					
Child malnutrition rate (total)294 $32.4$ $11.8$ $2.9$ $64.9$ Firms and GROs $310$ $2.6$ $26.7$ $0$ $454$ No. of firms (construction) $310$ $4.3$ $37.3$ $0$ $540$ No. of firms (total) $310$ $4.3$ $37.3$ $0$ $26666$ No. of GROs (legally registered) $310$ $337.6$ $2205.6$ $0$ $266666$ No. of GROs (legally registered) $305$ $43.9$ $52.5$ $0$ $416$ Interaction Terms $310$ $24.7$ $187.2$ $0$ $3165.4$ Illiteracy*Firms $310$ $24.7$ $187.2$ $0$ $3165.4$ Illiteracy*GROs $305$ $1365.1$ $1650.1$ $0$ $9018$ Markets*Firms (construction) $303$ $0.00018$ $0.0019$ $0$ $0.032$ Markets*GROs $304$ $0.025$ $0.153$ $0$ $1.8$ Firms (total)*GROs $310$ $807.2$ $7934$ $0$ $105840$ Firms (total)*GROs $304$ $45306.5$ $525818.8$ $0$ $8700211$ Markets*Firms*GROs $304$ $45306.5$ $525818.8$ $0$ $8700211$ Markets*Firms*GROs $310$ $0.474$ $0.500$ $0$ $1$ Control Variables $310$ $0.474$ $0.500$ $0$ $1$ Altiplano regional dummy $310$ $0.23.2$ $20.9$ $0$ $81.4$ Rural population (%) $310$ $23.2$ $20.9$ $0$ $81.4$ High-incom	Illiteracy rate	310	30.5	15.8	5.5	78.7
Child malnutrition rate (total)294 $32.4$ $11.8$ $2.9$ $64.9$ Firms and GROs $310$ $2.6$ $26.7$ $0$ $454$ No. of firms (construction) $310$ $4.3$ $37.3$ $0$ $540$ No. of firms (total) $310$ $4.3$ $37.3$ $0$ $26666$ No. of GROs (legally registered) $310$ $337.6$ $2205.6$ $0$ $266666$ No. of GROs (legally registered) $305$ $43.9$ $52.5$ $0$ $416$ Interaction Terms $310$ $24.7$ $187.2$ $0$ $3165.4$ Illiteracy*Firms $310$ $24.7$ $187.2$ $0$ $3165.4$ Illiteracy*GROs $305$ $1365.1$ $1650.1$ $0$ $9018$ Markets*Firms (construction) $303$ $0.00018$ $0.0019$ $0$ $0.032$ Markets*GROs $304$ $0.025$ $0.153$ $0$ $1.8$ Firms (total)*GROs $310$ $807.2$ $7934$ $0$ $105840$ Firms (total)*GROs $304$ $45306.5$ $525818.8$ $0$ $8700211$ Markets*Firms*GROs $304$ $45306.5$ $525818.8$ $0$ $8700211$ Markets*Firms*GROs $310$ $0.474$ $0.500$ $0$ $1$ Control Variables $310$ $0.474$ $0.500$ $0$ $1$ Altiplano regional dummy $310$ $0.23.2$ $20.9$ $0$ $81.4$ Rural population (%) $310$ $23.2$ $20.9$ $0$ $81.4$ High-incom	No. of markets per capita	304	0.001	0.011	0	0.152
No. of firms (finance) $310$ $2.6$ $26.7$ $0$ $454$ No. of firms (construction) $310$ $4.3$ $37.3$ $0$ $540$ No. of GROs (legally registered) $310$ $337.6$ $2205.6$ $0$ $26,666$ No. of GROs (legally registered) $310$ $337.6$ $2205.6$ $0$ $26,666$ Interaction Terms $310$ $24.7$ $187.2$ $0$ $3165.4$ Illitency*Firms (construction) $303$ $0.0018$ $0.0019$ $0$ $0.032$ Markets*Firms (construction) $303$ $0.0018$ $0.0019$ $0$ $0.032$ Markets*GROs $305$ $537.2$ $5997.0$ $0$ $97156$ Firms (finance)*GROs $310$ $807.2$ $7934$ $0$ $105840$ Firms (total)*GROs $310$ $807.2$ $7934$ $0$ $105840$ Firms (total)*GROs $310$ $807.2$ $7934$ $0$ $105840$ Firms (total)*GROs $304$ $45306.5$ $525818.8$ $0$ $870211$ Markets*Firms*GROs $304$ $0.0085$ $0.0801$ $0$ $1.1$ Malnutrition*Firms*GROs $310$ $0.474$ $0.500$ $0$ $1$ Control Variables $310$ $0.474$ $0.500$ $0$ $1$ Altiplano regional dummy $310$ $0.258$ $0.438$ $0$ $1$ Rural population (%) $310$ $23.2$ $20.9$ $0$ $81.4$ Population speaking indigenous languages only (%) $310$ $23.2$ $20.9$ <		294	32.4	11.8	2.9	64.9
No. of firms (construction) $310$ $4.3$ $37.3$ $0$ $540$ No. of firms (total) $310$ $337.6$ $2205.6$ $0$ $26,666$ No. of GROs (legally registered) $305$ $43.9$ $52.5$ $0$ $416$ Interaction TermsIlliteracy*Firms $310$ $24.7$ $187.2$ $0$ $3165.4$ Illiteracy*GROs $305$ $1365.1$ $1650.1$ $0$ $9018$ Markets*Firms (construction) $303$ $0.00018$ $0.0019$ $0$ $0.032$ Markets*GROs $304$ $0.025$ $0.153$ $0$ $1.8$ Firms (construction)*GROs $310$ $807.2$ $7934$ $0$ $105840$ Firms (total)*GROs $310$ $807.2$ $7934$ $0$ $105840$ Firms (total)*GROs $304$ $45306.5$ $525818.8$ $0$ $8700211$ Markets*Firms*GROs $304$ $40.0085$ $0.801$ $0$ $1.1$ Malnutrition*Firms*GROs $304$ $0.0085$ $0.801$ $0$ $1.1$ Malnutrition*Firms*GROs $304$ $0.0258$ $0.438$ $0$ $1$ Rural population (%) $310$ $0.474$ $0.500$ $0$ $1$ Rural population (%) $310$ $23.2$ $20.9$ $0$ $81.4$ High-income households, by housing category (%) $310$ $23.2$ $20.9$ $0$ $81.4$ High-income households, having a kitchen $310$ $63.2$ $14.0$ $15.1$ $90.7$ Economically inactive popula	Firms and GROs					
No. of firms (construction) $310$ $4.3$ $37.3$ $0$ $540$ No. of firms (total) $310$ $337.6$ $2205.6$ $0$ $26,666$ No. of GROs (legally registered) $305$ $43.9$ $52.5$ $0$ $416$ Interaction TermsIlliteracy*Firms $310$ $24.7$ $187.2$ $0$ $3165.4$ Illiteracy*GROs $305$ $1365.1$ $1650.1$ $0$ $9018$ Markets*Firms (construction) $303$ $0.00018$ $0.0019$ $0$ $0.032$ Markets*GROs $304$ $0.025$ $0.153$ $0$ $1.8$ Firms (construction)*GROs $310$ $807.2$ $7934$ $0$ $105840$ Firms (total)*GROs $310$ $807.2$ $7934$ $0$ $105840$ Firms (total)*GROs $304$ $45306.5$ $525818.8$ $0$ $8700211$ Markets*Firms*GROs $304$ $40.0085$ $0.801$ $0$ $1.1$ Malnutrition*Firms*GROs $304$ $0.0085$ $0.801$ $0$ $1.1$ Malnutrition*Firms*GROs $304$ $0.0258$ $0.438$ $0$ $1$ Rural population (%) $310$ $0.474$ $0.500$ $0$ $1$ Rural population (%) $310$ $23.2$ $20.9$ $0$ $81.4$ High-income households, by housing category (%) $310$ $23.2$ $20.9$ $0$ $81.4$ High-income households, having a kitchen $310$ $63.2$ $14.0$ $15.1$ $90.7$ Economically inactive popula	No. of firms (finance)	310	2.6	26.7	0	454
No. of firms (total)         310         337.6         2205.6         0         26,666           No. of GROs (legally registered)         305         43.9         52.5         0         416           Interaction Terms         310         24.7         187.2         0         3165.4           Illiteracy*GROs         305         1365.1         1650.1         0         9018           Markets*Firms (construction)         303         0.00018         0.0019         0         0.032           Markets*GROs         305         537.2         5997.0         0         97156           Firms (total)*GROs         304         807.2         7934         0         105840           Firms (total)*GROs         304         45306.5         525818.8         0         8700211           Markets*Firms*GROs         304         45306.5         525818.8         0         124000000           Control Variables         310         0.474         0.500         0         1         124000000           Control Variables         310         0.258         0.438         0         1         1           Altiplano regional dummy         310         0.258         0.438         1         1		310	4.3	37.3	0	540
No. of GROs (legally registered)         305         43.9         52.5         0         416           Interaction Terms         310         24.7         187.2         0         3165.4           Illiteracy*Firms         305         1365.1         1650.1         0         9018           Markets*Firms (construction)         303         0.00018         0.0019         0         0.032           Markets*GROs         304         0.025         0.153         0         1.8           Firms (finance)*GROs         305         537.2         5997.0         0         97156           Firms (construction)*GROs         310         807.2         7934         0         105840           Firms (total)*GROs         304         45306.5         525818.8         0         8700211           Markets*Firms*GROs         304         45306.5         525818.8         0         8700211           Malnutrition*Firms*GROs         304         0.0085         0.0801         0         1.1           Malnutrition*Firms*GROs         310         0.474         0.500         0         1           Control Variables         310         0.474         0.500         0         1           Altiplano regiona		310	337.6	2205.6	0	26,666
Interaction Terms         Illitera cy*Firms         Illitera cy*Firms         Illitera cy*GROs         Markets*Firms (construction)         Markets*GROs         Markets*GROs         Series         Markets*GROs         Series         Firms (finance)*GROs         Firms (finance)*GROs         Firms (construction)*GROs         Firms (construction)*GROs         Firms (total)*GROs         School attendance*Firms*GROs         School attendance*Firms*GROs         Altiplano regional dummy         Rural population (%)         Rural population (%)         Percentage of households, by housing category (%)         Percentage of households having a kitchen         Economically inactive population (%)         Central government investment project (FIS) dummy         300       0.445         0.445       0.445         0.445       0.498		305	43.9	52.5	0	416
Illiteracy*GROs3051365.11650.109018Markets*Firms (construction)3030.000180.001900.032Markets*GROs3040.0250.15301.8Firms (finance)*GROs305537.25997.0097156Firms (total)*GROs310807.279340105840Firms (total)*GROs30445306.5525818.80870211Markets*Firms*GROs3040.00850.080101.1Markets*Firms*GROs3040.02580.43801.1Malutrition*Firms*GROs3100.4740.50001Malutrition*Firms*GROs3100.4740.50001Markets3100.4740.50001Markets3100.4740.50001Markets3100.2580.43801Markets3100.2580.43801Markets3100.2580.43801Markets3100.2580.43801Markets3100.2580.43801Markets3100.23.220.9081.4Markets31023.220.9085.9Percentage of households, by housing category (%)31021.520.50Percentage of households having a kitchen31063.214.015.1Economically inactive pop						
Illiteracy*GROs3051365.11650.109018Markets*Firms (construction)3030.000180.001900.032Markets*GROs3040.0250.15301.8Firms (finance)*GROs305537.25997.0097156Firms (total)*GROs310807.279340105840Firms (total)*GROs30442836.4431066.407039824School attendance *Firms*GROs30445306.5525818.808700211Markets*Firms*GROs3040.00850.080101.1Malutrition*Firms*GROs292926867.78141260012400000Control Variables3100.47740.50001Altiplano regional dummy3100.2580.43801Rural population (%)31023.220.9081.4High-income households, by housing category (%)31021.520.5085.9Percentage of households having a kitchen31063.214.015.190.7Economically inactive population (%)31043.510.919.384.8Central government investment project (FIS) dummy3080.4450.49801	Illiteracy*Firms	310	24.7	187.2	0	3165.4
Markets*Firms (construction) $303$ $0.0018$ $0.0019$ $0$ $0.032$ Markets*GROs $304$ $0.025$ $0.153$ $0$ $1.8$ Firms (finance)*GROs $305$ $537.2$ $5997.0$ $0$ $97156$ Firms (construction)*GROs $310$ $807.2$ $7934$ $0$ $105840$ Firms (total)*GROs $308$ $42836.4$ $431066.4$ $0$ $7039824$ School attendance*Firms*GROs $304$ $45306.5$ $525818.8$ $0$ $8700211$ Markets*Firms*GROs $304$ $0.0085$ $0.0801$ $0$ $1.1$ Malutrition*Firms*GROs $292$ $926867.7$ $8141260$ $0$ $124000000$ Control Variables $310$ $0.474$ $0.500$ $0$ $1$ Altiplano regional dummy $310$ $0.258$ $0.438$ $0$ $1$ Rural population (%) $310$ $23.2$ $20.9$ $0$ $81.4$ Population speaking indigenous languages only (%) $310$ $21.5$ $20.5$ $0$ $85.9$ Percentage of households, by housing category (%) $310$ $21.5$ $20.5$ $0$ $85.9$ Percentage of households having a kitchen $310$ $43.5$ $10.9$ $19.3$ $84.8$ Central government investment project (FIS) dummy $308$ $0.445$ $0.498$ $0$ $1$	-	305	1365.1	1650.1	0	9018
Markets*GROs3040.0250.15301.8Firms (finance)*GROs305537.25997.0097156Firms (construction)*GROs310807.279340105840Firms (total)*GROs30842836.4431066.407039824School attendance*Firms*GROs30445306.5525818.808700211Markets*Firms*GROs3040.00850.080101.1Malnutrition*Firms*GROs3040.02580.4380124000000Control Variables3100.4740.50001Altiplano regional dummy3100.2580.43801Rural population (%)30889.5110.001,947.4Population speaking indigenous languages only (%)31023.220.9081.4High-income households, by housing category (%)31021.520.5085.9Percentage of households having a kitchen31063.214.015.190.7Economically inactive population (%)31043.510.919.384.8Central government investment project (FIS) dumm3080.4450.49801	2	303	0.00018	0.0019	0	0.032
Firms (construction)*GROs310807.279340105840Firms (total)*GROs30842836.4431066.407039824School attendance*Firms*GROs30445306.5525818.808700211Markets*Firms*GROs3040.00850.080101.1Malnutrition*Firms*GROs292926867.781412600124000000Control Variables3100.4740.50001Altiplano regional dummy3100.2580.43801Eastern regional dummy31023.220.9081.4Population speaking indigenous languages only (%)31021.520.5085.9Percentage of households, by housing category (%)31021.520.5085.9Percentage of households having a kitchen31043.510.919.384.8Central government investment project (FIS) dummy3080.4450.49801		304	0.025	0.153	0	1.8
Firms (construction)*GROs310807.279340105840Firms (total)*GROs30842836.4431066.407039824School attendance*Firms*GROs30445306.5525818.808700211Markets*Firms*GROs3040.00850.080101.1Malnutrition*Firms*GROs292926867.781412600124000000Control Variables3100.4740.50001Altiplano regional dummy3100.2580.43801Rural population (%)31023.220.9081.4High-income households, by housing category (%)31021.520.5085.9Percentage of households having a kitchen31043.510.919.384.8Central government investment project (FIS) dummy3080.4450.49801	Firms (finance)*GROs	305	537.2	5997.0	0	97156
School attendance*Firms*GROs       304       45306.5       525818.8       0       8700211         Markets*Firms*GROs       304       0.0085       0.0801       0       1.1         Malnutrition*Firms*GROs       292       926867.7       8141260       0       124000000         Control Variables       310       0.474       0.500       0       1         Altiplano regional dummy       310       0.258       0.438       0       1         Rural population (%)       308       89.5       110.0       0       1,947.4         Population speaking indigenous languages only (%)       310       23.2       20.9       0       81.4         High-income households, by housing category (%)       310       21.5       20.5       0       85.9         Percentage of households having a kitchen       310       63.2       14.0       15.1       90.7         Economically inactive population (%)       310       43.5       10.9       19.3       84.8         Central government investment project (FIS) dummy       308       0.445       0.498       0       1		310	807.2	7934	0	105840
School attendance*Firms*GROs       304       45306.5       525818.8       0       8700211         Markets*Firms*GROs       304       0.0085       0.0801       0       1.1         Malnutrition*Firms*GROs       292       926867.7       8141260       0       124000000         Control Variables       310       0.474       0.500       0       1         Altiplano regional dummy       310       0.258       0.438       0       1         Rural population (%)       308       89.5       110.0       0       1,947.4         Population speaking indigenous languages only (%)       310       23.2       20.9       0       81.4         High-income households, by housing category (%)       310       21.5       20.5       0       85.9         Percentage of households having a kitchen       310       63.2       14.0       15.1       90.7         Economically inactive population (%)       310       43.5       10.9       19.3       84.8         Central government investment project (FIS) dummy       308       0.445       0.498       0       1	Firms (total)*GROs	308	42836.4	431066.4	0	7039824
Malnutrition*Firms*GROs       292       926867.7       8141260       0       124000000         Control Variables       310       0.474       0.500       0       1         Altiplano regional dummy       310       0.258       0.438       0       1         Rural population (%)       308       89.5       110.0       0       1,947.4         Population speaking indigenous languages only (%)       310       23.2       20.9       0       81.4         High-income households, by housing category (%)       310       21.5       20.5       0       85.9         Percentage of households having a kitchen       310       63.2       14.0       15.1       90.7         Economically inactive population (%)       310       43.5       10.9       19.3       84.8         Central government investment project (FIS) dummy       308       0.445       0.498       0       1		304	45306.5	525818.8	0	8700211
Control Variables       310       0.474       0.500       0       1         Altiplano regional dummy       310       0.258       0.438       0       1         Eastern regional dummy       310       0.258       0.438       0       1         Rural population (%)       308       89.5       110.0       0       1,947.4         Population speaking indigenous languages only (%)       310       23.2       20.9       0       81.4         High-income households, by housing category (%)       310       21.5       20.5       0       85.9         Percentage of households having a kitchen       310       63.2       14.0       15.1       90.7         Economically inactive population (%)       310       43.5       10.9       19.3       84.8         Central government investment project (FIS) dummy       308       0.445       0.498       0       1	Markets*Firms*GROs	304	0.0085	0.0801	0	1.1
Altiplano regional dummy3100.4740.50001Eastern regional dummy3100.2580.43801Rural population (%)30889.5110.001,947.4Population speaking indigenous languages only (%)31023.220.9081.4High-income households, by housing category (%)31021.520.5085.9Percentage of households having a kitchen31063.214.015.190.7Economically inactive population (%)31043.510.919.384.8Central government investment project (FIS) dummy3080.4450.49801	Malnutrition*Firms*GROs	292	926867.7	8141260	0	124000000
Eastern regional dummy3100.2580.43801Rural population (%)30889.5110.001,947.4Population speaking indigenous languages only (%)31023.220.9081.4High-income households, by housing category (%)31021.520.5085.9Percentage of households having a kitchen31063.214.015.190.7Economically inactive population (%)31043.510.919.384.8Central government investment project (FIS) dummy3080.4450.49801	Control Variables					
Eastern regional dummy3100.2580.43801Rural population (%)30889.5110.001,947.4Population speaking indigenous languages only (%)31023.220.9081.4High-income households, by housing category (%)31021.520.5085.9Percentage of households having a kitchen31063.214.015.190.7Economically inactive population (%)31043.510.919.384.8Central government investment project (FIS) dummy3080.4450.49801	Altiplano regional dummy	310	0.474	0.500	0	1
Rural population (%)30889.5110.001,947.4Population speaking indigenous languages only (%)31023.220.9081.4High-income households, by housing category (%)31021.520.5085.9Percentage of households having a kitchen31063.214.015.190.7Economically inactive population (%)31043.510.919.384.8Central government investment project (FIS) dummy3080.4450.49801		310	0.258	0.438	0	1
Population speaking indigenous languages only (%) High-income households, by housing category (%) Percentage of households having a kitchen31023.220.9081.431021.520.5085.99931063.214.015.190.79931043.510.919.384.810193080.4450.49801	e ;	308	89.5	110.0	0	1,947.4
High-income households, by housing category (%)31021.520.5085.9Percentage of households having a kitchen31063.214.015.190.7Economically inactive population (%)31043.510.919.384.8Central government investment project (FIS) dummy3080.4450.49801		310	23.2	20.9	0	-
Percentage of households having a kitchen31063.214.015.190.7Economically inactive population (%)31043.510.919.384.8Central government investment project (FIS) dummy3080.4450.49801					0	
Economically inactive population (%)31043.510.919.384.8Central government investment project (FIS) dummy3080.4450.49801					15.1	
Central government investment project (FIS) dummy 308 0.445 0.498 0 1					19.3	
					0	
	Local education authority					1

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#### **ENDNOTES**

1. Hereafter I use "mayor" to refer to the executive branch of local government, including all appointed administrative and technical officials—by far the largest of the three branches.

2. Dr. Fernando Muñoz Franco, Social Investment Fund departmental director, interview, Santa Cruz, 31 March 1997.

3. Fr. Gabriel Sequier (Tianou Pirou), parish priest, interview, Izozo, 3 April 1997.

4. Luis González, departmental director, Social Investment Fund, interview, Viacha, 17 March 1997.

5. Juan Carlos Blanco, CBN bottling plant director, interview, Viacha, 16 October 1997.

6. Abelardo Vargas Portales, municipal council president (ADN), interview, Charagua, 1 April 1997.

7. This assumption may be expressed more strongly in its negative form: citizens will vote against candidates whose actions they expect to decrease their welfare or whose actions have done so in the past.

8. In some countries government is a third source of campaign finance.

9. We can think of these currents as horizontal (i.e. across space) and vertical (i.e. across sectors, activities, or identities).

10. Presencia, 22 March 1997.

11. Estimates of crowd size vary from 150-200 according to UCS spokesmen, to 500 according to OC2.

12. Unfortunately, problems with multicollinearity sometimes limit my ability to conduct these tests in the three sectors. I test as many as I can and report the results in the following section.

13. This time total firms—to avoid multicollinearity with the NFC term, which includes construction firms.

14. Associated in Bolivia much more with nutritional balance than caloric intake and hence susceptible to simple medical interventions.

15. While the coefficient on financial firms is much larger, there are far fewer of these than total firms.

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