

GOVERNMENT SERVICES UNDER DEMOCRACY
HOW PARTICULARISM DRIVES PUBLIC (AND PRIVATE) GOODS PROVISION

by

GLENN DANIEL WRIGHT

B.A., University of Alaska Fairbanks, 2001

M.A., University of Colorado, 2007

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Written by Glenn Daniel Wright
Has been approved for the Department of Political Science

Committee Chair:
Krister Andersson

Committee Member:
David S. Brown

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Government Services Under Democracy: How Particularism Drives Public (and Private) Goods
Provision

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Two theories argue that differences in public goods provision can often be explained by governments' levels of democracy, with more democratic governments spending more on public goods. On the one hand, democracy may operate by making it easier to remove leaders, thereby limiting waste and rent-seeking behavior. On the other hand, democracy may function through a process of particularistic exchange, such that supporters are rewarded with goods but non-supporters are excluded. Here, I test these contending theories using statistical data analysis. I find that particularistic exchange appears to be most strongly and consistently associated with spending outcomes. I then expand the analysis to examine the impact of opposition strength, civil society, and economic inequality on particularism. I find that strong oppositions and strong civil society reduce particularistic exchange, and economic inequality increases particularism. The analysis presented here goes beyond the work of existing research by examining the causes of public goods provision within the population of democratic states, rather than focusing on the differences between democracies or authoritarian regimes. The implication of my findings is that much, perhaps most public service provision is a result of a process often referred to as patronage, particularism, or clientelism, in which voters supply elected politicians with political support and in return, politicians provide tangible benefits such as government services. Further, rules which strengthen oppositions, increase jurisdictional sizes, decrease economic inequality, or promote civil society are likely to reduce particularism.

To Emily

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Introduction

Chapter 1

“Speer’s supporters in the downtown wards provided the basis of a potent political organization. Indeed, Speer had the largest bloc of votes at his beck and call of any person in Denver... He could count on the support of these interests only so long as he gave them something in return, and he could offer them nothing if he lost his influence in local government...” (Dorsett 1977)

The Puzzle

The two Peruvian municipalities of Carhuaz and Chavín de Huantar are quite alike in most respects. Geographically quite close (about 40 miles from one another, as the crow flies), they are both highland municipalities with large indigenous populations, similar (low) per capita incomes, and similar types of economic activity—mining and small-scale farming are important in both places.

Despite these similarities, however, the two places offer widely differing quantities and qualities of government services. Municipal infrastructure is illustrative. In Carhuaz, in 2008, urban residents reported that the municipality lacked basic electricity infrastructure, sewage and potable water, roads and other transportation infrastructure, classroom space in schools, an insufficient number of schools overall, and had many other infrastructural needs. Further, the local government had done little to address these urban problems in recent years. Instead, many locals seemed to believe that the local mayoral administration had primarily used political office for personal enrichment and the enrichment of a clique of supporters.

Chavín de Huantar, however, featured an ambitious and competent mayoral administration that seemed to be effectively seeking voter support by implementing substantial public works across the municipality. Projects included the construction of new roads and the upgrade of existing ones, the construction of schools and health clinics, promotion of environmental policies such as reforestation, and development of both urban and rural infrastructure such as water and

electricity infrastructure. In short, public goods were being provided in Chavín, in 2008, broadly and in remarkable quantities.

These differences are representative of the variation in public service provision across the full range of Peruvian municipalities. For example, about one quarter of Peruvian municipal governments spent less than 44 Peruvian Soles (about \$15 US) per capita on infrastructure improvements in 2007. On the other hand, about five percent of all Peruvian municipalities spent more than 900 Peruvian Soles (\$300 US) per capita on municipal infrastructure development the same year (Ministerio de Economía y Finanzas 2007). As demonstrated in the empirical chapters here, these differences cannot be explained by institutional differences, difference in municipal budget size, or many other intuitive factors.

Research Questions and Theory

Therefore, what explains these differences? Two theories argue that differences in government service provision can often be explained by governments' levels of democracy, with more democratic governments spending more on public goods (Bueno De Mesquita, Smith, Siverson, and Morrow 2003; Lake and Baum 2001). These theoretical approaches do a good job of explaining differences between authoritarian and democratic regimes (Baum and Lake 2003; Brown 2002; 1999; Brown and Hunter 2004; Brown and Mobarak 2009; Stasavage 2005b; 2005a) but fail to explain important variation within populations of democratic cases, especially across polities with identical institutional structures such as Peruvian local governments.

One reason for this weakness may be the failure of theory to account for underlying clientelistic networks and particularistic traditions that exist in many democratic settings.

Although clientelism and particularism¹ seem to be present in both democratic and non-democratic settings, particularistic exchange can drive government policy in a way that generates different outcomes from those predicted by scholars of democracy. In places where particularism is prevalent, democracy may tend to reinforce that particularism, although existing theory of democracy and government service provision suggests that democracy should reduce or eliminate clientelism or particularism (Bueno De Mesquita, Smith, Siverson, and Morrow 2003; Lake and Baum 2001).

A sizeable literature on government service provision has developed over the last several years, seeking to explain variation between democratic and non-democratic regimes (Ames 1987; Avelino, Brown, and Hunter 2005; Baum and Lake 2003; Brown 1999; Brown and Hunter 2004; Brown and Mobarak 2009; Bueno De Mesquita, Smith, Siverson, and Morrow 2003; Clarke and Stone 2007; Keefer, Neumayer, and Plümper 2011; Lake and Baum 2001; Stasavage 2005a). However, variation in government service provision across democratic polities is not well understood. A number of scholars have attempted to explain cross-national variation in the provision of a range of public goods. But with relatively few exceptions, these works have identified variation in regime type—the degree of democracy or autocracy of a given government—as the primary cause of this variation. This means that variation within regimes of approximately the same level of democracy, or across sub-national jurisdictions (provinces, regions, cities, or municipalities, for example) within a single democratic country (that is, a country with a single level of democracy according, for example, to the Polity project), remains unexplained. Similarly, some scholars of US politics have attempted to tie certain types of government service provision, including both public and excludable goods, to institutional

¹ Here, following Hicken (2011), I define “clientelism” as the contingent exchange of political support (by voters) for tangible government benefits or services (by politicians). Here, “particularism” is a synonym for “clientelism”.

partisan structures which are not relevant outside of the US context (Alt and Lowry 1994; Arnold 1992; Balla, Lawrence, Maltzman, and Sigelman 2002; Bickers 1991; Collie 1988; Fenno 1966; Ferejohn 1987; Heller 1997; Hird 1991; Lee 2004; Owens and Wade 1984; Ray 1981).

In addition, scholarship generally fails to recognize that ostensibly “public” goods can be provided in a way in which their benefits are targeted at some groups and excluded from others. Recognizing this excludability opens up the possibility that these services can be provided as toll/club or private goods, which in turn, opens the possibility of clientelism and particularism.

The failure to recognize that government services can be provided as targeted, excludable goods leads scholars to miss processes of clientelistic and particularistic exchange—the trading of votes for particularistic services—as an important source of variation in government service provision. And where clientelism has been considered, it has typically been examined through single-case, detailed sociological or anthropological research (Kitschelt and Wilkinson 2007a). At least two theories of public goods provision have been proposed by scholars to explain variation in public goods provision between authoritarian and democratic regimes (Bueno De Mesquita, Smith, Siverson, and Morrow 2003; Lake and Baum 2001), but neither theory effectively explains variation in government service provision across the population of cases examined here—a population of Peruvian municipal governments.

Finally, little attention has been paid to the role of electoral politics and institutions in structuring institutions, and scholars have called for greater investigation of the electoral roots of clientelistic practices (Hicken 2010).

Project Objectives

Here, I attempt to address these gaps:

First, I seek to determine the causal mechanism behind the relationship between democracy and greater public goods provision. That is, *how* does democracy promote the provision of public goods?

I argue, based on qualitative observation and the existing public goods literature, that elections and electoral institutions often promote clientelistic exchange between politicians and voters. I test this assertion against existing theory of public goods provision, and find strong evidence for the role of particularism in government service provision.

Because particularism is often undesirable, therefore, I also address a second issue. That is, what factors mitigate the negative effects of particularistic and clientelistic exchange? Scholars have long argued that particularism is undesirable (Acemoglu, Ticchi, and Vindigni 2006; Ashworth 1981; Escobar 1994; Hicken 2010; Keefer 2007; Roniger 1994; Schaffer and Schedler 2007; Schneider and Zúniga-Hamlin 2005; Transparency International 2009b; 2008c; 2008a), therefore, how can this process, which often seems to go hand in hand with democracy, be mitigated? And what factors make it more likely or more widespread? I test the effects of three likely causes of clientelism, including weak opposition parties or factions, weak civil society, and high economic inequality.

In short, I attempt to answer two general research questions:

First, what is the mechanism through which democracy promotes public goods; does democracy promote greater government service provision through electoral competition or by promoting larger minimum winning coalitions through electoral rules (as scholars such as Bueno de Mesquita and Lake and Baum have argued), or through a process of particularistic or clientelistic exchange between politicians and voters?

Second—because I find that democracy promotes public goods through a process of particularistic exchange—what factors mitigate or facilitate this dynamic?

In order to answer these questions, I use a mixed-method approach, including analysis of statistical data from approximately 1600 district-level Peruvian municipalities, a critical population of cases for the study of particularism. I support this statistical analysis with qualitative data gathered in the course of approximately one year of fieldwork in Peru and other Latin American countries.

Ultimately, my findings strongly suggest three conclusions. First, democracy, at least in Peru, promotes public goods primarily through a clientelism-like process of exchange in which politicians reward voters for party or personal support with the provision of tangible goods and services. Second, this clientelism-like dynamic is mitigated by several manipulable factors, including opposition strength, electoral institutions, and jurisdictional size. Finally, certain factors make particularism more likely, including weak civil society and economic inequality.

Theory and Literature: Democracy, Clientelism, and Public Services

Political scientists have long noted the apparent correlation between democracy and government service provision (Ames 1987; Ansell 2008; Baum and Lake 2003; Bueno De Mesquita, Smith, Siverson, and Morrow 2003; Chhatre and Saberwal 2005; Lake and Baum 2001; Ribot 1999; 2002; 2008; Trounstein 2008a). Most theory on government service provision, however, seeks only to explain the differences in goods and service provision between democracies and authoritarian regimes (Ames 1987; Ansell 2008; Baum and Lake 2003; Lake and Baum 2001; Olson 1993). Differences in service provision within the population of democratic regimes is less well understood, and there is very little comparative work on the differences between democratic governments in terms of public service provision. In chapter

two, I seek to fill this gap in the literature, by arguing that government services are often provided through a process of particularistic exchange. In chapter three, I test this idea on a population of Peruvian local government cases.

Two Theories

Here, I briefly outline the theoretical approaches that I test in chapter three. These theories are described more fully in chapter two, where I also describe testable hypotheses derived from each theory.

Lake and Baum (2001) argue that the threat of removal from office—in democracies, effectively the closeness of electoral competition—should motivate politicians to provide more services in order to win greater support from voters. Lake and Baum imply that leaders should spend more on public services *where electoral margin of victory is smaller*, because in these cases, they should be legitimately afraid that they will lose their jobs².

Bueno de Mesquita, Smith, Siverson, and Morrow (2003), on the other hand, argue that public good provision is less a factor of electoral competition than of the minimum number of supporters needed to maintain a leader's hold on office, which is itself determined by *electoral rules and institutions* for the selection of leadership³.

This “winning coalition size” or “minimum winning coalition size” is not the same as Lake and Baum's degree of electoral competition. In Bueno de Mesquita et al.'s formulation, winning coalition size in a democratic regime is the minimum number of votes needed, as structured by electoral rules, to ensure the hold on office. In democracies, electoral competitiveness is often related to the actual vote share received by victorious parties, but is unrelated to the nature of

² Here, I define and measure the degree of electoral competition as the difference in vote share between the first runner-up and the victorious candidate or faction.

³ Bueno de Mesquita et al. (2003), Olson (1993), and Olson and McGuire (1996) call this concept the “minimum winning coalition” or “winning coalition”.

“minimum winning coalition” sizes, which are primarily determined by electoral rules. In majoritarian systems, for example, electoral rules typically imply a minimum winning coalition size of 50% plus one vote. However, in such systems, electoral competitiveness can vary widely, with some elections being very close, and others being landslides for one candidate or another.

According to Bueno de Mesquita et al. (2003), the larger the coalition of supporters needed to win office, the more likely governments are to spend substantial amounts on public services. In essence, as the necessary number of supporters increases, so does the quantity of services, goods, and benefits needed to buy the support of those individuals.

However, among the population of cases studied here—Peruvian local governments—neither electoral competition, nor the nature of electoral rules explains the substantial variation in services provided by governments. Controlling for other likely factors, the competitiveness of local elections is correlated with public spending in the opposite direction from that suggested by Lake and Baum (2001). Further, electoral rules do not vary across Peruvian municipal governments, so electoral rules—a constant—cannot explain the visible variation in government service provision. Although these factors—the potential for electoral competition and the nature of electoral rules—may significantly determine government service expenditures, they clearly do not predict the variation observable across sub-national regimes in Peru. Instead, some additional factor or factors must be driving this variation.

An alternative theory

Therefore, I present an alternative to these two theories of democracy and public goods provision. I argue that, in order to reduce uncertainty about future electoral outcomes, politicians will seek to maximize the size of their coalition of supporters by building particularistic or

clientelistic networks of exchange. That is, politicians will seek to build networks of supporters who provide political support in exchange for tangible government services and other benefits, usually as toll or club goods.

Therefore, the actual size of politicians' supporting coalitions of voters—measured as the percentage of local voters supporting the victorious mayoral candidate in the last electoral cycle—will determine, to a significant extent, the nature of government services provided in a given municipality⁴.

Like Bueno de Mesquita et al. (2003), however, I argue that governments will tend to provide more services where supporting coalitions—measured by the vote share received by victorious candidates—are large. And like Lake and Baum (2001), I argue that monopoly rent extraction will be more likely where jurisdictions are less “democratic,” although I argue that rather than “democracy” or electoral competition, monopoly rents will be small where supporting coalitions are larger. Where supporting coalitions are smaller, elected politicians will have strong incentives to target expenditures at small groups of supporters—including through corrupt means like graft and patronage—in order to exclude non-supporters from the receipt of the benefits of government services.

⁴ I draw the term “supporting coalition” from Bueno de Mesquita et al. (2003), who use this term to describe the actual coalition of voters supporting a given victorious politician, as opposed to the minimal winning coalition or winning coalition, which is the minimum-sized coalition that politicians must assemble to retain their political position. A minimal winning coalition or winning coalition, according to Bueno de Mesquita et al. (2003), Olson (1993) and Olson and McGuire (1996) is smallest number of voters needed by a given politician to stay in office in a given regime. For example, in a two-party democracy, the minimal winning coalition is approximately 50% of the voting population. The supporting coalition, however, can be larger than 50%, and is the actual group of supporters backing a given politician or candidate. In a two-party democracy with a simple plurality election rule for president, for example, the winning coalition is 50% plus one vote, but the supporting coalition can be larger than that. For example, if a president needs 50% plus one vote to remain in office, but in a given election, receives the support of 65% of the electorate, his or her supporting coalition size is 65%. Here, “supporting coalition size” is synonymous with the vote share received by the victorious mayoral candidate in the last election.

Qualitative Evidence

The study of politics is filled with examples of political leaders who successfully pursued the political support of key constituencies by providing them with tangible goods, making a theoretical description of political survival as the pursuit of a large supporting coalition intuitively appealing.

Mobutu Sese Seko of the Democratic Republic of Congo and Ferdinand Marcos of the Philippines, two authoritarian rulers with a reputation for clientelism and corruption, retained their hold on power by providing excludable goods to key supporters, while siphoning as much wealth off into personal bank accounts to fund their extravagant lifestyles. In contrast, political leaders in democratic countries like the United Kingdom, the United States and Bolivia have much less opportunity for corrupt, self-seeking practices. This is because democratically elected leaders like Barack Obama, David Cameron, or Evo Morales must spend public funds on publicly beneficial projects, in order to remain in office (Bueno De Mesquita, Smith, Siverson, and Morrow 2003).

The effects of supporting coalition sizes are not limited to explaining the differences between authoritarian and democratic regimes. Bueno de Mesquita et al. (2003) suggest that the provision of public goods⁵ is directly related to the size of “winning coalitions” within democracies in a way that is compatible with the theory presented here. For example, as suffrage was expanded in the United Kingdom during the 19th century, public goods provision increased substantially, as politicians sought to buy the loyalty of newly enfranchised constituencies (p. 101; see also Cox 1987).

⁵ Note that the use of the term “public goods,” defined as goods and services which are both non-excludable and non-subtractable/non-rivalrous, is Bueno de Mesquita et al.’s. Here, I argue that most services which governments provide are in fact club goods because they are excludable.

And not all local governments within a country need have the same supporting coalition size. Trounstein (2008) suggests that many city governments through US history have been able to narrow supporting coalition sizes but maintain their hold on office through unsavory practices like voting fraud and eligibility requirements, such that their governments could cater to the needs to only a select elite (not always an economic elite). Unsurprisingly, she notes important cases of such “monopoly governments” in New York (under “Boss” Tweed and the Tammany Hall machine) and Chicago (under the Daley machine). More surprisingly, she notes a wide range of other monopolies, such as Pawtucket, Rhode Island, and San Jose, California. In each of these cases, some politician or group of politicians was careful to cultivate the political support of a key group of supporters that was provided with tangible government benefits and services in return.

Denver, Colorado is another example of a city that was dominated by particularistic or clientelistic politics in its youth. A political machine largely monopolized the political life of the city for nearly twenty years, between about 1900 and 1920. Denver’s Speer Boulevard is named after political boss and sometime mayor Robert W. Speer, who, beginning in the 1890s, built a political machine made up of a supporting coalition of strange bedfellows (often, in both a literal and figurative sense). Speer’s supporters included industrial magnates, bankers, and wealthy utility providers, city prostitution and saloon workers, and members of the Denver working class, including the Italian, Russian, and Mexican immigrant communities (Dorsett 1977; Johnson 1969; MacMeichen 1919).

In return for their support, Speer provided wealthy Denverites such as Walter S. Cheeseman, William Gray Evans, Charles J. Hughes, and David Moffat with profitable monopolies on utility services such as public transportation and water. And in return for the support of Denver’s

madams, gambling den proprietors and saloon owners, he allowed the sale of alcohol and permitted the operation of cathouses, despite progressive reformers' efforts to eliminate them. Speer also developed substantial redistributive programs to maintain the support of the Denver working class and immigrant communities, including the construction of playgrounds and public pools in immigrant-dominated neighborhoods, support of shelters for the destitute, the provision of clothing, food, and fuel handouts for the poor. Finally, the Speer machine sponsored a substantial spoils system, which functioned to build and maintain the support of blue-collar residents and redistribute wealth (Dorsett 1977; Johnson 1969; MacMechen 1919).

Although seemingly less morally offensive than 19th and early 20th century US “machine” politics, 21st century “pork barrel” spending—projects which seek to use tax revenues from the majority to benefit a narrow, typically geographic, minority—are qualitatively similar to machine politicians' reciprocal exchange of goods and services for votes and support. One striking example is the production of ballistic missile submarines in the United States. Years after the fall of the Soviet Union, elected senators and representatives continued to advocate for defense giant General Dynamics' contract for the production of Ohio-class ballistic missile submarines. Ohio-class subs are ballistic missile launching platforms, and are typically armed with 24 Trident-II ballistic missiles, each one of which carries a payload of eight 100 or 475 megaton warheads (approximately 22,600 times the power of the fat man bomb dropped on Nagasaki) (United States Navy n.d.). Although the submarine program (which yielded 14 ballistic missile submarines) was ostensibly targeted towards defense, it is difficult to understand the rationale for post-1990 nuclear missile sub construction except as an attempt to provide tangible benefits (jobs and income) to key constituencies, including employees of General Dynamics in Connecticut and Virginia.

Peruvian municipal governments also provide strong examples of this dynamic in practice. The two Peruvian municipalities described above, Carhuaz and Chavín de Huantar, both in the Ancash department, are good examples of Peruvian local clientelism in practice. Although they are similar in most important respects, including ethnicity, income, and geographic size, they have widely diverging outcomes in terms of government service provision, with Carhuaz underproviding services, except to key indigenous, rural residents, and Chavín providing services broadly.

In 2008, the Peruvian Populist/Nationalist party of congressman, sometime presidential candidate, and current President Elect Ollanta Humala controlled the municipality of Carhuaz, where public services were badly underprovided. In this municipality, the mayoral administration carefully cultivated a rural constituency by providing goods and services focused on rural areas. Community leaders, citizens and bureaucrats described the mayoral administration's clear efforts to buy rural, indigenous support with consumables (including food, drink, seed, animal feed and fertilizer) and with public works projects focused in rural areas, including rural school construction and agricultural infrastructure development, such as the construction and maintenance of rural irrigation infrastructure. Because the mayor's support was a narrow coalition of the rural poor, however, many urban dwellers complained of a lack of services. Urban streets remained unpaved, the town square was poorly managed, and the local government underprovided other projects and services focused on urban dwellers.

In Chavín, where the mayor enjoyed a much broader base of support, the government also worked to reward its supporters—who included both rural and urban voters—with tangible benefits. However, because a larger percentage of local voters supported the municipal government, and because these supporters were spread through both urban and rural areas, the

municipal government spent money on a wide range of projects in both rural areas and the municipal urban center. Ongoing projects included works beneficial to urban residents (road construction and maintenance, park and plaza construction and maintenance, and tourist infrastructure development) as well as works beneficial to outlying areas (including the construction of a large number of schools, health clinics, sewage and electricity infrastructure, irrigation systems, and tree nurseries for rural reforestation).

A test of mechanisms

In chapter two, I argue that democratic governments provide goods and services through a mechanism—particularistic exchange—different from that suggested by existing theories of democracy (Bueno De Mesquita, Smith, Siverson, and Morrow 2003; Lake and Baum 2001). I test this new theory of particularism against existing theory, and find strong support for the role of particularism in promoting the provision of government services. I conclude, therefore, that much public service is driven by clientelism-like exchange of political support for government services, and though electoral competition and electoral institutions may be important drivers of government spending in many settings, they are by no means the only determinant of public goods or government service provision, nor does electoral competition eliminate or reduce clientelistic exchange in the way Lake and Baum (2001) and Bueno de Mesquita et al. (2003) imply.

This result is consistent with many accounts of public service provision across the globe and across time which rely on a similar description of the exchange of political support for services. However, it is discouraging to find that democracy's benefits are often delivered through a particularistic mechanism, as many scholars have derided this type of exchange as undemocratic,

inefficient, and inherently undesirable (Acemoglu, Ticchi, and Vindigni 2006; Adsera, Boix, and Payne 2003; Arriola 2009; Escobar 1994; Gunes-Ayata 1994a; Keefer 2007; Roniger 1994)⁶.

Therefore, in chapters four, five, and six, I expand the study to determine which factors mitigate and which factors exacerbate this particularistic dynamic. In chapter four, I examine the effect of strong opposition parties, in chapter five, I examine the role of civil society, and in chapter six, I examine the role of economic inequality in promoting or preventing narrowly-focused particularism.

The Role of Opposition Factions

In chapter four, I examine the effects of opposition strength on the exchange of political support for government services.

Few scholars have examined the effects of institutional checks and balances—such as municipal councils’ abilities to veto mayoral policy—on clientelistic exchange. However, there is a substantial amount of scholarship which explores the effects of checks and balances on other forms of particularistic policy, including trade policy, economic reform, and fiscal policy (M. Bailey, Goldstein, and Weingast 1997; Becher 2009; Cheibub 2006; Gehlbach and Malesky 2010; Kang and Powell 2010; Rogowski 1987; van de Walle 2003; Ziblatt 2008).

This literature, however, fails to draw consistent conclusions about the effects of checks and balances on particularism.

One set of works predicts that institutional checks and balances, fragmented governments, and/or relatively large numbers of “veto points” or “veto players” will generate relatively more

⁶ It should also be noted that, although I see evidence of clientelism, where “clientelism” is defined as the exchange of political support for government services, many scholars assume that clientelism includes an element of unequal exchange (Hicken 2010; Roniger 1994). I have no way to measure the extent to which the exchange of support for services is equal or unequal here, so I define both clientelism and particularism as the contingent exchange of political support for particularistic benefits directed at one’s group, locality, family, or self, following Hicken (2010).

particularistic policy. Fiscal policy will tend to include greater spending on benefits for narrow interest groups, for example, and economic policy in general will tend to promote narrow rather than broad interests (Haggard and Kaufman 1995; Cheibub 2006; Becher 2009). These scholars argue that spending that policy is the result of negotiation; where negotiations involve more players who are capable of vetoing a given policy, those actors will be able to extract more constituency-specific concessions (Arriola 2009; Bawn and Rosenbluth 2006; Becher 2009; Cheibub 2006; Haggard and Kaufman 1995).

These scholars would predict that more powerful oppositions in Peruvian municipal governments—who will be more able to promote their own narrow constituencies’ interests at the expense of the local population as a whole—will tend to be associated with greater clientelistic exchange.

On the other hand, at least two theoretical arguments would predict that stronger oppositions will generate less support-service exchange. The first theory assumes that oppositions tend to play an oversight role, and when there are greater numbers of “veto players”, government is divided, or legislatures are divided between parties, particularistic, corrupt, or inefficient policies are less likely because of this accountability (Gehlbach and Malesky 2010; McKay 2009; see also Mayhew 2005 for another presentation of this argument).

A second argument along these lines suggests that the larger the number of actors involved in policy making, the larger the proportion of society represented by those actors is likely to be. Therefore, where more actors are involved in policy negotiations, and where more actors are needed to legislate or carry out policy (as in a situation where local opposition parties can more successfully oppose mayoral policy), the more broad the benefitted constituency is likely to be (Arriola 2009; Rogowski 1987; Saha 2010). As a result, where more actors or groups can slow

down, veto, or change policy (as in a situation where a municipal opposition party is relatively powerful), the less likely it is that mayors or other actors will successfully pursue narrowly targeted, clientelistic policies.

In chapter four, I test these contending arguments. I find that the evidence, at least in Peru, supports the contention that oppositions *weaken* clientelistic links and make particularistic exchange less common.

Normally, it would be difficult or impossible to test the effect of opposition strength on particularism in the way I test it here, because opposition strength is typically correlated (negatively) to the electoral support of governing parties. However, I am able to exploit the unique results of Peru's unusual set of local electoral rules. These rules engineer disproportionate representation amongst Peruvian municipalities, making it is possible to separate (a) the institutional strength of opposition parties and (b) the level of electoral support for governing parties. It is therefore possible to interact these two variables in a way that permits a test of the effect of opposition strength on particularistic exchange.

Civil Society

A second area which is ripe for comparative investigation, and which Peruvian local government data is uniquely suited to test, is the relationship between civil society density and the exchange of political support for government services. I examine these links in chapter five.

Scholars have argued that civil society density plays two functions which may affect the exchange of services for support between politicians and their constituents. First, dense social and civil society networks may promote government transparency, by lowering constituents' costs of information-gathering on the provision of government services. Where voters are involved with non-governmental organizations that provide a place and time, formally or

informally, for the discussion of political topics, it will be less costly for voters to gather a more complete picture of the performance of local government officials (Acemoglu and Robinson 2006; Iversen, Sen, Verschoor, and Dubey 2009; Sobel 2002). This discussion could be formal or informal, and such organizations can include explicitly political or apolitical organizations such as church groups, neighborhood associations, women's or peasant's organizations, etc. Where these organizations make information is relatively less costly, it will be more likely that constituencies will hold their elected officials accountable for bad governance in elections (Acemoglu and Robinson 2006; Adsera, Boix, and Payne 2003; Brehm and Rahn 1997; Brown 1999; Brown and Hunter 2004; Chandra 2004; Gehlbach and Malesky 2010; Gerring and Thacker 2004).

In addition, civil society density may affect citizens' abilities to organize collectively. Civil society may lead to greater social capital and interpersonal trust (Brehm and Rahn 1997; Levi 1996; Uslaner 2000), making collective action (and therefore, collective political mobilization) more likely (Brehm and Rahn 1997; Freitag and Buhlmann 2009; Levi 1996). Where mobilization is more widespread, voters will be more likely to get their way (Adsera, Boix, and Payne 2003; Escobar 1994).

One problem, however, is that voters' preferences are have not been well identified. On one hand, advocates of a civil society-clientelism link generally assume that voters prefer to live in an environment where clientelism is sparse, either because they are altruistic or because most voters will be disadvantaged by clientelism-like support-service exchange (Escobar 1994; Putnam, Leonardi, and Nanetti 1994). However, it is equally plausible that many citizens will use civil society networks to pursue particularistic benefits for themselves, their families, their village, neighborhood, or ethnic group (Aldrich 2008; Aldrich and Crook 2007). Therefore,

either one of the mechanisms described here might lead to either *more* or *less* particularistic exchange. Here, I test the effects of civil society density, and find that civil society networks have a nuanced effect on public spending, decreasing government service provision where that provision is likely to be narrowly targeted, and increasing government spending where it is likely to be broadly beneficial.

Inequality

In chapter six, I investigate the relationship between a third factor—economic inequality—and particularistic government service provision. Economic inequality and other forms of heterogeneity are factors which are likely to drive public goods provision, although the direction of the relationship is contested (Alesina, Baqir, and Easterly 1999; Baland and J.-P. Platteau 1999; Habyarimana, Humphreys, Posner, and Weinstein 2009; Munoz, Paredes, and Thorp 2007; Savoia, Easaw, and A. McKay 2010; Varughese and E. Ostrom 2001).

The relationship between inequality and particularism inherently interesting for policy reasons; inequality has been cited as a cause of poverty (Savoia, Easaw, and A. McKay 2010; The World Bank 2003; 2005), and if inequality promotes particularism and the under-provision of government services, this may be one causal mechanism through which inequality promotes underdevelopment.

In addition, high levels of inequality in Peru may make the empirical sample used here particularly subject to concerns about generalizability. Here, I hope to allay concerns that my results may not be generalizable due to the historically high levels of class- and ethnically-based inequality present in Peru and other Latin American polities. Therefore, I demonstrate that my results regarding the prevalence of particularistic exchange hold across both relatively equal and unequal municipalities in Peru.

Empirical Strategy

In the following chapters, I use a quantitative approach to study these two research questions—first, through what mechanism does democracy promote public service provision, and second, what factors mitigate the exchange of government services for political support? I capitalize on several under-utilized sources of public statistics gathered at the municipal level in each of approximately 1600 Peruvian municipalities to test the effects of supporting coalition size, electoral competition, opposition strength, and civil society density on public service provision. First, I use the 2007 Peruvian National Registry of Municipalities (RENAMU), second, I use the 2007 Peruvian census, and third, I use data on public expenditures available through Peruvian Ministry of Economy and Finances (MEF). I test the effects of supporting coalition size and electoral competition on several categories of public expenditures, and to determine the effect of opposition strength, civil society density, and economic inequality on clientelism-like exchange, I interact data on supporting coalition size with statistics on civil society density, opposition seats in municipal councils, and economic inequality.

I support my statistical analyses with qualitative observations made in the course of approximately one year of in-depth fieldwork in Latin America, establishing the plausibility of the causal mechanisms proposed in each theoretical account of the causes of public service provision.

Why Peru?

Peruvian local governments are a critical case for the study of government service provision through particularistic exchange, and the ideal setting for the study of government service provision through particularistic exchange. First, Peru's unusual set of local electoral rules makes particularism especially likely. Second, Peru's electoral rules permit the disaggregation and control of variables which cannot often be parsed in other settings. Third, the quality of data

on Peruvian local governments, especially in areas which should be particularly relevant for the study of particularism, is very good. Fourth, the study of Peruvian local governments automatically controls for many alternative, institutional explanations, since local government institutions do not vary from municipality to municipality. Finally, because some municipalities in Peru are very poor while others are quite rich, the Peruvian local government population should mean that the findings of this dissertation are generalizable to cases outside of the Peruvian sample.

Unusual electoral rules may facilitate particularism

First, because of the unusual mix of electoral rules they share, Peruvian municipalities are particularly susceptible to particularistic exchange of government services for electoral support. In perhaps no other democratic system do electoral systems generate both (a) governing coalitions which represent very small proportion of voters, and (b) institutionally weak oppositions which are typically unable to check the authority of the mayor. As a result of these unusual outcomes, Peruvian local governments are particularly susceptible to politics through particularism.

Peru has a mayor-council form of local government, using a modified open-list proportional representation (PR) electoral system for mayoral and municipal council seats. That is, municipal council seats are first allocated to mayoral parties, and the remainder of seats are allocated proportionally (explained in greater detail below). Because of the PR electoral system, and because of the use of a similar system for congressional elections at the local level, most local election contests feature several parties, and mayors are typically selected with only a plurality of votes (Ahmad and García-Escribano 2006; 2008; Estado and Locales 2006; Giugale, Retes-Cibils, and Newman 2007; Jaramillo Baanante 2009).

In only a very small number of municipalities (fewer than ten, out of approximately 1600 Peruvian district municipalities in 2006) do only two parties compete, and electoral contests usually feature between five and fifteen local and national political parties. In some cases, mayors are selected with the support of greater than a majority of the local population (about 8% of the time in 2006). However, more than half of all mayors are selected with the support of less than a third of the local population, and about 75% of all mayors are elected with the support of 40% or less of the local voting population. The median level of support is about 33% (ONPE 2011).

Normally, under these circumstances, mayors' parties would only control a minority of seats on most municipal councils. However, Peru's electoral laws engineer disproportionality so as to strengthen the hand of the mayor and prevent gridlock. Electoral rules state that, first, a majority ($> 50\%$) of municipal council seats are allocated to the party of the victorious candidate in the mayoral race, with other seats allocated proportionally. This means that the party of the mayor, which may have received less than 30% of the local vote, receives at least a majority of the municipal council.

Imagine, for example, a municipality in which the municipal council is five seats, and four parties competed for office. Party A receives 35% of the vote, party B receives 34%, party C receives 20%, and party D receives 11% (a relatively typical outcome). In this case, the majority of seats (three of the five) would be allocated to party A. In addition, amongst the two seats remaining, party A will receive 1, and party B will receive the sole remaining seat. Therefore, the municipal council will be composed of four representatives from party A, and 1 representative from party B (Jaramillo Baanante 2009).

The Peruvian local electoral system, therefore, generates results that may tend to exacerbate existing pressures for particularism, for two inter-connected reasons. First, governments tend to represent only a minority of local voters. As outlined above, governments representing small minorities will face strong pressure to redistribute tax revenue from the majority to the minority of supporters, and the smaller the group of supporters is, the more likely particularistic private goods provision will be.

Second, as demonstrated in Chapter 3, governments which include relatively powerful oppositions are less likely to experience significant amounts of particularism. However, because of the engineered disproportionality in Peruvian electoral systems, strong oppositions are relatively rare amongst Peruvian local governments.

Indeed, it is quite common for local governments which represent only a small majority of local residents (33% or fewer). In about half of all Peruvian district municipalities (790 districts), mayoral seats and majorities of municipal councils represent a third or less of all local voters, but oppositions control less than a third of the seats on the council. These outcomes are unusual in other democratic systems, but relatively commonplace in Peru, making it more likely that particularism will be observable in the sample analyzed here.

Electoral rules permit disaggregation of important variables

For similar reasons, Peruvian electoral rules permit opposition strength, electoral competition, winning coalition size, and supporting coalition size—which are normally so closely correlated that parsing these variables out would not be feasible—to be considered separately. Opposition strength would normally be highly correlated with supporting coalition size, but in the Peruvian municipal sample utilized here, because of the engineered disproportionality of Peruvian municipal councils, these two variables correlate at .06. Because

all municipalities enjoy the same set of electoral rules, and these rules do not vary, electoral rules (and therefore, minimum winning coalition size) can be easily ruled out as an explanation for variation in government service provision.

Data quality and quantity

In addition, public spending and governance data for Peruvian local governments is particularly well suited for the study of particularism. First, data quality and coverage is very good (especially for construction/infrastructure data). Second, mayoral supporting coalitions vary greatly in size, due to electoral rules (as discussed above). Third, the characteristics of local electoral rules make the estimation of governments' supporting coalition sizes tractable.

First, governing coalitions represent widely varying percentages of local voters⁷. In a few municipalities, governing coalitions (made up of a single party) represent fewer than 16% of all voters, and in a few municipalities, governing coalitions represent over 96% of local voters, with the bulk representing somewhere between 20% and 40%. In most places, institutional rules make governance by less than a majority very uncommon, allowing the evaluation of a much wider range of electoral outcomes using the population of cases examined here.

Second, it is very easy to determine what percentage of voters is represented by the governing coalition—that being simply the percentage of voters that voted for the victorious party. This makes it unnecessary to know the internal dynamics of every municipal council, where party alliances may change over time, and may be narrow or broader depending on who is allied with whom. In short, were the electoral system to function in the standard way, it would require a great deal of context-specific knowledge just to know what parties participate in government,

⁷ Here, I define the governing coalition as the group of parties controlling the legislature and the executive branch—the municipal council and the mayor's seat. In Peru, the "governing coalition" almost always consists of a single political party or faction, as explained below.

and which are excluded in each municipality, knowledge that would be very difficult to gather in a large sample of cases. Amongst Peruvian local governments, however, it is unnecessary to know what alliance of parties controls a majority of seats in the local council. It is only necessary to know the party of the mayor to determine which party controls the local government.

Finally, data on public spending on infrastructure improvements—the area in which particularism would most likely appear (Samuels 2001a; 2001b)—is gathered for every municipal government in Peru by the central government, making it possible to examine the full range of infrastructure spending outcomes. In addition, a fairly large sample of municipal governments voluntarily provide total spending figures (including both current and capital expenditures) in a wide range of policy areas, making it possible to examine the extent to which total government expenditures also reflect a process of particularistic exchange.

Comparability across units

Although theories of democracy have traditionally been tested on samples of nation-states, I use sub-national data to test the same ideas here. This approach is not without precedent (Besley, Persson, and Sturm 2010; Brehm and Rahn 1997; Hale 2007; D. McKay 2009; Stokes 2005; Trounstein 2008b; 2010), and in fact enjoys several important advantages over the use of cross-national data. In particular, comparison of Peruvian local governments is the ideal setting for the study of particularistic exchange, because many alternative explanations which have been proposed in the Comparative and American Politics literature do not vary across the sample.

Studying public goods provision by using statistical tests to compare spending across countries (the standard approach) introduces sources of variation which are very difficult to control, and may confound statistical analyses. This is not to say that such approaches are not

useful, but that it is difficult to know if the analyst has addressed all potential sources of omitted variable bias. By restricting the sample to municipal governments—which share essentially identical institutional structures—inside of a single country, many potential sources of omitted variable bias are eliminated. In particular, all Peruvian municipalities operate according to very similar institutional rules, and all possess essentially identical political structures: a popularly elected mayor, and a municipal council elected using a modified open-list proportional representation ballot (Ahmad and García-Escribano 2006; 2008; Giugale, Retes-Cibils, and Newman 2007; Jaramillo Baanante 2009).

The sub-national approach, for example, helps to address the possible confounding effects of variables associated US congressional appropriations. Substantial debate has taken place as to whether committee appointments, majority status, or links with bureaucratic agencies affect appropriations (Adler 2002; Arnold 1979; Ashworth 1981; Balla, Lawrence, Maltzman, and Sigelman 2002; Goss 1972; Herron and Theodos 2004; Hird 1991; Kim and Phillips 2009; Owens and Wade 1984; Plott 1968; Ray 1980; Rundquist and Griffith 1976; Stein 1981; Stein and Bickers 1995). These problems do not appear here, because (for example) all mayors and mayoral parties control municipalities as majorities, all mayors enjoy the same kinds of formal links with local bureaucracies, and because committees are not a factor in Peruvian municipal governance.

Similarly, although there are variations across Peruvian municipalities in terms of culture (for example, between *mestizo*, Quechua, Aymara, and lowland indigenous areas), and in terms of informal institutions for policy-making, most of the policy-making processes explored here are either managed by central government agencies (including local elections) in such a way that there are not substantial differences across municipalities in terms of the way elections are

managed, including formal and informal rules, and rules-in-use and rules-in-form. Likewise, municipal budgeting procedures, especially for capital projects, are managed according to a single, well-specified process delineated by central government decree (Ahmad and García-Escribano 2006; Congreso Honorable Del Peru 1997; 2002; Estado and Locales 2006; IPE 2003; Palacios 2009). As a result, there is little reason to believe that significant procedural or institutional differences should be an important cause of variation in government service provision or spending across Peruvian municipalities.

Finally, because Peruvian political parties, even at the national level, are particularly weak, even by developing country standards, and because political parties at the local level are substantially pragmatic, personality-based, and non-ideological, party ideology is also unlikely to vary substantially across Peruvian municipalities. Although party ideology in other settings is most likely an important driver of the size of the state in other places, even the ideologies of extreme left wing and extreme right wing parties frequently are not substantially different in the Peruvian local setting, making it unlikely that ideology will systematically drive expenditures in Peru.

Generalizability

Finally, many of the other characteristics of the Peruvian milieu make it likely that findings of this study may be generalizable to other settings. Although Peru is considered “middle income” by the World Bank and other IGOs (World Bank n.d.; CIA n.d.), municipalities in Peru range from very poor to very wealthy. While some district municipalities in Peru suffer from poverty, illiteracy, and infant mortality which is as high as the poorest countries on Earth (Drinot 2006; IPE 2003; Giugale, Retes-Cibils, and Newman 2007; N. Jones, Vargas, and Villar 2007), many urban districts in Lima and other major cities enjoy indicators of wealth and development

which are similar to those of many Western European or North American municipalities (INEI n.d.). This means that there are strong reasons to believe that these findings are generalizable to countries and other jurisdictions outside of Peru, in Latin America and around the world.

A Roadmap

In Chapter two, I present, in greater detail, a review of the existing literature on public goods provision and democracy, as well as an expanded explanation of how clientelism may promote public goods provision and government services in general.

In Chapter three, I test the implications of this theory against hypotheses derived from the existing literature, using a mixed-methods analysis of three hypothesized mechanisms which link democracy with greater public service provision. I ultimately conclude that clientelism is a more explanation for variation in government service provision than electoral rules or competition, at least within my Peruvian municipal sample. These results suggest that a process of clientelism-like exchange, in which politicians purchase the loyalty of key constituencies with public services, may be the most important mechanism through which democracy leads to greater government service provision.

In chapters four, five, and six I expand the study, to examine three additional factors which might mitigate the clientelism-like exchange of political support for tangible public services. The intention here is to identify factors that will make clientelism less likely, and to delineate settings in which clientelism is particularly common or uncommon. In particular, I focus on the role of economic inequality, civil society, and the institutional strength of opposition parties in municipal governments.

In chapter four, I examine the effect of opposition strength—measured by the proportion of municipal council seats held by opposition party-members—on the clientelism-like exchange of

political support for government services. I find that oppositions tend to play an oversight role, obstructing municipal policy where it stands to benefit only a small minority. In chapter five, I examine the effect of civil society density on clientelism-like support-service exchange. I find that, in general, municipalities with relatively dense civil society tend to experience less clientelism-like exchange than municipalities with lower civil society density. This suggests that civil society also tends to play an oversight role on governments, and promoting municipal policies which are broadly beneficial to a majority, rather than policies which benefit only a narrow clique of mayoral supporters.

In chapter six, I examine the role of economic inequality in promoting clientelistic exchange, with an eye to the degree of generalizability of my earlier results. It is possible that the particularistic exchange examined earlier in this dissertation is only present because of the very high level of inequality of Peruvian society. Therefore, I seek to determine whether particularistic exchange is promoted by inequality, and if so, whether particularism is only present in very unequal settings. Although I do find evidence that particularism is worsened by inequality, particularistic exchange appears to be present in both unequal and relatively equal municipalities in Peru, boding well for the generalizability of my earlier results

In chapter seven, I conclude with a summary of my results, and some implications thereof. Ultimately, my analysis suggests that the exchange of tangible government services for constituent support is an important driver of public service provision in Peru, and probably many places like it. If this type of exchange is undesirable, as many have asserted (Acemoglu, Ticchi, and Vindigni 2006; Adsera, Boix, and Payne 2003; Chandra 2004; Crabtree 2010; Islam 2006; Keefer 2007; van de Walle 2003), it is desirable for institutions to be structured in such a way as to provide opposition parties a strong voice in policy making. It is also beneficial for electoral

institutions to promote large supporting coalitions of voters, and for jurisdictional sizes to be large enough as to make it costly for politicians to gather information about which voters, villages, families, or ethnic groups supported and opposed them in recent elections. In addition, to the extent that civil society can be made denser, it is also desirable for NGOs and other organizations to pursue greater civil society engagement so as to make clientelism-like exchange less likely.

Implications

These empirical results have important theoretical and policy implications, both about the nature of democracy and about the provision of public goods and services.

First, although democracy *is* associated with greater public goods provision, based on the results reported here, municipalities generally do not spend more on public goods when electoral competition is tighter. Instead, supporting coalition size—the number of supporters of a given party or politician—is the primary driver of public goods provision, at least in Peru. This suggests that, at least in some settings, democracy functions less through electoral competition than through a process of clientelism-like exchange, in which voters are rewarded by victorious politicians for their support. In other words, democracy works through clientelism, patronage, or pork-barrel politics. This finding helps to refine scholars’ understanding of the mechanisms through which democracy promotes public goods provision. My findings broadly support the assertions of scholars who have cited the nature of electoral rules (Bueno De Mesquita, Smith, Siverson, and Morrow 2003; Olson 1993; McGuire and Olson 1996) and the *possibility* for democratic competition (Baum and Lake 2003; Lake and Baum 2001) as drivers of variation in government service provision. However, these findings suggest that *beyond* electoral rules, the

nature of clientelistic or particularistic networks determines substantial variation in public goods provision.

This process of particularistic exchange can be facilitated or mitigated by several factors, four of which I discuss here. Both opposition strength and civil society density mitigate the relationship between supporting coalition size and particularistic exchange, making private and toll good provision less likely where supporting coalitions are small. In addition, two factors seem to promote clientelism or particularism. Where communities are small, particularism is particularly salient, as it is where inequality is especially high. I explore these theoretical and policy implications in greater depth in the conclusion.

Background, Literature, Theory, and Hypotheses

Chapter 2

Public Goods and Governments

The provision of so-called “public goods”—which include services like national defense, education, and transportation services—are arguably among the most important tasks governments can carry out. Some public goods—defined as goods with large, positive spillovers—may be inherently desirable, such as the protection of civil rights and liberties, while others, such as education and healthcare, are desirable because they facilitate the pursuit of other policy goals, such as economic development. Some public goods are valuable for both reasons—they are both valued as desirable in and of themselves, and because they help policy-makers pursue other goals. Many types of environmental protection fit in this category. Education, for example, has been called the “magic bullet” for development (Ansell 2008), and the absence of education is a primary cause of poverty at the individual level (Brown and Hunter 2004; Zapata, Contreras, and Kruger 2010). Likewise, public infrastructure, including transportation infrastructure, is a key driver of economic development, and where governments do not provide spend sufficiently on transportation, higher rates of poverty are the result (Calderón and Servén 2004; Giugale, Retes-Cibils, and Newman 2007; IPE 2003). Finally, the rise of modern states has itself been tied to the need for national defense, another public good (Krasner et al. 1984; Thies and Sobek 2010).

Despite the desirability of many public goods, the provision of public goods is problematic. By definition, public goods are non-excludable. That is, individuals or groups of people cannot easily be excluded from enjoying their benefits, once they are provided. For example, people cannot easily be kept from enjoying the benefits of national defense or clean air once these goods are provided by other individuals, firms, or governments (V. Ostrom and E. Ostrom 1977).

Although seemingly desirable, the characteristic of non-excludability means that individuals have an incentive to wait and hope someone else provides the good so that they can benefit from its provision without contributing to its cost. As a result, public goods tend to be under-provided. However, governments are in a good position to provide public goods, because they enjoy a monopoly on the legitimate use of force, and can use coercion to overcome the collective action problem—the free-rider problem—that often makes public goods provision difficult. That is, governments can use force to require individuals to contribute to the collective provision of public goods (McGuire and Olson 1996).

In practice, however, governments often fail to provide sufficient quantities of public goods. For example, municipal education, public health, and transportation spending varies dramatically from place to place. In Peru, each year, many municipalities spend less than one dollar (US) per resident on education spending, transportation spending, or public health spending. On the other hand, a few municipalities spend more than \$1000 (US) per resident on public health services, and more than \$1200 (US) per resident on both transportation and education. Globally, public goods spending varies even more broadly. Chile, for example, spends about 12% of its GDP per capita (about \$1800 US) on each primary school student, Israel spends about 20% (about \$5900), and Uganda spends about 7.5% (about \$90 per student, purchasing power parity adjusted) (CIA n.d.; World Bank n.d.). Although economists and policy-makers might argue about the optimum level of education spending in a given economy, \$90 per primary student is probably sub-optimal.

Competition and Clientelism in the Public Goods Literature

Perhaps because “public goods” include so many types of services that are viewed as desirable for economic development and standards of living, such as education, sanitation, and

health care, scholars in Political Science and other disciplines have long studied the reasons some governments provide sufficient quantities of public goods but some under-provide these goods (Ames 1987; Lake and Baum 2001; Brown and Hunter 2004).

Public goods are both non-excludable (it is difficult to exclude their benefits from some individuals) and non-subtractable (one person's enjoyment of the benefits of the good does not subtract from another person's enjoyment). Provision of public goods is often difficult to organize, for the simple reason that, because they are non-excludable, they are difficult to sell in a market, and collective action in providing such goods suffers from free-rider problems. However, because of their unique position, holding a monopoly on the legitimate use of force, governments are well-positioned to provide such goods by requiring citizens to contribute to their provision (Bueno De Mesquita, Smith, Siverson, and Morrow 2003).

The provision of government services typically considered “public goods”—services like education, public health, electricity provision, and other infrastructure development—varies substantially across states and across sub-national jurisdictions (Alesina, Baqir, and Easterly 1999; Avelino, Brown, and Hunter 2005; Baum and Lake 2003; Brown and Hunter 2004; Brown and Mobarak 2009; Bueno De Mesquita, Smith, Siverson, and Morrow 2003; Craw 2010; Lake and Baum 2001; Ziblatt 2008), raising the question of how to explain these differences in government service provision.

At least two well-developed theories exist which identify different mechanisms by which democratic governments may provide more government services (Lake and Baum 2001; Bueno De Mesquita, Smith, Siverson, and Morrow 2003), and substantial empirical work has tested and confirmed the broad notion that democracies provide more public goods (Avelino, Brown, and Hunter 2005; Baum and Lake 2003; Brown 2002; 1999; 2000; Brown and Hunter 2004; Brown

and Mobarak 2009; Lake and Baum 2001; Stasavage 2005b; 2005a). However, these theories do little to explain variation within the population of democratic polities, including across Peruvian municipalities and many other sub-national regimes. Though both theories appear to have substantial predictive power, they are incomplete, as they fail to explain the full range of variation in settings where the frequency of democratic competition and the nature of electoral rules do not vary.

Democracy as competition

One theory argues that *the threat of removal from office*, through elections or, in the case of non-democratic regimes, competition for power by other means such as violence—is the key factor driving democracies’ greater provision of public services like education and public health services. According to these works, where politicians’ threat of removal is greater—for example, through frequent, competitive elections—governments will provide more public goods and public services (Stasavage 2005b; Lake and Baum 2001; Baum and Lake 2003; Ames 1987). These comparative scholars draw on a venerable tradition of scholars of US politics who see re-election as one of the most important, perhaps the only important goal of politicians (Arnold 1992; Fenno 1973; Mayhew 1974).

This argument is presented in its most well-developed form by Lake and Baum (2001), who argue that governments function like monopolistic firms which extract tax revenue from voters in exchange for the provision of services. These firms/governments will extract *fewer monopoly rents*, and will provide *more government services*, when *the risk they will be removed from office is higher*. This implies, as Lake and Baum point out, that democracies will provide greater quantities of public services.

Lake and Baum argue that the *potential* for competition through the presence of regularly scheduled, competitive and transparent elections may be the most important driver of government service provision. However, their argument may also imply that within democracies, more services will be provided, and monopoly rents will be lower, in places where electoral competition between parties is greater, and where average margins of victory are greater. It is in places with greater electoral competition, after all, that the risk that incumbent politicians will lose their seats is higher.

Stasavage (2005, 54) draws the connection between electoral competition and public service provision explicitly:

With several years of hindsight since the African democracy movement of the early 1990s, it is possible to begin investigating whether *electoral competition* has prompted African leaders to become more accountable, and to improve provision of basic services like health and education. Alternatively, in many, if not most, cases one may observe that the formal re-establishment of electoral democracy has had little impact on public service provision, *because African incumbents face weak electoral challenges*, because election outcomes can be rigged, or because African election campaigns focus on non policy questions (emphasis added).

Although few other scholars have presented theory as well-developed as that of Lake and Baum, a number of empirical studies have relied on the notion that *competition for office* drives greater public good expenditures (see, for example, Ames 1987; Baum and Lake 2003; Lake and Baum 2001; Stasavage 2005b; 2005a).

One implication of Lake and Baum (2001) may be that more competitive elections—elections where margins of victory are narrower—may promote greater government service provision, as elected officials seek reelection by purchasing the support of voters through service provision, leading to the first hypothesis tested in chapter 3:

H1: Where electoral competition is greater—that is, where margins of victory are narrower—public goods provision will tend to be greater.

Democracy as electoral institutions

Bueno de Mesquita, Smith, Siverson and Morrow (2003), Olson (1993) and Olson and McGuire (1996) present similarly well-developed theories of public goods provision, some aspects of which are useful for explaining variation in Peruvian municipal government service provision, placing emphasis on electoral institutions in democratic regimes.

According to Bueno de Mesquita et al. (2003), Olson (1993), and others, politicians in democratic systems stay in office primarily by buying support from voters through the provision of government services and tangible benefits. These benefits and services are often public, but are also frequently private benefits aimed at individuals or small groups.

Bueno de Mesquita et al. (2003) draw upon the idea of the “minimal winning coalition”—a concept drawn from studies of US Congressional appropriations. This is the idea that the smallest possible number of legislators (a bare majority in the US), will pass appropriations bills which redistribute wealth from all taxpayers to their own districts, so they each receive the maximum benefit for their districts (Buchanan and Tullock 1962; Riker and Ordeshook 1973; Riker 1962). Bueno de Mesquita et al. argue that political leaders internationally also rely on winning coalitions of supporters to stay in power, though these may be coalitions of families, factions, or voters.

Where it is possible to remain in office by maintaining a small winning coalition, the provision of goods targeted at particular groups and individuals—private goods—is often the most effective strategy for holding on to political office. Using tax revenue, politicians provide goods and services to individuals or small groups in return for their support (Bueno De Mesquita, Smith, Siverson, and Morrow 2003). However, as winning coalition size increases, the amount

of money that can be spent, per supporter, decreases. That is, if municipal revenue is fixed, and there are more supporters who need to be paid off with private goods provision, less can be spent per voter. Eventually, as winning coalition size increases, it becomes more cost-effective to buy the support of potential voters by providing non-excludable, non-subtractable goods—public goods. This is because as the winning coalition size becomes larger, more of the gains from public goods provision are captured by the winning coalition, even as private goods provision becomes less beneficial per supporter.

In authoritarian regimes, the size of the “winning coalition” needed to hold on to office is determined by idiosyncratic factors, such as the size of the group in control of the police or military. On the other hand, in democracies, winning coalition sizes are determined by formal institutions, especially electoral rules.

Therefore, as electoral rules require larger winning coalition sizes, expenditures on government services such as education, health and sanitation, transport, potable water and sewage services will rise, as (a) the number of individuals to be compensated for their political support increases, and (b) the per-constituent benefits of a given quantity of “public goods” becomes larger than the per-constituent benefits of “private goods.” *Politicians*, according to Bueno de Mesquita et al. (2003), Olson (1993), and Olson and McGuire (1996), *will spend more money on public services when they need larger numbers of supporters to win*. While electoral rules require small winning coalition sizes, government services will be more likely to take the form of private or excludable goods. In addition, Bueno de Mesquita et al. (2003), Olson (1993) and Olson and McGuire (1996) predict that authoritarian regimes or regimes with small winning coalitions will tax at higher rates in order to redistribute wealth from majorities to minorities of

supporters. When electoral rules require larger minimal winning coalitions, public goods provision is more likely, but even so, tax burdens will tend to be lower.

Democracy as particularism

Several works have noted that democracy can function through the reciprocal exchange of public services for votes. I describe these insights here, and use them to develop a theory of democracy as reciprocal, particularistic exchange between voters and politicians.

In general, scholars of particularism argue that, under some conditions, public services are used to reward loyal supporters in a process of clientelism or particularism. In essence, politicians and supporters engage in a process of reciprocal exchange, in which voters support particular elected officials in return for tangible rewards such as government services, and in some places, denser particularistic links lead to greater provision of government services. Scholars in economics (Acemoglu and Robinson 2006; McGuire and Olson 1996; Olson 1993), comparative politics (Arriola 2009; Clarke and Stone 2007), international relations (Ansell 2008; Bueno De Mesquita, Smith, Siverson, and Morrow 2003), and American politics (Trounstein 2008a) have all made arguments which capture some component of this dynamic.

McGuire and Olson (1996), Ansell (2008), and Acemoglu and Robinson (2006), for example, argue that democratic governments primarily assume power by buying the support of masses through redistributive policies. Olson (1993) notes specifically that democratic leaders improve their chances by promoting the rule of law and incentives for production, but that strong incentives for particularistic redistributive policies also exist (p. 571).

These arguments are also consistent with research on municipal politics in the United States by Trounstein (2008; 2010) and co-authors. These scholars have noted that political leaders such as mayors and city managers will often build political machines or other organizations which

exchange voter support for tangible government benefits. Such exchange can sometimes result in broadly beneficial government services—public goods provision—but can also be used to limit accountability and increase the private benefits of office over time (Hajnal and Trounstein 2005; Trounstein 2008; 2010).

Similarly, scholars of US congressional politics argue that reelection-seeking politicians often use their positions of influence in congress to bring benefits to their geographic districts, in an effort to secure re-election. In effect, these scholars assume that politicians exchange government spending for political support, although there has been substantial debate over the effectiveness of these efforts (Anagnoson 1982; Ashworth 1981; S. K. Bailey and Samuel 1965; Barry 1990; Carson and Jenkins 2010; Collie 1988; Fiorina 1981; Lee 2004; Mayhew 1974; Ray 1980; Rundquist and Griffith 1976; Stein and Bickers 1995; Weingast and Shepsle 1981). A number of scholars have argued that, within districts at the national or state levels, expenditures tend to be targeted to benefit powerful interest groups or important electoral supporters (Atlas, Gilligan, Hendershott, and Zupan 1995; Stein and Bickers 1995). However, some scholars have also noted that more competitive swing districts tend to be the ones which receive greater expenditures (Dahlberg and Johansson 2002; Herron and Theodos 2004; Stein and Bickers 1995), and these results have been supported by similar findings abroad (Nooruddin and Chhibber 2008; Kwon 2005). In addition, scholars have noted the advantage of majority party status in the receipt of national transfer funds and programs (Balla, Lawrence, Maltzman, and Sigelman 2002).

Bueno de Mesquita, Smith, Siverson, and Morrow (2003) suggest that “winning coalition sizes” in democratic regimes are mostly the result of electoral rules which tend to generate smaller or larger winning coalitions. However, they also posit that winning coalitions in

transitional and authoritarian regimes are generated through time- and place-specific processes which invest some individuals with much more authority than others, perhaps because those individuals control important economic resources or police or military force. There are reasons to believe that similar, idiosyncratic processes are at work, not only in transitional or authoritarian states, but in states with frequent, transparent elections and many of the trappings of full-fledged democracy. Such an argument is consistent with Bueno de Mesquita et al.'s argument, and appears appropriate, based on observation, for the way local democracy seems to work in Peru and many other settings.

One such example is documented by Joshi and Mason (2011), who provide strong evidence that land-tenure patterns, not formal electoral rules, promote different levels of public goods spending in Nepali electoral districts. These scholars argue that districts where smallholders are more common experience greater public goods provision, while districts with more tenant farmers experience less. In districts with more tenant farmers, landlords—who can use their authority over tenant farmers to promote a particular electoral outcome—reap the benefits of elections through government provision of private goods without sharing those benefits with their tenants. In effect, land tenure rules narrow or widen winning coalition sizes, leading to differing levels of public goods provision. In many Peruvian municipalities, politics also seem to resemble such clientelistic dynamics.

Peru and particularism

Other scholars have suggested that clientelism-like practices are more likely in certain kinds of settings—often, settings that are characteristic of Peru.

A number of scholars have suggested that certain types of cultural settings are more amenable to clientelism-like behaviors. In particular, clientelism is likely in settings where gift-

giving is an important culturally-grounded practice (Scheiner 2007; Hicken 2007a; Schaffer and Schedler 2007; Schaffer 2007). Gift-giving, and particularly reciprocal exchange is an important part of Peruvian indigenous culture, especially Andean culture (Quechua and Aymara culture), where labor exchange plays an important social and political role.

Likewise, Peru is a likely setting for clientelistic practices because of other, political characteristics. Peru may be the Latin American country with the weakest political parties, even at the national level, and parties in Peru are more pragmatic, personality-based, and non-ideological than they are at the national level. Though it is not clear whether clientelism leads to weak parties or weak parties make clientelistic practices more likely, weak parties also tend to be associated with clientelism in the literature (Desposato 2007; Hicken 2007a; 2007b). Some scholars argue that clientelism tends to weaken programmatic appeals by parties, leading to weak parties (Desposato 2007), while others argue that institutions which promote weak parties and the nature of parties themselves tends to promote personalistic appeals—and particularism—by politicians who benefit by developing a personal, rather than a party-based reputation (Hicken 2007b; 2007a).

A number of works have also argued that clientelism is likely where either (a) poverty is relatively common, or (b) poverty is widespread and inequality is high. Poverty may make clientelism more likely because the particularistic provision of excludable goods to the poor (private or club goods) is relatively less expensive than the particularistic provision of goods to the middle class or the wealthy. These effects are undesirable because clientelistic exchange tends to lead to the over-provision of excludable goods and the under-provision of public goods to needy populations (Hicken 2007a; Schaffer and Schedler 2007; Stokes 2007).

Toward a Theory of Particularism

Existing theory on democracy and public goods provision fails to explain patterns of government service provision in Peru. Here, in order to address these weaknesses, I present a revised theory of the particularistic provision of government services under democracy. This approach is based on the general idea that politicians build coalitions of supporters based on reciprocal relationships in which politicians provide government services to supporters in exchange for their political support. Unlike existing theory, I argue that both the degree of particularistic exchange and the level of support for victorious politicians depends on underlying networks of reciprocal exchange, rather than electoral rules alone.

Weaknesses of Existing Theory—Qualitative Evidence and New Theory

Qualitative evidence suggests that theory by Bueno de Mesquita et al. (2003), Lake and Baum (2001), Olson (1993), and McGuire and Olson (1996) capture many elements of democratic governance in developing-country, transitional settings. However, certain elements of these theoretical approaches are not consistent with qualitative evidence on the relationship between democratic politics and government service provision, at least in the specific setting observed here. To the extent that these are intended as general theories of public goods provision, the analysis and observations suggest that these theories are incomplete.

First, one implication of Lake and Baum (2001) is that government service provision will be greater where elections are more frequent. However, the substantial variation observable in Peruvian local government service provision cannot be traced to the frequency of elections, as all Peruvian municipalities hold elections at the same time, in four-year intervals.

A second implication of Lake and Baum (2001) may be that more competitive elections—elections where margins of victory are narrower—may promote greater government service

provision, as elected officials seek reelection by purchasing the support of voters through service provision. For much of their four-year term, however, the strength of possible competitors will be difficult to anticipate for mayoral incumbents, because mayoral campaigning only takes place in the few months prior to each election. Frequently, opposition parties are only formed and nominate candidates months prior to local elections. It would be difficult, therefore, for the degree of electoral competitiveness, or the margin of victory in past elections, to play a role in promoting government service provision through the majority of a mayor's term.

Bueno de Mesquita et al. (2003) argue that in democratic systems, winning coalition size—the minimum number of supporters needed for electoral victory—can explain much variation in public goods provision. This winning coalition size is itself determined by electoral rules. However, as all Peruvian local elections follow identical rules, electoral rules do not explain variation across Peruvian municipalities. Further, Peruvian electoral rules create a situation where it is very difficult for mayoral candidates to anticipate the optimum coalition size for victory in a given election; Minimum winning coalition size (where defined as at least one vote greater than the vote percentage received by the first runner up) varies substantially across municipalities, from just over 1% of the local vote, to just under 50%, with most municipalities spread through a broad range, from 15% to 35%. Further, minimum winning coalition size (according to this definition) is barely correlated within municipalities from one election to the next—for example, the correlation between the vote share of first runner-ups in 2002 and 2006 is about .05, and the correlation between winners' vote shares is about .06.

The implausibility of the minimum winning coalition approach in the Peruvian setting is matched by an absence of empirical evidence in the setting for which the approach originated. Specifically, Riker (1962) presented a theory of US congressional budget-making that argued

that minimal winning coalitions should pass budgets beneficial to as few members as possible. Although some scholars have found a partisan advantage in US congressional budgeting (Balla, Lawrence, Maltzman, and Sigelman 2002), and evidence that incumbent parties target swing districts for greater expenditures (Dahlberg and Johansson 2002; Herron and Theodos 2004; Kwon 2005), there is little empirical evidence for the minimal winning coalition approach. Instead, scholars have found that, in US politics, at least, appropriations generally benefit far larger numbers of legislators than implied by Riker's theory. Indeed, coalitions are often very large, and frequently include every conceivable legislator with a stake in a given program (Arnold 1979; Barry 1990; Dahlberg and Johansson 2002; Fenno 1966; Ferejohn 1987; 1974; Lowi 1964; Maass and Ickes 1951; Schattschneider 1935; Weingast 1979; Weingast and Shepsle 1981).

At least two approaches have attempted to explain this apparent anomaly. One approach argues that a norm of fairness makes minimal winning coalitions unlikely, except where the costs of a "fair" outcome are very high to individual committee members (Miller and Oppenheimer 1982). A related approach, based on rational choice modeling, argues that super-sized coalitions and fairness norms appear because individual legislators are willing to take a somewhat lower payoff in order to be assured that they will receive some benefits from an eventual budget deal (Weingast and Shepsle 1981; Weingast 1979).

Finally, examination of most "public goods" at the micro-level makes it clear that few of the government services considered "public" by political economists are truly non-excludable.

Education services are illustrative. Although some benefits of education spill over onto other citizens, most of the benefits created by education are felt by the students themselves. The presence of a system of private education in most places around the world is evidence that there

are substantial excludable benefits to education that students and their families are willing to pay for. Other so-called “public goods” which provide benefits which are mostly excludable include health services, social welfare services (what can be more excludable than a pension payment?) and transportation expenditures, which can be targeted easily at particular ethnic groups, villages, and even families or individuals in some cases.

The strategic logic of particularistic voting

To remedy weaknesses with existing theory, I first emphasize the role of *exclusion* in electoral competition. Existing theory notes that constituencies are, in effect, bought by one political faction or another by promising and providing government benefits. I argue, however, that the exclusion of constituents from the benefits of government services is also an important tool in the ambitious politician’s toolbox.

In democratic systems, voters face choices between multiple candidates, and seek to use their support (both their vote and other types of support) as a tool to bring benefits to themselves, their families, and their communities. They choose between candidates who make campaign promises, and who have some reputation. This reputation helps voters estimate the probability that individual candidates will follow through on their campaign promises.

In particularistic systems, voters also use their vote so as to avoid being punished by particularistic candidates who would exclude them, their families, their village, or their ethnic group from benefits if they (voters) do not support the victorious candidate.

Some candidates may promise to carry out policies which will bring substantial benefits to most of the local population, either directly or through spillovers. For example, candidates may promise to build health clinics, construct potable water and sewage infrastructure, and build

roads throughout the jurisdiction in a way which will benefit most local residents. If such a candidate wins, most or all residents will benefit.

Other candidates, however, may promise to provide services which will be privately beneficial to the individuals to whom these services are targeted, including specific villages, families, ethnic groups, or individuals.

In the presence of well-functioning democratic institutions, like transparent elections where ballots are truly secret, voters will tend to support candidates who they believe will benefit their (the voters) village, family, or the voter, personally. Under these conditions, Lake and Baum's (2001) and Bueno de Mesquita's (2003) theories are likely to produce accurate predictions. That is, where larger numbers of voters are needed to elect and re-elect candidates, voters will strategically vote candidates, promising broad benefits and candidates will be more likely to promise broadly-beneficial policies. This is because, although voters might individually prefer the election of some private goods-promising candidate, they will recognize that candidates who run on platforms of broadly-based goods provision are more likely to win, and will therefore choose the best candidate among likely winners.

As noted by Lyne (2007), where particularistic networks can subvert the functioning of democratic institutions, voters' strategic calculations will be somewhat different. Voters' decisions regarding the choice of a candidate promising narrowly-targeted or broadly-beneficial policies form a collective action problem.

Under particularism, benefits the voter receives from the election of a particular candidate are dependent both on the actions of the electorate as a whole, and on his or her own actions. Given the choice between candidates promising narrowly-targeted and broadly-beneficial services, the voter faces a strong incentive to vote for the candidate promising narrowly-targeted goods, for

the following reasons. If the electorate chooses the public goods-promising candidate, each voters' payoffs will not vary with their own vote choice. However, if the electorate selects the candidate promising narrowly-beneficial policies targeting groups of supporters, who can determine (through corrupt, particularistic networks) approximately who voted for him or her, each voters' payoff will depend on whether or not he voted for the victor. If not, he or she receives no benefits, and may even be penalized. On the other hand, if he or she did vote for the victor, his or her payoff is some arbitrary payoff from targeted goods provision. Because, in most circumstances, targeted goods provision is probably better than nothing at all (or even punishment) and because voters' choice will not affect his or her payoff if the electorate selects a candidate promising broadly-beneficial services, he or she faces a strong incentive to vote for the promiser of narrowly-targeted benefits.

In effect, voters face a prisoners' dilemma where they may be better off, on average, if they elect a public goods-promising or broad benefit-distributing candidate, but each individual voter faces a strong incentive to vote for a particularistic benefit-promising candidate, in order to avoid the punishment associated with backing a losing candidate in the face of a particularistic candidate's victory.

These incentives vary substantially from those faced by a voter in an election with a secret ballot, where his or her own payoff is dependent on his or her actions only to the extent that it helps to determine the victor, and voters will not be punished for backing a losing candidate.

Therefore, in the presence of mechanisms by which politicians can determine the vote of individuals, families, or villages, politicians have strong incentives to promise narrowly beneficial goods, and voters have much stronger incentives to vote for politicians promising

targeted benefits than they would in the presence of a secret ballot system. The result is the perpetuation of particularistic systems of governance.

A number of scholars have noted that politicians' ability to ensure voter compliance with promises made in the course of particularistic exchange—which Stokes refers to as “perverse accountability” is the key problem associated with particularistic exchange. In a situation with a secret ballot (such as in Peru and in most democratic settings around the world), politicians can extract promises of support from voters, only to have them vote for another candidate in the voting booth. Therefore, politicians develop intricate and well-developed systems for ensuring voter compliance (Cleary and Stokes 2006; Lehoucq 2007; Stokes 2005; 2007; Medina and Stokes 2007). In particular, politicians often rely on local intermediaries who are embedded in local communities, and who ensure voter compliance through their location in local social networks, and sometimes through unsavory practices such as intimidation and violence (Cleary and Stokes 2006; Kitschelt and Wilkinson 2007c; Lehoucq 2007; Stokes 2005; 2007; C.-S. Wang and Kurzman 2007).

Of course, Peruvian elections are designed with a secret ballot. However, in many places—perhaps most places—politicians can use similar practices to determine the degree of support they hold at a relatively low level of aggregation. Electoral returns are reported by party at the district level, which often includes only several hundred voters, and even in larger places, local networks of supporters, and visible demonstrations of voters' support for different candidates, are used to gather information regarding the level of support politicians and their parties hold among different villages, or families. Indeed, voters often willingly demonstrate their support for a particular candidate by painting the name and emblem of a given party on their home or property, or by permitting others to do so, even in sparsely populated rural settings where it is

implausible that such a demonstration of loyalty could sway the opinions of other voters.

Scholars have extensively documented the operation of these mechanisms for “reverse accountability”.

However, because such observations can be explained in other ways, I test the notion—suggested by Hicken (2007)—that particularistic exchange is more common in settings where politicians can more easily gather information on individual voters’ electoral choices. Specifically, in municipalities with large populations (and some Peruvian municipalities have over 100,000 residents), it will be difficult and costly for elected politicians to learn who voted for them and who voted against, and to consequently direct policy benefits towards supporters and away from opponents. On the other hand, in small municipalities (perhaps with only a few hundred residents), it will often be relatively easy for politicians to learn how individuals, families, neighborhoods, or villages voted. In these settings, clientelistic practices rewarding supporters and punishing opponents should be much more common. I test these ideas in chapter three, and find strong support for the notion that clientelistic exchange is common in relatively small municipalities, and becomes less common the larger the municipal population gets.

The role of exclusion—competition may promote particularism

Lake and Baum (2001) and Baum and Lake (2003) argue that in more “democratic” settings—where elections are more frequent, and the real possibility for electoral competition exists—governments are less able to behave as monopolists, and are able to extract fewer monopoly rents. Qualitative observations of Peruvian local governments seem to confirm that in such settings, where competition is real, and where politics are not dominated by a small clique of powerful individuals or a particular village, family, or ethnic group, governments are able to extract fewer monopoly rents.

Frequent, transparent electoral competition, however, seems to be a necessary but not sufficient condition for the reduction of monopoly rents. This is because in many places, elections and electioneering promote, rather than prevent personalistic exchange. In other words, democratic office-seeking actively *promotes* the provision of private benefits to small, victorious coalitions of supporters. Where office is won by buying the loyalty of a small group of supporters, it is good politics to prevent those individuals from defecting from the coalition by providing them with valuable benefits, often through the highly exclusive provision of benefits through graft, and the provision of private goods and services. This argument is consistent with findings by a number of scholars of clientelism, who argue (contra Lake and Baum) that electoral competition is likely to promote, rather than prevent clientelistic practices where politics are poor and culture is clientelism-acceptant (Chandra 2007; Kitschelt and Wilkinson 2007b; Krishna 2007b; Lyne 2007; Magaloni, Diaz-Cayeros, and Estévez 2007; Scheiner 2007; Wilkinson 2007).

Indeed, there is little evidence, at least in the Peruvian context, to suggest that public goods which cannot be easily targeted at important constituencies respond to either electoral competition or mayors' supporting coalition sizes (as determined by vote share). As an example, environmental regulation—which probably more closely approximates a pure public good than any other policy area which can be measured using standard indicators of government policy such as expenditures, staffing decisions, or number of actions, is an almost insubstantial component of most Peruvian government budgets and an insubstantial share of most governments' activities. According to the same government dataset which I use in regression models presented in chapters three, four, five, and six (RENAMU) over 64% of all Peruvian municipalities have no environmental policy at all, and less than 1% have developed the full

range of environmental institutions recommended by the Peruvian central government. Further, more than half of all municipalities have no mechanism through which citizens can even register environmental complaints. These are strong indicators that, non-excludable policy is simply not a priority amongst Peruvian local governments. This despite the observation that a majority of municipalities report problems with unsanitary drinking water, soil erosion, solid and liquid waste management, and other environmental problems which have a tangible impact on local residents' standard of living.

Winning coalition size vs. supporting coalition size

According to Olson (1993), Olson and McGuire (1996), and Bueno de Mesquita et al (2003), a leader's proclivity for the provision of public or private goods is a result of his or her "winning coalition" (and sometimes, his or her "minimal winning coalition"). This winning coalition is the smallest set of individuals needed to keep a leader in office, and in democratic settings, is itself determined by electoral rules. Where winning coalitions are large, politicians will be more inclined to provide public goods, and where they are small, private goods provision is more likely.

Qualitative observations suggest, however, that neither winning coalition size nor electoral rules are an important determinant of variation in government service provision across Peruvian municipal governments, as well as in many other settings. This is because (a) electoral rules do not vary across municipalities, but government service provision does vary, and (b) although supporting coalition size does fluctuate significantly across time and across municipalities, it is difficult for incumbents to anticipate their minimal winning coalition size in the next election, given the great variation in opposition support and number of parties observable in Peruvian municipalities.

A more likely explanation—one which is more consistent with qualitative observation—is that particularistic networks determine, to a significant extent, the size of politicians' supporting coalitions (not minimal winning coalitions) and are also responsible for patterns of government service provision.

At the local level in Peru (as well as in many other settings), the degree of electoral support a candidate receives is the result of his or her ability to credibly promise government benefits to particular groups or individuals, as a result of social, kinship, party, union, and-or geographically-based networks. Individuals in a given group make electoral choices, in part, as a result of their membership in different groups to whom politicians have promised particular benefits, and their assessment of the credibility of those promises.

The sizes of the groups to which political candidates have successfully appealed helps to determine the level of support received by those candidates in elections. For example, if politicians in rural, Andean municipalities can successfully convince rural peasants that they will provide desirable government services to rural areas, those politicians will receive a high degree of electoral support, because these municipalities' populations are mostly rural peasants. If they can only convince the urban wealthy class that they will provide desired public services in the urban core of the municipality, they will receive relatively less electoral support.

In turn, the extent to which politicians can credibly commit to provide services to a given group of voters depends, to a significant extent, on their reputation with different groups, and their place within informal institutional networks, such as village committees, kinship networks, and union organizations. Where these informal institutions make it possible for voters to hold politicians accountable for their actions through or outside of elections, the promises of candidates are more likely to be seen as credible.

Of course, once a politician has served in office, their performance as a politician depends, to a substantial extent, on their reputation as an incumbent. If an incumbent does a good job of providing needed services, as promised in electoral campaigns, he or she will develop a good reputation with a range of voters' groups. However, if an incumbent develops a reputation for breaking campaign promises to different groups, his or her promises will be viewed less favorably in the succeeding campaign for re-election, both amongst the groups which elected him to office, and among other local groups.

This theory, therefore, generates predictions which are somewhat different from those of Bueno de Mesquita et al. (2003):

Politicians' decisions to provide different types and amounts of government services are related to the size of the particularistic networks which support them, not only the electoral rules with which they are elected. This implications lead to the following hypothesis:

H2: Where mayors' supporting coalitions are larger, spending on government services will also be larger.

In short, if Lake and Baum's (2001) account is complete, government spending on public services should respond primarily to (a) the frequency of elections, (b) the presence of elections, and/or (c) the degree of electoral competition between various parties or factions among municipal governments. On the other hand, if Bueno de Mesquita et al.'s (2003) explanation for variation in government service provision is accurate, government spending on public services should respond to either (a) the nature of electoral rules (and the size of the minimum winning coalitions they construct), or (b) the time- and place-specific winning coalition, which is one vote more than the vote share of the victor's nearest opponent. However, if government service provision is primarily intended to buy and maintain the loyalty of particular voters or groups of

voters, and to punish non-supporters, spending will increase as politicians' numbers of supporters also increase. As neither the frequency nor the presence of elections varies across Peruvian municipalities, nor the nature of electoral rules, these factors cannot explain variation in Peruvian municipal spending and service provision. Therefore, I test the effect of the degree of electoral competition, the time- and place-specific minimal winning coalition size, and the size of politicians' supporting coalitions of voters for their relationship with municipal spending (and therefore, service provision).

Above, in "the strategic logic of particularistic voting," I note that the level of aggregation at which politicians can easily gather information may have an impact on the degree of particularism present. Specifically, where politicians can more easily gather information about their degree of support among voters at lower levels of aggregation, particularistic policy is more likely. This suggests that particularism will be more common in small municipalities, leading to the following hypothesis:

H3: The relationship between supporting coalition size and government service spending will be more strongly positive where jurisdictional population is smaller.

These hypotheses are consistent with observations of the US Congressional appropriations process. Weingast (1979) and Weingast and Shepsle's (1981) theory of super-sized coalition voting in congressional budgeting suggests that politicians may pursue coalitions which are much larger than minimum winning coalition-size, as a way to reduce uncertainty. These scholars argue that legislators form super-sized coalitions in budget negotiations, in order to reduce the probability that an eventual budget deal will exclude them entirely. Likewise, Peruvian politicians may pursue very large coalitions in order to reduce the probability that a future coalition of voters will unseat them. In addition, voters will prefer to join extra large

coalitions as a way to reduce the chance that they will be excluded entirely from the provision of toll goods. These implications lead to the following hypothesis:

H4: Supporting coalition size will influence spending levels at high levels (above majority size) as well as low levels.

Conclusion

Having developed a theory of democracy and government service provision through particularistic exchange, I next turn to a series of empirical tests of the hypotheses presented here. In chapter three, I present tests of hypotheses 1 through 4, before turning to an examination of several factors—in chapters four through six—of factors which may mitigate or exacerbate existing tendencies towards particularism, including opposition strength, civil society density, and economic inequality.

Does Democracy Operate Through Competition or Particularism?

Chapter 3

Introduction: Competition or Clientelism?

Here, I test two prominent theories of democracy against the newly-developed theory of particularism presented in chapter 2. To do so, I use qualitative observations from approximately one year of in-depth fieldwork, and statistical data analysis using a cross-sectional dataset of public spending and electoral data from approximately 1600 municipal governments in Peru. Based on the evidence presented here, the theory of particularistic exchange appears to be most consistent with evidence.

The analysis presented here goes beyond existing research by examining the causes of public goods provision within the population of democratic polities, rather than focusing on the differences between democracies or authoritarian regimes. In addition, I test an explanation for variation in public goods provision that identifies a new mechanism—particularism—which causes substantial variation in government service provision in settings which are institutionally identical.

I argue, like Bueno de Mesquita, Smith, Siverson, and Morrow (2003) that much—perhaps most—public service provision is a result of a process referred to variously as constituent service, interest group politics, pork barrel politics, patronage, cronyism, particularism, or clientelism. In this process, voters supply elected politicians with political support and in return, politicians provide tangible benefits such as government services. Unlike other scholars, however, I identify how informal networks of particularistic exchange, not formal electoral mechanisms or the degree of electoral competitiveness, drive much of the variation in government service provision.

I use data on Peruvian local governments because they are a critical case for the explanation of particularistic exchange. There are two reasons for this. First, particularism is particularly

likely in Peruvian local policy because, although transparent and frequent, Peruvian local elections, which tend to involve many parties and therefore, victories by relatively small minorities, tend to create governments controlled by a small clique. In addition, because of engineered disproportionality in the Peruvian municipal council system, opposition factions are mostly unable, because of the formal rules of the game, to check mayoral authority. Rarely do democratic systems generate this combination of strong governments with only weak electoral support and also weak checks and balances. Because checks and balances—as demonstrated in chapter three—are likely to reduce clientelistic exchange, and because particularism will be most visible where a small minority controls a political jurisdiction, if the presence of particularism is not visible in Peru, it is unlikely to be measurable anywhere else. In essence, this rare combination of institutions permits the examination of particularism in a way which is not possible with other samples.

This chapter is structured as follows: The next section is a review of the literature on democracy and public goods provision. The third section presents qualitative evidence that suggests that particularistic exchange may be an important driver of public service provision in Peru and other democracies. The fourth section outlines a new theory of particularistic exchange and how it interacts with formal electoral mechanisms in promoting government service provision. Next comes some background on local governance in Peru, and an explanation why Peruvian local governance is a critical case for the study of particularism. Sixth is a description of my empirical approach, including qualitative and quantitative data and methodology. In the seventh and eighth sections, results are presented then discussed. Finally, conclusions and implications are explored in the final section.

Quantitative Methodology and Data

Here, I use several under-utilized public data sources on Peruvian municipal governments and ordinary least squares (OLS) regression and generalized linear modeling techniques to test the contending hypotheses presented above. The 2008 Peruvian Registry of Municipalities (RENAMU), the 2007 Peruvian Census, and electoral data from the Peruvian National Office of Electoral Processes are the key data sources used in the analysis presented here, and I use OLS and extradispersed poisson regression to test the effects of particularistic vote exchange against the effects of electoral competition. I perform several postestimation tests and robustness checks to demonstrate the robustness of my results, including re-estimation of these models with alternative estimation techniques such as negative binomial regression.

Data

The dependent variables used here as proxy measures for government service provision include spending on infrastructure development per capita—spending on construction projects completed in 2007—in several categories which are often treated as public goods. These include (a) transportation, (b) education, (c) and a summed total of spending on water, electrification, and sewage projects⁸. I also use the summed total of all of these categories as a dependent variable, and also the summed total of all project spending, which includes two additional categories—tourism projects, and “other”. On this set of dependent variables, I use both generalized linear models (extradispersed poisson reported here) and OLS regression using a logged variant of the variable. This data was gathered in the 2008 Peruvian Registry of Municipalities by the Peruvian National Institute of Statistics and Informatics (INEI) and is

⁸ The summed total of water, sewage, and electrification infrastructure project spending is, unfortunately, the way this data is provided by the Peruvian government, though I would of course prefer to use indicators of each of these three areas.

available for about 1600 municipalities in each category. I also use data on each of these spending categories in 2005 as a control.

I use measures of expenditures on completed new construction to examine the effects of particularism on government service provision. The relationship between particularism and construction spending is well documented (Samuels 2001a; 2001b), and construction or capital expenditures have been used as a proxy for clientelism by a large number of studies (Hicken 2010). Although the use of capital spending as a proxy for clientelism has its weaknesses, I do not argue here that capital spending itself is a measure of clientelism, only that capital spending should respond to supporting coalition size where clientelism or particularistic exchange is an important mechanism driving spending policy.

New construction is also a good measure of infrastructure development, which is sorely needed throughout Peru, to promote economic development and improved standards of living (Ahmad and García-Escribano 2006; 2008; Calderón and Servén 2004; Crabtree 2010; Estado and Locales 2006; Zas Friz Burga 2009; Giugale, Retes-Cibils, and Newman 2007; Hordijk 2005; IPE 2003; N. Jones, Vargas, and Villar 2007; Palacios 2009; World Bank 2003; World Economic Forum 2005; World Resources Institute 2003).

In addition, I present regression results for several statistical models in which the dependent variables are total spending (current and capital expenditures) in several categories for 2007. This data is less comprehensive—data is only available for about 730 district-level municipalities (out of 1599), but the included municipalities are substantial in that they include nearly 80% of the Peruvian population, and so are an important sample in and of themselves. Results using these variables generally support the results of the project spending/infrastructure development spending regression models. This second set of dependent variables is available from the

Peruvian Ministry of Economy and Finances. Total spending and size of the public sector is also a common proxy measure used in the analysis of clientelism (Hicken 2010).

My key independent variables—my proxies for electoral competitiveness and winning coalition size—are both derived from electoral data gathered by the Peruvian National Office of Electoral Processes.

To test the effect of particularistic exchange, I use a measure of supporting coalition size. Because of the nature of Peruvian electoral rules (described above, in “Public Goods Provision in Peru”), the supporting coalition size in each municipality is simply the percentage of the total vote received by the victorious party, since that party receives the mayoral seat as well as a majority in the municipal council. Therefore, the supporting coalition is a coalition of voters, families, or villages, but is not a coalition of multiple parties.

To test the effect of electoral competition, I generate the following measure. First, I take the vote share (pct.) received by the first runner-up party. I then subtract the percentage of the vote received by the victorious party from that value, resulting in a variable which ranges from -1 to 0, where higher values represent greater (closer) competition between parties, and where lower values (closer to -1) indicate that one party received a substantial share of the vote compared to all its competitors and therefore faces very weak competition. I also test a second measure of competition, which is the number of parties competing in the most recent electoral race. This measure has no statistically significant relationship with the dependent variables. Other measures of competition, such as the frequency or presence of elections are constant across all municipalities.

One potential problem with the use of these two independent variables in the same statistical model is that they are quite highly correlated ($r=-.72$). This is because the two measures are

generated from the same process—local elections. Regardless of whether the variables are included in regression models alone or together, however, my findings provide strong support for hypothesis 2 (the “particularistic exchange” hypothesis) and only weak support for hypothesis 1 (the “electoral competition” hypothesis). To demonstrate the robustness of these findings, I show results of regressions with the variables included separately and together.

In the statistical models in which I test the effect of community size on particularistic exchange, I also assemble an interaction term which is population * supporting coalition size. This interaction term tests the extent to which the effect of supporting coalition size varies across municipalities of larger and smaller sizes.

In addition to the independent variables of interest described above, I use several control variables in the models presented here

First, I include several variables made available through INEI which were generated based on the 2007 Peruvian census, including the average level of education in each municipality, population (logged), urban population (logged), and a consumption measure. The consumption measure is designed to provide a measure of standards of living where many citizens, particularly in rural areas, do not participate in the cash economy with any intensity, and is derived from a series of standard Peruvian Government (INEI) poverty indicators. This is a count of the average number of household appliances—radio, television, washer/dryer, refrigerator, sound equipment—owned by families in the municipality. This control variable is particularly important, as a number of scholars have argued that economic development is an important driver of clientelism (Hale 2007; Kitschelt and Wilkinson 2007b; Lyne 2007; van de Walle 2007).

I also include several control variables from RENAMU data. Where the dependent variable is construction project spending, I include the percentage of funding in each policy area which was funded with private donations. This is meant to address concerns that private donors might use funding to influence municipal priorities. Because there is not conditionality placed on transfers from regional or national governments, there is no need to include a similar measure for government project transfers in each area. In addition, I use RENAMU data to control for debt service (pct. of total municipal budget) and total municipal budget size (total income, logged). Finally, I also control for prior levels of spending (during the prior mayoral term), in order to capture unobserved path dependence and demand for municipal services. I also test several models (excluded here for purposes of space) which control for a number of other proxies for demand for government services, including the percentage of local residences in rural areas, and percentage of homes with inside water, sewage, and electricity service. None of these variables substantially alter the direction or significance of the relationships presented here.

Methods

Where the dependent variable is total spending on projects completed in 2007, I have used extradispersed poisson regression. This is one appropriate estimation strategy for a dependent variable which follows an extradispersed poisson distribution, and where the dependent variable contains many 0s, such that it cannot be transformed to normality without generating large numbers of missing cases (Cameron and Trivedi 1998; Hoffman 2004; Rabe-Hesketh and Skrondal 2008). Typically, poisson models are used with dependent variables which represent counts or proportions. However, poisson models assume a dependent variable with equal mean and variance (Hoffman 2004; Rabe-Hesketh and Skrondal 2008). Such is not the case here; there is significant evidence of overdispersion. Therefore, I use extradispersed poisson models, which

is one appropriate strategy for data distributed like this. The technique displayed here is square-root of the deviance-based standard error adjustment with iterated, reweighted least squares optimization, but I also test these models with several other appropriate estimation techniques, including zero-inflated poisson, negative binomial, heteroskedasticity-robust negative binomial, and alternative extradispersed poisson approaches and find that my findings are robust to changes in estimation strategy. I choose to show extradispersed poisson results here because scholars suggest that it is inappropriate to use most typical robustness checks on negative binomial regression (Hoffman 2004). I also use a logged version of the summed total of all project spending in an OLS regression model.

A second set of models presented here uses the logged total spending per capita (per local resident) in a number of policy areas. These include administration, agriculture, education, energy and mining, industry, fishing, social welfare spending, health and sanitation, transportation, urban development and housing, total spending, and total spending in areas normally considered “public goods” (health and sanitation, education, social welfare spending, and housing and urban development). Where the dependent variable is one of these measures, the method used is a log-linear approach, where the dependent variable is logged, then OLS is used.

In addition, I present the results of several robustness checks on both the OLS and extradispersed poisson models.

I find that both theoretical approaches (particularism and electoral competition) have some explanatory power, but the particularistic exchange of goods and services seems to be more strongly and more consistently associated with spending outcomes.

A note on count data models

Social science methodologists, including Political Scientists, have frequently prescribed generalized linear model estimation techniques for the analysis of count data (Afifi, Kotlerman, Ettner, and Cowan 2007; Cameron and Trivedi 1998; Hoffman 2004; King 1989; Rabe-Hesketh and Skrondal 2008). Such techniques include negative binomial regression, poisson and extradispersed poisson, and zero-inflated negative binomial and poisson techniques. These techniques are appropriate when dependent variables have three primary characteristics. First, values are censored at 0, second, values are integers only, and third, values are not distributed normally, instead being highly right skewed, similar to a chi-squared distribution (Cameron and Trivedi 1986; 1998; Hoffman 2004; King 1989; Rabe-Hesketh and Skrondal 2008)

Scholars of political phenomena have used these techniques to study a range of topics, including terrorism and political violence (Kollias, Messis, Mylonidis, and Paleologou 2009; Danzell 2010; T. Y. Wang, Dixon, Muller, and Seligson 2011), congressional bill sponsorship (Kollias, Messis, Mylonidis, and Paleologou 2009), foreign direct investment (Kollias, Messis, Mylonidis, and Paleologou 2009), legislative productivity (W. D. Anderson, Box-Steffensmeier, and Sinclair-chapman 2003; G. W. Cox and Terry 2008), the targeting of government expenditures (Rickard 2009) and a range of other topics (Boehmke 2005; Dezhbakhsh, Tohamy, and Aranson 2003; Holmes, De Piñeres, and Curtin 2007; Ingall and Crisp 2001; Neumayer 2005; Schiller 2006). In other social sciences, two of the most common uses of count data techniques include the study of economic innovation (R. Andersson, Quigley, and Wilhelmsson 2009; Branstetter 2001) and the demand for health services (Ekman 2007; Shin 2006; Street, A. Jones, and Furuta 1999)

In political science, count data techniques have not often been used to study expenditures, because most expenditure data studied by political scientists can be logged to a normal distribution and analyzed using OLS regression (so-called log-linear techniques). However, the project expenditure data used here contains a large number of zeros, which is data which would be lost if logged. This is because a large number of municipalities completed no new construction of, for example, schools, health clinics, roads, or potable water systems in 2006. These zeros are meaningful, representing no investment in the production of these types of projects, and their exclusion may bias regression results.

One area of the social sciences in which the analysis of similarly distributed expenditure data is common is health economics. Health expenditures for a given individual, family, or jurisdiction are positively skewed, contain large numbers of zeros, and include only positive integers, just like the project data analyzed here. In health economics, therefore, the use of count models (poisson, extradispersed poisson, negative binomial, and zero-inflated models) to study expenditures is very common (Barnett and Nurmagambetov 2011; Kamble and Bharmal 2009; Noro, Hakkinen, and Laitnen 1994; Wagstaff and Doorslaer 2011)

Quantitative Results

In general, the hypothesis tests presented here generate four important findings. First, particularistic exchange—supporting coalition size—is more consistently associated with public goods provision than electoral competition, and is strongly and robustly associated with project spending, regardless of the controls introduced or the sample used. Second, electoral competition has little explanatory power, even after controlling for supporting coalition size. Third, the relationship between supporting coalition size and government service spending is positive and significant in small communities, but disappears in large communities. Finally,

Table 1: Supporting coalition and electoral competition

Extradispersed poisson regression with iterated reweighted least squares optimization and square root of variance adjustment for overdispersion

	Transport	Health	Education	Electrification, water, sewage	All public goods
Supporting coalition size	3.865 (0.000)***	30.900 (0.000)***	3.696 (0.000)***	1.869 (0.063)+	4.986 (0.000)***
Electoral competition	0.728 (0.387)	13.546 (0.000)***	0.251 (0.759)	-0.116 (0.897)	0.776 (0.271)
Consumption	0.023 (0.887)	3.057 (0.000)***	-1.804 (0.000)***	-2.750 (0.000)***	-0.833 (0.000)***
Education (mean)	-0.428 (0.000)***	-1.722 (0.000)***	-0.623 (0.000)***	-0.352 (0.000)***	-0.569 (0.000)***
Urban pop. (logged)	-0.286 (0.000)***	-2.606 (0.000)***	-0.244 (0.003)**	0.037 (0.669)	-0.313 (0.000)***
Municipal budget (logged)	-0.090 (0.026)*	0.014 (0.763)	-0.111 (0.008)**	-0.201 (0.000)***	-0.086 (0.014)*
Debt service (pct.)	-2.969 (0.201)	13.168 (0.000)***	-22.796 (0.000)***	-27.386 (0.000)***	-13.003 (0.000)***
Private transfers: transport (pct.)	0.393 (0.361)				
2005 project spending/cap: transp.	0.000 (0.001)**				
Private transfers: health (pct.)		2.572 (0.101)			
2005 project spending/cap: health (pct.)		-0.087 (0.000)***			
Private transfers: education (pct.)			-0.667 (0.343)		
2005 project spending/cap: education			0.001 (0.113)		
Private transfers: electricity, sewage, and water (pct.)				0.097 (0.860)	
2005 project spending/cap: electricity, sewage, and water				0.001 (0.116)	
Private transfers: public goods (pct.)					66.865 (0.000)***
2005 project spending/cap: public goods					0.000 (0.353)
Constant	8.334 (0.000)***	9.552 (0.000)***	10.567 (0.000)***	10.428 (0.000)***	10.462 (0.000)***
Observations	1370	1370	1370	1370	1605
p values in parentheses + significant at 10%; * significant at 5%; ** significant at 1%; *** significant at .1%					

supporting coalition size has a significant effect on government service spending at levels above 50%, just as at lower levels. Taken together, these results suggest that particularism is one key mechanism driving greater spending in democracies.

Spending on projects, infrastructure, and new construction

The most important set of models shown here are in table 1, showing the effect of supporting coalition size, after controlling for electoral competition. These models demonstrate that the supporting coalition size variable is robust to the inclusion of the electoral competition variable in the model. In all but one model (electrification, water, and sewage construction spending), the supporting coalition size variable remains significant at the .1% level in the expected direction, once the electoral competition variable is included in the model. In one model (health construction spending), the competition variable is also significant in the expected direction, but it is not significant otherwise.

Table 2 shows the effect of supporting coalition size on several categories of public works spending. This dependent variable, again, is the amount of spending on new construction in each policy area. For example, most transport spending is road construction, most of the education spending is new classroom construction, and most health spending here is the construction of new health clinics. In these models, the effect of supporting coalition size on electrification, water, and sewage, transport, health, education, and all public goods new construction is positive and significant at the .1% level. These results provide strong support for hypothesis 1, supporting a model of democracy based on the exchange of votes for tangible benefits—in short, a clientelist or particularist story.

Table 2: Supporting coalition size					
Extradispersed poisson regression with iterated reweighted least squares optimization and square root of variance adjustment for overdispersion					
	Transport	Health	Education	Electrification, water, and sewage	All public goods
Supporting coalition size	3.200 (0.000)***	11.847 (0.000)***	3.433 (0.000)***	1.981 (0.000)***	4.196 (0.000)***
Consumption	0.033 (0.840)	2.496 (0.000)***	-1.793 (0.000)***	-2.753 (0.000)***	-0.802 (0.000)***
Education (mean)	-0.418 (0.000)***	-1.433 (0.000)***	-0.620 (0.000)***	-0.353 (0.000)***	-0.560 (0.000)***
Urban pop (logged)	-0.295 (0.000)***	-2.204 (0.000)***	-0.247 (0.002)***	0.038 (0.659)	-0.324 (0.000)***
Municipal budget (logged)	-0.090 (0.027)*	0.054 (0.309)	-0.110 (0.008)**	-0.201 (0.000)***	-0.085 (0.015)*
Debt service (pct.)	-2.992 (0.197)	8.026 (0.001)***	-22.800 (0.000)***	-27.374 (0.000)***	-13.005 (0.000)***
Private transfers: transport (pct.)	0.394 (0.359)				
2005 project spending/cap: transp.	0.000 (0.000)***				
Private transfers: health (pct.)		0.816 (0.640)			
2005 project spending/cap: health		-0.080 (0.000)***			
Private transfers: education (pct.)			-0.668 (0.342)		
2005 project spending/cap: educ.			0.001 (0.117)		
Private transfers: elect., sewage, and water (pct.)				0.094 (0.864)	
2005 project spending/cap: elect. sewage, and water				0.001 (0.115)	
Private transfers: public goods (pct.)					67.286 (0.000)***
2005 project spending/cap: public goods					0.000 (0.336)
Constant	8.494 (0.000)***	13.470 (0.000)***	10.625 (0.000)***	10.404 (0.000)***	10.669 (0.000)***
Observations	1370	1370	1370	1370	1605
p values in parentheses + significant at 10%; * significant at 5%; ** significant at 1%; *** significant at .1%					

In contrast, regression models which show the effects of electoral competition (table 3) do not provide strong support for hypothesis two. Although electoral competition is significantly

Table 3: Electoral Competition					
Extradispersed poisson regression with iterated reweighted least squares optimization and square root of variance adjustment for overdispersion					
	Transport	Health	Education	Electrification, water, and sewage	All public goods
Electoral competition	-2.265 (0.000)***	-5.978 (0.000)***	-2.543 (0.000)***	-1.553 (0.000)***	-2.967 (0.000)***
Consumption	0.084 (0.601)	1.826 (0.000)***	-1.715 (0.000)***	-2.712 (0.000)***	-0.716 (0.001)**
Education (mean)	-0.392 (0.000)***	-1.244 (0.000)***	-0.587 (0.000)***	-0.331 (0.000)***	-0.529 (0.000)***
Urban pop. (logged)	-0.341 (0.000)***	-1.771 (0.000)***	-0.294 (0.000)***	0.012 (0.890)	-0.389 (0.000)***
Municipal budget (logged)	-0.094 (0.022)*	0.011 (0.838)	-0.112 (0.008)**	-0.203 (0.000)***	-0.093 (0.009)**
Debt service (pct.)	-3.131 (0.180)	4.400 (0.116)	-23.093 (0.000)***	-27.778 (0.000)***	-13.343 (0.000)***
Private transfers: transport (pct.)	0.443 (0.304)				
2005 project spending/cap: transp.	0.000 (0.000)***				
Private transfers: health (pct.)		-0.314 (0.877)			
2005 project spending/cap: health (pct.)		-0.061 (0.000)***			
Private transfers: education (pct.)			-0.633 (0.373)		
2005 project spending/cap: education			0.001 (0.147)		
Private transfers: elect., sewage, and water (pct.)				0.140 (0.798)	
2005 project spending/cap: elect., sewage, and water				0.001 (0.102)	
Private transfers: public goods (pct.)					68.545 (0.000)***
2005 project spending/cap: public goods					0.000 (0.233)
Constant	9.600 (0.000)***	16.327 (0.000)***	11.718 (0.000)***	11.001 (0.000)***	12.187 (0.000)***
Observations	1370	1370	1370	1370	1605
p values in parentheses					
+ significant at 10%; * significant at 5%; ** significant at 1%; *** significant at .1%					

correlated with all areas of new construction spending, the correlation is negative, the opposite of the expected direction, given the hypothesis and the way the electoral competition variable was constructed. The most likely explanation for the direction of the observed relationships here is the very close correlation between winning coalition size and electoral competition—that is, table two more strongly supports hypothesis one than hypothesis two.

In sum, supporting coalition size is generally statistically significant in the predicted direction, with or without the inclusion of the electoral competition control variable. On the other hand, electoral competition is rarely significant in the correct direction, and then, only when the supporting coalition size variable is included. These findings strongly support hypothesis number 1, and a theory of democratic provision of public goods grounded in particularistic exchange.

Total spending

Also reported here is the effect of supporting coalition size and electoral competition on total expenditures, including both current and capital expenditures. The project spending dependent variables used above are probably better to test the effect of any variable associated with particularism, and data quality of the RENAMU survey used to assemble the public goods infrastructure development variables used above is more comprehensive than data available on total spending from the Ministry of Economy and Finances. However, the use of infrastructure development/new construction spending alone raises legitimate questions about the different ways in which capital vs. current expenditures may be used to promote particularistic exchange, potentially biasing the results I present here (Samuels 2001a; 2001b). Therefore, I present several alternative models which use total spending in each of several categories as a check. In

general, these results are weaker than the models presented above—this is most likely because of a smaller number of observations (data for only about 500 municipalities is available, as compared to about 1600 municipalities for the project spending variables used above). However, these statistical models also provide support for hypothesis 2 (particularistic exchange/supporting coalition size) but no support for hypothesis 1 (electoral competition).

Table 4: Total expenditures per capita (current and capital)					
Heteroskedasticity-robust OLS: logged expenditures per capita					
	Administration and planning	Agriculture	Transport	Health, education, and transport	Total
Supporting coalition size	1.144 (0.000)***	3.346 (0.001)***	1.736 (0.003)**	1.207 (0.001)***	1.204 (0.000)***
Consumption	0.185 (0.002)**	-0.898 (0.000)***	-0.138 (0.239)	0.141 (0.034)*	0.126 (0.019)*
Education (mean)	0.177 (0.000)***	0.531 (0.000)***	0.079 (0.387)	0.117 (0.028)*	0.140 (0.003)**
Urban pop. (logged)	-0.455 (0.000)***	-0.639 (0.000)***	-0.383 (0.000)***	-0.469 (0.000)***	-0.498 (0.000)***
Municipal budget (logged)	0.204 (0.000)***	0.484 (0.000)***	0.275 (0.000)***	0.268 (0.000)***	0.266 (0.000)***
Debt service (pct.)	0.810 (0.477)	-3.680 (0.366)	-0.874 (0.668)	-1.487 (0.228)	-1.404 (0.217)
Constant	3.619 (0.000)***	-2.622 (0.042)*	1.413 (0.079)+	3.175 (0.000)***	4.397 (0.000)***
Observations	538	301	515	538	538
R-squared	0.454	0.300	0.177	0.355	0.524
Robust p values in parentheses + significant at 10%; * significant at 5%; ** significant at 1%; *** significant at .1%					

Table 4 shows the results of five regression models, in which the dependent variables are, respectively, (a) administration and planning, (b) agriculture, (c) health, education, and transport, and (d) total expenditures. In each of these models, the effect of supporting coalition size is significant and positive, supporting hypothesis one.

Though not every spending category is positively and significantly associated with supporting coalition size, these outcomes, when pooled, are positively associated with supporting coalition size.

Table 5: The effect of community size on particularistic exchange	
Extradispersed poisson regression with iterated reweighted least squares optimization and square root of variance adjustment for overdispersion	
	Total water, sewage, electrification, public health, education, and transportation project spending
Supporting coalition size	4.680 (0.000)***
Population	-0.000 (0.951)
Supporting coalition size * population	-0.000 (0.020)*
Asset ownership (mean)	-0.539 (0.009)**
Education (mean)	-0.757 (0.000)***
Urban population (logged)	-0.114 (0.151)
Municipal budget (Thousands of Peruvian Soles, logged)	-0.018 (0.636)
Debt service (pct.)	-9.785 (0.000)***
Private project transfers (pct.)	58.889 (0.000)***
Total "public goods" project spending 2005	0.000 (0.500)
Constant	9.597 (0.000)***
Observations	1605
p values in parentheses	
+ significant at 10%; * significant at 5%; ** significant at 1%; *** significant at .1%	

Also tested was a logged total project spending dependent variable using these same control variables and OLS regression. Like the other OLS models shown here, these results support hypothesis 2 over hypothesis 1 (competition is not significant).

The role of jurisdictional size

As predicted in hypothesis 3, jurisdiction size (population) has a substantial impact on the relationship between supporting coalition size and spending in a range of areas. For an example, see table 5 (above) and figure 3 (below, in discussion). Where community size is small, the

Table 6: The effect of supporting coalition size in super-sized coalition municipalities			
Extradispersed poisson regression with iterated reweighted least squares optimization and square root of variance adjustment for overdispersion			
	Full population	Minority coalitions	Majority coalitions
Supporting coalition size (pct.)	4.192 (0.000)***	3.508 (0.000)***	5.557 (0.012)*
Asset ownership	-0.749 (0.001)****	-1.666 (0.000)***	2.391 (0.000)***
Education (mean)	-0.890 (0.000)***	-0.759 (0.000)***	-1.527 (0.000)***
Urban population (logged)	-0.230 (0.001)***	0.091 (0.219)	-1.976 (0.000)***
Municipal budget size (logged)	-0.214 (0.000)***	-0.290 (0.000)***	0.125 (0.211)
Debt service (pct.)	2.702 (0.148)	5.510 (0.002)**	-121.550 (0.000)***
Project private transfers (pct.)	2.967 (0.000)***	3.216 (0.000)***	-11.994 (0.013)*
Total project spending/cap 2005	0.000 (0.229)	0.000 (0.231)	0.000 (0.021)*
Constant	12.877 (0.000)***	12.186 (0.000)***	17.204 (0.000)***
Observations	1561	1437	123
p values in parentheses			
+ significant at 10%; * significant at 5%; ** significant at 1%; *** significant at .1%			

effect of supporting coalition size is strongly positive and highly significant. In larger communities, however, the relationship becomes weaker, and ultimately insignificant. This interactive relationship is consistent with the theoretical assertion that particularistic exchange is an important driver of public service provision. For simplicity's sake, only one regression table and one graphic is shown here depicting this relationship—specifically, total “public goods” project spending is shown here. However, the relationship also holds across all areas of project spending and most areas of total spending.

Super-sized supporting coalitions

As predicted in H4, above, supporting coalition size has an impact on public goods spending, even where supporting coalitions are larger than majority size. For an illustration, see table 6.

Although the effect of supporting coalition size is less significant where coalitions are larger than a majority, because of the relatively small number of cases involved, the effect is still significant. This suggests that politicians do not only seek to maintain the support of a minimal winning coalition through the provision of government services, but seek to build and maintain the support of coalitions of voters which may be much larger than necessary, through particularistic exchange, in order to reduce future uncertainty about election outcomes.

Postestimation

Post-estimation tests demonstrate the robustness of these results. In particular, the supporting coalition variable is quite robust. None of the supporting coalition models are sensitive to the exclusion of influential outliers, and there are no apparent problems with the functional form of estimators. The reported results generally quite robust to estimation technique (including poisson regression with chi-squared extradispersion adjustment, negative binomial regression, and heteroskedasticity-robust negative binomial regression). Though the chi-squared adjustment did render supporting coalition size insignificant in the transportation spending and water, sewage, and electrification spending models, these models displayed much poorer model fit statistics (log likelihood, Aikake's Information Criterion and Bayes' Information Criterion) than other models. Therefore, the most likely explanation for these results is poor model fit, rather than any issue of substantive importance. Each of the square root of deviance adjusted poisson models' residuals showed some deviation from normality, however, heteroskedasticity-robust negative binomial regression generated no differences in the direction or significance of

coefficients, suggesting that non-normal residuals are not a problem. Finally, the supporting coalition size variable never lost significance or changed direction when other control variables were added or excluded from the model.

In general, the electoral competition variable is more sensitive and less robust than the size of the supporting coalition. In addition, because the direction and significance of the electoral competition variable never matches that predicted by Lake and Baum (2001; 2003), the robustness checks performed here support the contention that public goods' association with democracy is more likely the result of particularistic exchange than electoral competition. The electoral competition variable was generally robust to the exclusion of high-influence cases, as measured by deviance, anscombe, and pearson residuals, with the exception of and electricity, water, and sewage project spending and health project spending, in which coefficients lost their significance when Coronel Castañeda, Ayacucho, and Huamanquiquia, Ayacucho—the most distant outliers—were excluded from the regression models. In the other three models, however, outliers were not a problem.

Plotting deviance residuals against the electoral competition variable suggested that a logged competition term might better capture the effect of electoral competition, but models with a logged competition variable did not provide substantially different results from a linear term, nor did residual distribution vary.

Residuals did deviate from normality in each of these models, but this is explained by the overdispersion of the dependent variable (Hoffman 2004) and therefore should not be a problem.

The use of a chi-squared extradispersion adjustment and negative binomial regression with heteroskedasticity-robust standard errors produced coefficients which never differed in direction or significance than those reported. In addition, model fit statistics (log likelihood, AIC and

BIC) generally were better with negative binomial models. However, poisson results are reported here because some scholars (Cameron and Trivedi 1998; Hoffman 2004) advise against the use of many postestimation diagnostics with negative binomial regression.

Finally, electoral competition models were robust to the addition and exclusion of control variables in a series of sensitivity tests.

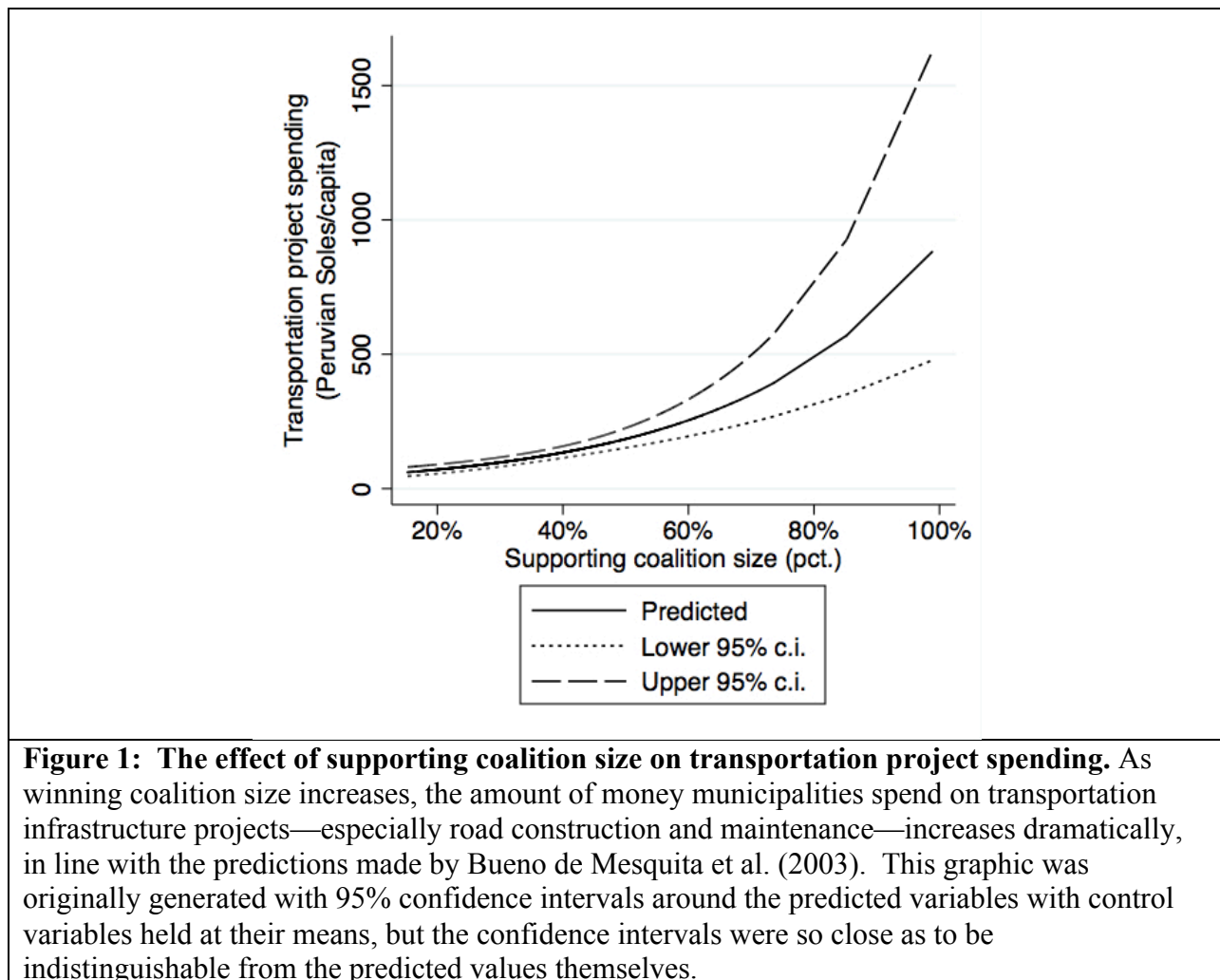
In general, the models presented here which include both electoral competition and winning coalition size variables are the least robust of the three sets of models, because of collinearity and variance inflation (correlation between these variables is .71). The measures are, after all, the result of the same process (local elections) which will tend to produce high competition only when vote shares for the victorious party are lower. However, robustness checks continue to support the theory of particularistic exchange and hypothesis 2 more strongly than theories of electoral institutions and hypothesis 1.

First, several of these models are sensitive to the exclusion of outliers—in particular, the regression models where transportation project spending, health project spending, and education project spending become insignificant when the municipality of Coronel Castañeda, Ayacucho are excluded from the regression. Total project spending is robust to the exclusion of outliers.

Here again, plotting residuals against each of the independent variables shows the possible utility of a logged competition variable, however, inclusion of such a term does not change the direction or significance of the results reported.

Thirdly, plotting these models' residuals (Anscombe, deviance, and Pearson) against a hypothetical normal distribution show some deviation from normality, though this is probably not a problem, because of the extradispersion adjustment (Hoffman 2004).

In several models, including total project spending, education project spending, and transport spending, the use of different estimation techniques produces insignificant results, though as above, these alternative models display poorer model fit statistics. In the case of health project spending, the use of a chi-squared extradispersion-adjusted poisson technique and heteroskedasticity-robust negative binomial regression generates significant and positive results for the supporting coalition size variable, but the competition variable becomes insignificant.



Finally, these models, like the models described above are robust to the exclusion of control variables as a test of model sensitivity.

These models, like the regression models above, support hypothesis 2 much more strongly than hypothesis 1, and generally are much more supportive of the theory of particularistic exchange than theories of electoral institutions.

In short, these statistical models support the conclusion that public goods provision in democracies is often the result of particularistic exchange. By contrast, electoral competition is rarely significantly associated with spending in any policy category, suggesting that electoral competition is not as important in driving greater public goods provision.

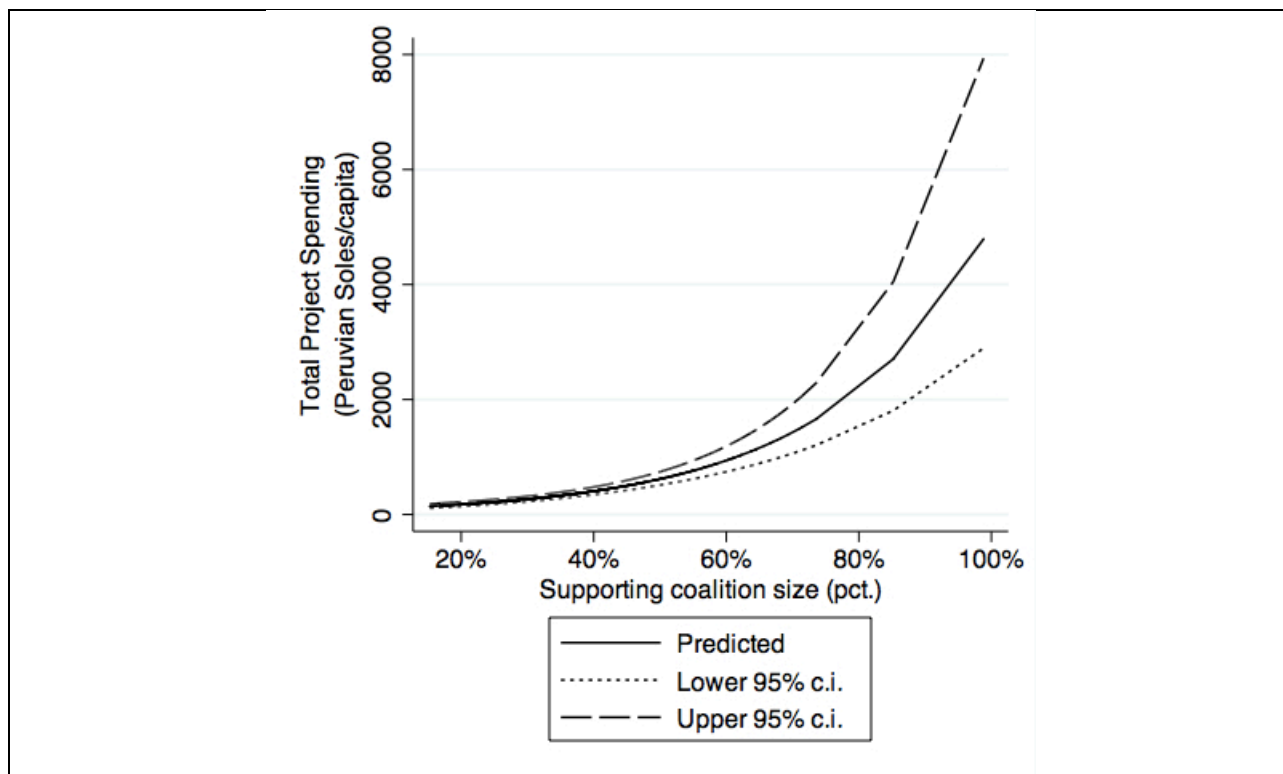
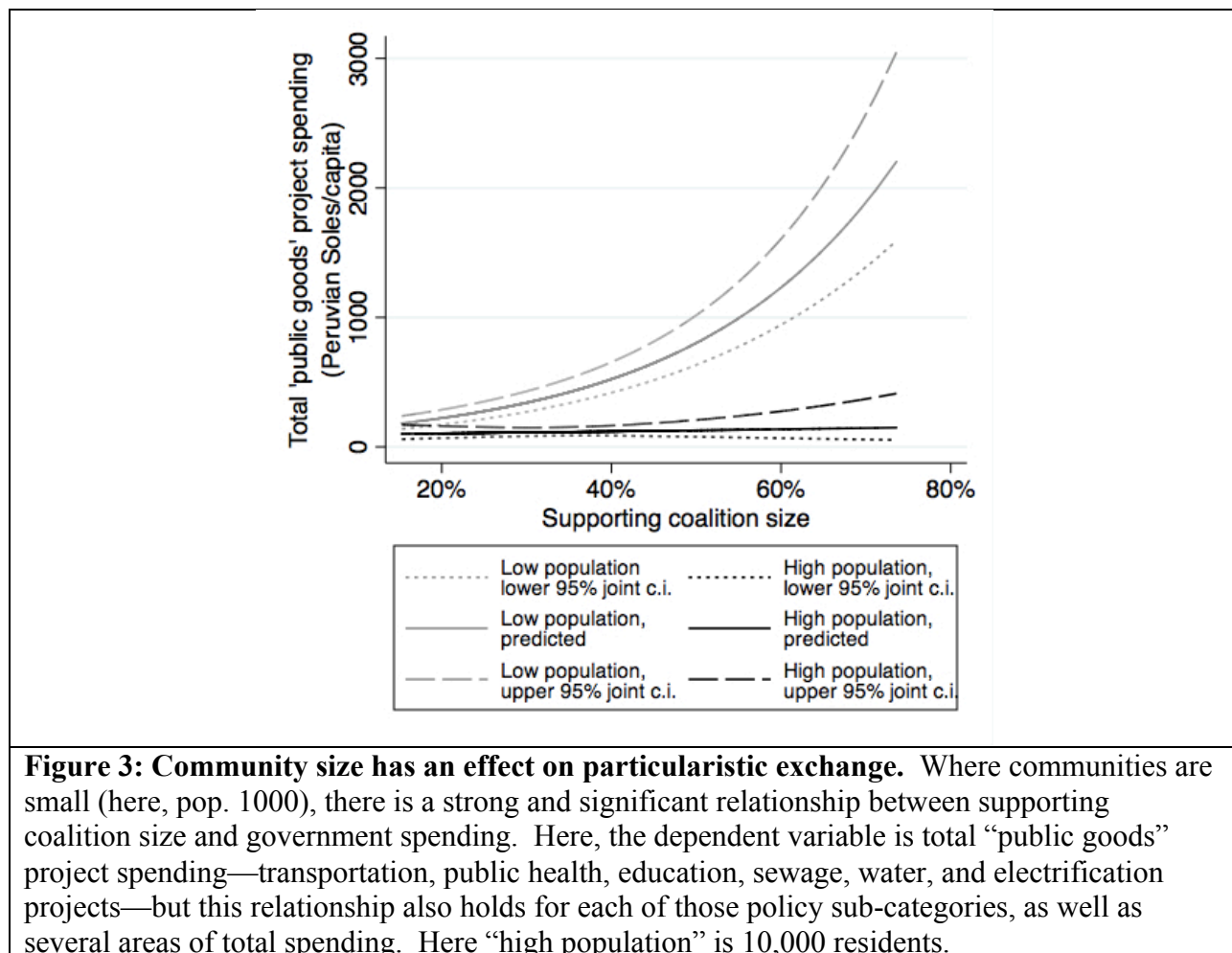


Figure 2: The effect of supporting coalition size on total project spending. This effect is similar to that shown above in Figure 1; as winning coalition size increases, predicted amounts spent on public works projects (new construction) increase dramatically. This graphic, and Figure 1 (above) were originally drawn with 95% confidence intervals around the predicted values with control variables held at their means, but the confidence intervals were narrow enough to be nearly indistinguishable from the predicted values themselves.

The OLS models reported above are also robust to the full range of robustness checks, including the exclusion of outliers and high-influence cases, splitting the sample various ways, and including and excluding control variables. Residuals are distributed normally.

Models presented which use only a sub-sample of municipalities with supporting coalitions smaller and larger than 50% are generally somewhat sensitive to the exclusion of outliers, although robust to other postestimation checks. However, this is most likely because of the relatively low numbers of observations in these models (123, for example, shown in Table 5).



Models in which community size was interacted with the supporting coalition size variable were also tested with a series of robustness checks. These models are also robust to the

exclusion of outliers and high-influence cases, splitting of the sample, and sensitivity tests. Residuals are also distributed normally here.

Discussion

Taken together, the results presented above provide strong support for the second hypothesis, which is drawn from the theory presented here which explains government service provision in terms of particularistic exchange. In short, supporting coalition size is consistently significant in the predicted direction, while electoral competition is almost never significant in the direction predicted by hypothesis 1. The first set of models (Table 1) supports hypothesis 2 robustly, the second set of models (Table 2) fails to support hypothesis 1, and the third set of models (Table 3), though subject to some methodological problems, is much more supportive of hypothesis 2 than hypothesis 1.

In essence, these results support the notion that democracy promotes the provision of public goods through the exchange of political support for tangible benefits—politicians win votes by providing supporters with tangible benefits, such as schools, health clinics, roads, and electricity, water, or sewage infrastructure.

For an intuitive interpretation of the effects of winning coalition size on transportation project spending, see figure 1. As winning coalition size increases from below 20 percent to above 60 percent, predicted expenditures on transportation project spending (mostly road construction) increases from just over 50 Soles per capita (about \$18 US) to nearly 250 Soles per capita (about \$100 US).

Likewise, the effect of supporting coalition size on total project spending is substantial. Where supporting coalition size is about 20 percent of the voting population, total project

spending is about 100 Soles per capita (about \$37 US), but where supporting coalition size is 60 percent, the predicted amount of total project spending per capita is nearly 600 Soles per capita (about \$220 US). This is a 600% increase in the new construction spending per capita.

Supporting coalition size has a similar effect on the other dependent variables in these regression models and all these results are most highly significant where supporting coalition size is between 20% and 45% of the local electorate.

As a secondary test of the theory of particularistic exchange and government service provision described here, I also tested the effect of community size on the hypothesized supporting coalition size-government service spending relationship. Hypothesis three predicted that smaller communities would experience greater particularistic exchange, because in these places, where voting returns are reported at a relatively low level of aggregation, and other forms of information gathering (including particularistic networks) capture a greater share of local voting behavior, it will be easier for politicians to know who to reward with government services.

Regression results (extradispersed poisson regression) support hypothesis three. Where community size is small, there is a strong and significant relationship between supporting coalition size and government service spending. However, where community size is large, politicians are effectively unable to determine who to reward and who to punish, and government spending no longer is related to supporting coalition size.

Finally, I examine the effect of supporting coalition size on government service spending where supporting coalitions are above majority size—above the level where Bueno de Mesquita et al. (2003), Olson (1993), and Olson and McGuire (1996) suggest they should make a difference. Contrary to these scholars' predictions, and consistent with Hypothesis 4, supporting

coalition size has a positive and significant effect on government service spending where supporting coalitions are above 50%. This suggests that particularistic exchange is a more important mechanism for the provision of government services than a formal assessment of minimal winning coalition size by elected politicians. In many places, at least, politicians seek to form and maintain the support of very large supporting coalitions through a process of particularistic exchange.

Conclusion

Scholars have presented two contending explanations for the apparent correlation for democracy and public goods provision. Some have argued that democracies provide more public goods because under democracy, electoral competition makes it easier for political leaders to be removed from office and requires that leaders buy the support of larger numbers of voters through public goods provision. (Ames 1987; Lake and Baum 2001; Baum and Lake 2003).

However, existing theory fails to explain the variation in government service provision visible across governments in decentralized regimes where formal democratic institutions are identical. To remedy these issues, I present a theory of democracy and government service provision based on particularistic exchange.

I test this theory of particularistic exchange against existing theory using sub-national data from approximately 1600 Peruvian municipal governments. The use of sub-national data is ideal for the purposes of this examination, because it eliminates any variation in institutional forms which might confound my results.

In addition, the causes of public goods provision in sub-national governments is an important and understudied research question in its own right (Berry 2008; Donahue 1997; Faguet 2004;

Faguet and Sanchez 2008; Hiskey and Seligson 2003; Howell-Moroney 2008; Oates 1999; Ribot 2008; World Bank 2003; World Resources Institute 2003).

Finally, Peruvian local governance is a critical case for this theory of particularistic exchange because of the unusual way in which it promotes small supporting coalitions and weak oppositions, and therefore, in theory, facilitates particularism.

My findings suggest that supporting coalition size is consistently associated with greater public goods provision, while there is little statistical evidence that electoral competition leads to greater public goods provision. I corroborate these findings with qualitative observations from fieldwork conducted in Peruvian municipalities in 2008 and 2009.

These findings also elucidate the mechanisms through which democracy likely influences public goods provision. In short, the analysis presented here suggests that particularism, pork barrel politics, or interest group politics may be one of the most important mechanisms through which democracies provide public goods.

Many scholars would argue that particularistic exchange like that documented here is undesirable for a number of reasons, including its inequity and inefficiency (Acemoglu, Ticchi, and Vindigni 2006; Adsera, Boix, and Payne 2003; Crabtree 2010; Keefer 2007; Roniger 1994). Therefore, the appropriate follow-up for the analysis contained here is to question what factors reduce these clientelism-like links between voters and politicians. This is the question to which I turn next.

In particular, I focus on three factors which scholarly research suggests may affect particularistic exchange.

First, scholars suggest that fragmented or divided government may have an effect on distributional politics, including particularism (Arriola 2009; Becher 2009; Cheibub 2006; Milesi-Ferretti, Perotti, and Rostagno 2002; Tsebelis 2002; Tsebelis and Chang 2004). In the following chapter, I examine the effects of opposition strength on the presence of particularistic exchange. Ultimately, I find that strong oppositions tend to dampen particularism.

Second, scholars argue that civil society density may impact particularism, clientelism and other forms of corruption by promoting mobilization and making information less costly (Acemoglu and Robinson 2006; Escobar 1994; Gunes-Ayata 1994a; 1994b; Iversen, Sen, Verschoor, and Dubey 2009; Levi 1996; Sobel 2002). In chapter five, I investigate the impact of civil society on particularistic exchange, finding that particularism is also reduced by dense civil society.

Finally, I address one threat to the generalizability of my findings in chapter six. One reason why particularism may be especially salient in Peru is the country's very high level of economic inequality. In chapter five, I construct a measure of economic inequality based on asset ownership, and incorporate this variable into my statistical model of particularism. I find that inequality worsens particularism, but the effect of particularism is present in both relatively equal and relatively unequal municipalities. The implication, therefore, is that particularism may be present in both equal and unequal places around the world, not only extremely unequal settings like Peru, although the effect of particularism may be dampened in more equal places.

Opposition Strength, Divided Government, and Particularistic Service Provision

Chapter 4

Introduction

In chapters one, two, and three, I have developed and tested a theory which identifies how democracy promotes public goods provision through particularism. I find that the exchange of political support for public services is a more important source of public goods spending than electoral competition or electoral institutions, at least in Peruvian municipal governance.

Many scholars have expressed concerns about the particularistic or clientelistic exchange of political support for public services. Economists, Political Scientists, and Sociologists argue that this type of particularism promotes inefficiency, lower rates of economic growth and lower living standards overall, unequal treatment under the law, lower quality of governance and lower quality of public service provision, and is inherently undemocratic (Acemoglu, Ticchi, and Vindigni 2006; Adsera, Boix, and Payne 2003; Crabtree 2010; Keefer 2007; Roniger 1994).

Here, I attempt to identify mechanisms that mitigate this type of exchange between politicians and political supporters. One such mechanism—which may be manipulated through institutional design—is the institutional strength of opposition parties or factions⁹. However, two theories of institutional politics make opposing predictions about the effects of political institutions on particularistic exchange. The first of these suggests that the presence of strong oppositions—which operate through the presence of “veto points” or “veto players”—will make particularism exchange *more* likely. The second makes the opposite prediction—that strong oppositions will discourage particularism.

⁹ This concept—which I refer to here as “opposition strength” is a measure of the strength opposition parties or factions hold within Peruvian municipal councils (the legislative branch of Peruvian local governments). This concept, intended as a proxy for opposition factions’ abilities to veto mayoral policy, is measured as the proportion of seats held by parties other than that of the mayor. Therefore, if the mayor’s party holds 80% of the seats in the municipal council, and other parties hold 20%, this variable is coded as .2, and if the mayor’s party holds 90%, this variable is coded as .1.

Each of these theories, if true, has clear policy implications in Peru. In the local Peruvian milieu, opposition parties' abilities to veto or alter policies proposed by the mayor is limited by Peruvian electoral laws (although oppositions may sometimes check mayoral authority because of the highly personalized nature of Peruvian politics, and because of the small-scale and often poorly-organized nature of Peruvian mayoral administrations). If the absence of institutional checks and balances facilitates particularism, then the designers of Peru's early-2000s decentralization reforms may have made an important mistake that should be rectified.

Further, understanding which of these theoretical approaches is correct is important for better understanding the operation of political institutions in settings like Peru.

Unlike most empirical work studying clientelism and particularism in a comparative setting, I use large-N statistical techniques, using municipal-level data from Peru, supported with qualitative observations from the field.

The Peruvian local setting is ideal for the study of opposition strength and particularism, because unique electoral rules permit two important factors, fundamental to the quantitative study of particularism and opposition strength, to be disaggregated in the Peruvian setting. Although supporting coalitions size—that is, the proportion of the local population which voted for the victorious mayoral candidate in the previous election—and the strength of local opposition parties in municipal councils are strongly negatively correlated in most settings, they can be easily parsed in Peruvian municipalities.

In addition, the use of Peruvian sub-national data permits the easy control of many potentially confounding factors, especially institutional factors, which are constant across municipalities.

Finally, because of the unusual institutional structure of Peruvian municipalities, which creates especially weak oppositions, Peru should be a hard case for the effects of institutional checks and balances on Particularism. Any positive results from this analysis, therefore, should be taken as strong evidence that opposition strength affects particularism.

My findings suggest that institutional checks and balances in the form of relatively strong municipal oppositions do mitigate the effects of particularistic exchange. Where oppositions are stronger, the provision of particularistic benefits to selected constituencies appears to be strongly reduced.

I have structured the remainder of this paper as follows: First, I present a summary of the two theoretical approaches that present opposing predictions about the effects of opposition strength on particularistic exchange. Second, I provide some background on Peruvian municipal governance, identifying factors that make Peruvian municipal governance a particularly useful setting for the empirical testing of these theories. Third, I present the two theories tested here, and the predictions they make. Fourth, I outline my quantitative methods and data. Fifth, I present my quantitative findings. Next, I discuss these findings and briefly present the results of my qualitative investigation. Finally, I present the conclusions and theoretical and policy implications of this work.

Democracy, Public Goods, and Institutions

Here, I outline a body of scholarship which examines the effects of institutional fragmentation, “veto points,” or “veto players” on particularistic policies. This body of scholarship includes works which suggest opposite predictions regarding the effects of checks and balances on particularistic behavior clientelism-like exchange. I also introduce a third body

of scholarship that specifically addresses the causes of “clientelism”, though rarely from an institutional angle.

The Effects of Institutions on Particularistic Policies

One reason for the apparently pervasive particularistic exchange present in Peruvian municipalities (as outlined in chapter 3) may be the unusual structure of Peruvian municipal governments, which is a result of its atypical election laws. By law, although Peruvian local governments include both popularly elected mayors and municipal councils elected through a modified system of proportional representation, the victorious party in each municipality’s election—the party of the mayor—automatically receives a majority in each municipal council. Although opposition factions are still often able to veto or modify mayoral initiatives, because of the disorganization of many local political factions, and because the often personalistic and fragmented nature of Peruvian local parties, these electoral institutions tend to substantially weaken the municipal opposition (Jaramillo Baanante 2009).

Scholars have rarely, if ever examined the effects of institutional checks and balances on clientelism. However, there is a substantial amount of scholarship which explores the effects of checks and balances on other forms of particularistic policy, including trade policy, economic reform, and fiscal policy (M. Bailey, Goldstein, and Weingast 1997; Becher 2009; Cheibub 2006; Gehlbach and Malesky 2010; Kang and Powell 2010; Rogowski 1987; van de Walle 2003; Ziblatt 2008). This literature, however, fails to draw consistent conclusions about the effects of checks and balances on particularism.

One set of works predicts that institutional checks and balances, fragmented governments, and/or relatively large numbers of strong “veto points” or “veto players” will generate relatively more particularistic policy. Fiscal policy will tend to include greater spending on benefits for

narrow interest groups, for example, and economic policy in general will tend to promote narrow rather than broad interests (Haggard and Kaufman 1995; Cheibub 2006; Becher 2009). These scholars argue that policy is the result of negotiation. Where negotiations involve more players who are capable of vetoing a given policy, those actors will, in sum, be able to extract more benefits for special interests (Arriola 2009; Bawn and Rosenbluth 2006; Becher 2009; Cheibub 2006; Haggard and Kaufman 1995).

This school of thought suggests that more powerful oppositions in Peruvian municipal governments will tend to be associated with greater clientelistic exchange in municipal governance, and that governments which include weaker oppositions will tend to be characterized by lower amounts of clientelism:

H1: Stronger municipal oppositions will tend to be associated with more particularism, such that where supporting coalition sizes are small (and therefore, fiscal policy tends to be particularistic), spending will be greater.

On the other hand, at least two theoretical arguments would predict that stronger oppositions will generate less particularistic exchange. The first theory assumes that actors tend to play an oversight role on one another. Therefore, when there are greater numbers of “veto players”—where government is divided, or legislatures are divided between parties—particularistic policies are less likely because of the resulting greater accountability (Gehlbach and Malesky 2010; McKay 2009; see also Mayhew 2005 for another presentation of this argument).

A second argument along these lines suggests that the more actors involved in policy making, the larger the proportion of society represented by those actors is likely to be. Therefore, where more actors are involved in policy negotiations, and where more actors are needed to legislate or carry out policy (as in a situation where local opposition parties can more successfully oppose mayoral policy), the more broad the benefitted constituency is likely to be

(Arriola 2009; Rogowski 1987; Saha 2010). And because the particularistic provision of private goods or club goods is less beneficial to individual voters and more costly to governments where supporting coalition sizes are larger, governments where oppositions are strong will often find that it is more cost-effective to provide public goods than private or toll goods¹⁰. Therefore, where more actors or groups can slow down, veto, or change policy (as in a situation where a municipal opposition party is relatively powerful), the less likely it is that mayors or other actors will successfully pursue narrowly-targeted, clientelistic policies.

These theoretical arguments are also consistent with recent findings in Comparative Politics, that institutional polarization is associated with lower levels of corruption (Brown, Touchton, and Whitford 2011).

Both of these arguments lead to the following hypothesis:

H2: Stronger municipal oppositions will tend to be associated less particularism, such that where supporting coalitions are small—and therefore, where policy is likely to be particularistic—spending will be lower.

In addition to these theories, scholars and practitioners have argued that a number of other factors cause variation in the quantity of clientelism. These variables include community size (Adsera, Boix, and Payne 2003), transparency (Adsera, Boix, and Payne 2003; Brown and Hunter 2004; Gerring and Thacker 2004; Islam 2006; Kaufmann et al. 2010), social capital (Adsera, Boix, and Payne 2003; Crabtree 2010; Escobar 1994), political instability (Campante, Chor, and Do 2009; Keefer 2007), other institutional structures than those considered here, including parliamentarism (van de Walle 2003; Gerring and Thacker 2004) and federalism (Gerring and Thacker 2004; J. Platteau 2003), economic modernization (Gunes-Ayata 1994a; 1994b; Roniger 1994; Silva 1994), natural resources (Kaufmann et al. 2010), economic

¹⁰ For a detailed explanation of this theory and empirical evidence, see Bueno de Mesquita et Al. 2003.

inequality and ethnic heterogeneity (Acemoglu, Ticchi, and Vindigni 2006; Chandra 2004; Crabtree 2010), and education (Truex 2010).

Several of these variables are controlled here using statistical techniques, including community size, economic modernization, and education. Others are controlled through research design—these are factors which do not vary across Peruvian municipalities, including political instability, parliamentarism and federalism. Finally, a third set of variables are not controlled here, but are addressed in greater detail elsewhere in this ongoing project. These factors include social capital, inequality and heterogeneity. For the operationalization of each variable, see “Data and Methods”, below.

Local Government in Peru: Some Background

Local governments in Peru are set up like most municipal governments in the United States. The primary difference, however, is the share of local municipal councils controlled by opposition parties; because of Peruvian electoral rules, oppositions are very weak in Peruvian local governments, making these governments a “hard case” for theories which argue that checks and balances should affect distributional politics.

Local Government Structures

Like most local governments in the United States, Peruvian local governments resemble presidential national systems, with independently elected executives (mayors) and separately elected legislatures (city councils). Formal authority vested in these institutions is similar to that in other presidential-style governments such as that of the United States, in which the mayor and his staff are charged with carrying out local regulations (including budgets) passed by the municipal council.

Electoral laws

One important difference between local governments in Peru and those in most other countries is the way in which mayors and municipal council members are selected; Peruvian electoral rules were engineered in such a way as to significantly strengthen the hand of the mayor, and to prevent gridlock in local policy-making. Elections take place using a modified proportional representation rule, and mayors and municipal councils are elected on the same ballot. Mayors are elected by plurality, but municipal council-members are seated in an unusual way; the party of the mayor (the party which wins the most votes) is granted a majority of seats on the council, with the remainder of seats allocated proportionally (Jaramillo Baanante 2009). All of this takes place in a context where there are rarely fewer than four or five parties competing in local races. The end result is that governing parties (which rarely receive more than 30% of the vote in a given municipality) typically receive 60% or more of the seats on the municipal council.

These rules mean that institutional checks and balances tend to be weaker in Peru than elsewhere, making Peruvian municipal governments a “hard case” for testing the effects of checks and balances on clientelistic exchange. If checks and balances have an effect here, where they are so weak, they will most likely have an effect in other governments as well.

Methodological importance for this study

In addition, these electoral rules mean that opposition strength (the proportion of municipal council seats controlled by opposition parties) and supporting coalition size (the proportion of the local electorate which voted for the mayor) are only weakly correlated ($r = -.08$). As a result, it is methodologically possible to interact supporting coalition size and opposition strength using the data utilized here, to determine the effect of opposition strength on the relationship between

supporting coalition size and expenditures. This type of interaction is not methodologically feasible with most other systems' electoral data, where opposition strength and supporting coalition size are highly negatively correlated.

Theory: Opposition Strength, Supporting coalition Size, and Service Spending

Here, I identify two ways in which theories on public goods provision and opposition strength may be combined. The statistical model I use to test the two resulting theories, using an interaction term, is not as straightforward as the interpretation of a single linear variable coefficient, therefore, I also explain the predictions of these two theories in some detail here.

Supporting coalitions and “private goods”

According to the theory presented in chapter 2, and tested in chapter 3, politicians gain and hold political office by assembling and maintaining a coalition of supporters called the “supporting coalition.” In municipalities in Peru, I define the supporting coalition as a coalition of individuals who vote for the victorious mayoral candidate and his party in municipal elections.

As supporting coalition sizes rise, expenditures on government services will also rise, as politicians reward larger numbers of supporters with targeted goods and services. Where supporting coalitions are small, graft and corruption will be common, as an effective strategy for paying off narrow cliques of supporters. Where they are larger, goods (typically club goods) will be targeted more broadly, such that these goods have larger beneficial spillovers for non-supporters.

Are “public goods” really non-excludable?

Typically, services which are generally considered the role of government—services like education, health and sanitation, transport, potable water and sewage services—have been considered public goods (Ansell 2008; Baum and Lake 2003; Brown and Hunter 2004; Lake and

Baum 2001; Bueno De Mesquita, Smith, Siverson, and Morrow 2003; Olson 1993; McGuire and Olson 1996). Sometimes, the provision of such goods will take the form of public goods.

However, these services are often provided as toll or private goods, targeted at particular groups or individuals. In chapter 3, I have provided evidence that within Peruvian municipalities, as supporting coalition size increases, so does spending on services like education, transportation, public health and sanitation, and public infrastructure. These findings are consistent with the theory presented here and in chapter 2.

Although government-provided services are rarely completely excludable, individuals can often be excluded from enjoying their benefits. For example, public health services, public education, transportation services, potable water, sewage services and public electrification services are often considered “public goods” (Alesina, Baqir, and Easterly 1999; Baum and Lake 2003; Brown and Hunter 2004; Brown and Mobarak 2009; Bueno De Mesquita, Smith, Siverson, and Morrow 2003; Stasavage 2005a; Ziblatt 2008). However, the benefits of all of these types of services can be excluded from certain potential beneficiaries under many circumstances, making them “club goods” or “toll goods”. In rural Peru and around the developing world, for example, a politician may choose to build a school in one village rather than another, making it very costly for students from the excluded village to receive an education. Health clinics can be built and staffed in some places rather than others, and public potable water systems and sewage services can easily be provided to one family and excluded from the next village, neighborhood, street, or residence.

One political tool which politicians may use is the targeted provision of club goods. Anecdotal evidence suggests that this type of targeted service provision is a common political tool used by municipal and other politicians in Peru and elsewhere. Villages which are strongly

supportive of a particular candidate find that they are rewarded with irrigation, drinking water, electrification, or education services while the next village up the valley which was more supportive of a losing party or candidate finds that they are denied those services.

Although anecdotal evidence suggests that municipal politicians often use private goods provision to win elections in Peru (see above), stories of the targeted provision of club goods to villages, neighborhoods, and even extended families are also not uncommon.

Indeed, there is often no way to distinguish between public service spending in “public goods” and spending as private or toll goods, which is targeted to benefit a particular group of people. Therefore, I proceed with the assumption that most government services can be provided either as public, toll, or private goods. As such, I will avoid the use of the terms “public goods” and “private goods” in favor of more general terms like “government services”, which I define as any type of services provided by governments, or more exact terms such as “excludable goods.” In addition, henceforth, I refer to the exchange political support (on the part of constituents) for tangible government services (on the part of politicians) as particularistic exchange.

Opposition strength and particularism

In general, as per the discussion of the two relevant literatures on oppositions, veto players, divided governments, and legislative coalitions described in the literature review, institutional theory predicts two different relationships between opposition strength and particularistic exchange. One set of theories predicts that strong oppositions will encourage greater particularistic exchange, as they demand to be paid off with excludable goods for their constituencies. Another set of theories predicts that they will prevent particularistic exchange in favor of the provision of goods to all local voters.

In general, if oppositions are sufficiently weak, they will be unable to have any impact on policy at all. There is qualitative evidence to suggest that, in Peru, where electoral rules intentionally weaken oppositions, there are many municipalities where opposition parties, though opposed to mayoral policies, are unable to change or stop the mayor and his party from carrying out their own set of policies.

However, there is also substantial evidence that relatively strong oppositions can impact policy at the municipal level. Because of divisions within mayoral factions and because of the poor organization of many local political parties, relatively strong, well-organized oppositions can veto or change municipal policy, despite the fact that they can never win a majority of seats on the municipal council.

Theory 1: Strong oppositions increase particularism

If oppositions prefer to improve their own political fortunes by promoting the provision of excludable goods to their own constituency of supporters, and if supporting coalitions are small, opposition strength will tend to be positively associated with particularistic exchange and public service spending. This is because governments that assume and maintain local political power through a small supporting coalition will prefer to provide excludable goods to their own set of supporters, rather than provide goods which benefit all local voters. Strong oppositions which might otherwise veto mayoral policy may agree to cooperate with mayoral efforts to provide excludable goods to his supporters, on the condition that their supporters are likewise compensated with excludable goods. Therefore, where supporting coalitions are small, strong oppositions may be associated with greater particularistic exchange—and greater public service spending—than weak oppositions.

Where supporting coalitions are large, however, opposition strength will have little effect on public service spending. This is because, as per Bueno de Mesquita et Al. (2003), larger supporting coalition sizes will tend to be associated with provision of broadly beneficial services and goods. These goods and services will tend to be provided in ways which also benefit opposition supporters. Therefore, oppositions will tend to support mayoral policy of non-excludable goods provision, and will have little or no observable effect on service provision and public spending.

Theory 2: Strong oppositions decrease particularism

On the other hand, if oppositions are unwilling or unable to extract concessions from supporting coalitions in the form of excludable goods provision to their supporters, opposition strength may be associated with less particularism and less spending on public services where supporting coalitions are small. Strong oppositions may, for example, be capable of vetoing municipal policy if it does not suit them, but unable to enact a policy which they prefer, because the mayor controls the agenda. Or, opposition members may prefer to exercise an oversight role and prevent the mayor from rewarding only his supporters with government services.

In this case, opposition strength will be associated with lower levels of spending where supporting coalitions are small, because oppositions will seek to veto mayoral attempts to reward his own supporters using tax revenues extracted from the local population as a whole.

Where supporting coalitions are large, however, as above, spending under weak and strong oppositions will tend to converge at relatively high levels, because governments with large supporting coalitions will tend to promote inoffensive, broadly-beneficial service provision which will benefit all municipal voters.

Operationalizing these hypothesized relationships

I test these theories using an interaction term, in which opposition strength is hypothesized to affect the relationship between supporting coalition size and public goods spending. Elsewhere, I have found that public goods spending responds directly to supporting coalition size, suggesting that politicians seek the support of a core of supporters by providing them with benefits and seeking to exclude non-supporters from those benefits. As supporting coalition size increases, spending on services targeted at political supporters likewise increases, because each individual in the supporting coalition requires a certain payout in order to continue to support the mayor and his party (as per Bueno de Mesquita et Al. 2003).

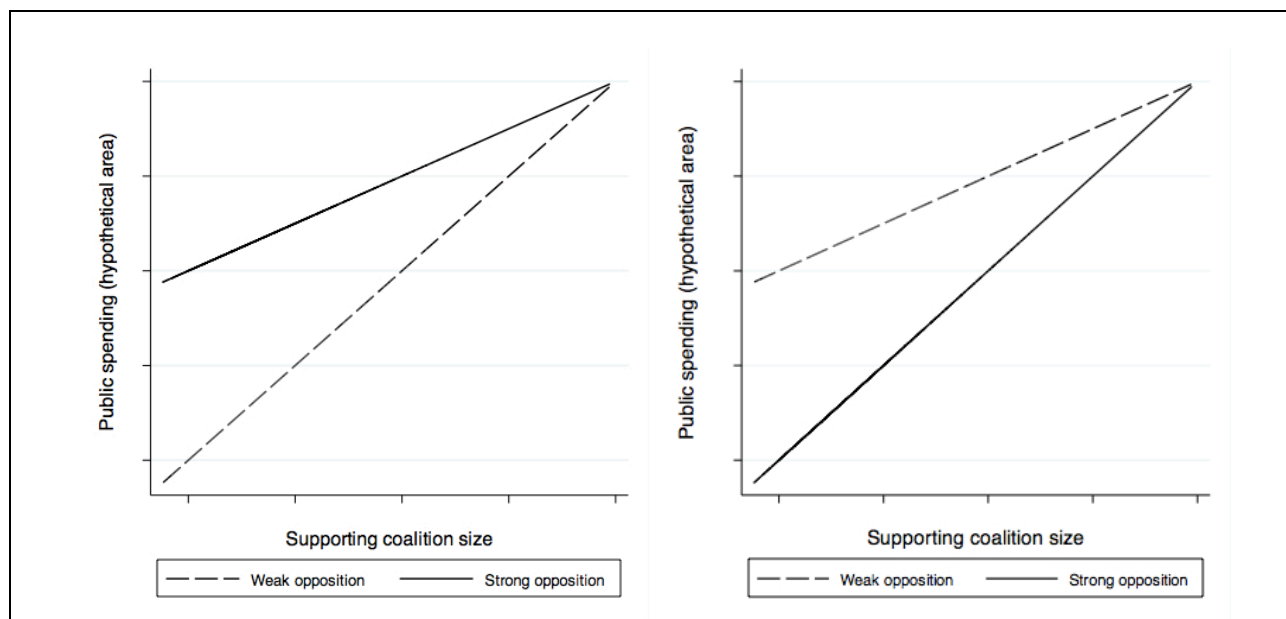


Figure 1: Hypothesized effects of opposition strength on the relationship between supporting coalition size and public goods spending. According to one theory (left graph), strong oppositions promote greater excludable goods provision and therefore greater government service spending (on narrowly targeted constituencies) where supporting coalitions are small. According to a second theory (right graph), strong oppositions diminish public spending where supporting coalitions are small, by limiting particularistic policies. According to both theories, however, high-opposition municipality and low-opposition municipality government service spending converges where supporting coalitions are large and promote greater broadly-beneficial spending.

Above, I hypothesize that opposition strength will make particularistic exchange more likely (H1) or less likely (H2). These hypothesized relationships are somewhat complex, however, and deserve some further explanation.

As in figure 1, the first hypothesis argues that opposition strength will be associated with greater spending where supporting coalition size is small. Where coalition size is large, however, spending on government services under weak and strong oppositions will tend to converge, as municipal governments provide greater quantities of broadly beneficial goods which benefit mayoral and opposition supporters.

The second hypothesis makes a different prediction. Here, oppositions attempt to veto mayoral attempts to provide services targeted only at supporters. Therefore, where supporting coalitions are small, opposition strength will be associated with less government service spending. However, as above, spending in strong-opposition and weak-opposition municipalities will tend to converge at relatively high levels where supporting coalition sizes are large, as municipal governments provide greater quantities of broadly beneficial goods.

Empirical Strategy

Here, as in chapter 3, I use two estimation techniques to test these hypothesized relationships. The first of these is Ordinary Least Squares regression, which I use where the dependent variable is logged total municipal spending in one of several policy areas (including several areas, like education, health and sanitation, and transportation, which are typically considered public goods). I also use extradispersed Poisson regression in several models, where the dependent variable is total spending on infrastructure improvements (new construction) in each of several policy area categories. My independent variables of interest are measures of winning coalition

size, opposition strength, and an interaction term which is opposition strength multiplied by opposition strength. I also include a number of control variables.

Dependent variables

The first dependent variable used here is spending on infrastructure development per capita—spending on new construction of public works projects completed in 2007—in several categories which are often treated as public goods. These include (a) transportation, (b) education, (c) and a summed total of spending on water, electrification, and sewage projects¹¹. This data was gathered in the 2008 Peruvian Registry of Municipalities by the Peruvian National Institute of Statistics and Informatics. This data is available for about 1800 municipalities in each category. I also used data on each of these spending categories in 2005 as a control.

The second dependent variable used is total spending in each of several policy categories—including education, housing and urban development, industrial policy, and several other policy areas. This data was compiled from the Peruvian Ministry of Economy and Finances, available on the internet at <http://www.mef.gob.pe>, and represents total spending from 2007. Here, data coverage is not as good as the public works project spending data described in the paragraph above, and data from the prior mayoral term is not easily accessible for use as a control. However, even with poorer coverage and without the control data, results from models using these variables as outcomes are consistent with the results of the public works project spending variable models, with a few important exceptions that I note below.

¹¹ The summed total of water, sewage, and electrification infrastructure project spending is, unfortunately, the way this data is provided by the Peruvian government, though I would of course prefer to use indicators of each of these three areas.

Independent variables of interest

I use three independent variables of interest, including a measure of the supporting coalition size of the victor in the most recent election, a measure of the strength of the opposition in local governments, and an interaction term, which is the product of these other two variables.

The first of these independent variables, supporting coalition size, is a measure of the percentage of municipal voters who supported the victorious mayoral candidate in the previous election. This variable was generated using publicly available data through the Peruvian National Organization of Electoral Processes, the independent government agency which oversees elections. Elsewhere (chapter 3), I have used this variable to measure the extent to which public expenditures are the result of particularistic exchange.

The second variable, opposition strength, is simply the percentage of the municipal council—the primary institutional check on mayoral power—controlled by opposition parties. Though electoral rules in Peruvian local government elections are structured such that this value is almost never greater than 50%, I assume that greater percentages controlled by opposition parties means that oppositions have more frequent opportunities to veto mayoral policy, because of the personalistic and fragmented nature of Peruvian political parties. This data is available through the Peruvian National Electoral Panel, the judicial organization which oversees the implementation of election results.

The third—and most important—independent variable of interest here is an interaction term, which is the product of both the opposition and supporting coalition measures, such that very high values represent municipalities where there are both large supporting coalitions and a high probability that opposition parties will be able to check mayoral authority. This variable will

measure the extent to which the effect of “opposition strength” on public spending will vary across different values of “supporting coalition size.”

Control variables

In addition to the independent variables of interest listed above, I include a number of control variables in the model.

First, I include several variables made available through INEI which were generated based on the 2007 Peruvian census, including the average level of education in each municipality, population (logged), urban population (logged), and a consumption measure. The consumption measure is designed to provide a measure of standards of living where many citizens, particularly in rural areas, do not participate in the cash economy with any intensity, and is derived from a series of standard Peruvian Government (INEI) poverty indicators. This is a count of the average number of household appliances—radio, television, washer/dryer, refrigerator, and sound equipment—owned by families in the municipality.

I also include several control variables from RENAMU data—each model includes a control variable, which is the percentage of completed project funding in each policy area which was funded with private donations. This is meant to address concerns that private donors might use funding to influence municipal priorities. Because there is no conditionality placed on transfers from regional or national governments, there is no need to include a similar measure for government project transfers in each area. In the models in which the dependent variable is public works project spending, I also control for spending in the previous mayoral term (year 2005).

Methodology

The dependent variables in the first set of regression models presented here represent spending on projects completed in 2007, and many municipalities completed no projects in one or more policy areas in that year. Therefore, the distributions of these dependent variables are skewed, with large numbers of cases at 0, and a long right tail.

For dependent variables where the distribution follows approximately a poisson or negative binomial distribution—such as the public works project spending variables I use here—there are several appropriate techniques which can be used. Standard poisson regression is not appropriate here, because the variance of the dependent variable is much greater than the mean, one of the important conditions for the appropriate use of poisson regression. However, extradispersed poisson regression is appropriate (that is, poisson regression with standard errors adjusted for the extra variance), as is negative binomial regression¹² (Cameron and Trivedi 1998; Hoffman 2004; Rabe-Hesketh and Skrondal 2008).

Because of the large numbers of zeros in each of the dependent variables used here, I also test similar models using a zero-inflated poisson estimation strategy. This approach is appropriate where the variance on the dependent variable is inflated because of large numbers of zeros determined by some factor which can be incorporated in a two-stage model (Cameron and Trivedi 1998; Hoffman 2004; Rabe-Hesketh and Skrondal 2008).

After examining each of these models, I compare goodness-of-fit statistics to determine the most appropriate link function (AIC, BIC, and log likelihood statistics). In general, extradispersed poisson models using an iterated, reweighted least squares optimization procedure

¹² I test these models both with and without heteroskedasticity-robust standard errors.

and standard-error rescaling produced the best model fit, but the models presented here provided substantively very similar results regardless of the estimation technique used.

I ran a number of robustness checks on these models, including eliminating outliers, splitting samples in several ways, and running sensitivity tests by removing and adding control variables in groups and singly. With a single exception—transportation project spending—the models presented here did not change in significance or direction through these tests.

Where the dependent variable of these regressions is normal—this includes the variables measuring total spending in each policy category—I use heteroskedasticity-robust OLS regression. I also test these models with a series of robustness checks, including plotting independent and dependent variables against residuals, examining the normality of residuals, and re-testing models with outliers or high-leverage cases excluded. Generally, the reported results are robust to these checks, though there are some exceptions which I note below. In general, this second set of regression models is more sensitive to the exclusion of outliers than the first set—where the dependent variable is public works project spending on new construction—because the first set of variables is more complete, and therefore, include a higher number of observations.

My key independent variable here is an interaction between “supporting coalition size” and “opposition strength.” Because the coefficient and significance of the interaction term itself is not substantively meaningful or important (Brambor, Clark, and Golder 2005), I provide a graphic depiction of the effect of differing effects of “supporting coalition size” on public goods spending across values of “opposition strength” and include regression tables in the appendix.

Results

The two sets of dependent variables used here generate somewhat different substantive results. The first set of dependent variables—total spending on infrastructure development (new

Table 1: Project (new construction) spending					
Extradispersed poisson regression with iterated reweighted least squares optimization and square root of variance adjustment for overdispersion					
	Transportation	Health	Education	Electrification, water, and sewage	All "public goods" categories
Supporting coalition size	6.303 (0.000)***	-7.176 (0.243)	-3.007 (0.652)	-3.714 (0.242)	6.242 (0.000)***
Opposition strength	9.028 (0.026)*	-75.253 (0.001)***	-29.677 (0.186)	-25.236 (0.006)**	1.679 (0.730)
Supporting coalition size * Opposition strength	-15.757 (0.054)+	96.834 (0.002)**	32.837 (0.328)	32.125 (0.044)*	-4.642 (0.560)
Consumption	0.009 (0.954)	2.501 (0.000)***	-1.799 (0.000)***	0.210 (0.098)+	0.553 (0.000)***
Education (mean)	-0.423 (0.000)***	-1.569 (0.000)***	-0.653 (0.000)***	0.130 (0.032)*	-0.373 (0.000)***
Urban population (pct., logged)	-0.324 (0.000)***	-2.176 (0.000)***	-0.242 (0.003)**	-0.389 (0.000)***	-0.731 (0.000)***
Muni. budget size (logged)	-0.090 (0.027)*	0.072 (0.176)	-0.099 (0.018)*	0.081 (0.010)*	0.111 (0.000)***
Debt service (pct.)	-3.043 (0.192)	9.604 (0.000)***	-21.936 (0.000)***	-6.576 (0.001)***	-3.776 (0.041)*
Private transfers: transportation (pct.)	0.369 (0.392)				
Transportation spending/cap 2005	0.000 (0.001)***				
Private transfers: health (pct.)		3.007 (0.073)+			
Health spending/cap 2005		-0.058 (0.000)***			
Private transfers: education (pct.)			-0.726 (0.306)		
Education spending/cap 2005			0.001 (0.133)		
Private transfers: electrification, water, and sewage (pct.)				0.875 (0.001)***	
Electrification, water, and sewage spending/cap 2005				0.002 (0.000)***	
Private transfers: total "public goods" (pct.)					74.216 (0.000)***
"Public goods" spending/cap 2005					0.000 (0.067)+
Constant	6.896 (0.000)***	28.464 (0.000)***	16.498 (0.000)***	8.787 (0.000)***	7.216 (0.000)***
Observations	1366	1366	1366	1365	1598
p values in parentheses + significant at 10%; * significant at 5%; ** significant at 1%; *** significant at .1%					

construction) in education, health care, transportation, consistently displays the pattern described in hypothesis 2. Total spending in several policy categories also produces statistically significant results, though these patterns are not exactly as described in either hypothesis. These results and possible explanations are described here, and discussed below.

Where the dependent variable is total spending on public works projects (new construction), results of these regression models support hypothesis 2 with a great degree of consistency—that stronger oppositions are associated with less particularistic exchange. In each of the policy areas I examine, opposition strength decreases public spending where supporting coalitions are small, but these differences become statistically insignificant where supporting coalitions are large. These findings are consistent with the assertion that oppositions play an oversight role, limiting spending where it is targeted only at supporting coalition-members, but not obstructing spending where it is targeted more broadly, to benefit the general population of local voters.

These results are remarkably consistent across policy areas. The one area of spending in which the results do not initially support hypothesis two—transportation project spending—does in fact show the same dynamic in support of hypothesis two is a single outlier (a very small municipality with extremely high per-capita spending on road construction, located outside of Ayacucho, Peru) is excluded from the model. In addition, total project spending and project spending on sewage, water, and electrification spending do not display the same pattern. However, if electrification, sewage, and water spending is excluded from total project spending (the sewage, water, and electrification project spending is consistently problematic, and seems suspect), the newly-generated total project spending less electrification, sewage, and water spending measure does also show the same pattern. In addition, both total spending and infrastructure, water, and electrification spending show the same pattern as hypothesized under

Table 2: Total spending OLS with heteroskedasticity-robust standard errors							
	Industrial policy	Social spending	Education	Fishing	Housing and urban development	Public health and sanitation	Transport
Supporting coalition size	-10.474 (0.029)*	-0.555 (0.701)	-3.475 (0.286)	-74.937 (0.019)*	-8.132 (0.070)+	0.185 (0.925)	-0.195 (0.933)
Opposition strength	-13.251 (0.034)*	-0.479 (0.818)	-7.979 (0.055)+	-167.958 (0.009)**	-13.075 (0.038)*	0.119 (0.963)	-4.124 (0.226)
Supporting coalition size * Opposition strength	43.348 (0.026)*	5.277 (0.412)	18.194 (0.197)	400.403 (0.014)*	42.062 (0.040)*	2.977 (0.697)	8.328 (0.397)
Consumption	0.292 (0.207)	0.005 (0.934)	-0.226 (0.048)*	1.377 (0.111)	0.287 (0.066)+	0.432 (0.000)***	-0.147 (0.217)
Education (mean)	0.364 (0.079)+	-0.107 (0.034)*	-0.023 (0.804)	0.948 (0.126)	0.443 (0.003)**	0.149 (0.058)+	0.066 (0.474)
Urban population (pct., logged)	-0.795 (0.000)***	-0.310 (0.000)***	-0.609 (0.000)***	-0.298 (0.629)	-0.627 (0.000)***	-0.443 (0.000)***	-0.351 (0.000)***
Muni. budget size (logged)	0.385 (0.000)***	0.194 (0.000)***	0.371 (0.000)***	-0.101 (0.697)	0.284 (0.000)***	0.318 (0.000)***	0.274 (0.000)***
Debt service (pct.)	-7.173 (0.146)	-0.164 (0.886)	3.002 (0.135)	-2.218 (0.950)	-6.715 (0.092)+	-4.479 (0.045)*	-1.010 (0.627)
Constant	2.896 (0.148)	3.513 (0.000)***	4.062 (0.000)***	30.641 (0.010)*	2.558 (0.102)	0.607 (0.463)	2.236 (0.032)*
Observations	249	536	518	35	363	521	513
R-squared	0.211	0.256	0.375	0.431	0.211	0.189	0.184
Robust p values in parentheses + significant at 10%; * significant at 5%; ** significant at 1%; *** significant at .1%							

H2 if a single municipality with an implausible level of spending per capita (approximately \$330,000 US) is excluded.

Specifically, this pattern is as follows: municipalities with small supporting coalitions spend less on public works projects in each of these policy area categories than municipalities with large supporting coalitions. Often, the differences are dramatic. However, the strength of the opposition also matters, and its effect varies across values of “supporting coalition size.” Where supporting coalition sizes are small, strong-opposition municipalities spend substantially less on public works construction projects in health care, education, and transportation than weak-opposition municipalities. This is because oppositions in these municipalities veto mayoral attempts to provide excludable goods to his constituency alone, leading to overall lower levels of

spending. On the other hand, as supporting coalition sizes rise, these differences between strong-opposition and weak-opposition municipalities diminish, even as project spending rises, and the differences ultimately become statistically insignificant.

In addition, the independent variables of interest here—supporting coalition size, opposition strength, and the interaction of these two factors—are significantly related to total spending in several categories, including several categories which have typically been considered “public goods,”—in particular, social services and social protection spending, housing and urban development, education, and expenditures on local government support of industry and business. However, these relationships are not all robust to the exclusion of outliers (in particular, social spending is sensitive to the exclusion of high-leverage cases and outliers) and the local industrial support variable, housing and urban development, as well as social spending show a somewhat different pattern than those two patterns described in the theory section, above. I discuss these results and some possible explanations below.

Discussion

In most of the policy areas for which there is available data, the relationships of interest are statistically significant, though the details of these significant relationships are not always as hypothesized earlier. In most policy categories, regression results are consistent with hypothesis two, above—that strong oppositions play an oversight role in preventing particularistic exchange where it only stands to benefit a small minority of governing-faction supporters. However, in several models where the dependent variable is total spending in a given policy category, regression results show a somewhat different result from that hypothesized in either H1 or H2 above. I identify some possible explanations for these results.

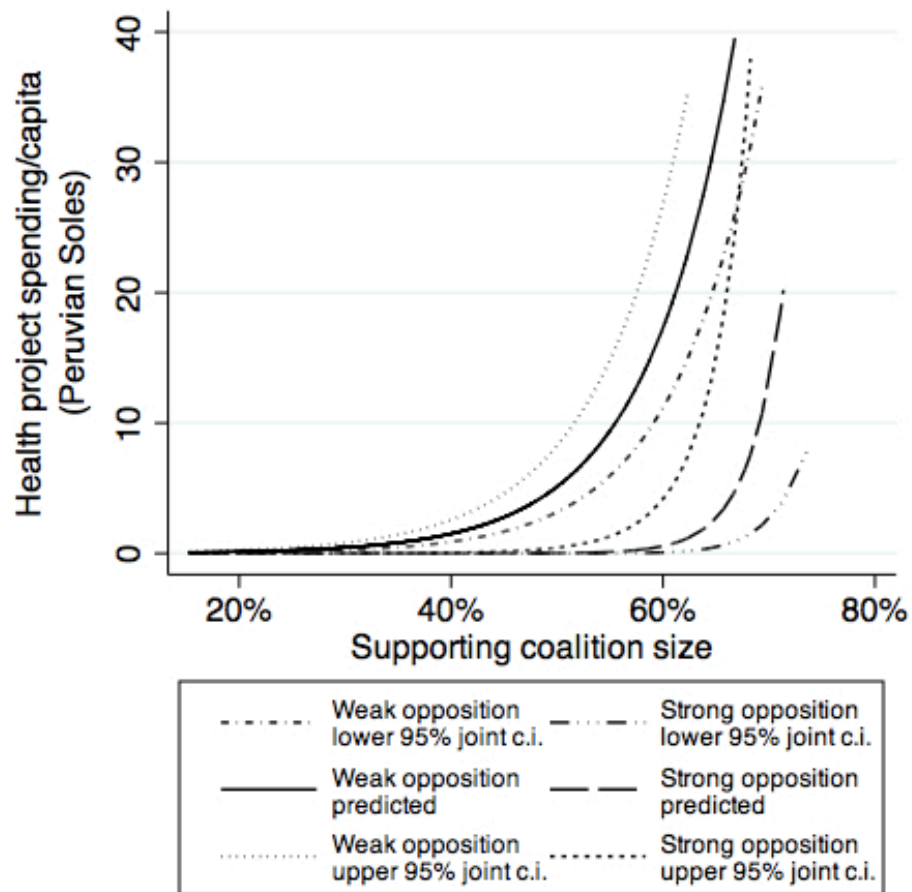


Figure 2: The effect of opposition strength on health project particularism. Where supporting coalitions are weak, strong-opposition municipalities show much lower rates of spending on health projects on average compared to weak-opposition municipalities. Where supporting coalitions are large, however, these levels of spending begin to converge, ultimately becoming statistically insignificant where supporting coalitions represent about 60% of local voters. The dynamic shown here is consistent with hypothesis two.

In figures 2, 3, and 4, the interactive effect of supporting coalition size and opposition strength on public service spending is shown in an intuitive way. In each of these graphs, one line (with 95% joint confidence intervals) shows the relationship between supporting coalition size and spending (in a given category) where oppositions are strong (40% of the municipal council), and another line (also with confidence intervals) shows the same relationship where oppositions are relatively weak (20% of the municipal council).

Health project spending

In figure 2, the dependent variable is spending on new construction in public health—generally, this represents the construction and repair of health clinics, especially in rural areas.

Where oppositions are weak, spending on health projects remains low where supporting coalitions are small—up to about 30%, spending per capita on health projects is less than one Peruvian Sol (about \$.30) per person. Beyond that point, expenditures begin to rise fairly rapidly, such that where supporting coalitions are about 45% of voters, spending is about 5 Soles/capita, and where supporting coalition size is about 60% of voters, spending is about 15 Soles/capita.

Where oppositions are strong, spending on health projects remains very low for much longer—supporting coalition sizes approach 60% before spending begins to rise. Above that point, however, spending increases very rapidly, rising to approximately 15 Soles/capita by the time supporting coalitions are 75% of local voters.

These dynamics are consistent with hypothesis two. Based on these results, I would suggest that (a) mayors and their factions often use health project spending as a reward for supportive constituencies, (b) the size and frequency of these projects increases as there are more supporters to reward, and (c) once supporting coalition sizes are a majority of local voters, such rewards increase rapidly, because health project spending is a relatively efficient way to visibly reward supporters, and because spillover effects are more likely to benefit supporters than non-supporters. Also (d) oppositions are frequently successful at vetoing health projects where these projects are intended to reward a minority, but (e) oppositions are much more likely to permit health project spending where it will benefit a larger proportion of local voters.

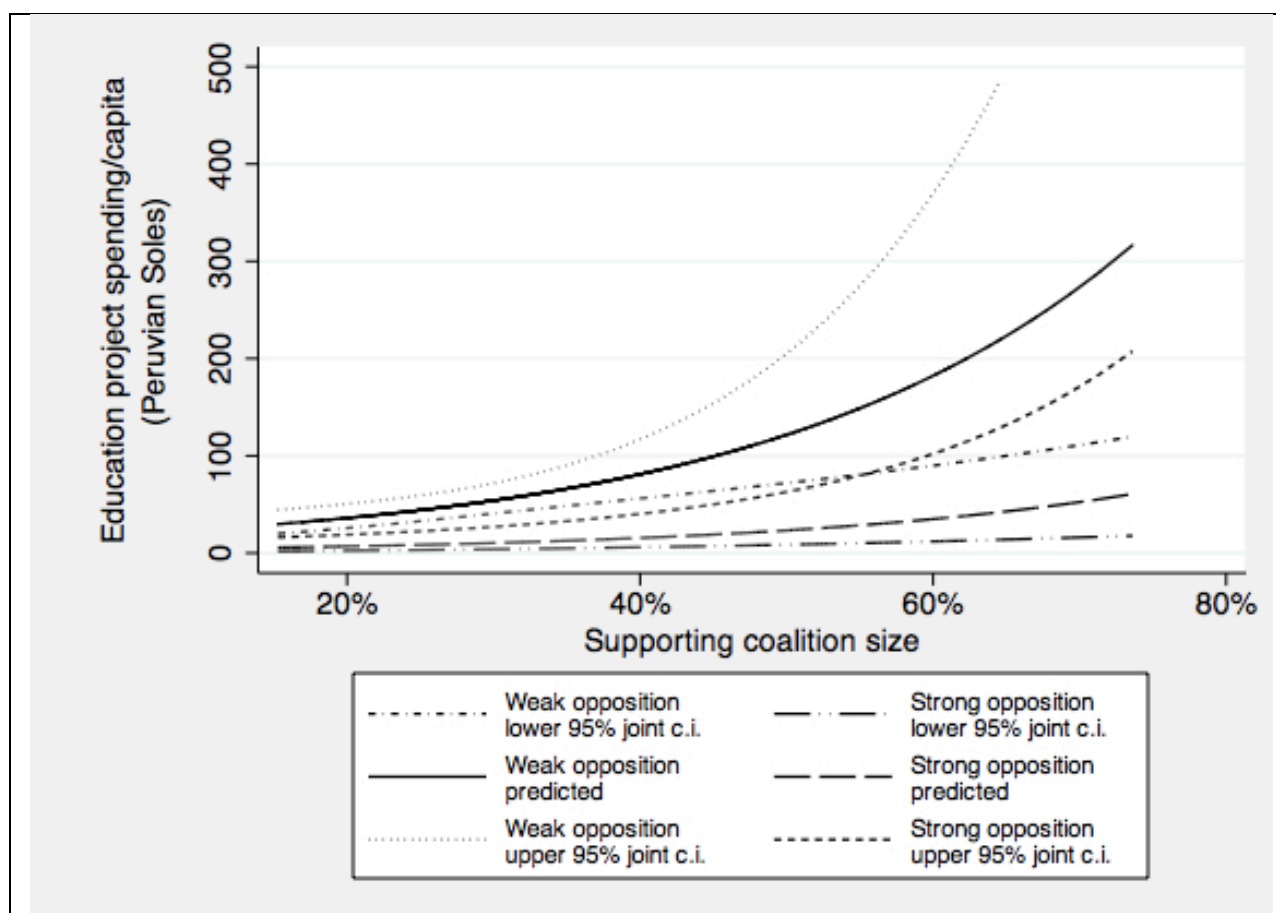
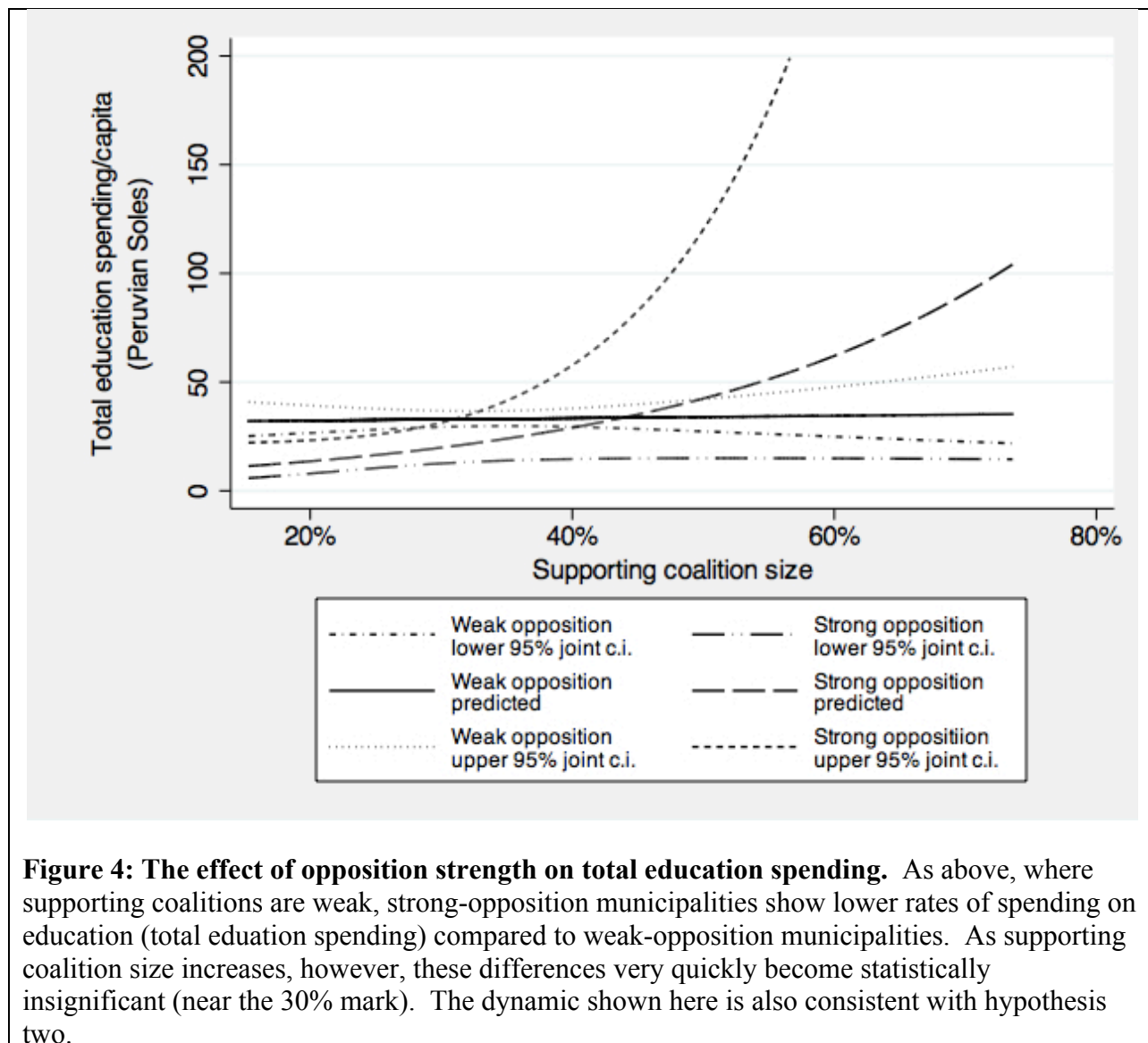


Figure 3: The effect of opposition strength on education project particularism. The joint effect of supporting coalition size and opposition strength on education project spending per capita is similar to that shown above in health project spending/capita. Where supporting coalitions are small, strong-opposition municipalities show lower rates of spending on education projects on average compared to weak-opposition municipalities. Where supporting coalitions are large, however, these levels of spending begin to converge, ultimately becoming statistically insignificant where supporting coalitions represent about 55% of local voters. The dynamic shown here is consistent with hypothesis two.

Education project spending

The interactive effect of supporting coalition size and opposition strength on education project spending per capita is similar to the effect discussed above, in “Health project spending.” Again, this is spending in new construction, generally infrastructure development, and in this category generally includes school construction and public school campus improvements.

As above, supporting coalition size tends to increase spending on education project, regardless of the size of the supporting coalition. However, where supporting coalition sizes are small, strong-opposition municipalities spend significantly less than weak-opposition municipalities. These differences become statistically insignificant where supporting coalition sizes are large—above about the 55% mark.



Again, these results suggest that mayors and their supporters in the municipal council often use school construction as a reward for supporting constituencies—like health clinics, schools

are a government service which can easily be targeted geographically, provided to one village but not another, thus rewarding key constituencies and ensuring their support. Where supporting coalitions are small, oppositions will often attempt—and apparently, frequently succeed—at reducing these targeted expenditures.

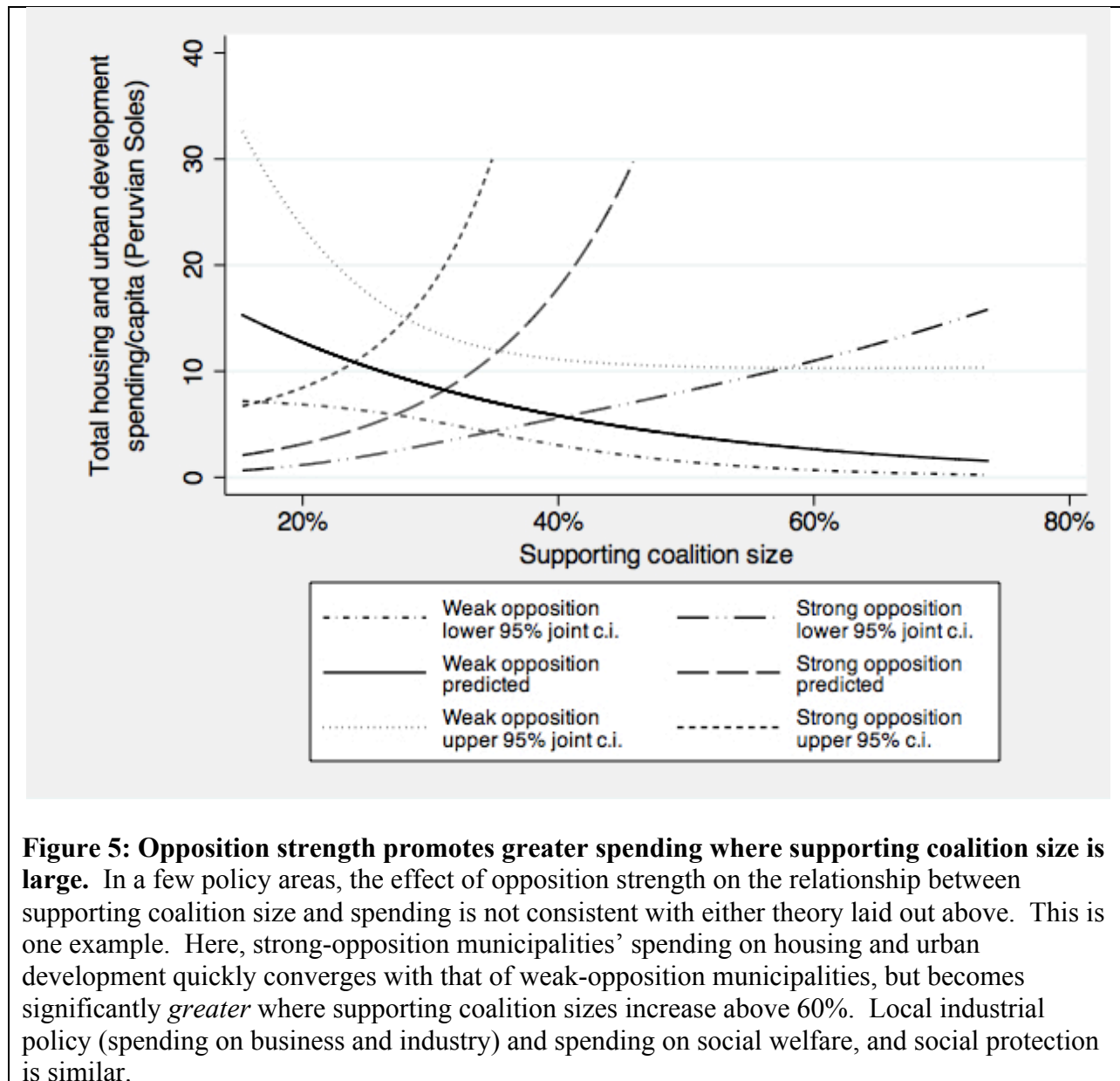
Where supporting coalitions are large, however, and mayors attempt to use education project spending to reward large proportions of the local population for their support, oppositions are less likely to veto education project spending. This is because attempts to reward supporters with these services, at this scale, will create large spillovers which will also benefit opposition supporters.

Total education spending

Like the two areas of spending described above, total education spending (not only project spending) shows a similar pattern, and is consistent with hypothesis two. Where supporting coalitions are small, weak- and strong-opposition municipalities' spending diverges, with less spending on education per capita in strong-opposition municipalities. I argue that this is because oppositions in these places veto mayoral attempts to provide targeted education spending, directed at his own constituency. Where supporting coalition sizes are larger, however, the difference between weak- and strong-opposition municipalities becomes statistically insignificant. This is also likely because mayors in these municipalities pursue policies of public goods provision to most effectively reach their large supporting coalitions, and these policies have spillover benefits which affect opposition supporters, reducing the difference between oppositions' and mayors' policies.

Total housing and urban development spending

Three other policy areas, including housing and urban development, local industrial policy (spending on support for local business and industry), and social welfare spending show a second pattern which is not consistent with either hypothesis one or hypothesis two. In total housing



and urban development spending, where supporting coalitions are small, as in the other policy areas reported above, weak-opposition municipalities spend more than strong-opposition

municipalities. This is likely because oppositions can sometimes veto mayoral attempts to provide targeted, excludable goods to his supporters alone. The difference between high-opposition and low opposition municipalities very quickly becomes insignificant, but unlike the areas described above, these differences become statistically significant where supporting coalition size is above 60%, but with strong-opposition municipalities experiencing significantly *greater* spending than weak-opposition municipalities.

One explanation for these differences may be that municipalities with large supporting coalitions and weak oppositions actually represent municipalities where mayors and their supporters use extra-judicial means to control municipal governing institutions, thereby ensuring that they need not provide services to large supporting coalitions, as suggested by Trounstein in the US municipal context (Trounstein 2008a; 2010). However, a set of secondary statistical tests

suggest that these municipalities—those with large supporting coalitions and weak oppositions—are actually *more* likely to engage in ostensibly democratic procedures such as participatory budgeting and citizen engagement in policy-setting through citizen roundtables and town meetings, implying that these are municipalities are *more*, not *less* responsive to citizen demands.

A second explanation is that municipalities with weak and strong oppositions and large supporting coalitions differ in some way which is not included in the model but correlated with housing and urban development, social welfare spending, and industrial support spending. One possible candidate is urbanization. Perhaps urban municipalities—where housing policy, social welfare policy, and industrial policy are more important—are more likely to have strong oppositions. However, urbanization is already included in the model as a control variable

(percent of local population located in an urban area), so urbanization is unlikely to explain these differences.

Therefore, I tentatively conclude that these results are a result of differences between these policy areas and the others used here as dependent variables. Industrial policy, social welfare benefits, and housing and urban development policy are more likely to take the form of private than public or club goods provision, compared to policy areas like education, public health, and sanitation service provision. It is likely, therefore, that where oppositions seek to pursue private or club benefits for their constituencies, they are more likely to press for benefits in these areas. Further, mayoral administrations are most likely to agree with these policies where supporting coalition sizes are large, in a sort of universal-benefit coalition arrangement, as discussed by scholars of congressional appropriations in the United States (Collie 1988; Ferejohn 1974; Weingast and Shepsle 1981; Weingast 1979).

Qualitative evidence

In general, observations from the field are consistent with these statistical results. If the causal process outlined in the theory section does, in fact, explain the outcomes observed in public service provision in Peruvian municipalities, at least five processes should also be observable in Peruvian municipal governance. First, despite rules which mandate that mayors' parties receive a majority or more on municipal councils, strong but minority oppositions must sometimes be capable of vetoing mayoral policy. Second, oppositions must sometimes veto mayoral policies when those policies are perceived as benefitting only the mayor's constituency. Third, oppositions must acquiesce to policy which benefits most voters or residents in the jurisdiction. Fourth, mayors should reward supporters with public services, and finally, those constituencies should reward the mayor with their political support, in return. Clear examples of

all these dynamics are visible across Peru. Here, I highlight several strong examples of these dynamics from several Peruvian municipalities.

First, in order for the theory identified above to adequately explain the regression results presented here, Peruvian opposition parties must be capable of vetoing or altering mayoral policies, despite the fact that election rules never permit opposition parties to hold majorities in municipal councils. I argue that, because local political parties are often disorganized, and because divisions often exist within mayoral factions, it is often possible for opposition parties to stop or alter mayoral policies. The district municipality of Ranrahirca, in the Callejón de Huaylas, about 28 miles North of the central Andean city of Huaraz, is an excellent example of this dynamic. Here, a relatively weak opposition is able to veto mayoral policies, with the support of splinter elements of the mayor's own party. In Ranrahirca, mayoral intransigence in the face of requests for documentation of municipal expenditures—in the interest of government transparency—is an important contributor to the fractionalization of the mayor's party. In this case, the result is a slow-moving government which is unable to carry out many municipal functions. For example, the municipal government is unable to spend significant portions of the municipal budget, consistent with the theory presented above, in which oppositions should attempt to veto mayoral policies where those policies are seen not to benefit their own supporters, leading to lower level of expenditure overall.

This second component of the theory presented above—that municipal oppositions should attempt to veto policies which are seen not to benefit their constituencies—was also visible in the provincial municipality of Carhuaz, only ten miles Southeast of Ranrahirca. Here, the mayoral administration is widely perceived as favorable only to rural interests, and in fact, the mayor is associated with a national-level party, Partido Nacionalista Peruano, which seeks a rural

constituency. In Carhuaz, unlike Ranrahirca, the mayor's party is reasonably cohesive, and as a result, the opposition has little success in pursuing their own policy goals. However, opposition parties, representative of interests located in the municipal town center—the urban capital of the municipality—are vocal opponents of the mayor's policy, arguing that the mayor is clientelist, corrupt, and authoritarian.

Where mayoral policy is broadly beneficial to mayoral supporters as well as opposition supporters, however, the theory and statistical results presented above suggest that opposition parties should acquiesce to mayoral policy. This dynamic is visible in Chavín de Huantar, a district municipality located about 30 miles East of Carhuaz, on the Eastern slope of the Andean spine. Here, the municipal council's sole opposition party councilman explained that he was supportive of mayoral policy because, although his party differed from that of the mayor, mayoral policy favored most residents of the municipality, leaving him little reason to complain. Indeed, this observation seemed unsurprising, as Chavín has an extremely active municipal government carrying out a wide range of public works projects in all parts of the municipality, including rural school and health clinic construction, rural electrification, and beautification of the urban core of the municipality.

Finally, qualitative observations suggest that mayors do seek to reward supportive constituencies with public services, and these constituencies reciprocate with further political support. One clear example comes from the provincial municipality of Anta, Cusco, where rural community leaders from the village of Paltaybamba—a village strongly supportive of the mayoral faction in the 2006 elections—were rewarded with a rural electrification project. This project, the first public works project that had ever reached the rural community, brought electricity to the village for the first time, and cemented the loyalty of village residents, which

could then be reliably counted upon to support the mayor and his party's candidates in the upcoming municipal elections.

In summary, qualitative observations from Peruvian municipalities illustrate the plausibility of the causal path theorized above, linking opposition strength with particularistic exchange. Minority oppositions are capable of vetoing mayoral policy, and attempt to do so where mayoral spending fails to benefit opposition supporters. However, oppositions acquiesce to mayoral spending policy where that policy is broadly beneficial to voters, including opposition supporters. Finally, mayors do seek to retain the support of targeted constituencies through the provision of public works and services, and in return, benefitted constituencies reciprocate with political support for the mayor. Although these qualitative observations are not conclusive, combined with the results of the statistical data analysis presented above, they provide very strong evidence for theory which suggests that oppositions attempt (and often succeed) at vetoing mayoral policies which are targeted at mayoral supporters but fail to benefit opposition supporters.

Conclusion

Scholars have long recognized that democracies provide more public goods than autocracies (Ames 1987; Avelino, Brown, and Hunter 2005; Baum and Lake 2003; Brown 1999; 2002; 2000; Brown and Hunter 2004; Brown and Mobarak 2009; Bueno De Mesquita, Smith, Siverson, and Morrow 2003; Lake and Baum 2001; Stasavage 2005b; 2005a). However, the factors that affect public service provision within democracies are less well understood. Elsewhere, I have found that supporting coalition size is closely associated with spending on public services in a range of policy areas (chapter 3). Here, I test the effect of opposition strength on this relationship.

A number of scholars suggest that divided or fragmented governments are more likely to provide targeted goods to well-defined constituencies, as those constituencies' representatives negotiate with agenda-setters, demanding services for their particular constituencies (Cheibub 2006; Haggard and Kaufman 1995; Heller 1997; D. McKay 2009; O'Halloran and Lohmann 1994). On the other hand, a different set of scholarly works implies that divided or fragmented governments are less likely to provide targeted goods to specific constituencies, and are more likely to provide public goods to large portions of the population because fragmentation allows oppositions to hold governing cliques accountable (Gehlbach and Malesky 2010; M. De Secondat 1914; D. McKay 2009).

Here, I test these contending theoretical assertions using data from approximately 1600 Peruvian municipal governments with varying degrees of fragmentation, supported with qualitative observations from approximately one year of fieldwork.

I find substantial evidence for the assertion that fragmentation—and strong opposition factions—leads to lower levels of targeted provision. The interaction term which is the independent variable of interest here behaves in a way which is consistent with the notion that, generally, oppositions provide oversight and accountability, and generally do not demand targeted services for their constituencies. These results provide insights into the ways oppositions behave, and implies that institutions which limit the power of oppositions, such as those in Peru, are undesirable.

In addition, qualitative observations from Peruvian municipalities demonstrate the plausibility of the causal path theorized here.

These results suggest that oppositions are often a constructive force in public goods provision, preventing so-called “clientelist” exchange, in which politicians' supporters are

rewarded and reciprocate with further political support, while opposition supporters are bypassed, but permitting the provision of broadly-beneficial services.

In a few policy areas, however, the statistical tests presented above generate anomalous results which are not adequately explained by either theory tested here. These findings deserve further inquiry and explanation.

In addition, the topic examined here deserves serious further study. A number of other contextual factors should be tested for their relationships with public service spending and targeted service provision. These factors include (but should not be limited to) (a) the role of civil society, and (b) the role of economic inequality in promoting or preventing particularistic exchange. Next, in chapter five, I address the first of these two factors—the role of civil society in promoting or preventing particularism.

Civil Society and Particularistic Exchange

Chapter 5

Introduction

Particularistic exchange—the exchange of voter support for tangible government benefits for a particular group of supporters—sometimes called “clientelism,” “particularism,” or “pork barrel politics,” is widespread in the developing world, and appears to be endemic to Peru. This fact is documented in chapter 3 of this dissertation, and noted by a number of scholars of Peruvian politics (Crabtree 2010; Giugale, Retes-Cibils, and Newman 2007; Hordijk 2005; Munoz, Paredes, and Thorp 2007).

Definitions of clientelism, particularism, and pork vary (see, for example Keefer 2007 and Roniger 1994 for different definitions). However, most scholars agree that particularism involves the exchange of political support (by citizens) for tangible government benefits or services (by politicians). Further, most agree that clientelism is undesirable, as it is anti-democratic, inequitable, and economically inefficient (Acemoglu, Ticchi, and Vindigni 2006; Escobar 1994; Gunes-Ayata 1994a; 1994b; Kaufmann et al. 2010; Keefer 2007; Roniger 1994; Silva 1994).

In the previous chapter, therefore, I seek to identify factors that mitigate or facilitate clientelism and particularistic exchange in Peru. I focus on the institutional strength of opposition parties, and I test the effect of opposition strength on particularistic exchange. I provide evidence that strong oppositions in municipal governments play an oversight role in preventing municipal spending which is targeted at narrow constituencies. In short, strong oppositions play a role in preventing particularistic exchange. More specifically, strong oppositions reduce public expenditures where those expenditures target benefits at small groups of political supporters. Where expenditures benefit larger proportions of the local population, however, oppositions usually have no visible effect on expenditures.

Here, I expand the investigation to examine the effects of civil society density on particularistic exchange¹³. Scholars have suggested that dense civil society may impede clientelism (Escobar 1994), because civil society (a) may make information gathering about government performance less costly for citizens and (b) may facilitate collective mobilization, making citizen oversight easier and more effective (Escobar 1994; Iversen, Sen, Verschoor, and Dubey 2009; Sobel 2002). However, there is also evidence that dense civil society can *promote* clientelism-like exchange for similar reasons. By allowing groups to mobilize and promote their particularistic interests rather than broad societal interests and the public good, civil society may sometimes encourage clientelism-like politics that favor particular groups (Aldrich 2008; Aldrich and Crook 2007; Gunes-Ayata 1994b; 1994a; Iversen, Sen, Verschoor, and Dubey 2009).

Therefore, what is the effect of civil society on public goods provision? And further, under what conditions does civil society promote, and under what conditions does it prevent particularistic exchange? Here, I use statistical data analysis of municipal-level governance data from Peru and qualitative data gathered in the course of approximately one year of in-depth fieldwork to determine what effect, if any, civil society density has on clientelism-like exchange. I find that civil society density seems to lessen the scale of clientelism. Specifically, civil society density is associated with lower expenditures where those expenditures are most likely to be particularistic, but greater spending where those expenditures are most likely to be broadly beneficial.

The remainder of this chapter is structured as follows: First, I present some background regarding clientelism, civil society, and Peruvian local governance. Second, I present a summary

¹³ Here, I define civil society density as the number of memberships in formal organizations which are not managed by government itself. As described below, I use a proxy for this concept, which is the number of memberships in several specific organizations which exist in most municipalities across Peru (see “Independent Variables of Interest”, below).

of the literature on civil society, using the literature to generate two contending hypotheses that make opposing predictions. Third, I describe my empirical approach, including my data and methodology, and identifying how I operationalize the relationships I examine here. Fourth, I present my empirical findings, followed by a discussion of my statistical and qualitative results. Finally, I present some conclusions and implications of these results.

Background: Civil Society and Peruvian Governance

In chapter two, I generated the hypothesis that politicians will spend more on public services where they have greater numbers of supporters to reward for their political support. Indeed, there is a strong and statistically significant correlation between public spending in a range of policy areas. This statistical relationship strongly suggests that clientelism-like, particularistic exchange is an important cause of variation in public service provision in Peru. Further, qualitative observations strongly suggest that the exchange of government services for political support is commonplace in Peru and elsewhere around the world. A number of characteristics may make clientelism-like exchange more likely in the context of Peruvian municipal government compared to other places around the world. I outline these characteristics in this section.

Supporting coalition size and public service provision

In chapter three, I present strong evidence that clientelism-like exchange is an important cause of variation in public service provision across Peruvian municipalities, after outlining a theory of particularistic provision of government services in chapter 2. I present statistical evidence for the presence and importance of clientelism-like exchange (see Figure 1). These results are inconsistent with two major theories of the democratic provision of government services, including a theory of electoral competition which argues that governments will provide

more services where margins of victory are small¹⁴ (Lake and Baum 2001), and a theory of democratic institutions¹⁵ (Bueno de Mesquita, Smith, Siverson, and Morrow 2003). In short, because particularistic exchange is an important driver of government service expenditures, expenditures rise as politicians' supporting coalitions (as measured by vote share) increase in size, because larger supporting coalitions mean larger numbers of supporters to reward for their support and loyalty. For greater detail regarding this theory and supporting empirics, see chapters two and three.

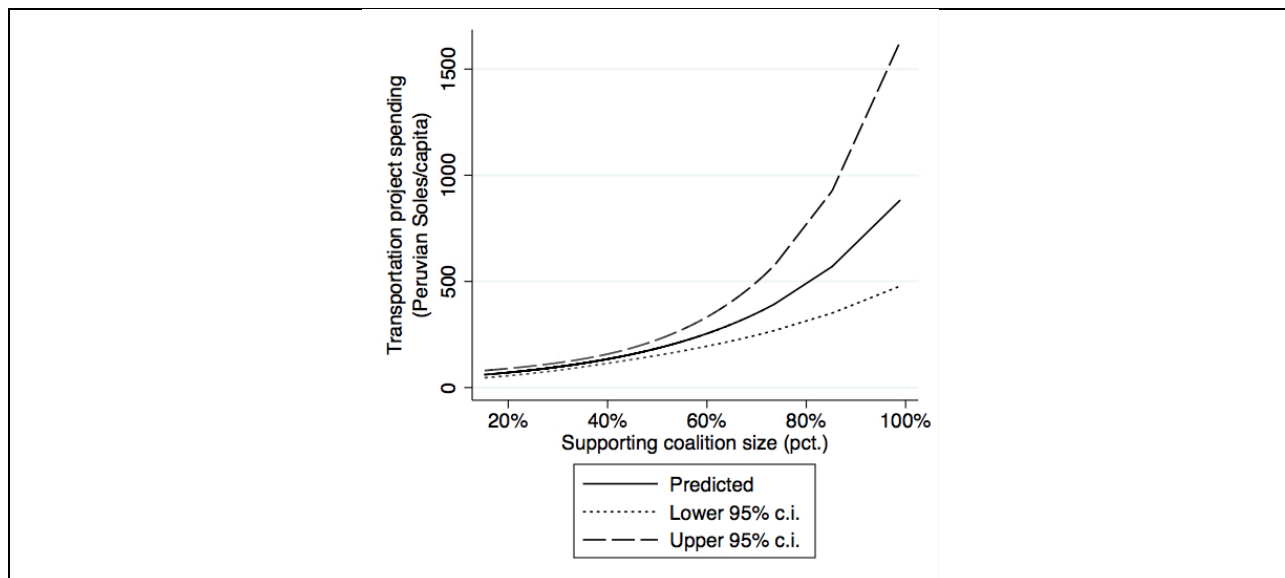


Figure 1: Typical particularistic effects. The strong and highly significant relationship between supporting coalition size and transportation project spending demonstrates particularistic exchange. This graphic was originally generated with 95% confidence intervals around the predicted variables with control variables held at their means, but the confidence intervals were so close as to be indistinguishable from the predicted values themselves. Note that the grey X markers represent predicted values with other variables in the model held *at their observed values*, while the black line (and indistinguishable confidence intervals) represents predicted values *with all control variables held at their means*.

¹⁴ In fact, margin of victory makes little difference once supporting coalition size is controlled.

¹⁵ Electoral institutions are constant across Peruvian municipalities, so cannot explain variation in government service provision.

Local government data and generalizable theory

Although theories of democracy have traditionally been tested on samples of nation-states, I use the increasingly common approach of testing generalizable theories using sub-national data (Besley, Persson, and Sturm 2010; Brehm and Rahn 1997; McKay 2009; Trounstein 2008; 2010). This approach is superior in several ways to the use of cross-national data. First, Peruvian municipalities operate according to essentially identical institutional rules, eliminating one potentially confounding source of variation. Second, the unique nature of Peruvian local electoral rules (a) make it very easy to distinguish supporting coalition size, and (b) also tends to create an unusually large amount of variation in supporting coalition size, compared to other electoral democracies. Finally, the operation of municipal governments is important as a research topic in its own right, as a substantial number of governments around the world now operate under some degree of decentralization (Lessmann and Markwardt 2010; Ribot 2002; Treisman 2007; World Resources Institute 2003, 2005). It is also true that this approach raises questions about the external validity of any inferences drawn from such a sample, but as part of a much larger research program, analysis like that presented here has can play a role in developing knowledge of the way that democratic governments function.

Civil society groups in Peru

In much of Peru, civil society is an interesting intermixture of organizations associated with traditional forms of indigenous, communal governance and modern civil society groups. Because traditional institutions can impose sanctions for violation of communal norms and agreements, and because traditional organizations overlap in membership and function with more modern forms of civic engagement, this mixture may make Peruvian civil society groups particularly dynamic and powerful, making Peru, again, a critical case for the study of civil society and particularism.

The measures of civil society density used here are measures of “modern” civil society groups—groups such as women’s organizations, workers’ and peasants’ groups, and neighborhood associations (as opposed to organizations which are linked closely with local indigenous traditions)¹⁶. These types of organizations, in the Peruvian milieu, resemble similar organizations elsewhere around the developed and developing world, in that they include volunteer membership, are generally organized by a committee (typically headed by an elected president and secretary), meet regularly in formal meetings, and do not include binding rules or sanctions for participation or non-participation.

However, these types of organizations—typically with some loose but formal organization, including a general conception of group membership, some leadership hierarchy chosen through some formal process such as elections, and regular meetings—overlap with much older, traditional forms of communal governance, which originated during the pre-Columbian period.

These traditional forms of governance vary widely, but are often geographically based, associated with a village or cluster of villages, operate through a process of consensus, and are much more informally organized, typically led by respected, older community members. Such village organizations are usually not formally associated with modern forms of government such as municipal governments, but often cooperate and overlap with modern governments, much like modern civil society groups.

Traditional organizations command few financial resources, but can operate through a powerful system of graduated social sanctions which permit communities to sanction wayward neighbors for transgressions of community rules or violations of communal agreements. Such organizations often operate informally. These punishments range from verbal warnings,

¹⁶ Described in greater detail in “Empirical Strategy,” below.

demands for financial compensation and public shaming to more severe punishments, including corporal punishment, property damage, ostracism, and in extreme cases, the exclusion of community members from communally-owned lands.

In addition to such communal organizations, Andean communities engage in a complex series of cooperative social relationships in which individuals give and receive aid, in the form of labor, from other members in their community and neighboring communities in a reciprocal fashion at key times of the year, or during major projects (harvest, construction activities, etc.)

These traditional forms of governance and mutual aid often overlap with modern civil society organizations in terms of membership, leadership, and function. These inter-linked civil society networks can be particularly effective at mobilization because of the tangible sanctions imposed by traditional organizations. However, because of poverty, low levels of education and literacy, language and other barriers, civil society networks in Peru also vary substantially in terms of their level of organization and effectiveness in coordinating and mobilizing local populations. Nevertheless, where dense, civil society in Peru is likely to make collective mobilization particularly likely. As a result, Peru may be a critical case for the study of civil society's effects on clientelism and particularism; if civil society fails to impact particularism in Peru, it may be unlikely to affect particularism in other settings where it may be less powerful.

Theory and Empirics on Democracy, Civil Society, and Particularism

Scholars have long noted the apparent correlation between democracy and public goods (Ansell 2008; Baum and Lake 2003; Brown 1999; Brown and Hunter 2004; Bueno De Mesquita, Smith, Siverson, and Morrow 2003; Lake and Baum 2001; Olson 1993; McGuire and Olson 1996). In chapter two, I develop a theory in chapter two that argues that this relationship is due to particularistic or clientelistic exchange of political support (by voters) in exchange for

government services (by politicians). In chapter three, I provide evidence in support of the theory, based on large-N statistical analysis of municipal-level data from Peru, and qualitative data from fieldwork in Latin America and primary historical research. Here, I examine the effect of civil society on particularistic exchange.

Since Robert Putnam's publication of *Making Democracy Work* (1994), the civil society, social capital, and civic engagement literature has exploded, becoming one of the major streams of research in the social sciences (Sobel 2002). This research program, however, presents two types of theoretical arguments that imply that civil society can either promote or prevent particularism. On one hand, by reducing information costs, encouraging interpersonal trust and collective action, and facilitating mobilization, civil society may discourage particularistic policy and encourage the broadly beneficial provision of government services (Escobar 1994; Gunes-Ayata 1994a; Kingston 2008; Krishna 2007a; Putnam, Leonardi, and Nanetti 1994; Sobel 2002). On the other hand, if civil society engagement is distributed unevenly, civil society may make particularism more common (Aldrich 2008; Aldrich and Crook 2007; C. J. Anderson and Paskeviciute 2006; El-Said and Harrigan 2009; Fox 1996; Gunes-Ayata 1994b).

In two classic papers, Weingast and Shepsle model legislators' preferences for district-specific, pork barrel spending. They argue that legislators will prefer spending bills which provide benefits to all or most districts in order to reduce uncertainty about future benefits (Weingast 1979; Weingast and Shepsle 1981). Following a similar logic, I argue that most civil society groups will act strategically, tending to push for broadly beneficial benefits, in order to reduce the probability that policies will exclude them in the future.

Both of these arguments imply nuanced, interactive relationships between civil society density, supporting coalition size, and government service provision, outlined below.

Civil society may facilitate particularistic exchange

Many contemporary works suggest or imply that civic engagement, social capital, or civil society may facilitate or promote particularism or clientelism-like exchange through a number of mechanisms.

Perhaps the most important of these arguments, for the purposes of the analysis presented here, is that uneven social capital can promote particularism and uneven public goods provision across geographic areas, (and uneven provision of “public bads”—Aldrich’s term for public goods with undesirable spillovers). In short, policy-makers will cater to the needs of groups of citizens who are well-organized, at the expense of less well-organized citizens, resulting in a pork barrel-like or clientelism-like process of exchange in which elected politicians pander to well-organized constituencies in exchange for electoral support (Aldrich and Crook 2007; Aldrich 2008).

Aldrich and Crook (2007) present evidence that this dynamic determined policy in New Orleans and other parts of the Gulf coast after hurricanes Katrina and Rita, where well-organized communities pressured politicians and bureaucrats to place temporary housing trailers—viewed as undesirable—elsewhere, leading to a concentration of trailers in poor, under-organized neighborhoods. Aldrich (2008) suggests that a similar dynamic has taken place in Japan, where nuclear power plants and other industrial facilities are placed in locations where civil society is less dense.

Adhikari and Goldey see a similar dynamic in the sustainability of community-based organizations in Nepal, where divided communities with uneven social capital have a harder time sustaining self-organization because of elite capture (Adhikari and Goldey 2010). Other scholars find similar results cross-nationally (C. J. Anderson and Paskeviciute 2006).

Another set of researchers suggests other reasons why civil society may be associated with greater levels of particularistic exchange. Several scholars suggest that clientelistic networks are themselves one type of independent association and that they generate social capital (El-Said and Harrigan 2009; Gunes-Ayata 1994b; 1994a). El-Said and Harrigan describe changes in social capital over time in the Hashemite Kingdom of Jordan, presenting a definition of Jordanian traditional modes of social capital—called *wasta*—which is nearly identical to many scholars’ definition of clientelism. According to El-Said and Harrigan, *wasta* means “to employ a middle man, broker, go-between or intermediary—usually a person of high social status and accepted rank—to achieve one’s ends.” In effect, this suggests that in some cases, social capital may be identical to clientelism (El-Said and Harrigan 2009). Similarly, Fox argues that in authoritarian settings, civil society organizations will only be sustainable where civil society actors have connections with political elites that can provide them with tangible benefits (Fox 1996). Although Fox is interested in authoritarian settings, much the same results might be present in weak democracies like Peru. Finally, Iversen et al. argue that social networks have important micro-level effects that affect individuals unevenly, including in economic job-seeking (Iversen, Sen, Verschoor, and Dubey 2009).

Therefore, this body of research suggests the following hypothesis:

H1: Places with denser civil society will experience greater particularistic exchange, such that spending will be higher where it benefits small groups (small supporting coalition sizes) and will be lower where it benefits large proportions of local residents (large supporting coalition sizes).

Civil society may discourage particularistic exchange

In *Making Democracy Work*, Robert Putnam argues that civic engagement, social capital, and interpersonal trust allow citizens in Northern Italy to cooperate to pursue policies which are broadly beneficial. The result is the prosperous North’s divergence from Southern Italy, where

social capital is much weaker. As a result, in the South, clientelism-like exchange takes place between politicians and voters, who pursue personal and familial gains at the expense of others. In short, particularism and clientelism-like exchange are the natural result of a social-capital scarce polity. In social capital-rich polities, however, citizens develop greater interpersonal trust, which allows them to overcome the collective action problem of particularistic policy making, leading to greater public goods provision, and policy which is broadly beneficial, and produces a secure society, and one with high rates of economic growth and corresponding prosperity (Putnam, Leonardi, and Nanetti 1994).

Many recent publications concur with Putnam in arguing that social capital discourages particularistic exchange. For example, Escobar suggests that civic engagement and civil society has reduced the reach of clientelistic networks amongst poor rural people in Northern Colombia (Escobar 1994). Sobel notes important claims that civil society density and social capital makes information less costly, and therefore, makes particularistic exchange less likely (Sobel 2002). Krishna notes an empirical correlation over time between higher levels of social capital and lower levels of inequality, suggesting that, empirically, social capital does not encourage unequally-beneficial policy (Krishna 2007a). Finally, Kingston generates a game theoretic model that suggests that informal ties between individuals can help citizens overcome collective action problems to fight a “culture of corruption” which permits or facilitates particularistic exchange and other forms of corruption (Kingston 2008). Interestingly, Stokes argues that interpersonal trust facilitates, rather than prevents clientelistic exchange, although in a way which suggests that civil society density would, itself, prevent clientelism; where accountability is easier (including in environments where citizens can effectively gather information about

politicians' performance), clientelism is less likely, as long as citizens are skeptical of politicians' intentions (Stokes 2005).

One puzzle is why relatively small civil society groups (each of which will generally only contain a tiny minority a given population) might prefer to prefer to exchange broadly-beneficial policies rather than narrowly-targeted policies for their political support. One likely answer comes from classic studies on US Congress. In two classic papers by Shepsle and Weingast model legislators' preferences for distributional (particularistic) spending under conditions of uncertainty. They find that, although legislators and their constituents might benefit more over the short term by forming minimum winning coalitions that distribute benefits between as small a number of districts as possible (so each district receives the maximum amount possible), legislators may prefer super-sized or universal coalitions which provide some benefits to all districts in situations of repeated play. This is because, although each district will benefit more from the formation of minimum winning coalitions and the provision of narrowly-targeted benefits to those districts, in any budgetary cycle, just under half of all districts will be left out of the winning coalition. Therefore, in any budgetary cycle, legislators face a high probability that they will be excluded from the winning coalition and will receive no benefits. However, through the development of a norm of universal or super-sized coalitions, whereby all legislators take a smaller pie of the spending pie, all or nearly all legislators can be guaranteed some benefit in every budgetary cycle. In essence, if legislators prefer to receive some benefits in every cycle rather than maximum benefits in some fiscal cycles a universalist norm will arise, whereby all districts will receive some benefits in each cycle (Weingast and Shepsle 1981; Weingast 1979).

A similar logic leads to the prediction that civil society groups will prefer a "fair" distribution of benefits, whereby all segments of society—or at least, all groups represented by civil society

groups—will pursue broadly distributed benefits. In order to maximize the probability that they will receive some benefits in most budgetary cycles, civil society groups will prefer universal benefits, or benefits for large majorities, rather than benefits focused on their own small group. This does not necessarily mean that civil society groups will pursue public goods—instead, they may pursue the provision of broadly distributed club or private goods. But according to this logic, civil society groups will, over time, tend to collude so that all groups receive some benefits.

This theoretical argument, and the literature described above, suggests Hypothesis 2, tested here:

H2: Places with denser civil society will experience less particularistic exchange, such that spending will be lower where it benefits only small groups (small supporting coalitions) and will be greater where it benefits larger numbers of local residents (large supporting coalitions).

In short, the literature provides empirical and theoretical reasons to believe that civil society may be either positively or negatively associated with particularistic exchange. I argue, however, that uncertainty over time will lead to cooperation between civil society groups, leading civil society to reduce particularism and clientelism. In this chapter, I test both theories using an under-utilized quantitative dataset from Peru. I describe my data and methods in the next section.

Theory and Operationalization: Taxing and Spending and Service Provision

Here, I present several theoretical innovations. In addition, I describe the operationalization of the hypotheses presented above.

In government fiscal policy, politicians gather tax revenues, generally from the whole population, then decide whether these revenues should be spent in areas which benefit the population as a whole, or on specific individuals or groups. Groups have a short-term incentive

to lobby for group-specific expenditures so that they individually receive greater benefits from government expenditures (Olson 1965), leading to greater particularism. However, groups may collude to generate broadly-beneficial spending policies, in which governments provide broadly-spread club or private goods, or public goods.

There are strong reasons to believe that groups will tend to resist policies that they pay for (through taxation), but from which they do not benefit. However, groups' level of success in resisting those policies will depend on a number of factors, including their level of social capital, which is itself associated with civil society density.

Civil society groups might, however, press for particularistic spending policies—policies which benefit their own small group—or they might pressure politicians for broadly beneficial public goods. The results of these pressures will be different than the results of political polarization, discussed in the previous chapter, because unlike opposition groups in Peruvian local governments, civil society actors can play the role of agenda setter, pressuring mayors and opposition politicians to change agendas throughout the policy process.

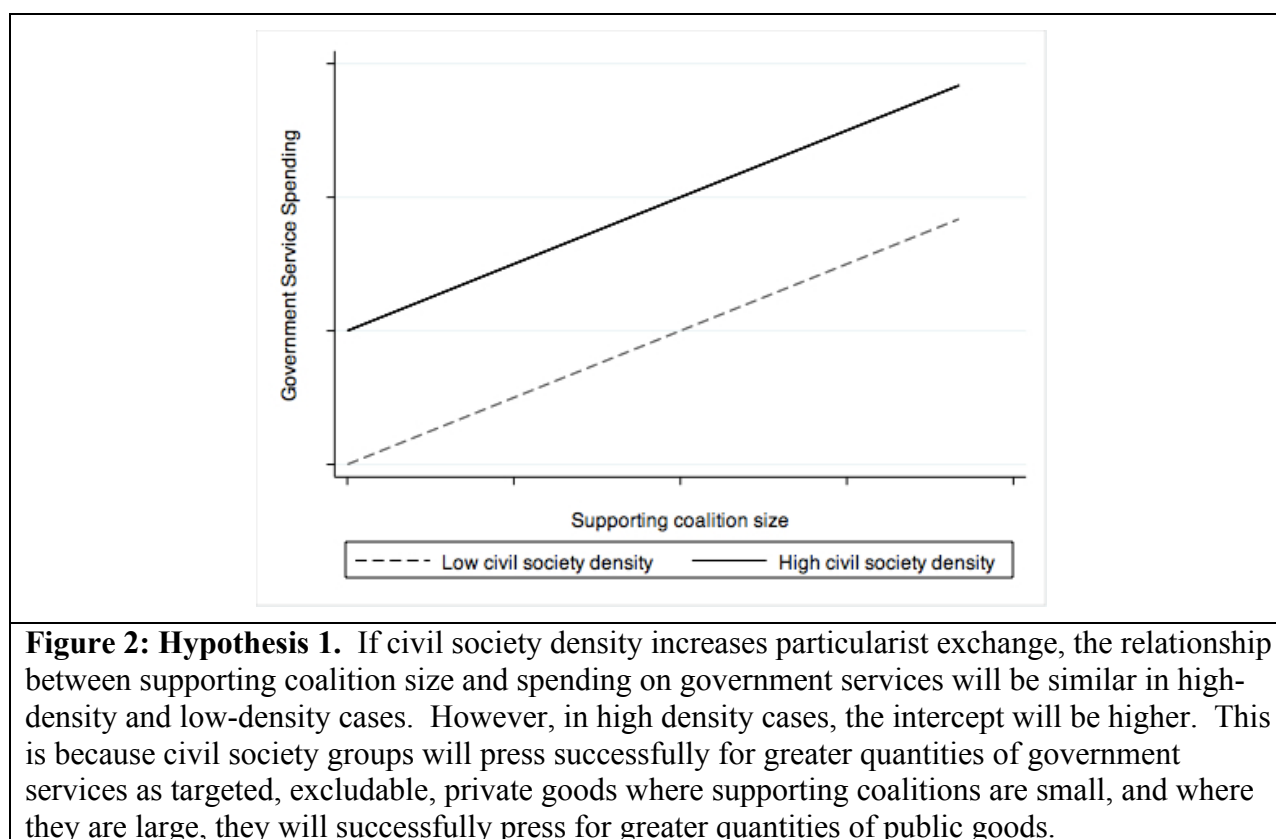
Hypothesis 1: Civil society may promote particularism

Where particularism is salient, dense civil society may (a) encourage particularistic exchange which benefits small groups over majorities, as well as (b) promote greater expenditures where policy is not targeted at small groups, but designed to be broadly beneficial.

Where civil society is weak, the relationship between supporting coalition size and public goods spending and provision will resemble that shown in Figure 1 (below). Specifically, as supporting coalition sizes increase, spending on public services will increase. This is because politicians will use public service provision to reward their supporters—and ensure their

loyalty—and as numbers of supporters increase, there will be more voters to reward, and therefore, more money will be spent.

If civil society density is unevenly spread among the population, if civil society organizations are associated with specific parties, and if civil society members' preferences are, on average in favor of the provision of private, rather than public goods, civil society groups may promote particularistic exchange, and greater civil society density will be associated with greater amounts of particularism.



In this case, the relationship between civil society density, public service spending, and supporting coalition size will resemble that in figure 2. As supporting coalition size increases, so will spending on government services, regardless of the density of civil society. However, low civil society density municipalities will spend less on government services than high density municipalities across the board. This is because civil society groups in dense municipalities will

be able to successfully press for greater amounts of government spending. In municipalities where supporting coalitions are small, this spending will be concentrated in areas which are more excludable—so called private goods or club goods—and targeted at groups of supporters. However, in municipalities where supporting coalitions are large, governments will spend more on broadly-beneficial policies, including broadly distributed club goods and public goods provision.

Therefore, regardless of supporting coalition size, civil society density will be associated with greater spending on government services. Where supporting coalitions are large, this may be desirable, as civil society pressures may result in greater quantities of services reaching most segments of the population. However, where supporting coalitions are small, it indicates that governments are redistributing greater revenues from the population as a whole to small groups of supporters, through taxation and spending policy, which may be inequitable

Hypothesis 2: Civil society may prevent particularism

On the other hand, civil society may discourage particularistic policy. According to hypothesis 2, most civil society members will prefer to collude with other civil society groups to pursue policies that will be beneficial to most or all residents. Over time, by developing a fairness norm under which all local residents receive something regardless of their position vis a vis the winning coalition, civil society groups will be able to reduce uncertainty that they will receive at least some benefits in a given budgetary cycle.

The resulting theoretical predictions regarding the relationship between supporting coalition size, civil society density, and government service spending are visible in figure 3.

Where supporting coalition size is small, high civil society density municipalities will spend less on government services, as civil society groups press governments not to spend tax revenue

in areas where those individuals will not benefit. Where civil society is less dense, these individuals and networks will be less successful at preventing excludable goods provision, and therefore, spending will be higher. In other words, civil society groups will promote policy which is more beneficial because it extracts fewer taxes from the majorities which receive no benefits from those policies.

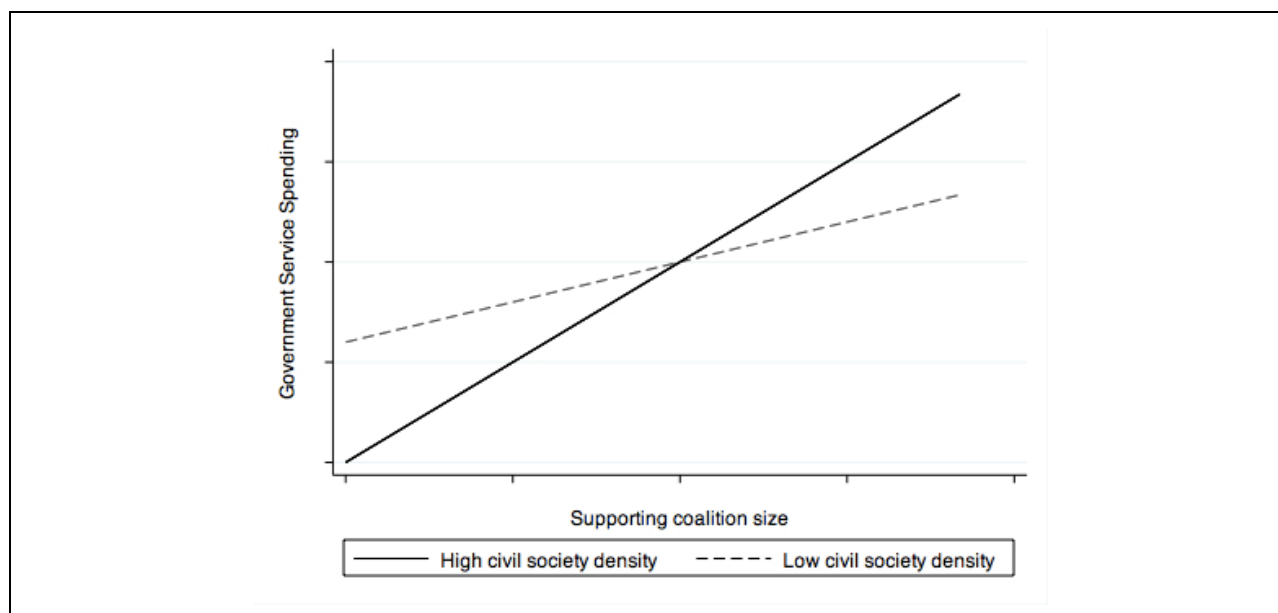


Figure 3: Hypothesis 2. If civil society density prevents particularist exchange, municipalities with high civil society density will spend less on government services in municipalities where mayors have small supporting coalitions—where most spending is concentrated in excludable goods provision—but where supporting coalitions are larger—where spending tends to be non-excludable goods provision—civil society groups will press for greater spending.

Where supporting coalition size is large—and therefore, governments are inclined towards broadly-beneficial service provision with large positive spillovers—these relationships will reverse. In these places, civil society will encourage the provision of broadly-based services because they will benefit from those goods, and even where civil society groups are connected with mayoral administrations such that they could benefit particularistically, they will press for broadly-beneficial services. This is because of fairness norms which reduce uncertainty over time, as described by Shepsle and Weingast (1979) and Weingast (1981). In these places,

citizens will be more successful in achieving these goals where civil society is dense. Therefore, government service spending will be greater in places where civil society density is greater.

Excludability and policy goals

The theoretical argument presented in chapter two posits that politicians intentionally exclude non-supporters from the receipt of government services. This implies the provision of excludable goods (club or private goods) or the provision of goods which might be non-excludable under certain circumstances (education, for example) in an excludable way. As I posit in chapter two, most government services are excludable to a greater or lesser degree.

However, different government services are excludable to greater or lesser degrees; some services can be provided in an excludable way quite easily, while others are more difficult to provide in a way which excludes certain individuals or groups.

Some services, such as the provision of sewage, water, or electrification services can be (and often are) provided in a highly targeted way, in which particular villages, neighborhoods, streets, or even residences are provided with these services, but others are not. Because sewage, water, and electrification services benefit, almost exclusively, the individuals who live in the geographic zones where those services are provided, they are highly excludable.

Other services, however, such as public health services, are used by area residents as well as non-residents. Public health services often bring benefits to a broader population, by preventing the spread of disease and by servicing large geographic areas.

Finally, some services can be provided in either excludable or non-excludable ways, such as education services or health services. Health services, for example, can be highly public, when

they prevent the spread of easily communicable diseases. Where they promote the health of particular villages or neighborhoods, however, they take the form of club goods.

Where politicians, driven by political incentives and institutional constraints, pursue the support of important constituencies, the most important characteristic of a given policy project may be the degree to which the benefits of the policy can be limited to supportive constituencies. Therefore, politicians may strategically pursue particular types of projects which are more or less excludable, depending on the size of their supporting coalition and other factors.

For example, mayors with large supporting coalitions will be more likely to pursue policies which have large positive spillovers, because more of the spillovers will be captured by their supporting coalition. Conversely, mayors with small supporting coalitions will tend to pursue policies which are more excludable at the individual, neighborhood, or village level. Mayors with large supporting coalitions, therefore, will be more likely to implement transportation, education, and public health programs. On the other hand, mayors with small supporting coalitions will be more likely to pursue construction projects (so that that benefits can be directed at cronies and their employees) and in particular, construction projects in relatively excludable policy areas, such as water, sewage, and electricity service provision.

Therefore, where mayors' policy goals include the provision of club or private goods to key supporters, factors which promote particularistic exchange (including economic inequality) will tend to promote greater spending in more excludable areas. Further, where mayors' policy goals include the provision of broadly beneficial services (including the provision of public goods), variables associated with greater spending in broadly-beneficial policies will tend to promote spending in less excludable areas.

Following this logic, I present the following secondary hypotheses, which are themselves dependent on findings regarding H1 and H2:

If tests of H1 and H2 show that civil society reduces particularism,

H3: Where government services are relatively more excludable (such as in sewage, water, and electrification project spending), high civil society density will be more likely to suppress spending regardless of supporting coalition size, as mayors shift funds into less excludable areas. Where government services are relatively less excludable (such as in public health expenditures), civil society density will tend to promote greater expenditures, as mayors shift spending into these areas.

On the other hand, if hypothesis tests of H1 and H2 demonstrate that civil society promotes particularism,

H3: Where government services are relatively more excludable (such as in sewage, water, and electrification project spending), high civil society density will be more likely to increase spending regardless of supporting coalition size, as mayors shift funds into less excludable areas. Where government services are relatively less excludable (such as in public health expenditures), civil society density will tend to reduce expenditures, as mayors shift spending into these areas.

Empirical Strategy

These four hypotheses were tested using quantitative data analysis using municipal data from approximately 1600 Peruvian municipalities.

Dependent variables

The dependent variables used here are identical to those used in Chapters 2 and 3. The first dependent variable is spending on infrastructure development per capita—spending on new construction of public works projects completed in 2007—in several categories which are often treated as public goods, although they may include private, club, or public goods. These include (a) transportation, (b) education, (c) and a summed total of spending on water, electrification,

and sewage projects¹⁷, as well as (d) the total of all these areas. This data was gathered in the 2008 Peruvian Registry of Municipalities by the Peruvian National Institute of Statistics and Informatics. This data is available for about 1800 municipalities in each category. I also use data on each of these spending categories in 2005 as a control.

The second dependent variable used is total spending in each of several policy categories—including education, housing and urban development, industrial policy, and several other policy areas. This data was compiled from the Peruvian Ministry of Economy and Finances, available on the internet at <http://www.mef.gob.pe>, and represents total spending from 2007.

Independent variables of interest

Here, I use three independent variables of interest, including a measure of supporting coalition size, a measure of the density of civil society, and an interaction term, which is the product of these other two variables.

The first of these independent variables, supporting coalition size, is a measure of the percentage of municipal voters who supported the victorious mayoral candidate in the previous election. This variable was generated using publicly available data through the Peruvian National Organization of Electoral Processes (ONPE), the independent government agency which oversees elections. In earlier chapters, I have used this variable to measure the extent to which public expenditures are the result of support-service exchange—where support-service exchange is greater, the correlation between supporting coalition size and public spending will be greater, as politicians spend more money to satisfy a larger number of supporters, as suggested by Bueno de Mesquita et al (2003).

¹⁷ The summed total of water, sewage, and electrification infrastructure project spending is, unfortunately, the way this data is provided by the Peruvian government, though I would of course prefer to use indicators of each of these three areas.

The second independent variable of interest is a proxy for the density of civil society. This is a measure of the per capita membership of a number of prominent types of civil society organizations, including mothers' groups, local committees for Peru's *Vaso de Leche* conditional cash transfer program, local "people's cafeteria" (*comedor popular*) volunteer committees, child-care organizations, adults' and juveniles' social clubs, and an "other" category. The Peruvian RENAMU (National Registry of Municipalities) provides this data, broken down by category.

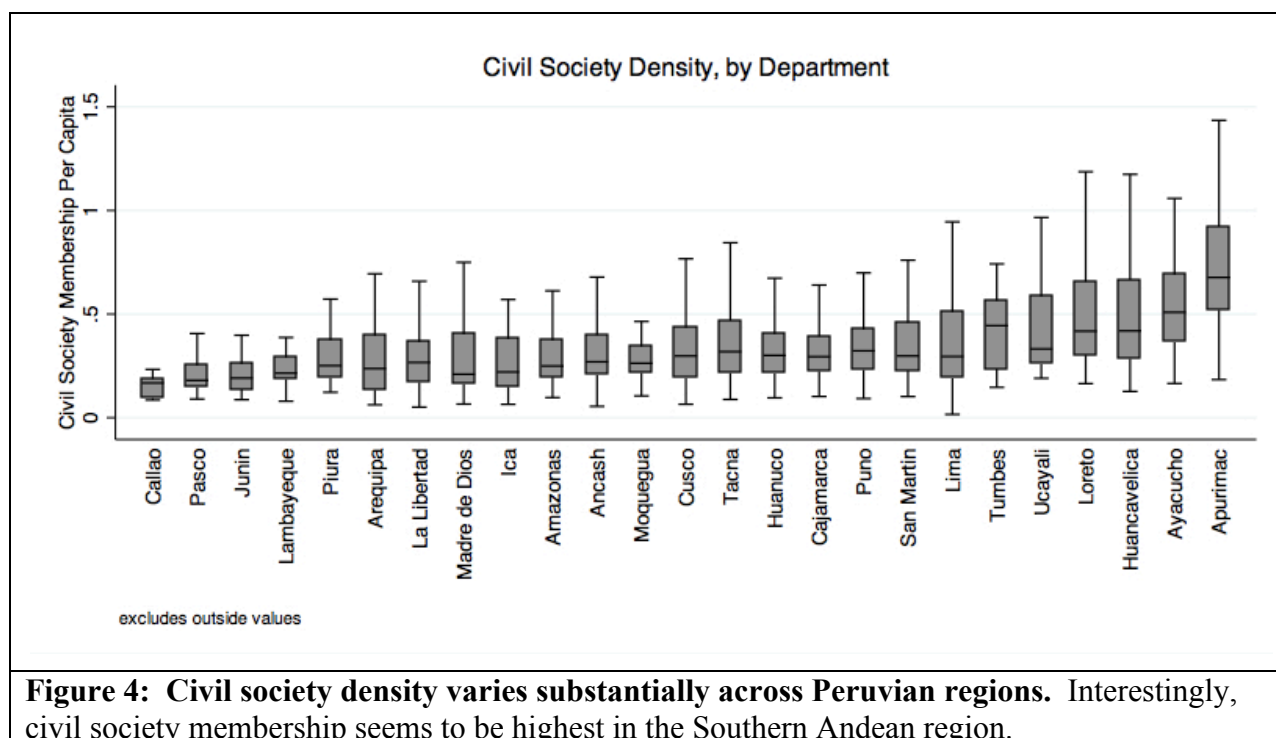


Figure 4: Civil society density varies substantially across Peruvian regions. Interestingly, civil society membership seems to be highest in the Southern Andean region.

For each municipality, the total membership in all organizations was divided by the total municipal population, providing a per capita measure of civil society membership. This measure ranges from near 0 to over 3, roughly forming a poisson distribution, with the mean near .4. In other words, in the average Peruvian municipality, slightly less than 1 in 2 people are members of some civil society organization, but in some places, membership is closer to 1 in 100, and in some places, on average, every person is a member in more than three organizations. Interestingly, civil society density is greatest in the Southern Andean region—a region with a

strong indigenous tradition, but a region where the Shining Path uprising was particularly salient in the late 1980s and early 1990s.

The third independent variable of interest here is an interaction term, which is the product of both the civil society density and supporting coalition measures, such that very high values represent municipalities where there is both large supporting coalitions and high civil society density. This variable will measure the extent to which the effect of “civil society density” on public spending will vary across different values of “supporting coalition size.”

Control variables

In addition to the independent variables of interest listed above, I include a number of control variables in the model.

First, I include several variables made available through INEI which were generated based on the 2007 Peruvian census, including the average level of education in each municipality, population (logged), urban population (logged), and a consumption measure. The consumption measure is designed to provide a measure of standards of living where many citizens, particularly in rural areas, do not participate in the cash economy with any intensity, and is derived from a series of standard Peruvian Government (INEI) poverty indicators. This is a count of the average number of household appliances—radio, television, washer/dryer, refrigerator, sound equipment—owned by families in the municipality.

I also include several control variables from RENAMU data—each model includes a control variable, which is the percentage of completed project funding in each policy area which was funded with private donations. This is meant to address concerns that private donors might use funding to influence municipal priorities. Because there is no conditionality associated with transfers from regional or national governments, there is no need to include a similar measure for

government project transfers in each area. In the models in which the dependent variable is public works project spending, I also control for spending in the previous mayoral term (year 2005).

For summary statistics of all the variables used here, see the appendix.

Methodology

The dependent variables in the first set of regression models presented here represent spending on projects completed in 2007, and many municipalities completed no projects in one or more policy areas in that year. Therefore, the distributions of these dependent variables are skewed, with large numbers of cases at 0, and a long right tail.

For dependent variables where the distribution follows approximately a poisson or negative binomial distribution—such as the public works project spending variables I use here—there are several appropriate techniques which can be used. Standard poisson regression is not appropriate here, because the variance of the dependent variable (variance from the mean) is much greater than the mean, one of the important conditions for the appropriate use of poisson regression. However, extradispersed poisson regression is appropriate (that is, poisson regression with standard errors adjusted for the extra variance), as is negative binomial regression¹⁸ (Cameron and Trivedi 1998; Hoffman 2004; Rabe-Hesketh and Skrondal 2008).

Because of the large numbers of zeros in each of the dependent variables used here, I also test similar models using a zero-inflated poisson estimation strategy, which is appropriate where the variance on the dependent variable is inflated because of large numbers of zeros determined by some factor which can be incorporated in a two-stage model (Cameron and Trivedi 1998; Hoffman 2004; Rabe-Hesketh and Skrondal 2008).

¹⁸ I test these models both with and without heteroskedasticity-robust standard errors.

After examining each of these models, I compare goodness-of-fit statistics to determine the most appropriate link function (AIC, BIC, and log likelihood statistics). In general, zero inflated poisson models produced the best model fit, but the models presented here provided substantively very similar results regardless of the estimation technique used.

I ran a number of robustness checks on these models, including eliminating outliers, splitting samples in several ways, and running sensitivity tests by removing and adding control variables in groups and singly. The models reported here were all robust to these tests.

Where the dependent variable of these regressions is normal—this includes the variables measuring total spending in each policy category—I use heteroskedasticity-robust OLS regression. I also test these models with a series of robustness checks, including plotting independent and dependent variables against residuals, examining the normality of residuals, and re-testing models with outliers excluded (high residual, cook's d, and DFITS cases). In general, the results I report here are robust to these checks, although in some cases—notably, health and sanitation spending, the exclusion of certain outliers does render the interaction term insignificant.

My key independent variable here is an interaction between “supporting coalition size” and “civil society density.” Because the coefficient and significance of the interaction term itself is not substantively meaningful or important (Brambor, Clark, and Golder 2005), I provide a graphic depiction of the effect of differing effects of “supporting coalition size” on public goods spending across values of “civil society density” and include regression tables in the appendix.

A note on multicollinearity

Elsewhere (in chapters 4 and 6), I test the effects of several other independent variables on the relationship between supporting coalition size and government spending in several spending

categories. For purposes of display, I have shown my statistical regression models without the other chapters' independent variables of interest.

One concern, therefore, is that the results reported here are significant because important control variables—the independent variables of interest in the other chapters—are correlated with the independent variables of interest. One way to allay these concerns is to test each interactive effect in a model where the other interactions are present. Therefore, I have tested each of the models with each of the other interaction and base terms from the dissertation.

In general, the results reported here are robust to the inclusion of these additional variables. There are a few exceptions, however, which deserve some note. Where all interactions and base terms are included, the models which use total spending in a given policy category frequently become insignificant. Directions of relationships do not change, however, and predicted values do not vary substantially. In addition, where one set of interactions and base terms or another is included as a control (but not all interactions) these results are more often significant.

Therefore, the most likely explanation is that multicollinearity inflates the variance of these coefficients, leading to inefficient estimates. This explanation is consistent with the correlation of interaction terms and their base terms, which frequently are worrisome. For example, the inequality measure used here is correlated with its interaction (with supporting coalition size) at .76, opposition strength at .34, the opposition strength interaction with supporting coalition size at .15, as well as the standard of living (consumption) measure at .58. These correlations raise legitimate concerns about overspecification, multicollinearity, and inefficient estimates, especially where each interaction and all included base terms are included in a regression model. Variance inflation statistics, when all variables are included in a given model are very high, ranging between 12.6 and 35.4, depending on the independent variable and dependent variable of

interest. These numbers are high enough to suggest that inclusion of all independent variables of interest will generate false negative results. These very high VIF statistics further demonstrate the extreme robustness of these results, where they remain significant.

The following also deserves to be emphasized. First, project spending models, with a larger number of observations, are robust to these controls. Second, total spending models are robust to the inclusion of each interaction and base terms in sets. Third, predicted values and the direction of relationships do not vary when these additional controls are included. Fourth, total spending models have much smaller numbers of observations, making them more susceptible to problems of variance inflation through multicollinearity. Finally, the correlation between the independent variables of interest here (supporting coalition size, civil society density, opposition strength, and inequality) is low enough that omitted variable bias should not be a concern, and where correlations are higher (such as between inequality and opposition strength, with r of .34), models are robust to the inclusion of the relatively well-correlated control variable.

Results

In general, statistical tests are much more supportive of hypothesis two (that dense civil society prevents particularistic policies) than hypothesis one. In general, therefore, civil society tends to reduce particularistic exchange of votes for tangible goods and services. However, although overall spending tends to respond to civil society pressures as predicted by hypothesis 2, spending in particular policy areas often responds differently, suggesting that spending tends to be focused in one area or another based on the ease with which service provision may be provided in an excludable or non-excludable way.

The variables of interest here are interacted, making interpretation from a standard regression table difficult. In many cases, interaction terms which are statistically significant alone in a

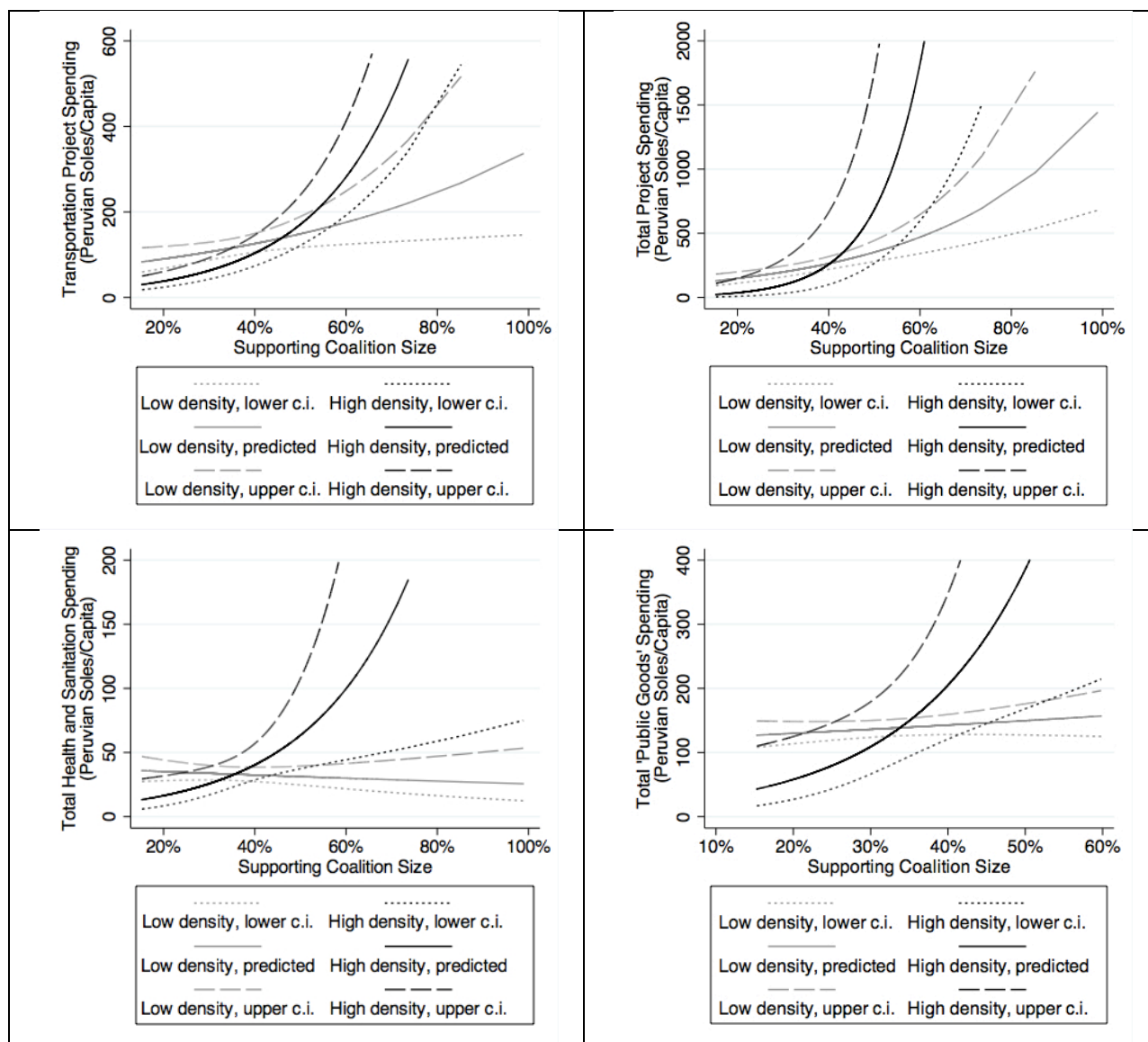


Figure 5: Civil society prevents particularistic exchange. In most policy areas tested, results strongly support of hypothesis 2—that civil society prevents particularistic exchange. Where supporting coalition size is small—and therefore, where most spending is targeted, excludable, ‘private’ goods provision—municipalities with denser civil society have significantly lower levels of expenditures than municipalities where civil society is less dense. Where supporting coalition size is large, however, and most expenditures are broadly beneficial ‘public goods’ provision with large positive spillovers, dense civil society municipalities spend more on government services with non-excludable benefits, like health and sanitation services and transportation projects. Total municipal spending also follows this pattern. These graphs were made with differing civil society density for display purposes. In all graphs, “low density” is .1 civil society memberships/capita. In total project spending and total health and sanitation spending, “high density” is 2.1. In the other graphs, “high density” is 1.1. Total ‘public goods’ spending includes health and sanitation, education, and transport—areas where most spending probably produces mostly non-excludable benefits. memberships/capita. Confidence intervals are 95% joint confidence intervals around point predictions.

regression table are not substantively significant in combination with the interaction base terms, and often terms which appear insignificant are, in fact, substantively and jointly statistically significant. The easiest way to interpret interactions is through the use of graphic depictions of statistical relationships (Brambor, Clark, and Golder 2005). Here, the significance of the interaction term on its own is not important—what *is* important is the effect of each base term on the dependent variable, as it varies across the other base term. Therefore, graphic depictions of the relationships of interest are provided here, and regression tables are included in the appendix.

Civil society prevents particularism

In general, results support hypothesis two—that particularistic exchange is lower where civil society is denser. Results in several policy areas, including transportation project spending, total energy and mining spending, and total health and sanitation spending, are consistent with hypothesis two. In addition, total spending, total project spending, and total public goods spending are associated with civil society density and supporting coalition size in the way predicted by hypothesis two. For examples of these results, see the four graphs in figure 5.

The upper left-hand graph shows the interactive effect of supporting coalition size and civil society density on transportation project spending (almost entirely spending on road construction and road upgrading). First, regardless of the degree of civil society density, spending on transportation projects increases with supporting coalition size. However, the slope of the relationship is much steeper where civil society is denser. In municipalities with small supporting coalitions (below about 45% of the voting population), expenditures on transportation projects are lower in dense civil society municipalities. These differences are significant where supporting coalition size is less than approximately 30% of local voters. Where supporting coalition size is above about 45% of municipal voters, however, this difference reverses, and

municipalities with greater civil society density spend more on transportation projects. This difference increases rapidly as supporting coalition size increases, and becomes significant where supporting coalitions are greater than about 80% of local voters. The substantive differences in

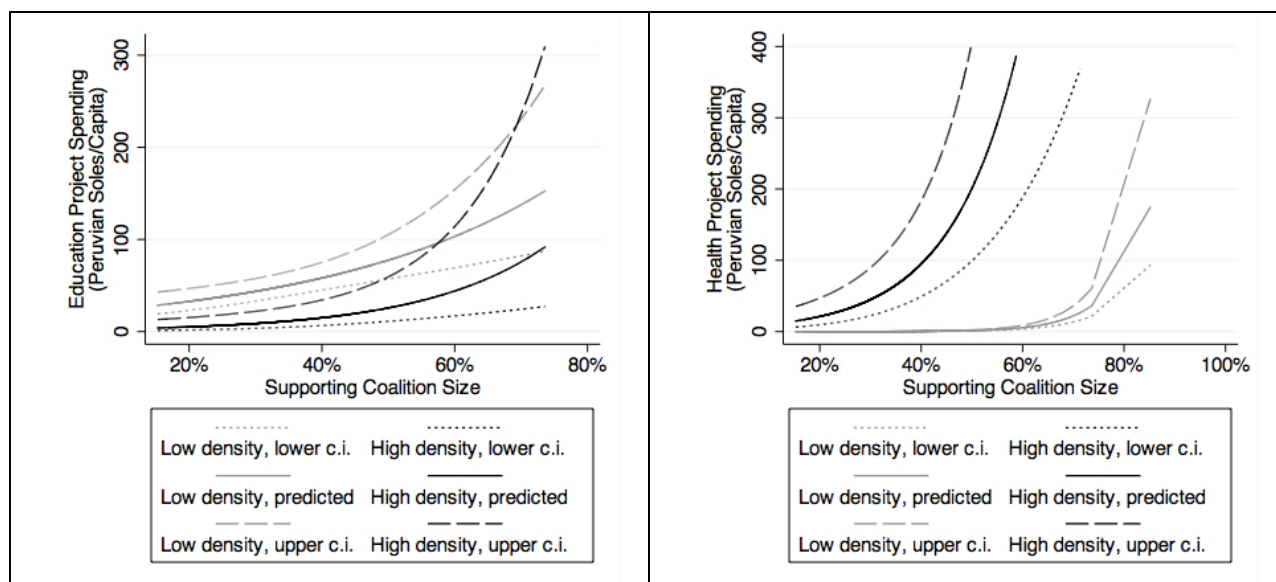


Figure 6: Differing relationships. In several policy areas, although civil society density has a significant impact on the relationship between supporting coalition size and government service spending, the relationship differs from that shown in figure 5. In a few policy areas, such as education project spending and water, sewage, and electrification project spending, the relationship resembles that in the left-hand graph. In these cases, civil society density is associated with lower spending across the board, but these differences become insignificant where supporting coalitions are large. This result suggests that, in these policy areas, most spending, even where supporting coalitions are large, is excludable, and ‘private’. In several other areas, including health project spending, administration and personnel (mostly wages and salaries), social welfare spending, and housing and urban development, the relationship resembles that shown in the right-hand graph, where civil society-dense municipalities have greater spending across the board. These results, taken together, suggest that some policy areas may be more ‘public’ and non-excludable than others, and that services often considered “public,” such as education, may not be non-excludable. Where incentives (such as civil society pressure) promote public or private goods provision, mayors will tend to allocate funds in more or less excludable areas.

spending are quite substantial. Where supporting coalition sizes are very small, high civil society density municipalities spend about 30 Soles/capita (about \$10 US), while low civil society density municipalities spend more than three times more—about 100 Soles/capita (about \$34). Where supporting coalition sizes are larger, the differences are even more substantial.

Where supporting coalition sizes are about 60% of local voters, high civil society density municipalities spend about 300 Soles/capita (roughly \$100), while low civil society density municipalities spend less than 200 Soles/capita.

Similar dynamics exist in a number of other policy areas, including total spending on energy and mining, and total health and sanitation spending. More importantly, however, this dynamic holds across spending more generally. Total municipal spending, total project spending, and total spending on public goods (here, health and sanitation, education, and transportation) all respond in the same way to supporting coalition size and civil society density.

These findings demonstrate that, in general, civil society plays a role in promoting accountability and oversight, and thereby, prevents particularistic exchange and promotes broadly beneficial public goods provision.

Different policy areas respond differently

Although total spending and spending in several policy areas respond to civil society density and supporting coalition size in the way predicted by hypothesis 2—that civil society will tend to reduce particularistic exchange—other policy areas respond differently to the joint effects of supporting coalition size and civil society density. Two general types of dynamics are apparent in these relationships, which are consistent with hypothesis 3. Here, I identify these alternate relationships.

In several policy areas, particularistic exchange appears to vary with civil society density in much the same way as it responds to opposition strength (see chapter 3). This relationship is shown in the left hand graph in figure 6. Here, high civil society density is associated with lower levels of spending where supporting coalition sizes are small, but these differences become

insignificant where supporting coalition sizes are larger. Education project spending and sewage, water, and electrification project spending both show this dynamic.

In other policy areas, including health project spending, administration and personnel, social welfare spending, and housing and urban development, the relationship between supporting coalition size, civil society density, and spending is similar to that predicted by hypothesis 1. In these areas, spending is greater where civil society is denser, regardless of supporting coalition size (although in most cases, the differences increase as supporting coalition size increases).

Discussion

Although the results presented here are broadly supportive of the second hypothesis presented above—that civil society density reduces particularistic exchange—these results also suggest that different policy areas, including different so-called “public goods” respond differently to the same pressures. Here, I present one possible explanation for these different relationships. In addition, I present qualitative evidence of the nature of the causal relationships between civil society density and particularistic exchange. Finally, I discuss the strengths and weaknesses of these results.

Explaining differences across policy areas

The differing interactive effect of civil society density on the relationship between supporting coalition size and spending in different policy areas is consistent with H3, above. Some areas of spending respond differently to the combined effects of supporting coalition size and civil society density because spending is sorted into categories which are easier or more difficult to provide as excludable, private benefits. Therefore, some areas only receive funding when large quantities of private or public goods are desired, leading to different relationships than those hypothesized.

Spending in nearly all policy areas can result in either the provision of non-excludable goods or excludable goods, but some services are easier to provide in a targeted, excludable way than others. For example, project spending in electrification, sewage, and water provision typically targets particular geographic regions, including villages or neighborhoods, and can easily be targeted at streets and even, in some cases, particular families. Therefore, the provision of targeted, “private goods” or “club goods” is easy with such expenditures. On the other hand, public health expenditures can much less easily be targeted at small constituencies or individuals, because most tasks undertaken by public health functionaries—including vaccination campaigns and the provision of sanitary facilities—are beneficial to the population broadly by preventing the outbreak and spread of disease.

Where civil society groups prefer club or private goods, they may pressure mayors to spend on patronage and other private goods, and where they prefer public goods, they may pressure mayors to spend on public health and sanitation.

Taken together, then, the results reported above suggest that, as a result of civil society pressure or other incentives, mayors differ in their preferences for private and public goods provision. Based on the incentives they face, mayors sort spending into policy areas where it is easier or more difficult to target benefits to particular constituencies. Thus, while total expenditures are associated with supporting coalition size and civil society density in a way which is consistent with hypothesis 2—that civil society density prevents particularistic exchange—in some policy areas, these dynamics look different, consistent with hypothesis 3, as mayors sort funds in and out of policy areas which are more or less excludable.

Qualitative evidence

In general, qualitative evidence also supports the results and interpretation provided above. Carhuaz, Ancash, Peru, once again, provides a good example, this case, in the ways that civil society density helps promote collective action which prevents particularistic exchange.

First, civil society organizations and civil society networks are useful mechanisms for promoting information flow and transparency about government activities within voting populations. In Carhuaz, for example, NGOs, neighborhood groups, producers' associations, village and peasant organizations overlapped, making it less costly for voters—particularly poorly educated rural voters—to gather information about the quality and quantity of government services. Organizations with formal, cooperative relationships with local government personnel—including, for example, organic farmers' cooperatives, small-animal raising associations, and neighborhood groups, were able to communicate with members, other citizens, and other organizations, through dense social networks, the frequency with which the municipal government failed to carry through on promised projects in these areas. Citizens could report numerous examples of unfulfilled promises regarding government services, and could describe the means through which they gathered this information—typically through some combination of social networks with friends, family, and neighbors, and through formal or traditional organizations such as village associations or producers' groups.

Civil society groups also made processes of mobilization less costly, and therefore, made it easier for local voters to self-organize and coordinate in promoting their own interests, both by lobbying local government, and by mobilizing in favor of opposition candidates at election time. Local civil society groups functioned as a learning environment where local leaders could develop organizational skills and repertoires through which they were able to mobilize support

for political candidates and for particular local government policies. In addition, local civil society networks made it easier for community leaderships, by providing social networks for the dissemination of information, by generating trust between individuals, and by encouraging collective action through traditional mechanisms of reciprocity and shared social obligations. For example, the leadership of modern civil society groups could use their links with civil society members to organize and persuade others to vote for a particular candidate, or to pressure local politicians for particular policies. Likewise, traditional communal networks which facilitate shared labor such as road maintenance and communal harvesting, could be used to promote communal voting and mobilization for or against particular political candidates.

In rural communities in Peru, as elsewhere, there are frequently (one is tempted to say always) organizations which would prefer private goods provision. However, if civil society is well-organized, and able to mobilize on a mass scale, majorities of voters are often able to overcome the collective action dilemmas they face to a degree where larger numbers of groups and individual voters are able to mobilize against policies which use tax revenue gathered from the many in benefit of the few. Even if benefits are distributed to small groups, if the overall provision of government services are broadly distributed, civil society groups seem less inclined to mobilize against particular projects—organizations, in effect, generally seem willing to “log roll,” permitting broadly distributed private benefits, as long as one particular group is not targeted for disproportionate benefits. For example, voters were unconcerned with the provision of government funds to projects that benefited small groups of voters, such as subsidies for small animal raising projects or organic fertilizer. However, civil society leadership generally seemed very concerned with the provision of patronage jobs and private benefits to members of the mayor’s political party.

Reverse causality

One objection to the conclusions presented here might be endogeneity or reverse causality. In particular, one argument may be that civil society density promotes larger supporting coalitions for victorious candidates, and also more broadly beneficial policy.

First, both supporting coalition size and civil society density are included in the models presented here, so the intervening effect of supporting coalition size, if there is one, is controlled in the statistical analysis, by the presence of the supporting coalition size variable.

Second, the arguments that (a) civil society density promotes larger supporting coalition sizes as well as more broadly beneficial spending, or (b) that civil society promotes more broadly beneficial spending entirely through larger supporting coalition size is not consistent with the interactive nature of the relationship observed here. I find that civil society density has a *different* effect on government spending *depending on the size of the mayor's supporting coalition*. Such a relationship is not consistent with the argument that such a relationship is endogenous, which would find that either supporting coalition size, or civil society density or both would have a simple, linear relationship with government service spending.

Finally, the correlation between supporting coalition size and civil society density provides little reason for concern ($r = .04$), and although civil society engagement is typically associated with political participation (Aldrich 2008; Aldrich and Crook 2007; Levi 1996; Putnam, Leonardi, and Nanetti 1994), there is little theoretical reason to believe that civil society will promote larger or smaller supporting coalitions.

Conclusions and Implications

This chapter presents tests on the effect of civil society density on particularistic exchange. This analysis is in response to earlier findings which suggest that particularistic exchange

(clientelism, pork barrel spending, patronage, or constituent service) is an important mechanism that connects electoral democracy with public goods provision. I seek to identify whether clientelism promotes or prevents particularism, testing two conflicting theories which make opposing predictions.

Quantitative results using municipal-level data from approximately 1600 Peruvian local governments suggest that civil society has a nuanced effect on government service expenditures. Specifically, civil society density tends to suppress government service expenditures where these expenditures benefit only small cliques of mayoral supporters, and harm majorities of residents through taxation. However, civil society density increases spending where that spending is most likely to benefit larger proportions of municipal residents.

In addition, qualitative observations suggest three mechanisms through which this effect of civil society on particularism operates. First, civil society makes information about government performance less costly to citizens, thereby promoting transparency and accountability. Second, civil society leadership provides citizens with opportunities to develop leadership skills and repertoires of citizen mobilization. Finally, civil society membership promotes interpersonal trust, making collective mobilization less costly and therefore more likely.

In addition to their theoretical value, these results carry clear policy implications for government bureaucrats, advocates of democracy and decentralization, community organizers, and policy-makers.

First, local governments are likely to be more effective at providing public goods provision where civil society is dense. Second, the promotion of civil society is likely to facilitate improved governance across the board, and is likely to produce less particularistic outcomes in places where particularism has been rampant.

Despite the strength of the results presented here, important questions remain about the impact of civil society on spending. For example, the relationship between civil society and spending varies across policy categories. I hypothesize here that these results are due to the ease with which spending in particular policy categories can be directed at particular groups. The extent to which different policy activities such as public health provision, education, and road construction can be particularized, however, is unclear, and should be studied in greater detail.

Although the data used here is specifically from Peru, these results provide evidence regarding the likely effects of civil society density on particularistic exchange in a range of different settings, including both developing- and developed-world locations. Although Peru is a middle-income country, there is substantial variation in income and standards of living across Peruvian municipalities, and Peru—and the data used here—includes municipalities where standards of living are as high as some members of the European Union¹⁹, and some municipalities where rates of extreme poverty surpass 50%. Therefore, these findings are likely generalizable to governments outside of Peru, Latin America, and indeed, outside of the developing world.

However, further questions remain about the generalizability of these findings, not due to questions of applicability to richer or poorer places, but because of Peru's (and Latin America's) history of ethnicity- and class-based inequality. This is the question to which I turn in the following chapter. Specifically, I proceed by examining the effects of economic inequality on particularistic exchange.

¹⁹ For example, the Human Development Index value for several provinces in Lima is similar to that of Poland or Portugal, according to the United Nations. Although HDI figures are not available for district-level municipalities, many districts within Lima are substantially richer than average, and likely would have HDI figures near that of the Scandinavian countries.

Appendix

Table 1: Summary Statistics					
Variable	Obs	Mean	Std. Dev.	Min	Max
Supporting coalition size	1619	0.35	0.10	0.15	0.99
Civil society membership/cap	1832	0.37	0.27	0.02	3.68
Civil society membership * Supporting coalition size	1617	0.13	0.11	0.01	1.90
Transport project spending/cap.	1832	117.06	1,070.82	0.00	35,945.00
Transport project transfers (pct.)	1835	0.01	0.11	0.00	1.00
Transport project spending/cap. (2005)	1568	38.37	187.06	0.00	5,213.90
Health project spending/cap.	1832	144.38	4,080.47	0.00	152,297.60
Health project transfers (pct.)	1835	0.01	0.07	0.00	1.00
Health project spending/cap. (2005)	1568	14.33	197.39	0.00	7,396.45
Education project spending/cap.	1832	103.66	1,695.62	0.00	66,284.03
Education project transfers (pct.)	1835	0.01	0.09	0.00	1.00
Education project spending/cap. (2005)	1568	24.79	66.66	0.00	1,325.09
Water, sanitation, and electrification project spending/cap.	1832	121.96	2,302.73	0.00	97,276.96
Water, sanitation, and electrification project transfers (pct.)	1835	0.02	0.12	0.00	1.00
Water, sanitation, and electrification project spending/cap. (2005)	1568	25.35	63.75	0.00	1,148.41
Total public goods project spending/cap.	1832	487.05	6,682.52	0.00	199,506.00
Total public goods project transfers (pct.)	1835	0.00	0.00	0.00	0.09
Total public goods project spending/cap (2005)	1832	153.95	738.66	0.00	26,093.52
Total public goods spending/cap. (logged)	723	4.80	0.95	2.19	8.81
Administrative spending/cap. (logged)	723	4.80	0.78	2.73	8.87
Energy spending/cap. (logged)	388	1.75	1.95	-3.29	6.22
Social welfare spending/cap. (logged)	723	3.78	0.80	0.73	7.80
Health and sanitation spending/cap. (logged)	706	3.51	1.31	-7.09	8.18
Housing and urban development spending/cap. (logged)	522	1.87	1.72	-5.22	7.09
Total spending/cap. (log)	723	5.87	0.82	4.27	9.83
Total public goods spending/cap. (log)	723	4.80	0.95	2.19	8.81
Consumption index	1832	1.01	0.69	0.07	4.84
Education level (mean)	1832	4.43	0.73	1.38	7.30
urban population (logged)	1826	6.35	1.50	2.71	12.22
Municipal budget (Millions of Peruvian Soles, logged)	1827	13.81	1.80	6.09	20.42
Debt service (pct.)	1827	0.02	0.03	0.00	0.21

Table 2: Project spending/capita (Peruvian Soles)					
Extradispersed Poisson with Square Root of Deviance Extradispersion Adjustment and Iterated Reweighted Least Squares Optimization					
	Transport	Health	Education	Water, sanitation, and electrification	Total public goods project spending
Supporting coalition size	1.338 (0.139)	13.964 (0.000)***	2.745 (0.004)**	2.462 (0.016)*	2.652 (0.001)***
Civil society membership/cap.	-1.527 (0.009)**	4.012 (0.000)***	-1.185 (0.046)*	-1.455 (0.041)*	-0.927 (0.066)+
Civil society membership *	3.331 (0.008)**	-3.077 (0.006)**	1.265 (0.312)	-0.112 (0.944)	2.297 (0.029)*
Supporting coalition size	0.035 (0.836)	2.506 (0.000)***	-1.996 (0.000)***	-3.233 (0.000)***	-0.741 (0.001)***
Consumption index	-0.426 (0.000)***	-1.449 (0.000)***	-0.633 (0.000)***	-0.391 (0.000)***	-0.569 (0.000)***
Education (mean)	-0.317 (0.000)***	-2.196 (0.000)***	-0.246 (0.003)**	0.057 (0.505)	-0.349 (0.000)***
Urban population (logged)	-0.086 (0.037)*	0.302 (0.000)***	-0.126 (0.003)**	-0.228 (0.000)***	-0.078 (0.030)*
Municipal budget (Peruvian Soles, logged)	-2.665 (0.249)	11.106 (0.000)***	-23.328 (0.000)***	-28.570 (0.000)***	-12.605 (0.000)***
Debt service (pct.)	0.410 (0.339)				
Transport project private transfers (pct.)	0.000 (0.000)***				
Transport project spending/cap. (2005)					
Health project private transfers (pct.)		1.217 (0.464)			
Health project spending/cap. (2005)		-0.080 (0.000)***			
Education project private transfers(pct.)			-0.675 (0.341)		
Education project spending/cap. (2005)			0.001 (0.140)		
Sewage, water, and electrification project private transfers (pct.)				-0.037 (0.945)	
Sewage, water, and electrification project spending/cap. (2005)				0.001 (0.228)	
Public works project private transfers (pct.)					67.901 (0.000)***
Public works project spending/cap. (2005)					0.000 (0.254)
Constant	9.396 (0.000)***	7.698 (0.000)***	11.585 (0.000)***	11.586 (0.000)***	11.301 (0.000)***
Public works project private transfers (pct.)					67.901 (0.000)***
Public works project spending/cap. (2005)					0.000 (0.254)
Observations	1370	1370	1370	1370	1605
p values in parentheses					
+ significant at 10%; * significant at 5%; ** significant at 1%; *** significant at .1%					

Table 3: Total spending (current and capital expenditures) Ordinary Least Squares (OLS) regression with logged dependent variables							
	Administration	Energy	Social welfare	Health and sanitation	Housing and urban development	Total "Public Goods"	Total
Supporting coalition size	0.296 (0.455)	-0.983 (0.550)	-0.066 (0.866)	-0.892 (0.285)	0.146 (0.930)	0.362 (0.327)	0.181 (0.748)
Civil society membership/cap.	-0.261 (0.469)	-2.034 (0.155)	0.527 (0.180)	-1.751 (0.054)+	-0.282 (0.827)	-0.391 (0.228)	-0.988 (0.057)+
Civil society membership *	2.145 (0.025)*	7.418 (0.073)+	1.286 (0.113)	4.921 (0.034)*	3.863 (0.309)	2.195 (0.009)**	2.922 (0.045)*
Supporting coalition size	0.246 (0.000)***	-0.447 (0.085)+	0.120 (0.037)*	0.475 (0.000)***	0.469 (0.004)**	0.176 (0.001)***	0.164 (0.011)*
Consumption index	0.178 (0.000)***	0.269 (0.096)+	-0.091 (0.050)*	0.134 (0.073)+	0.447 (0.003)**	0.139 (0.002)**	0.106 (0.043)*
Education (mean)	-0.451 (0.000)***	-0.626 (0.000)***	-0.272 (0.000)***	-0.440 (0.000)***	-0.643 (0.000)***	-0.496 (0.000)***	-0.478 (0.000)***
Urban population (logged)	0.208 (0.000)***	0.235 (0.002)**	0.201 (0.000)***	0.320 (0.000)***	0.302 (0.000)***	0.269 (0.000)***	0.269 (0.000)***
Municipal budget (Peruvian Soles, logged)	1.192 (0.279)	-8.631 (0.009)**	0.460 (0.653)	-3.664 (0.107)	-4.881 (0.291)	-1.045 (0.338)	-1.131 (0.359)
Debt service (pct.)	3.570 (0.000)***	2.282 (0.126)	2.703 (0.000)***	1.182 (0.086)+	-0.765 (0.561)	4.439 (0.000)***	3.572 (0.000)***
Constant	538	277	538	523	364	538	538
Observations	0.495	0.303	0.357	0.202	0.210	0.550	0.365
R-squared	Robust p values in parentheses						
	+ significant at 10%; * significant at 5%; ** significant at 1%; *** significant at .1%						

Inequality, Particularism, and Public Goods Provision

Chapter 6

Introduction

In this, the final empirical chapter of this dissertation, I demonstrate that my earlier results are not only an artifact of the high level of inequality in Peru. I show that, although economic inequality²⁰ appears to worsen particularism, particularistic exchange is present in both equal and unequal municipalities. This analysis is a logical extension of earlier empirical tests.

In chapter three, I established the importance of particularistic exchange in driving government service provision in Peruvian municipalities. Although my findings align nicely with theory presented in chapter 2, which is intended as general theory regarding democracy and public goods provision, empirical research based on a single-country sample will always face questions regarding its generalizability to other populations.

In chapters 4 and 5, I examine the impact of two important factors—political polarization and civil society density—on government service provision and particularistic exchange, finding that both polarization and civil society density mitigate particularism. Although my findings in these chapters also validate general theory about public service provision and particularism, these results face problems of generalizability, because they are based on a single-country sample of cases.

Because inequality has often been linked to clientelism and particularism (Drinot 2006; Karstedt 2003; Munoz, Paredes, and Thorp 2007; Schneider and Zúniga-Hamlin 2005; Sives 2002), perhaps the largest threat to the generalizability of these earlier findings has to do with the very high degree of economic inequality in Peru. According to these scholars, unequal settings are particularly ripe for particularism and clientelism. This is because, in unequal settings, the

²⁰ Here, I measure economic inequality by constructing a Gini index of asset ownership based on ownership of common household appliances. Though this approach has some weaknesses, this is similar to the technique used by INEI, the Peruvian national statistical agency, to measure poverty through consumption.

wealthy and powerful can extract concessions from politicians through their control of less wealthy clients, and because in general, the wealthy have an easier time sustaining collective action in pursuit of their interests than the poor. If Peru's high levels of economic inequality make the particularism observed in chapters 3, 4, and 5 possible, it may be that these results are not generalizable to more equal settings. Conversely, if particularistic exchange takes place in both relatively equal and relatively unequal municipalities, there are strong reasons to believe that the results described earlier do, in fact, apply to a range of settings outside of Peruvian municipalities.

In this chapter, therefore, I investigate the relationship between a third factor—economic inequality—and particularistic government service provision among my sample. Economic inequality and other forms of heterogeneity are factors which scholars argue is likely to drive public goods provision, although the direction of the relationship is contested (Alesina, Baqir, and Easterly 1999; Baland and J.-P. Platteau 1999; Habyarimana, Humphreys, Posner, and Weinstein 2009; Munoz, Paredes, and Thorp 2007; Savoia, Easaw, and A. McKay 2010; Varughese and E. Ostrom 2001).

The relationship between inequality and particularism is inherently interesting and relevant for policy reasons (Savoia, Easaw, and A. McKay 2010; The World Bank 2003; 2005). For example, the World Bank (2005) notes that inequality is associated with underdevelopment, and addressing the causes of inequality, and the links between inequality and poverty, are an important goal in the alleviation of global poverty. Particularism might be one such link.

In addition, this examination of the effects of inequality on particularistic exchange in Peru may help to allay concerns about generalizability of the results presented in this dissertation. Here, I hope to allay concerns that my results may not be generalizable due to the historically

high levels of class- and ethnically-based inequality present in Peru and other Latin American polities. Therefore, I demonstrate that my results regarding the prevalence of particularistic exchange hold across both relatively equal and unequal municipalities in Peru.

The Peruvian Context

In chapter two, I generate the hypothesis that politicians will spend more on public services where they have greater numbers of supporters to reward for their political support. There, I show that there is a strong and statistically significant correlation between public spending in a range of policy areas. This statistical relationship strongly suggests that clientelism-like exchange is an important cause of variation in public service provision in Peru. Further, qualitative observations strongly suggest that the exchange of government services for political support is commonplace in Peru and elsewhere around the world. A number of characteristics may make clientelism-like exchange more likely in the context of Peruvian municipal government than in other places around the world. I will outline these characteristics in [the next](#) section.

Supporting coalition size and public service provision

In chapter two, I present strong qualitative evidence that clientelism-like exchange is an important cause of variation in public service provision across Peruvian municipalities. I presented statistical evidence for the presence and importance of clientelism-like exchange (see Figure 1). In essence, government service expenditures rise as politicians' numbers of supporters increase, requiring greater targeted spending to maintain the loyalty of the coalition of supporters.

Inequality in Peru

Like many developing countries, especially much of Latin America, Peru has both high and sustained economic inequality, even as economic development has led to substantial increases in

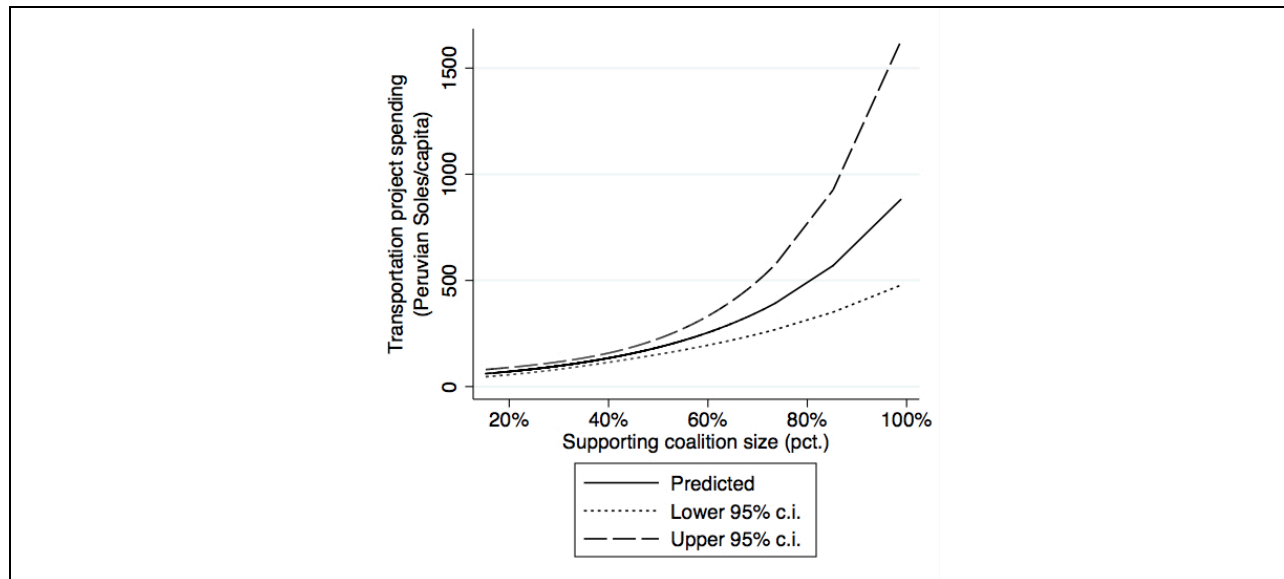


Figure 1: Typical particularistic effects. The strong and highly significant relationship between supporting coalition size and transportation project spending is highly suggestive of particularist exchange. This graphic was originally generated with 95% confidence intervals around the predicted variables with control variables held at their means, but the confidence intervals were so close as to be indistinguishable from the predicted values themselves. Note that the x's represent predicted values with all controls held at their observed variables, not their means.

the gross domestic product. Although GDP growth has averaged nearly nine percent per year since the mid-2000s, inequality has declined very little in that time. Indeed, although measurements of inequality are notoriously controversial, and good longitudinal data on inequality sub-nationally does not exist for Peru, national-level inequality statistics suggest that Peru's level of economic inequality is nearly as high as that of Brazil, placing it amongst the most unequal countries in the world. Further, this level of inequality has been sustained as long as national-level statistics have been available, beginning in the early 1960s. (Munoz, Paredes, and Thorp 2007). The presence of this very high degree of inequality, combined with

explanations for particularism and clientelism that associate inequality with clientelistic practice bring into question the generalizability of the earlier findings presented in this dissertation.

Anecdotal evidence suggests that this sustained inequality is driven by heterogeneity in wealth between ethnic groups—while indigenous populations tend to be very poor, mestizo and especially European, “white” individuals tend to be much more wealthy (Drinot 2006; Munoz, Paredes, and Thorp 2007). In addition, regional disparities in wealth are very large, with urban areas, and particularly urban areas in the coastal region being much more wealthy than the highlands or inland jungle regions (Ahmad and García-Escribano 2006; 2008). These realities result in much worse outcomes for the indigenous. Education levels for indigenous workers are, on average, four years lower than that for mestizo workers, infant mortality is higher, and life expectancy and literacy are substantially lower, although exact differences are difficult to pin down because Peruvian government surveys fail to gather information about ethnicity (Giugale, Retes-Cibils, and Newman 2007).

Scholars argue that this persistent inequality is driven by institutionalized racism in Peruvian government policy (Drinot 2006) or by clientelistic processes which themselves are facilitated by political and economic inequalities (Crabtree 2010). Because of this asserted link between inequality and clientelism, some question remains about the degree to which the findings presented in this dissertation are generalizable—it may be that particularistic exchange is prevalent in Peru because of the degree of inequality. Therefore, I examine the effect of inequality on particularistic exchange. Although I find that inequality has an impact on particularistic exchange, the relationship is not such that the generalizability of my findings is brought into question.

Theory and Empirics: Inequality, Particularism, and Public Goods

A growing literature in Political Science, Economics, and the other social sciences explores the causes and effects of economic inequality. In academic circles, the relationship between inequality and collective action, for example, has been well studied (Baland and J.-P. Platteau 1999; Habayarimana, Humphreys, Posner, and Weinstein 2009; 2007; Munoz, Paredes, and Thorp 2007; Naidu 2009; Rothstein and Uslaner 2005; Savoia, Easaw, and A. McKay 2010; Varughese and E. Ostrom 2001). In addition, the policy community recognizes the importance of inequality in promoting deprivation and underdevelopment (The World Bank 2003; 2005). Even so, scholars recognize that inequality is, in many ways, poorly understood, and scholars have called for further study of the causes and effects of economic inequality, singling out the need for sub-national and micro-level studies (Savoia, Easaw, and A. McKay 2010). Here, I present such an analysis—a sub-national examination of economic inequality.

In this section, I review the literature on inequality, noting four contending hypotheses which may be drawn from scholarly works regarding the relationship between inequality, government service provision, and economic exchange. These are that inequality may (a) reduce or (b) increase government service provision in general, and that inequality may (c) exacerbate or (d) reduce particularistic exchange.

Inequality may increase or decrease public goods provision

Perhaps the most consistent claim made regarding inequality and public goods provision is that inequality is, through one of several hypothesized mechanisms, associated with less public goods provision.

Habayarimana et al. (2007) provides a useful overview of these mechanisms. First, heterogeneity may promote differences in preferences between, for example, different ethnic

groups or different socioeconomic classes, making it difficult for them to pursue collective action or common goals regarding public goods provision because, in fact, their goals are different. Second, heterogeneity may make it difficult for individuals to work together, because they lack social bonds and interact only infrequently. Finally, individuals may feel less altruistic towards groups outside of their own ethnicity or class, leading to an unwillingness to cooperate (Habyarimana, Humphreys, Posner, and Weinstein 2007). Using experimental techniques, these scholars find little evidence of the first mechanism, but do find evidence of the second and the third. These results support other empirical work which also finds a link between heterogeneity and less collective action (Habyarimana, Humphreys, Posner, and Weinstein 2009; Varughese and E. Ostrom 2001).

Alesina and La Ferrara (2002) and other scholars suggest that inequality is associated with less public goods provision through a fourth mechanism. This is that inequality fosters distrust, making it difficult for individuals to work together (Alesina and La Ferrara 2002; Rothstein and Uslaner 2005; Uslaner 2000). These findings are consistent with other works that suggest that ethnic heterogeneity is associated with lower levels of public goods provision across US cities (Alesina, Baqir, and Easterly 1999), and that lower levels of interpersonal trust are associated with less public goods provision (Putnam, Leonardi, and Nanetti 1994; Putnam 1995).

Finally, Baland and Platteau argue that, where public goods are provided through formal rules and regulation, inequality has the tendency to lessen the amounts of public goods provided, by undermining the legitimacy of rule-systems for contribution to provision systems (Baland and J.-P. Platteau 1999).

All of these works lead to the following hypothesis:

H1: Regardless of supporting coalition size, greater inequality will be associated with less spending on government services.

Although fewer in number, several scholarly works also suggest that inequality promotes greater public goods provision. In general, these works argue that public goods provision often includes some contribution of effort or resources from a range of actors in a given setting. Where some actors stand to benefit disproportionately from the provision of public goods, though actors are more likely to contribute a disproportionate amount (relative to their share of the population), and may even be willing to unilaterally bear the cost of the provision of the good, if the benefits outweigh the cost. These conditions are more likely where inequality is high (Baland and J.-P. Platteau 1999).

These papers suggest the following:

H2: Regardless of supporting coalition size, greater inequality will be associated with more spending on government services.

Inequality may promote particularism

Though less scholarship has investigated relationships between inequality and particularism, clientelism, or pork barrel politics, a few scholars have presented theory relevant for the questions investigated here.

In general, scholars of clientelism—including economists, sociologists, anthropologists, and political scientists—argue that unequal societies tend to generate exploitative formal or informal institutions which facilitate clientelism and particularism. In such places, elites support politicians with funds and political support, including (often) the electoral support of poor voters who are beholden to wealthy employers or landlords (for example), and politicians return the favor by pursuing policies which are beneficial to the rich at the expense of the poor (Acemoglu, Ticchi, and Vindigni 2006; Crabtree 2010; Drinot 2006; Galor, Moav, and Vollrath 2009;

Karstedt 2003; Savoia, Easaw, and A. McKay 2010; Schneider and Zúniga-Hamlin 2005; Sives 2002; Wood and Murray 2007).

For example, Galor et al. (2009) argue that wealthy landowners in unequal states around the world have effectively promoted lower levels of public education service provision, so as to keep rural labor forces immobile and inexpensive. Likewise, Muñoz, Paredes, and Thorp (2007) identify inequality in Peru as the cause of uneven collective action across socioeconomic classes, unequally beneficial policies, and persistent class- and ethnicity-based inequality. Similarly, Andersson and Agrawal identify inequality as a cause of lower levels of public goods provision through common property management, though they find that effective local institutions mitigate these relationships (K. Andersson and Agrawal 2011).

Similarly, Stokes and co-authors have often argued that inequality promotes clientelistic exchange by making it relatively more cost effective for (typically wealthy) politicians to purchase the votes of the poor, who receive private benefits through the process of particularistic exchange, but who are then ignored in the policy-making process in favor of the wealthy and middle classes (Cleary and Stokes 2006; Stokes 2005; 2007).

All of these works imply this hypothesis:

H3: Inequality will be associated with increased particularistic exchange—where supporting coalitions are small, municipalities will pay more on government services that benefit that relatively small coalition of voters, and where supporting coalitions are large, they will spend less, primarily to benefit important, wealthy residents.

Although there seems to be something of a scholarly consensus around the idea that inequality and clientelism should be positively correlated, the idea has rarely, if ever been tested with large-n, quantitative techniques in a rigorous way. Here, I proceed by conducting such a test.

Theory and Operationalization

As Chapter 2 demonstrates, the impact of particularistic exchange on government service expenditure varies according to the size of the coalition of voters supporting the victorious candidate.

Where supporting coalitions are small, mayors will face pressures to redistribute wealth from non-supporters to members of their supporting coalitions. In these cases, (a) expenditures in so-called “public goods” will be low, as mayors attempt to provide targeted (club) goods or private goods to supporters, and (b) expenditures in general will be low, as mayors face strong incentives to *exclude* non-supporters, and to avoid spending on opposition-supporting individuals.

Where supporting coalitions are larger, however, pressures to exclude supporters and to provide club or private goods will weaken, as (a) the per-supporter benefit of private or toll goods provision decreases relative to the benefits of public goods provision, and (b) it becomes more likely that positive externalities will benefit supporters rather than opposition members, because supporters comprise a larger proportion of the population.

In earlier chapters, these hypotheses are tested by examining the relationship between supporting coalition size and government spending in a series of policy area categories. Therefore, to test the effect of economic inequality on particularistic exchange, it is necessary to examine the effect of inequality on the *relationship* between supporting coalition size and government service spending.

There are three possible effects of inequality on the relationship between supporting coalition size and government service expenditures.

First, inequality may exacerbate clientelism and/or particularistic exchange. In this case, expenditures in a given policy area will be greater where mayors' supporting coalitions are smaller—and therefore, where spending tends to be directed at goods and services which are targeted at small groups (club goods) or individuals (private goods). Where supporting coalitions are larger—and spending would otherwise be directed to broadly beneficial public goods—spending will be lower. In essence, if inequality exacerbates particularism, it will be because elites effectively capture most expenditures, and therefore, supporting coalition sizes will be less important (and possibly insignificant) in driving government service expenditures in high-inequality cases. Therefore, if results show a *stronger* relationship between supporting coalition size and expenditures in *more equal* municipalities, particularism is a driver of government expenditures in both relatively equal and relatively unequal cases.

If, on the other hand, the relationship between supporting coalition size is only significant where municipalities are *unequal*, the results presented earlier in the dissertation may only apply to *unequal* municipalities. Such results would cast doubt on the generalizability of the results presented here, beyond very unequal contexts such as those found in Latin American and some other developing-country settings. In this case, the relationship between supporting coalition size and spending will be weak and/or insignificant where municipalities are more equal, but positive and significant where municipalities are unequal. In this case, particularism is a driver of expenditures only where municipalities are unequal, and not elsewhere.

Finally, the null hypothesis—that inequality will have no effect on particularism—is that there will be no significant difference in the relationship between supporting coalition size and expenditures, regardless of the level of inequality. In this case, the relationship between supporting coalition size and expenditures will be positive and significant, but high-inequality

and low-inequality municipalities will not significantly differ in expenditures across the range of supporting coalition sizes. Although such a result will be uninteresting in the immediate sense, it will suggest that the earlier findings presented here are generalizable outside of high-inequality settings, such as those in Peru and much of Latin America.

Quantitative Methodology and Data

Here, I use several under-utilized public data sources on Peruvian municipal governments and ordinary least squares (OLS) regression and generalized linear modeling techniques to test the hypotheses presented above. The 2008 Peruvian Registry of Municipalities (RENAMU), the 2007 Peruvian Census, and electoral data from the Peruvian National Office of Electoral Processes are the key data sources used in the analysis presented here, and I use OLS and extradispersed poisson regression to test the effects of particularistic vote exchange against the effects of electoral competition. I perform several postestimation tests and robustness checks to demonstrate the robustness of my results.

Data

Two measures of different types of government service provision are used here as Dependent Variables. The first of these is spending on infrastructure development per capita—spending on construction projects completed in 2007—in several categories which are often treated as public goods. These include (a) transportation, (b) education, (c) and a summed total of spending on water, electrification, and sewage projects²¹. Also used is the summed total of all of these categories as a dependent variable, and also the summed total of all project spending, which includes two additional categories—tourism projects, and “other”. On this set of dependent

²¹ The summed total of water, sewage, and electrification infrastructure project spending is, unfortunately, the way this data is provided by the Peruvian government, though I would of course prefer to use indicators of each of these three areas.

Table 1: Summary statistics					
Variable	Obs.	Mean	Std. Dev.	Min	Max
Total public works spending/cap. (Peruvian Soles)	1832	487.05	6682.52	0	199506
Transportation project spending/cap. (Peruvian Soles)	1832	117.06	1070.82	0	35945
Electrification, water, and sewage project spending/cap. (Peruvian Soles)	1832	121.96	2302.73	0	97276.96
Education project spending/cap. (Peruvian Soles)	1832	103.66	1695.62	0	66284.03
Supporting coalition size	1619	0.35	0.10	0.15	0.99
Inequality (Gini)	1832	0.13	0.05	0.02	0.33
Supporting coalition size * Inequality	1617	0.04	0.02	0.01	0.21
Consumption index	1832	1.01	0.69	0.07	4.84
Education level (mean)	1832	4.43	0.73	1.38	7.30
Urban population (logged)	1826	6.35	1.50	2.71	12.22
Municipal budget (Mill. Peruvian Soles, logged)	1827	13.81	1.80	6.09	20.42
Debt service (pct.)	1827	0.02	0.03	0	0.21
Total public works spending/cap. (Peruvian Soles, 2005)	1832	153.95	738.66	0	26093.52
Total public works private transfers (pct.)	1835	0	0	0	0.09
Transportation project private transfers (pct.)	1835	0.01	0.11	0	1
Transportation projects spending/cap. (Peruvian Soles, 2005)	1568	38.37	187.06	0	5213.90
Electrification, water, and sewage private transfers (pct.)	1835	0.02	0.12	0	1
Electrification, water, and sewage project spending/cap. (Peruvian Soles, 2005)	1568	25.35	63.75	0	1148.41
Education project private transfers (pct.)	1835	0.01	0.09	0	1
Education project spending/cap. (Peruvian Soles, 2005)	1568	24.79	66.66	0	1325.09

variables, I use both generalized linear models (extradispersed poisson reported here) and OLS regression using a logged variant of the variable. This data was gathered in the 2008 Peruvian Registry of Municipalities by the Peruvian National Institute of Statistics and Informatics. This data is available for about 1600 municipalities in each category. I also use data on each of these spending categories in 2005 as a control.

I use measures of expenditures on completed new construction to examine the effects of particularism on government service provision—the relationship between particularism and infrastructure/construction spending is well-documented (Samuels 2001a; 2001b). If particularistic exchange is an important cause of public spending patterns, it should be most visible in new construction expenditures.

New construction is also a good measure of infrastructure development, which is sorely needed throughout Peru, to promote economic development and improved standards of living (Ahmad and García-Escribano 2006; 2008; Calderón and Servén 2004; Crabtree 2010; Estado and Locales 2006; Zas Friz Burga 2009; Giugale, Retes-Cibils, and Newman 2007; Hordijk 2005; IPE 2003; N. Jones, Vargas, and Villar 2007; Palacios 2009; World Bank 2003; World Economic Forum 2005; World Resources Institute 2003).

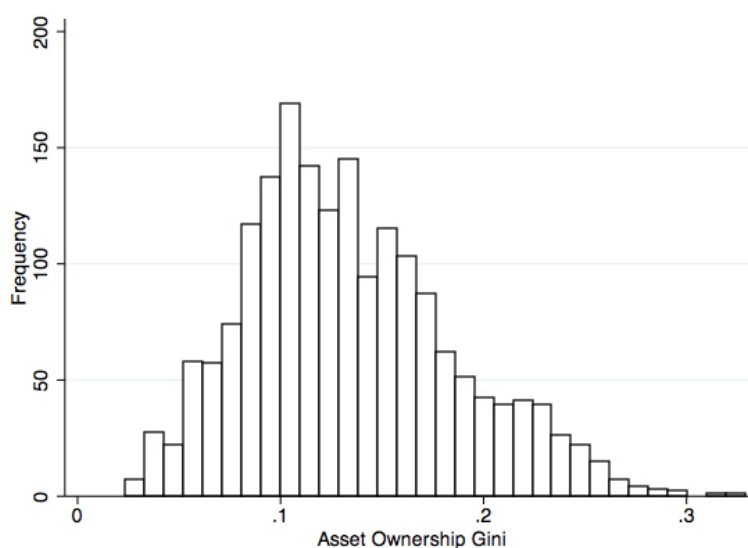


Figure 2: Distribution of the key independent variable

The second set of dependent variables used here is a set of measures of total spending (current and capital expenditures) in several categories for 2007. This data is less comprehensive—data is only available for about 730 district-level municipalities (out of 1599),

but the included municipalities are substantial in that they include nearly 80% of the Peruvian population, and so are an important sample in and of themselves. Results using these variables generally support the results of the project spending/infrastructure development spending regression models. This second set of dependent variables is available from the Peruvian Ministry of Economy and Finances.

The key independent variable used here is based on indicators gathered in the course of the 2007 Peruvian Census by the National Institute of Statistics and Informatics (INEI). These are measures of asset ownership of Peruvian households. Specifically, households were asked about the ownership of six important household appliances—radios, televisions, washing machines, refrigerators, sound equipment, and computers. These asset ownership indicators—used by INEI and the Peruvian government as measures of poverty in a country where many families have little integration with the cash economy—measure standards of living more effectively than income measures, especially in rural parts of the Andes and the Amazon, where barter and subsistence are commonplace. These indicators were aggregated at the district level, then used to generate a Gini index of asset ownership, whereby families were ordered by number of appliances owned, and the cumulative total proportion of appliances for each number of appliances was subtracted from the cumulative hypothetical proportion if asset ownership was completely equal in the district. The resulting measure is an index of inequality which, in theory, ranges from 0 to 1, with 1 being perfectly unequal (one person owns all appliances in the district) and 0 being a completely equal distribution. In reality, however, the minimum value was .023, the maximum was .330, with a mean of .134.

To test the effect of this variable across varying supporting coalition sizes—to test the effect of inequality on particularistic exchange—this variable was interacted with the measure of supporting coalition size.

Because of the nature of Peruvian electoral rules (described above, in “Public Goods Provision in Peru”), the supporting coalition size in each municipality is simply the percentage of the total vote received by the victorious party in the most recent election, since that party receives the mayoral seat as well as a majority in the municipal council. Therefore, the supporting coalition is a coalition of voters, families, or villages, but is not a coalition of multiple parties.

In addition to the independent variables of interest described above, I use several control variables in the models presented here

First, I include several variables made available through INEI which were generated based on the 2007 Peruvian census, including the average level of education in each municipality, population (logged), urban population (logged), and a consumption measure. The consumption measure is designed to provide a measure of standards of living where many citizens, particularly in rural areas, do not participate in the cash economy with any intensity, and is derived from a series of standard Peruvian Government (INEI) poverty indicators. This is a count of the average number of household appliances—radio, television, washer/dryer, refrigerator, sound equipment—owned by families in the municipality.

I also include several control variables from RENAMU data. In the models in which the dependent variable is construction project spending, I include the percentage of completed project funding in each policy area which was funded with private donations. This is meant to address concerns that private donors might use funding to influence municipal priorities.

Because there is not conditionality placed on transfers from regional or national governments, there is no need to include a similar measure for government project transfers in each area. In addition, I use RENAMU data to control for debt service (pct. of total municipal budget) and total municipal budget size (total income, logged).

For summary statistics of all these variables, see Table 1 (above).

Methods

In the first set of models presented here—in which the dependent variable is total spending on projects completed in 2007—I have used generalized linear modeling techniques for count data. These are the most appropriate estimation strategy for a dependent variable which is skewed, with a long right tail, where values are only positive integers, and where the dependent variable contains many 0s, such that it cannot be transformed to normality without generating large numbers of missing cases (Cameron and Trivedi 1998; Hoffman 2004; Rabe-Hesketh and Skrondal 2008). Typically, poisson models are used with dependent variables which represent counts or proportions. However, poisson models assume a dependent variable with equal mean and variance (Hoffman 2004; Rabe-Hesketh and Skrondal 2008). Such is not the case with the dependent variables used here; there is significant evidence of overdispersion. Therefore, I use extradispersed poisson models, which is one appropriate strategy for data distributed like this. The models displayed here use a square-root of the deviance-based standard error adjustment with iterated, reweighted least squares optimization, but I also test these models with several alternative estimation techniques, including zero-inflated poisson, negative binomial, heteroskedasticity-robust negative binomial, and alternative extradispersed poisson approaches and find that my findings are robust to changes in estimation strategy. I choose to show the extradispersed poisson results here because scholars suggest that it is inappropriate to use most

typical robustness checks on negative binomial regression (Hoffman 2004). I also use a logged version of the summed total of all project spending in an OLS regression model. With this latter variable, results do not differ substantively from the count data models.

A second set of models, described but not presented here uses the logged total spending per capita (per local resident) in a number of policy areas. These include administration, agriculture, education, energy and mining, industry, fishing, social welfare spending, health and sanitation, transportation, urban development and housing, total spending, and total spending in areas normally considered “public goods” (health and sanitation, education, social welfare spending, and housing and urban development). Where the dependent variable is one of these measures, the method used is a log-linear approach, where the dependent variable is logged, then OLS is used.

The key independent variable here is an interaction term. Because the coefficient and significance of the interaction term itself is not substantively meaningful or important (Brambor, Clark, and Golder 2005), I provide a graphic depiction of the effect of differing effects of “supporting coalition size” on public goods spending across values of “civil society density” as well as regression tables.

In addition, I present the results of several robustness checks on both the OLS and extradispersed poisson models.

I find that inequality does have an impact on particularistic exchange, but only in infrastructure spending—in the area where clientelism or particularism is most likely—and only in some policy areas. In general, these results suggest that although particularism is worse where inequality is higher, particularism is salient regardless of the level of inequality.

A note on count data models

Social science methodologists, including Political Scientists, have frequently prescribed generalized linear model estimation techniques for the analysis of count data (Afifi, Kotlerman, Ettner, and Cowan 2007; Cameron and Trivedi 1998; Hoffman 2004; King 1989; Rabe-Hesketh and Skrondal 2008). Such techniques include negative binomial regression, poisson and extradispersed poisson, and zero-inflated negative binomial and poisson techniques. These techniques are appropriate when dependent variables have three primary characteristics. First, values are censored at 0, second, values are integers only, and third, values are not distributed normally, instead being highly right skewed, similar to a chi-squared distribution (Cameron and Trivedi 1986; 1998; Hoffman 2004; King 1989; Rabe-Hesketh and Skrondal 2008)

Scholars of political phenomena have used these techniques to study a range of topics, including terrorism and political violence (Kollias, Messis, Mylonidis, and Paleologou 2009; Danzell 2010; T. Y. Wang, Dixon, Muller, and Seligson 2011), congressional bill sponsorship (Kollias, Messis, Mylonidis, and Paleologou 2009), foreign direct investment (Kollias, Messis, Mylonidis, and Paleologou 2009), legislative productivity (W. D. Anderson, Box-Steffensmeier, and Sinclair-chapman 2003; G. W. Cox and Terry 2008), the targeting of government expenditures (Rickard 2009) and a range of other topics (Boehmke 2005; Dezhbakhsh, Tohamy, and Aranson 2003; Holmes, De Piñeres, and Curtin 2007; Ingall and Crisp 2001; Neumayer 2005; Schiller 2006). In other social sciences, two of the most common uses of count data techniques include the study of economic innovation (R. Andersson, Quigley, and Wilhelmsson 2009; Branstetter 2001) and the demand for health services (Ekman 2007; Shin 2006; Street, A. Jones, and Furuta 1999)

In political science, count data techniques have not often been used to study expenditures, because most expenditure data studied by political scientists can be logged to a normal distribution and analyzed using OLS regression (so-called log-linear techniques). However, the project expenditures data used here contains a large number of zeros, which is data which would be lost if logged. This is because a large number of municipalities completed no new construction of, for example, schools, health clinics, roads, or potable water systems in 2006. These zeros are meaningful, representing no investment in the production of these types of projects, and their exclusion may bias regression results.

One area of the social sciences in which the analysis of similarly distributed expenditure data is quite common is health economics. Health expenditures for a given individual, family, or jurisdiction are positively skewed, contain large numbers of zeros, and include only positive integers, just like the project data analyzed here. In health economics, therefore, the use of count models (poisson, extradispersed poisson, negative binomial, and zero-inflated models) to study expenditures is very common (World Bank n.d.; CIA n.d.)

A note on multicollinearity

Elsewhere in this dissertation, I test the effects of several other independent variables on the relationship between supporting coalition size and government spending in several categories. For purposes of display, I have shown my statistical regression models without the other chapters' independent variables of interest.

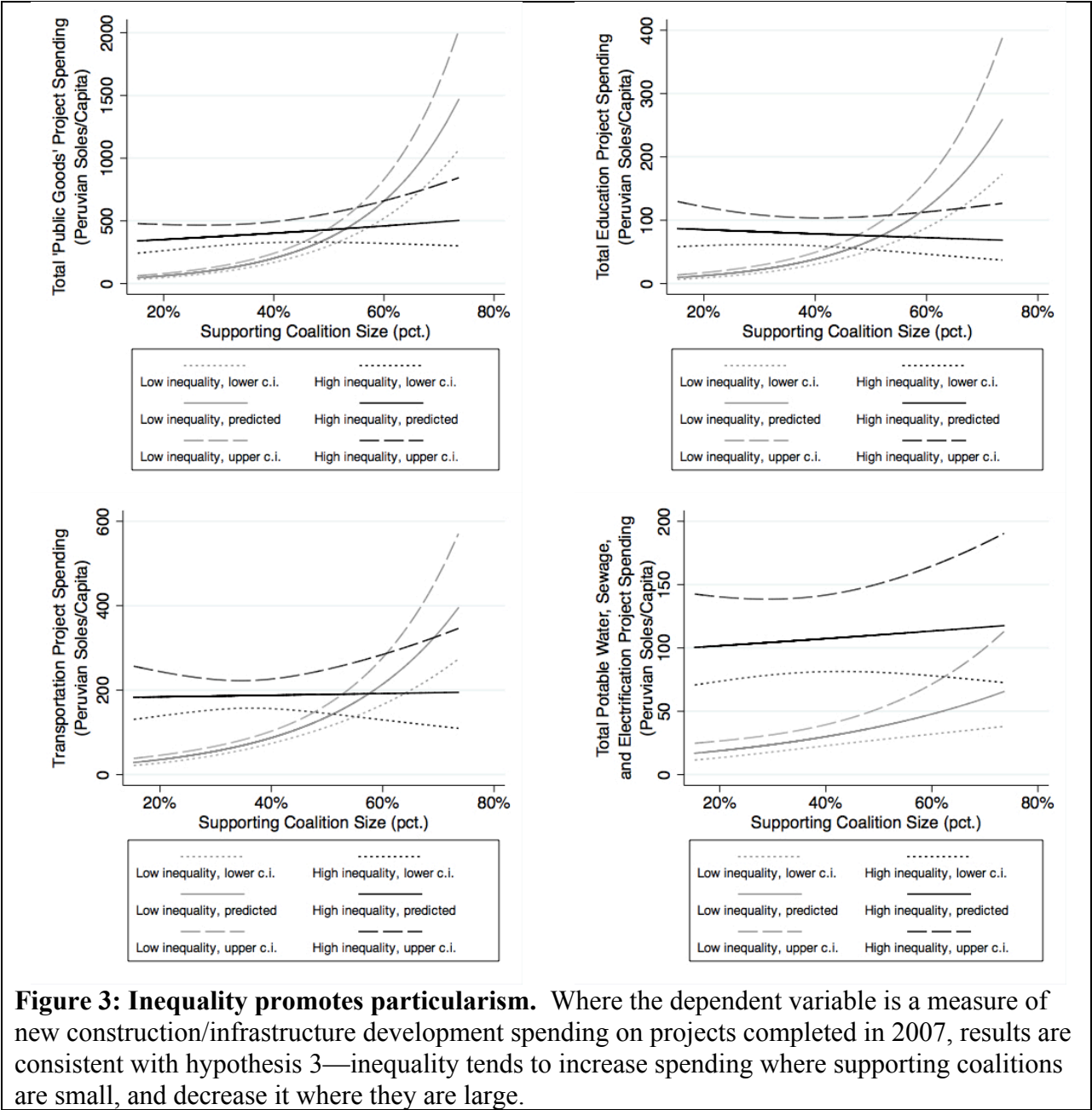
One concern, therefore, is that the results reported here are significant because important control variables—the independent variables of interest in the other chapters—are correlated with the independent variables of interest. One way to allay these concerns is to test each

interactive effect in a model where the other interactions are present. Therefore, I have tested each of the models with each of the other interaction and base terms from the dissertation.

In general, the results reported here are robust to the inclusion of these additional variables. There are a few exceptions, however, which deserve some note. Where all interactions and base terms are included, the models which use total spending in a given policy category frequently become insignificant. Directions of relationships do not change, however, and predicted values do not vary substantially. In addition, where one set of interactions and base terms or another is included as a control (but not all interactions) these results are more often significant. Therefore, the most likely explanation is that multicollinearity inflates the variance of these coefficients, leading to inefficient estimates. This explanation is consistent with the correlation of interaction terms and their base terms, which frequently are worrisome. For example, the inequality measure used here is correlated with its interaction (with supporting coalition size) at .76, opposition strength at .34, the opposition strength interaction with supporting coalition size at .15, as well as the standard of living (consumption) measure at .58. These correlations raise legitimate concerns about overspecification, multicollinearity, and inefficient estimates, especially where each interaction and all included base terms are included in a regression model. Variance inflation statistics, when all variables are included in a given model are very high, ranging between 12.6 and 35.4, depending on the independent variable and dependent variable of interest. Regardless, these numbers are high enough to suggest that inclusion of all independent variables of interest will generate false negative results. These very high VIF statistics further demonstrate the extreme robustness of these results, where they remain significant.

It deserves to be emphasized, that (a) project spending models, with a larger number of observations, are robust to these controls, (b) total spending models are robust to the inclusion of

each interaction and base terms in sets, (c) predicted values and the direction of relationships do not vary when these additional controls are included, and (d) total spending models have much



smaller numbers of observations, making them more susceptible to problems of variance

inflation through multicollinearity. Finally, the correlation between the independent variables of interest here (supporting coalition size, civil society density, opposition strength, and inequality)

is low enough that omitted variable bias should not be a concern, and where correlations are higher (such as between inequality and opposition strength, with r of .34), models are robust to the inclusion of the relatively well-correlated control variable.

Results

In general, results of the statistical tests described above support Hypothesis 3—that inequality tends to exacerbate particularistic exchange, having a impact on spending which differs depending on the size of the mayor’s supporting coalition. However, this effect—the tendency of inequality to exacerbate tendencies towards particularistic exchange—appears to be limited to the areas of spending where particularism is most likely. Specifically, the impact of inequality on particularistic exchange is only visible in infrastructure development/public works projects/new construction expenditures. Taken together, these results suggest that economic inequality does have some tendency to promote particularistic exchange, but particularism is not limited to high-inequality cases. Particularism is present both in relatively equal and relatively unequal municipalities.

In statistical models where the dependent variable was the logged per capita expenditure in both current and capital expenditures in a given area²², inequality had no visible effect on the relationship between supporting coalition size and expenditures. In short, inequality appears to have no discernible effect on general (current and capital) expenditures. In addition, inequality itself was insignificant where included individually and along with the interaction term.

However, regardless of whether the inequality variable and interaction term were included in models together or whether the inequality variable was included alone, the relationship between

²² These included twelve areas of spending, including administration and personnel, agriculture, education, energy and mining, industry, fishing, social welfare and women’s rights, health and sanitation, transportation, urban development and housing, total expenditures, and total expenditures in areas normally considered “public goods” (education, social welfare, health and sanitation, and transportation).

Table 2: Project spending/capita (Peruvian Soles)				
Extradispersed poisson regression				
	Total public works	Transport	Water, sewage, and electrification	Education
Supporting coalition size	11.146 (0.000)***	8.889 (0.000)***	4.386 (0.008)**	11.734 (0.000)***
Inequality (ownership Gini)	27.841 (0.000)***	25.254 (0.000)***	20.986 (0.000)***	31.387 (0.000)***
Inequality * Supporting coalition size	-52.371 (0.000)***	-43.918 (0.000)***	-20.572 (0.035)*	-60.697 (0.000)***
Consumption index	-0.943 (0.000)***	-0.182 (0.260)	-2.642 (0.000)***	-1.907 (0.000)***
Education (mean)	-0.561 (0.000)***	-0.446 (0.000)***	-0.310 (0.001)***	-0.637 (0.000)***
Urban population (logged)	-0.379 (0.000)***	-0.402 (0.000)***	-0.125 (0.140)	-0.318 (0.000)***
Municipal budget (Peruvian Soles, logged)	-0.105 (0.002)**	-0.102 (0.009)**	-0.214 (0.000)***	-0.118 (0.003)**
Debt service (pct.)	-12.514 (0.000)***	-2.161 (0.335)	-27.040 (0.000)***	-23.269 (0.000)***
Public works project private transfers (pct.)	71.615 (0.000)***			
Public works project spending/cap. (2005)	0.000 (0.386)			
Transport project private transfers (pct.)		0.333 (0.425)		
Transport project spending/cap. (2005)		0.000 (0.000)***		
Sewage, water, and electrification project private transfers (pct.)			0.282 (0.594)	
Sewage, water, and electrification project spending/cap. (2005)			0.001 (0.049)*	
Education project private transfers (pct.)				-0.77 (0.271)
Education project spending/cap. (2005)				0 (0.338)
Constant	7.678 (0.000)***	6.289 (0.000)***	8.637 (0.000)***	7.078 (0.000)***
Observations	1605	1370	1370	1370
p values in parentheses				
+ significant at 10%; * significant at 5%; ** significant at 1%; *** significant at .1%				

supporting coalition size and total expenditures (in a given policy area) remained significant.

Therefore, particularism appears to have a similar effect on expenditures, regardless of the level of inequality in a municipality.

Unlike the total expenditure statistical models described above, inequality does appear to have an effect on particularistic exchange in the area of spending where particularism is most likely—new construction, infrastructure development, or public works project spending.

Here, results tend to confirm hypothesis three—that inequality worsens particularism. However, these results show that, although particularism appears to be more common in more unequal municipalities, particularistic exchange is present even in relatively equal municipalities.

These results are most intuitively visible in figure 3. Where supporting coalition size is small, unequal municipalities (here, these are municipalities with an asset ownership Gini coefficient of .2) spend more than relatively equal municipalities (Gini of .1) in infrastructure development in all the areas for which data is available. This includes (a) education project spending, (b) transportation project spending, (c) health project spending, (d) electrification, sewage, and potable water project spending, and (e) the sum total of all these areas. Where supporting coalition sizes are larger, however, more *equal* municipalities spend more on these types of projects than relatively *unequal* municipalities. These models are also validated with a log-linear model (logged dependent variable with OLS regression) with total project spending as the dependent variable, demonstrating that these results are not a quirk of the methodology used.

These findings are consistent with theory that suggests that inequality worsens particularism. However, particularism is not limited to the high-inequality cases. The relationship between supporting coalition size is, in fact, most highly significant where inequality is relatively low.

Discussion

In general, the results reported and described above are consistent with hypothesis 3—that high inequality exacerbates existing tendencies for particularism. However, even where municipalities are more equal, total and public works (infrastructure development/new construction) expenditures are significantly driven by particularistic exchange.

In low inequality municipalities, expenditures are driven primarily by reciprocal exchange between voters and politicians. As identified in “Theory”, above, this means that municipalities will tend to spend more, and focus their expenditures in true public goods with large positive spillovers where coalitions of supporters are relatively large. Where supporting coalitions are small, however, and only comprise a small minority of local voters, politicians will face strong incentives to redistribute revenue to supporters, providing them with private or toll goods and excluding non-supporters. The result is relatively lower levels of spending on most government services where supporting coalitions are small, and relatively higher levels of spending where they are large.

In places where inequality is high, however, supporting coalition size becomes less important. This is because, as inequality rises, resources and power in the community are held in fewer hands, and it becomes more important for politicians to pursue the support of those elites who control resources. It becomes less important to seek the support of a coalition of voters, and more important to seek a supporting coalition of a small group of elites (or even a single individual or family).

Therefore, the number of voters supporting the victorious candidate in the most recent election is not an important predictor of government service expenditures where inequality is high. It is an important predictor, however, where inequality is low.

Why, therefore, do the results vary between models where the dependent variable is total spending, and the models where the dependent variable is spending on new construction? There are three possible answers.

The first possibility is that the smaller number of cases in the total spending models makes it more difficult to find statistically significant results. If this is the case, a more complete dataset would generate statistically significant results, similar to those in the project spending models.

Perhaps a more likely possibility, however, is that particularism is more likely, and therefore more visible in new construction spending because this is an area in which particularism and clientelism often finds expression. Scholars have found that construction expenditures tend to be a common outlet for corruption, clientelism, and particularism, making the observation of these phenomena more likely in construction expenditures, and less likely in other areas of the budget (Samuels 2001a; 2001b).

Finally, the relatively higher population of the cases included in these regressions may mean that particularism is less likely (see chapter 1), and if a full set of observations were available for total spending, these models may also be significant.

Conclusion

Earlier in this dissertation, I demonstrate that particularistic exchange between politicians and voters—the exchange of votes and political support for tangible government services—is an important driver of government service provision amongst Peruvian municipalities, and perhaps much of the developing world. I have then demonstrated that two factors—civil society and institutional checks and balances—have the potential to reduce or eliminate much particularistic exchange, which most scholars and policy-makers, after all, consider undesirable (Acemoglu, Ticchi, and Vindigni 2006; Adsera, Boix, and Payne 2003; Crabtree 2010; Escobar 1994;

Haggard and Kaufman 1995; Hicken 2010; Transparency International 2008b; 2009b; 2008c; 2009a; 2007; Trounstein 2008a; van de Walle 2003).

Here, I follow up with an examination of the most important threat to the generalizability of this study—economic inequality. Peru, and therefore, the sample examined here, may be particularly susceptible to the rise of particularistic exchange because of the high level of economic inequality present, and if economic inequality is an important driver of the results presented in chapters 2, 3, and 4, particularistic exchange may not be so important as this dissertation suggests.

In this chapter, however, I demonstrate that although economic inequality is an important driver of particularistic exchange, particularism is present across the full range of municipalities, including municipalities with relatively low levels of economic inequality.

These results suggest, therefore, that particularism is worse where facilitated by high levels of economic inequality, but is still present in relatively unequal municipalities.

Therefore, particularistic exchange is likely to be an important cause of government spending and service provision in a wide range of places outside of Peru—not only in places where inequality facilitates greater particularism through patronage and clientelism.

At the same time, these results suggest that inequality itself is undesirable in that it is likely to promote the particularistic provision of private and toll goods to elites, not to masses. The results imply, therefore, that high inequality, by worsening tendencies towards particularism, may impede the provision broadly-beneficial government services, and may discourage outcomes that are associated with the broad provision of public goods, like reduced infant mortality, improved mass education, greater economic development, and more thorough

development of human capital. In short, inequality is a problem in its own right that deserves attention.

Conclusion

Chapter 7

Background

The question, “why do some governments provide more services than others?” has been extensively analyzed in Political Science. In Comparative Politics, explanations have focused on the presence or absence of democratic institutions or other associated characteristics of democracy. In short, democracy causes greater public goods provision, either because electoral institutions broaden the number of supporters needed to keep a politician in office, or because the threat of electoral defeat creates incentives for politicians to buy off larger numbers of supporters with the provision of government services and other benefits (Baum and Lake 2003; Bueno De Mesquita, Smith, Siverson, and Morrow 2003; Lake and Baum 2001; Olson 1993; McGuire and Olson 1996).

According to the first theoretical approach, where electoral institutions require politicians to gain the support of larger numbers of voters, broadly-beneficial public goods provision will be more likely, because politicians are able to most efficiently buy the support of large numbers of voters where they provide public goods with large positive spillovers. Therefore, where electoral rules require larger coalitions to win, more public goods will be provided (Bueno De Mesquita, Smith, Siverson, and Morrow 2003; Bueno de Mesquita, Morrow, Siverson, and Smith 2002; Olson 1993; McGuire and Olson 1996).

According to the second approach, public goods provision will be greater, not where politicians are forced to buy the support of larger numbers of voters, but where competition makes it more likely that they will be thrown out of office (Baum and Lake 2003; Lake and Baum 2001).

Particularism Causes Service Provision

This focus on democracy, however, fails to explain much variation in public goods and government service provision around the world. For example, in decentralized regimes, sub-national jurisdictions vary greatly in the quantity of government services they provide, even where formal democratic institutions are constant across jurisdictions.

This apparent anomaly, therefore, raises an important question: What determines this variation in government service provision across regimes with identical, or nearly identical institutions?

One possible explanation, which has been under-studied in comparative politics, is that politicians' strategies for re-election often focus on the construction of networks of particularistic exchange. Such networks, sometimes called clientelistic or patronage networks, vary in size, and differences in public service provision may be a result in the exogenous variation of these networks. According to this explanation, developed more fully in the introduction and chapter two, politicians develop personalized and reciprocal relationships with voters, who support them by voting and through other means, and in return, politicians reward this support with government services. Where coalitions of supporters (as measured by vote share) increase in size, expenditures on government services also increase, as politicians spend to retain the loyalty of these larger numbers of voters.

In some ways, this theoretical approach is similar to the first theory presented directly above—that electoral rules promote the formation of “winning coalitions” of a particular size, which then determine the quantity of government services provided. Unlike the electoral institution explanation, however, the number of supporters politicians seek to buy off is not determined primarily by electoral rules. Instead, politicians generally seek to maximize the size

of their supporting coalition, regardless of electoral rules, in order to reduce future uncertainty about electoral outcomes. Politicians' abilities to generate large coalitions, however, are determined by exogenous factors, however, resulting in a great deal of variation in the sizes of supporting coalitions across governments.

Like Bueno de Mesquita, Smith, Siverson, and Morrow (2003), I argue that where politicians' supporting coalitions are small, they will face strong incentives to provide private or toll goods (excludable goods) to relatively small groups of supporters. Where these supporting coalitions are larger, however, the provision of broadly beneficial goods becomes more cost-effective, and incentives to provide excludable goods decreases, as positive spillovers become relatively more likely to benefit supporters. However, unlike Bueno de Mesquita et al., I argue that supporting coalition size is determined primarily by the size of particularistic networks, rather than by electoral rules, which do not vary across many sub-national polities.

To test these ideas, I use quantitative analysis of under-utilized statistical data on Peruvian local governments and jurisdictions available through the Peruvian national government. Peruvian local governance is the ideal setting for the study of particularistic exchange, because Peruvian local governments exhibit a unique institutional structure which makes particularistic exchange especially likely (and therefore, especially visible), and which makes the separate and interactive examination of certain characteristics—most notably, supporting coalition size and opposition strength—possible, in a way which is not feasible in other settings.

My quantitative and qualitative tests suggest that much government service provision is the result of a process which is described as inefficient (Acemoglu, Ticchi, and Vindigni 2006), undemocratic (Escobar 1994), and inherently undesirable (Transparency International 2007; 2008c; 2009a). In short, particularism drives expenditures and service provision to a significant

extent. Therefore, I examine a second research question here. This is, “What factors exacerbate, and what factors mitigate particularistic exchange”?

Opposition Strength and Particularism

Although the causes of particularism have only rarely been empirically evaluated in a comparative setting, scholars have often analyzed similar processes, and as a result, strong theory abounds which can be utilized to explain the dynamics of particularistic exchange.

First, scholars have argued, alternately, that institutional checks and balances, “veto players” or veto points, opposition strength, government fragmentation, and/or government polarization (a) exacerbates particularistic dynamics, or (b) mitigates particularism (Bawn and Rosenbluth 2006; Becher 2009; Gehlbach and Malesky 2010; Gerring and Thacker 2004; Haggard and Kaufman 1995; Heller 1997; Kunicová and Rose-Ackerman 2005; D. McKay 2009; Milesi-Ferretti, Perotti, and Rostagno 2002; Persson 2007; Rogowski 1987; Rogowski and Kayser 2002; Tsebelis 2000).

The first possibility is that a stronger opposition may mean that larger numbers of actors in legislatures or other political organizations need to be bought off with particularistic benefits, for themselves and their supporters, in order to pass and implement policy. In essence, the more players in the game, the more particularism there will be, as larger numbers of players’ support is bought with more excludable benefits (Gerring and Thacker 2004; Haggard and Kaufman 1995; Rogowski and Kayser 2002).

On the other hand, stronger oppositions may prevent particularism, providing some degree of oversight, and institutional checks, on mayors and legislative majorities who would otherwise prefer to provide excludable benefits to their supporters alone. According to this theoretical

formulation, stronger oppositions are likely to reduce particularistic exchange (Gehlbach and Malesky 2010; Gerring and Thacker 2004; Rogowski 1987).

In chapter three, I test the effect of opposition strength on particularism, using qualitative and quantitative techniques. I find that strong oppositions reduce particularistic exchange. Specifically, where mayors' supporting coalitions of voters are small (and therefore, where spending is more likely to be excludable goods, directed at key supporting constituencies), strong oppositions reduce levels of spending. However, where supporting coalitions are larger (and therefore, where expenditures are more likely to be in broadly beneficial, possibly public goods), expenditures tend not to differ in municipalities with strong and weak oppositions.

Civil Society and Particularism

A second factor which may exacerbate or mitigate particularistic exchange is civil society. But like theory regarding opposition strength, theory on the effects of civil society makes two, contenting predictions.

First, where civil society is dense, particularistic exchange may be reduced, as civil society groups press politicians for broadly-beneficial public goods, or at least reduced redistribution from the majority to the mayor's supporting minority coalition. Civil society groups may prefer broadly-beneficial services either because of norms of fairness, or because they prefer policies which will be more likely to them in some way, even if the alternative is high-reward and high risk (relatively higher benefits if services are targeted at an individual, his family or village, but no benefits if services are targeted elsewhere) (Escobar 1994; Putnam, Leonardi, and Nanetti 1994).

On the other hand, civil society groups may promote particularism by using pressure tactics to encourage politicians to provide them with particularistic benefits (Aldrich 2008; Aldrich and Crook 2007; Aldrich 2011).

In chapter four, I test these ideas using statistical and qualitative techniques. I find that civil society density, like opposition strength, is associated with lower rates of particularism. Specifically, where supporting coalition sizes are small, and therefore, where expenditures tend to be targeted at excludable benefits for mayoral supporters, civil society density is associated with lower expenditures on government services, as civil society groups fight to prevent redistribution from majorities to minorities of mayoral supporters. Where mayoral supporting coalitions are large, however, and expenditures are more likely to result in broadly beneficial public goods, civil society density is associated with greater expenditures, as civil society groups pressure local governments for greater quantities of broadly beneficial public goods.

Inequality

Economic inequality is a third factor which is likely to exacerbate existing tendencies for particularism (Drinot 2006; Galor, Moav, and Vollrath 2009; Karstedt 2003; Munoz, Paredes, and Thorp 2007; Sives 2002; The World Bank 2003). In addition, the high level of economic inequality in Peru may be the single greatest threat to the generalizability of the findings of this dissertation. Therefore, I examine the effects of economic inequality on particularism by constructing a new index of inequality in asset ownership, and testing the effect of this index on particularistic exchange.

I find that, although economic inequality worsens particularism—increasing spending where supporting coalitions are small, and decreasing it where supporting coalitions are large—particularism is present even in low-inequality settings. Where inequality is low, expenditures

are a function of supporting coalition size, suggesting particularistic, excludable benefit provision to small supporting coalitions and generalized, public goods provision where supporting coalitions are large. Where inequality is high, however, supporting coalition size is insignificant as a predictor of expenditures, suggesting that in high-inequality cases, mayors choose to provide goods only to small groups of relatively wealthy and powerful voters.

Although these findings suggest that inequality is a cause of undesirable spending outcomes, it also indicates that expenditures respond to particularistic incentives, even in low-inequality settings. As a result, it seems likely that the results of chapters two through four are generalizable to at least some settings outside of Peru.

Implications

These findings, taken together, carry important implications for scholars' understanding of the way democracy operates, and how to make ostensibly democratic governments function better, even where particularism is prevalent.

Democracy sometimes operates through particularism

First, although scholars have sometimes argued that clientelistic or particularistic politics are antithetical to democracy (Adsera, Boix, and Payne 2003; Crabtree 2010; Escobar 1994; Hicken 2010; Kaufmann et al. 2010; Keefer 2007; Roniger 1994), the findings present here suggest that, in some settings at least, democracy *is* particularism, in the sense that many of the benefits brought by “democratic” institutions like free and fair elections work through a mechanism of particularistic exchange. That is, the public benefits of electoral democracy—which scholars have typically connected with the nature of electoral institutions and the presence and degree of electoral institutions—are, in many cases at least, brought about through processes which many have called undemocratic.

These results do demonstrate that, under certain conditions, these processes of particularistic exchange produce undesirable outcomes, at other times and under other conditions, they produce very desirable results. Specifically, governments controlled by small cliques of voters are likely to distribute benefits in ways that benefit only that small minority. However, this same process of particularistic exchange can generate broadly based public goods where these “cliques” of voters are larger. My findings support the speculations of some scholars who argue that patronage networks, when broad, can be beneficial rather than harmful, and that clientelistic practices can coexist with post-industrial, wealthy, democratic polities, including in OECD countries like Japan and Austria (Gunes-Ayata 1994b; Scheiner 2007; Mustapha and Whitfield 2010; Wilkinson 2007).

In general, these results suggest that Lake and Baum’s (2001) focus on competition, and Bueno de Mesquita et al.’s focus on electoral institutions and minimum winning coalition size is justified, but incomplete. My results suggest that electoral institutions can manipulate minimum winning coalition sizes and thereby increase or decrease government service provision. Likewise, the presence of electoral competition is an important necessary (but not sufficient) condition for the broadly-beneficial provision of government services. A third factor, however—the size of a politician’s supporting coalition—must also be taken into account in some (perhaps most) settings in order to accurately predict the level of government service provision likely to be provided.

Particularism can be manipulated

Second, several institutional factors can be manipulated by constitution-writers and reformers to generate better governance and improved government service provision.

Electoral institutions

The first of these factors is the nature of electoral institutions. My findings demonstrate that where the supporting coalitions of voters for victorious candidates and parties are larger, more government services—and more public goods, specifically—are the likely outcome. The implication, therefore, is that earlier conjectures about the role of electoral institutions are, in part, true (Bueno De Mesquita, Smith, Siverson, and Morrow 2003; Scheiner 2007). Electoral institutions can be manipulated to generate larger victorious coalitions of supporters, and therefore, greater public goods provision. That is, where electoral rules require majorities (either through legislative coalition formation, or through single member districts), greater public goods provision is more likely.

In the case of Peru, one clear implication, therefore, is to do away with Peru's electoral rules which guarantee mayoral parties a majority on municipal councils. By doing away with these rules, Peruvian local governments controlled by minority-support mayors will be required, in order to institute policy, to form coalitions with opposition parties in municipal councils. The end result will be governing coalitions of parties which represent majorities, or near majorities, of voters, making broadly-beneficial public goods provision more likely in a larger number of municipalities.

Opposition strength

A second manipulable factor which is associated with the provision of greater public goods and fewer excludable goods is the strength of local opposition parties in municipal councils. Here, too, electoral rules have a bearing on the size of opposition parties. And here, too, electoral rules which generate more proportional results, in the Peruvian case, will generate better local government service provision in the sense that they will be more likely to produce

public goods provision and less likely to generate excludable goods provision. Another possible method to improve public goods provision is to require supermajorities for approval of certain types of local legislation (spending legislation is a logical example), which would give more leverage to legislative oppositions and minorities.

Electoral aggregation

A final factor which can be manipulated to make particularistic exchange less harmful is through the manipulation of jurisdictional sizes for electoral purposes. In chapter two, I demonstrated that particularistic exchange is more prevalent in small municipalities. This is because in small jurisdictions, politicians find it less costly to gather information on who is a supporter, and who supports the opposition, because electoral returns reported in smaller communities make it easier to trace electoral support to groups and communities, and because social networks and direct observation make contact with larger numbers of local voters, directly or indirectly, more frequent. Therefore, in order to reduce the effects of particularistic exchange, reformers and constitution writers could manipulate jurisdictional boundaries or require a minimum population for local jurisdictions in order to make information-gathering on local voting patterns more costly. Of course, such advice must be taken with caution, as any increase in jurisdictional size may also increase the cost of other types of information, including information about the needs and preferences of local voters.

Generalizability

As with any study which samples from a single national case—in this case, the data source is a complete cross section of Peruvian municipalities, with data from 2005, 2006, and 2007—the results of the analyses presented here will face concerns about generalizability to other types of

settings. To what extent can these findings be extrapolated to municipal, regional, and national governments elsewhere around the world?

As in any study, it is impossible to address every concern about generalizability.

Nevertheless, there are strong reasons why these findings may be applied to other settings.

First, Peru is a country with a tremendous amount of diversity in terms of level of economic development across municipalities. While many municipalities high in the Andes and deep in the Amazon are as poor as towns and villages anywhere on the planet, some districts of Lima and other major cities demonstrate average standards of living which are at least even with some of the middle-income countries of Western Europe. Second, intra-municipality inequality varies substantially across the country, and is a threat to generalizability addressed in chapter five. Finally, although Peruvian municipalities possess a unique institutional structure which makes it possible to observe the interaction between different factors which appear to drive particularism and government service provision, these institutions—including strong executives and disproportionate assemblies—are common elsewhere (just not in the same combination).

On the other hand, there are important factors which do not vary across Peruvian municipalities, which scholars have associated with fiscal outcomes, such as politicians' and representatives' positions in the institutional hierarchy (Adler 2002; Arnold 1979; Cain, Ferejohn, and Fiorina 1987; Collie 1988; Goss 1972), institutional structures such as parliamentarism or bicameralism (Cheibub 2006; Cutrone and McCarty 2006; Gerring and Thacker 2004; D. McKay 2009; O'Halloran and Lohmann 1994), and political culture (Stokes 2005; Putnam 1995), which do not vary, or vary very little across Peruvian municipalities. Such factors may substantially encourage or prevent clientelism in ways which have not been (and in some cases, cannot be) explored in the Peruvian context. Therefore, the results presented here

should be extrapolated with great caution to settings where these important variables take on values different from those observable in Peru—for example, settings with strong, ideological political parties, or very different political cultures or institutional structures.

Future Research

The findings presented here raise a long list of interesting and important questions which should be the focus of future research.

First, if elected mayors attempt to use the provision of government services to build and maintain clientelistic networks in order to pursue re-election, is such a strategy successful? Are mayors who spend more on public services more likely to be re-elected, and is the relationship stronger for particular types of spending?

Second, scholars in comparative politics have argued that single member district, majoritarian political systems are more susceptible to pork barrel spending and other types of geographically-based particularism than proportional systems (Gerring and Thacker 2004; Milesi-Ferretti, Perotti, and Rostagno 2002; Polinard, Wrinkle, Longoria, and Binder 1994; Trounstein 2008a; 2010). The evidence presented here strongly suggests, however, that proportional systems are not immune from the temptations of pork barrel spending. Therefore, is there a geographic dimension to the provision of government services in Peruvian municipal governments and proportional governments elsewhere? For example, are mayors more likely to focus spending on villages or regions where supporters are more common, or do expenditures in this kind of setting follow class or sector lines?

Third, although scholars have often asserted that particularism, clientelism, and patronage is strongly undesirable, the widespread pursuit of particularistic strategies by Peruvian municipal politicians seems to suggest that many voters prefer particularism to broadly-beneficial public

goods. Therefore, are voters, on average, more satisfied with local governance is more prevalent?

Finally, although the particularistic provision of private and toll goods may effectively exclude large segments of local populations, theory and anecdotal evidence from Peru and elsewhere suggests that particularistic policies are often most beneficial for the poor whose demands can more inexpensively be met, on average, than the demands of wealthy elites (Dorsett 1977; Ferejohn 1987; Johnson 1969). Therefore, are outcomes better where particularistic exchange is more common? And do particularistic politicians do more to improve conditions for the poor, for example, by improving nutrition, literacy, and income, and by reducing infant mortality and the incidence of disease?

Conclusion

In short, this dissertation does much to answer questions about (a) how democracy functions in providing services for voters, (b) how particularistic exchange—which may be undesirable—can be reduced by electoral institutions and other formal rules, and (c) the settings in which particularism is most common. In addition, the results presented here bring into question many scholars' normative assertions about the undesirability of particularistic exchange, which appears to often (though not always) generate desirable outcomes. Certainly, though, this analysis is not the last word, and these questions deserve much greater examination.

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