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**Disobedient Markets:
Street Vendors, Enforcement, and State Intervention in
Collective Action**

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**Disobedient Markets:
Street Vendors, Enforcement, and State Intervention in
Collective Action**

by

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DISSERTATION

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Dedicated to Nana Jo, Aunt Maureen, and everyone who shared their stories.

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**Disobedient Markets:
Street Vendors, Enforcement, and State Intervention in
Collective Action**

by

Calla Marie Buzy Hummel, Ph.D.
The University of Texas at Austin, 2017

Supervisor: Raúl Madrid

Under what conditions do informal workers organize? Contrary to conventional wisdom, informal workers organize in nearly every major city on every continent and officials often encourage them to do so. I demonstrate that under certain conditions, governments offer private benefits to informal workers who organize self-regulating associations, which solves the workers' collective action problem. This leads to another puzzle: why do governments pay people to organize, especially people who routinely violate the law? I argue that where the state cannot stop violators, it may prefer to pay violators to organize a self-regulating group rather than enforce the law itself. The state can then bargain over legalization, regulation, and enforcement with a representative group.

The project challenges assumptions about collective action in marginalized communities and offers a new theory of collective action where informal workers interact strategically with the state. I argue that where enforcement is costly, states may take an active role in encouraging potential violators to organize and, once organized, regulate themselves. Recent work on the politics of enforcement demonstrates

that governments reap political benefits by not enforcing laws against poor citizens in informal work and housing. However, foregoing enforcement can create additional political, public health, and material costs. I extend this work by using enforcement costs to explain why informal workers organize. I suggest that where governments successfully encourage potential violators to organize, governments keep the political benefits of forgoing enforcement while civil society organizations assume partial responsibility for enforcement.

My fieldwork included 14 months in Bolivia and Brazil working as a street vendor, gathering 92 interviews, and administering two surveys. Chapter 1 of the project develops the puzzle—why do informal workers organize, given barriers to collective action—in the context of current research. Chapter 2 presents the theory and then formalizes it in a game theoretic model of collective action. Chapter 3 justifies the model’s assumptions and demonstrates how its dynamics work in an ethnography of street vendor organizations and their interactions with the city government in La Paz, Bolivia. Chapter 4 illustrates how the model explains variation across people and places by comparing street vendors in La Paz to their counterparts in the neighboring city of El Alto. I then compare the highly organized street vendors in La Paz to the sparsely organized vendors in São Paulo, Brazil. Chapter 5 tests the theory on out-of-sample data: 26,304 self-employed respondents in 17 countries from the Latin American Public Opinion Project. I analyze the data with logistic regressions and then move to a nonparametric machine learning framework to address concerns about identifying assumptions. I find similar patterns in different types of data across different analytic frameworks, lending support to the theory.

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Chapter 1

Introduction

On Saturdays in La Paz, Bolivia, Rosa sells champagne, photographs, and car decorations to newlyweds in the neighborhood plaza. Rosa is the founding *secretaria general*, or director, of the neighborhood's new street vendor union. The position is unpaid and the \$10 to \$50 that she makes as a *champanera* every Saturday supplements the money that she makes scavenging recyclables at night. In São Paulo, Brazil, Renato sells cheap electronics from a cardboard box on 25 de Março, Brazil's largest street market. Renato can make up to \$100 on a good day, even though he spends a third of his time running from the military police. Like Rosa, he works as a vendor to scrape by on rent and support his daughter, but unlike Rosa, Renato does not belong to a street vendor organization and he dismisses work-based organizing as futile.

Informal workers like Rosa and Renato make up roughly 50% of the global workforce (Vanek et al., 2014, p. xi). Scholars (e.g., Castells and Portes (1989)) and policymakers (e.g., Perry (2007)) often view informal workers as a hindrance to political and economic development. The conventional wisdom holds that informal workers break laws, avoid taxes, produce less and participate less in civil society than

formal workers (King and Rueda, 2008; Schneider et al., 2010). Governments from Nigeria to Brazil launch formalization programs to bring workers into state-regulated market and political structures, often aided by international organizations like the World Bank (see World Bank 2008), but these programs usually see anemic enrollment. Additionally, external program evaluations find uneven or negligible benefits for the informal businesses and individual that do enroll (Bruhn and McKenzie, 2014).

For decades, comparative research has found that informal workers rarely organize or participate in civil society and political life, and that this atomization stunts political and economic development (Castells and Portes, 1989; Perry, 2007; Rueda, 2007). For example, Castells and Portes (1989) conclude that, "The more the informal economy develops, the more economy and society become relatively autonomous spheres of social action" (p.32), and argue that informal work is "disenfranchisement of the institutionalized power conquered by labor" (p.11). Scholars explain informal workers' low political participation with their high barriers to collective action, particularly an uncertain legal status, high turnover, low income and education, and high costs to organizing (King and Rueda, 2008; Naylor, 2004; Kurtz, 2004, p.265).

However, recent research documents extensive variation in the degree to which informal workers organize and participate in civil society and national political systems (Agarwala, 2013; Bhowmik, 2012; Holland, 2014). While plenty of workers eschew any organization, others form groups of dozens to hundreds of workers, often encouraged by bureaucrats and politicians (WIEGO, 2016; Bhowmik, 2012, p.23-24, 197). Renana Jhabvala, a former chairperson of an international network of street vendor activists, claims that "In every city in the world, there is always some organizing among street vendors (Bhowmik, 2012, p. xvi)." In Bolivia, Chile, South Africa, South Korea, and India, national informal worker organizations can represent

millions (Agarwala, 2013; Bhowmik, 2012; Lazar, 2007a).

Why do informal workers organize to lobby the state? Why did Rosa found a street vendor union while Renato did not? Both are young, poor street vendors in Latin American metropolises, but their organizational and, by extension, political participation is very different. Hundreds of studies on collective action in disparate contexts find that resources are key to organizing: in places and among individuals with more resources—especially experience, money, and time—labor, civic, and political organizations are much more likely (Hochstetler, 2012; McCarthy and Zald, 1987; Ostrom, 1990, 2007; Putnam et al., 1994; Tilly, 1978). Yet people with few resources do organize and stand to benefit significantly from political participation: where informal workers organize, they can improve their working conditions and win concessions from the state, like licenses, health care, and subsidized loans (Bhowmik, 2012; Blofield, 2012, p.6).

For example, street vendors typically¹ hold jobs in the informal sector, where their pay is low, precarious, and variable, their work conditions dangerous and stressful, and social security or health benefits are rare (Neuwirth, 2012; de Soto, 1989). While most do not belong to any work-based organization, a growing and politically active minority does (Agarwala, 2013; Tassi et al., 2013; Fernández-Kelly and Shefner, 2006). In India and Bolivia, where street vendors formed national informal worker organizations, the organizations have negotiated with the state to largely regulate themselves (Tassi et al., 2015, p.92), receive money for public works, and extend health benefits (Agarwala, 2013, p.3-4). Lazar (2007a) argues that in El Alto, Bolivia

¹Formal street vendors can exist, though they are rare. For example, owners of licensed food trucks or permanent artisan stalls at municipal markets that pay taxes and follow all local regulations could simultaneously be street vendors and formal businesses.

"street traders construct themselves as collective political subjects with the capacity to confront and negotiate with the state" (p.179). How did supposedly atomized individuals achieve this level of political engagement?

I argue that where enforcement costs are high, the state benefits from encouraging violators to organize self-regulating groups. I show that governments can offer private benefits to informal workers who organize self-regulating associations, which solves the workers' collective action problem. Political entrepreneurs in informal sectors can use state-supplied selective incentives to make it worth their colleagues' time to join and participate in informal workers' organizations. Once workers organize, the state can bargain over legalization, regulation, and enforcement with a representative group. The group, in turn, enforces laws more thoroughly than the state could itself.

However, state payments² to informal workers lead to another puzzle: why do governments pay people to organize, especially people who routinely violate the law? Where people find it easier to violate a policy than to comply, many will break the law, which drives up enforcement costs for the state. I argue that states with lower capacity are particularly constrained by enforcement costs because they do not have the material or political resources to cover increasing costs. When enforcement costs rise, most states respond but lower capacity states in particular look for solutions that do not draw on budgetary or human resources. One option that governments

²Some governments offer cash payments to informal workers and other violators: vendors reported that past city administrations in La Paz paid leaders to cooperate and El Alto has an agreement to return half of all licensing fees to street vendor organizations (see chapters 3 and 4). In India, the government issues organized street vendors debit cards for health care expenses (Agarwala, 2013, p.3-4). In many more cases, governments offer potential violators incentives that can be used for material gain. In this project, I primarily discuss licenses, which in Bolivia, Brazil, and many other places are resold on secondary markets for cash and can make an informal business more predictable, stable, and lucrative. Thus, I use "payment" broadly to mean cash payments as well as less liquid benefits, like licenses or restricted-use debit cards.

in Bolivia, India, and other countries have found is to delegate enforcement to civil society, and, in the process, materially encourage new civil society organizations to form.

In this project, I use the cases of Bolivian and Brazilian street vendors to argue that state enforcement costs and individual resources like education shape resource-poor actors' decisions to organize. Street vendors are 4% to 15% of workers in major cities like Lima, Hanoi, and Johannesburg (Vanek et al., 2014, p.47). Street vendors typically have little formal education or other social capital relative to other workers and earn roughly minimum wage (Bhowmik, 2012, p.8). Globally, most street vendors eschew organization, but a sizable minority unionizes and some of these form city- and country-wide federations, making the population empirically relevant and theoretically appropriate for developing the theory.

The dissertation presents twin puzzles—why do some people with very few resources organize while most do not, and why do states sometimes pay potential lawbreakers to organize—and resolves both with a theory of strategic state intervention in civil society. I use cases of organized and unorganized street vendors in La Paz and El Alto, Bolivia and São Paulo, Brazil to develop the theory, formalize the theoretical core in a game theoretic model, and provisionally test its implications with a dataset of self-employed people in Latin America.

1.1 Contributions

The main contribution of this dissertation is to formally demonstrate broad conditions under which low-resource actors like informal workers organize. Half of all workers are informal and the few studies on informality and political participation find that

informality decreases participation (Castells and Portes, 1989; King and Rueda, 2008; Kurtz, 2004; Lindvall and Rueda, 2014; Perry, 2007; Roberts, 2002). In contrast, I find that where workers increase enforcement costs for the state—which is much more likely in informal markets than formal employment—the state may incentivize organized political participation. This may be the main avenue for low resource actors like informal workers to overcome collective action problems, since effective selective incentives tend to demand significant resources. The state—as a large, established, and resource-rich organization—can provide selective incentives where individual activists cannot. Members benefit from resulting organizations that advocate for better policy, coordinate interests and information, and provide services.

The dissertation also contributes to comparative political science by formalizing political context (Tarrow, 2011). The formal model demonstrates that these outcomes stem from interactive as opposed to top-down processes: informal workers and authorities create the environment in which they make decisions about collective action. Additionally, the model endogenizes selective incentives and in doing so, partially endogenizes collective action to the political process. The model includes equilibrium outcomes where people who would not otherwise organize do so in anticipation of policy input or legal benefits.

Political bargaining processes can involve legalizing or formalizing people and activities that were previously outlawed. This process brings marginalized workers and communities into state regulatory structures while giving them reasons to participate in and support government projects. In this way, legalization and formalization can contribute to state building projects and strengthen civil society. Additionally, I demonstrate that the dimensions and characteristics of informal work and gray markets are endogenous to state actions. Bruhn and McKenzie (2014), Soto (2000), and

others find that most formalization policies have minimal effects and many states know that large informal sectors are a persistent reality. For policymakers who are willing to work with informal businesses on development and civil society projects, paying workers to organize and then delegating enforcement to those organizations is a strategy that has legalized workers while strengthening civil society and local bureaucracies.

1.2 Definitions

The estimates of informal workers relative to formal workers stay relatively consistent across different operationalizations of informality, like self-employed, working for a micro-enterprise, or not receiving legally mandated compensation (Ronconi, 2010, p.719). Due to these overlapping but contested definitions, it may be more intuitive to think of informality as a continuum (Guha-Khasnobis et al., 2007, p.3). On one end, unregistered street vendors sell counterfeit goods, do not work under labor regulations, and pay no taxes and fees. These workers may have some colleagues who sell imported counterfeits but also locally-produced goods and who pay licensing fees to the municipality. Moving along the continuum, a corner café may be registered and licensed by the health department, but have an owner who does not report cash revenues on taxes and pays employees under the table to avoid social security. Even large businesses that we reflexively consider anchors of the formal end of the continuum regularly skimp on labor laws, falsify documents to under-report taxes, and subcontract operations to less formal firms (Castells and Portes, 1989; Lopez, 2007; Nordstrom, 2007).

The project takes individual street vendors as the primary units of analysis

and their decisions to create work-based organizations or not as the outcome of interest. The project definitions in Table 1 designate a large and heterogeneous part of the workforce as informal, while acknowledging that most workers and markets use a mix of formal and informal practices. The empirical literature has not reached a consensus on definitions of informal economic activity, and so I construct my definitions to be comparable with the most prominent studies, particularly Holland (2016), Castells and Portes (1989) and de Soto (1989).

1.3 Methods

The dissertation employs an integrative multi-method research design to support the weaknesses of each method with the strengths of another (Seawright, 2016, p.9) and because informal sector research is plagued by data paucity. The project employs ethnography for its in-depth observation of micro-level processes over time (Katz, 1997; Auyero, 2012). Surveys and interviews enable initial comparisons to larger groups of people within the same city. Game theoretic models can then assess the logical consistency of the theory and formalize the qualitative findings in order to derive clear expectations for other cases (Clarke and Primo, 2012; Wagner, 2010). Finally, logistic regression and machine learning analyses on a dataset of self-employed people allow for a provisional test of the theory's predictions on out of sample data (Breiman, 2001a).

I selected La Paz as a case because the metropolitan area hosts one of the largest street vendor organizations in the world: the Confederation of Street Vendors of Bolivia has over 700 affiliated groups, which range in size from 24 to over 20,000.

Table 1.1: Project definitions

Term	Definition
Informal work:	Any transaction of money, goods, or services in which the participants ignore relevant tax, reporting, <i>or</i> licensing requirements.
Informal worker:	A worker who does not pay taxes on taxable earnings, does not hold a license for her work when one is required, <i>or</i> is not part of a mandatory social security system. Falling into any one of these categories makes a worker informal for the purposes of this study.
Street vendor:	A person who sells any good outside and on public land at least once a week. Note that street vendors are not inherently informal but most are in practice (Bhowmik, 2012; Roever, 2005; de Soto, 1989).
Street vendor organization:	A registered group whose members are mostly street vendors from the same urban area and that states it represents street vendors in its bylaws.
Selective incentive:	A private benefit that people receive for participating in a collective endeavor (Hardin, 1982; Ostrom, 2007).
Negative externality:	A cost that an actor's actions create for an external actor.
Collective action problem:	Any issue that prevents people from working together when doing so is in their mutual interest (Olson, 1965).
Public good:	Anything that everyone can benefit from without reducing its value once it is provided; a good that is non-excludable and non-rivalrous (Ostrom, 1990, 2007).

Mine and others' interviews (Lazar, 2007a; Tassi et al., 2013) suggest that it has at least 250,000 members from its strongholds of El Alto and La Paz, as well as members in other Bolivian cities. Lazar (2007a) claims that most adults in El Alto belong to informal sector unions (p.53). Thus, the Confederation is one of the largest informal workers' organizations in the world. Conversely, the largest informal workers' organization, the Self-Employed Women's Association in India, claims 1.9 million members and includes many street vendors (SEWA 2009). Proportionally, the Bolivian confederation is the largest street vendor and informal worker organization, as Bolivia's entire population is 10 million.

São Paulo, Brazil serves as a comparison because its street vendors and their organizations are typical of large cities, according to surveys and histories of street vendor organizations globally (Bhowmik, 2012; WIEGO, 2016). Like Lima, New York, and Hong Kong, tens of thousands of people work in São Paulo as street vendors. The sector serves a "shock absorber for the labor market" (Pamplona, 2013, p.226), with people turning to street vending when they find themselves out of work. While many people cycle in and out, a core of career street vendors anchors the sector. Career street vendors control the best selling spots and may have a higher level of job security and certainty from licenses and informal contracts. Still, most career street vendors in São Paulo, similar to many other large cities, do not join vendor organizations.

Ethnography is particularly suited for studying processes and systems of informal rules because it uses in-depth observation and interaction over time, making it ideal for both collective action and informal sector research (Katz, 1997; Auyero, 2001). Ethnographic methods use participant observation—observing actions, interactions, and conversations repeatedly—to assess what participants have told the researcher in conversations and interviews (Geertz, 1973). Through repetition and ob-

servation over months, ethnography offers far more opportunities to falsify hypotheses and revise expectations than purely interview-based methods (Jerolmack and Khan, 2014).

Formalizing ethnographic findings through a game theoretic model develops the internal logic of the theory and facilitates generalization. Game theory makes explicit the underlying assumptions that every theory relies on, and once these assumptions are clear, readers can evaluate if the assumptions logically lead to the stated conclusions (Clarke and Primo, 2012). Furthermore, the model's assumptions are grounded in ethnographic data. For example, the model assumes that informal workers approach organizing decisions with a rational, cost-benefit calculation and that once formed, organizations self-regulate. The ethnographic data demonstrates that street vendors in La Paz and their organizations do both. Finally, formalization yields clear observable implications that can be falsified or confirmed with new data.

Moving to new analyses and data, machine learning is much more flexible than standard statistical models because it requires no parametric assumptions about the data (Breiman, 2001a; Muchlinski et al., 2016). This feature is particularly useful for large datasets that violate core regression assumptions, like the regional survey data that I use as a provisional test. It is also useful for theoretical areas in which proper model specification is largely unknown and widely debated, which is the case in collective action research. Finally, machine learning models can accurately find what data predicts other data, and typically outperform logistic regression and other common statistical models (Muchlinski et al., 2016, p.88).

1.4 Key Concepts

1.4.1 Collective Action

People with shared interests often fail to work together due to a set of common challenges known as collective action problems (Axelrod, 1984; Marwell and Oliver, 1993; Hardin, 1982). Olson (1965) demonstrates that people do not have an incentive to work together for their common interest unless they receive a private benefit. Overcoming this problem is particularly difficult for large, diffuse groups and, in most times and places, informal workers constitute a large, diffuse group.

Research on the informal economy shows that informal workers exist in every country and that informal jobs make up most employment opportunities in many places (Vanek et al., 2014; WIEGO, 2016). Schneider, Buehn, and Montenegro (2010) estimate that 19% of the world's GDP comes from informal activity, ranging from national highs of 68% of GDP in Bolivia and Georgia to lows of 8% in the United States and Switzerland (p.20-24). Informal workers typically work long hours to make approximately minimum wage, their jobs are often stressful and dangerous, and many also maintain a household (Bhowmik, 2012, p.6-8, 20-21). Most do not have extra time or money to attend meetings or pay dues, and when they do, family, health care, or rest come first. Due to these barriers, informal workers face common but intractable collective action problems.

Scholars disagree on how people overcome collective action problems. Olson (1965) demonstrated that selective incentives—private benefits for participants—can resolve problems, but Oliver (1980) shows that providing selective incentives presents another collective action problem. Axelrod (1984) demonstrates that with enough time and interaction, groups evolve stable participation norms and Ostrom (1990)

shows that these can be complex institutions. Still, many longstanding groups do not create these arrangements. Marwell and Oliver (1993) demonstrate that large, diffuse groups can solve collective action problems if one resource-rich actor provides the outcome or covers costs (p.10, 20). Similarly, Hardin (1982) demonstrates that actor heterogeneity makes it easier for actors to coordinate contributions (p.67-69), which empirical studies confirm (Grossman and Baldassarri, 2012).

Researchers disagree on why informal workers organize. Many scholars assume that they do not organize (Naylor, 2004; Perry, 2007). These expectations follow the predictions of the larger collective action literature, which finds that people with fewer resources are less likely to participate in social movements, political parties, and unions than people with more (Ostrom, 2007; MacCarthy and Zald, 1973; Tarrow, 2011). However, Table 2 lists studies that document informal worker organizations all over the world.

Resources and political context shape who participates in civil society (Cook, 2012; Hochstetler, 2012; Holland, 2015; McAdam, 1982; Ostrom, 2007; Putnam, 2001; Tarrow, 2011; McAdam et al., 2003). On an individual level, resources largely explain who organizes and participates and who does not: people with more education, income, free time, and social connections form and participate in civil organizations while people with less tend to abstain (Hochstetler, 2012; Murillo, 2001; Karcher and Schneider, 2012). On a national level, political context largely explains why some places see much higher levels of participation than others: states that create a political context with opportunities for participation—for example, through voting, participatory budgeting, free public association, or broad consultation laws, among many other possibilities—see higher levels of participation (Flavin and Hartney, 2015; Ostrom, 1990; Tarrow, 2011). Conversely, as states encourage less of this behavior

Table 1.2: Selected case studies on informal workers and their organizations

Study	Location	Workers	Level of Organization
Agarwala (2013)	India	Home workers & street vendors	Regional and national
Bhowmik (2012) (edited volume)	Global	Street vendors	Range: Neighborhood to national organizations
Blofield (2012)	Bolivia & Costa Rica	Domestic workers	National
Cross (1998)	Mexico City	Street vendors	Neighborhood
Duneier and Carter (1999)	New York	Street vendors	None
Gowan (2010)	San Francisco	Recyclers	None
Goodfellow (2015)	Kigali & Kampala	Motorcycle taxis	Citywide
Grossman (2017)	Lagos	Market vendors	Citywide
Holland (2014)	Bogotá, Lima, & Santiago	Street vendors	Citywide
Hondagneu-Sotelo (2001)	Los Angeles	Domestic workers	Citywide
Itikawa (2010)	São Paulo	Street vendors	Neighborhood
Lazar (2007a)	El Alto	Street vendors	Citywide and national
MacGaffey and Bazenguissa-Ganga (2000)	Paris & Brazzaville	Import & export	None
WIEGO Database (2016)	Global	Varied	Range: Neighborhood to national

or discourage participation with restrictive laws and outright repression, they see less participation overall and individuals factor this environment into their political decisions (Davenport, 2007; Ritter and Conrad, 2016; Levitsky and Way, 2010).

Researchers do not agree on which theoretical components or empirical factors matter most for participation or how they interact. Only a few studies, like Ostrom (2009), Tarrow (2011), and Schelling (1978), consider civil society formation as a process that brings various parts together at different points and in potentially interactive ways. However, these studies operate at a level of abstraction that complicates operationalization and falsifiability in empirical studies.

Ostrom (1990) and Tarrow (2011) might characterize this project's argument as a political context explanation: where political context is favorable or political opportunities expand, states offer selective incentives and we expect to see more collective action. Conversely, where the context is unfavorable and opportunities contract, we expect less. While this conjecture is widely accepted, it is too broad to be falsifiable. This study builds on political opportunities by formalizing political context in a simple way to show the conditions under which the state incentivizes collective action. In doing so, I demonstrate that political context is interactive (Goodwin, 2001, p.24-25): street vendors help create the conditions under which they then make collective action decisions.

1.4.2 State Capacity

States' ability to enforce laws is a central component of state capacity, according to the many scholars who argue for a behavioral-based definition of state capacity (Amengual, 2013; Besley and Persson, 2010; Goodfellow, 2015). States with more capacity may produce the same laws as states with less (Amengual, 2013, p.527), but

because increased capacity means increased implementation, higher capacity states interact more with civil society in the process. Therefore, defining state capacity as a state's ability to implement policy implies that states with more capacity are more active in their citizens' lives.

Scholars generally agree that more state capacity leads to better outcomes, like higher rates of development, higher GDP growth, more and high quality services, and less armed conflict (Besley and Persson, 2010, p.1-2). They disagree on how to build state capacity. Besley and Persson (2010) model state capacity as investments in public infrastructure while (Grindle, 1997, p.484) and many others find that investments alone increase costs without necessarily increasing capacity; Amengual (2013) stresses investments and linkages to civil society (p.528-529). To the contrary, Huntington (1968) cautions that an active civil society in weak institutional contexts could lead to chaos, not capacity (p.4).

The literature largely ignores the possibility that states can build capacity by making investments in areas outside of the public sector. I suggest that lower capacity states may prefer to invest in civil society over enforcement infrastructures. Encouraging civil society can be cheaper than investing directly in the public sector and can build state capacity over time, contrary to Huntington (1968). Civil society linkages build state capacity by returning resources to the state in the form of taxes, information, and qualified personnel (Amengual, 2013, p.544).

1.5 The Argument in Brief

Under what conditions do informal workers organize? I argue that where enforcement is politically and materially costly, states may pay informal workers to organize and

regulate themselves. Where the cost of direct enforcement is higher than the cost of collective action, states can benefit from paying potential violators to form and participate in civil society organizations. States can then save resources by delegating enforcement functions to those organizations.

In the proposed theoretical process, state capacity, enforcement costs, and individuals' resources affect civil society formation and participation through two theoretical mechanisms. The process begins with state capacity: lower capacity states spend less on enforcement than higher capacity states because they have fewer resources to work with. In the first mechanism, states may pay people to participate in self-regulating organizations, under the condition that delegation costs less than direct enforcement. In the second mechanism, individuals with more resources leverage them to participate in civil society in order to capture selective incentives. Thus, when lower capacity states provide benefits to informal workers, informal workers form, join, and participate more in civil society, whereas higher capacity states that ramp up enforcement do not see these developments in civil society. The people in the sector who participate typically have more education, income, time, and other resources than those who do not.

The project advances a general argument about when governments intervene in collective action, and the conditions under which intervention pushes individuals to organize. The project uses street vendors in three cities as cases of state intervention in collective action. The scope of the argument covers all governments facing unorganized citizens. However, I expect democratic governments to intervene more readily than authoritarian ones. Democratic governments face regular referendums on governance and enforcement issues through elections. Additionally, authoritarian governments may have more opportunities and resources to enforce harshly without

public outcry and may prefer to do so instead of delegating power and responsibility to civil society groups.

1.6 Alternative Explanations

Scholars suggest that grievances (Gurr, 1970), identity politics (Yashar, 2005), and emotional cycles (Efler, 2010; Seawright, 2012) can help people mobilize, but these factors appear to play little to no role in street vendor organizations or other informal worker organizations documented in existing research. As others have argued, grievances are omnipresent in low resource actors' lives (Scott, 1987; Goodwin, 2001, p.26) but unions and protests are not; therefore, grievances cannot explain variation in participation. Additionally, informal workers describe forming organizations in cost-benefit terms with little mention of identity (Bhowmik, 2012, p.29-33), actively compete with their colleagues (Goldstein, 2016, p.xi), and publicly express their dislike for other people in their organizations (Lazar, 2007a, p.184, 198). For example, working with domestic workers' associations, Blofield (2012) highlights the role of personal organizing costs, particularly experience, as well as state incentives in the form of legal resources (p.6), not identity, emotions, or grievances, though domestic workers could base claims in all three.

Corruption and clientelism could also explain why officials encourage informal worker organizations: organizations could facilitate bribes or vote buying. Researchers consistently find that bureaucrats and politicians extract votes and bribes from informal workers (Bhowmik, 2012; Holland, 2015; Lazar, 2007a). However, corruption and clientelism exist around the world and target both organized and unorganized informal workers. Organizations do not exist in all of the same places. For

example, organized and unorganized street vendors in São Paulo describe a bribery racket where both types of vendors bribe inspectors under the threat of confiscation (Itikawa, 2006, p.141). Likewise, vendors in La Paz described paying small bribes to police and bureaucrats before they organized and paying fewer but larger bribes to bureaucrats in the same offices after organizing. These patterns suggest that officials target informal workers with clientelism and corruption whether or not they are organized, but that clientelism and corruption do not drive organizational dynamics.

Clientelism certainly exists in La Paz's street vendor organizations: I observed appointed bureaucrats and elected officials making clientelistic appeals to organized and unorganized vendors. However, in private, vendors scoffed at the parties and professed their vote choice for another party. Additionally, if clientelism were driving organizing dynamics, we should observe organizations starting around election season and state incentives following electoral cycles; instead, organizations start outside of election season and bureaucrats and vendors sustain incentives and relationships across electoral cycles. Organization might centralize clientelistic appeals, but the unions do not monitor clients' vote choices, suggesting that organizational incentives make for an ineffective vote buying strategy (Muñoz, 2014, p.79-80). Modes of clientelism and corruption may change with organization but do not appear to drive state intervention in collective action.

Bolivia has experienced massive cycles of mobilization from the 1952 revolution to the gas and water wars of the early 2000s and the broad social movements that propelled the *Movimiento al Socialismo* (MAS) to power (Dangl, 2007; Madrid, 2012). One alternative explanation is that prior forms of mass collective action create or enable abnormally large informal workers' organizations in Bolivia, and that Bolivia is an outlier because of idiosyncratic historical factors. However, South Korea,

South Africa, India, and Chile all have national informal workers' organizations and very different histories of mass participation, particularly in Chile and South Korea (Bhowmik, 2012, p. 40, 232). Additionally, Bolivian street vendor unions began organizing in the 1800s (Rojas, 1992, p.111, 115-116) and while individual unions come and go, the national confederation and most citywide federations began in the 1950s and 1970s, prior to Bolivia's most recent wave of contention. Finally, while some individual vendors participated in the gas war or campaigned for MAS, most did not, and very few mention past collective action as a factor in starting street vendor organizations. Instead, street vendors discuss the state and potential costs and benefits of organizing.

Scholars argue that variations in political variables like state institutions facilitate informal workers' collective action (Agarwala, 2013; Cross, 1998; Holland, 2015). However, the inclusive institutions that facilitate organizing, according to scholars such as Agarwala (2013), p.15, and Cross (1998), p.229, exist in countries like the United States and France which have few to no informal workers' organizations. To the contrary, anthropologists argue that particularly complex forms of cooperation—like long-lived community associations and self-regulating unions—occur precisely when the state neglects informal markets and actors (Goldstein, 2016; Lazar, 2007a; Tassi et al., 2013). However, informal workers frequently discuss their interactions with the state and the biggest organizations are often in capital cities where the state is most present (Blofield, 2012; WIEGO, 2016), strongly suggesting that state absence does not explain when and why informal workers organize.

I contend that scholars miss the role of strategic interaction between governments and informal workers, and that without this interaction, both bottom-up and state-based explanations are incomplete. States can benefit by materially encouraging

organization, but only when informal workers' actions make enforcement particularly costly. This interaction explains why informal workers rarely organize in places like the United States, occasionally organize in places like Brazil and Peru, and massively organize in Bolivia and India.

1.7 Organization of the Dissertation

Chapter 1 has introduced and situated the puzzle of organized street vendors in the literatures on collective action, civil society, informal work, and state capacity. Informal workers do not organize, according to most scholars, which makes Rosa's *champaneras* union and its affiliation with a national street vendor confederation puzzling. The chapter has outlined an explanation for why informal workers organize and assessed alternative explanations. Specifically, I argue that where enforcement costs are high, the state benefits from encouraging violators to organize self-regulating groups.

Chapter 2 develops a theory of state intervention in collective action. I argue that as unorganized people create negative externalities for the state, the state increasingly has an incentive to offer private benefits to people that organize self-regulating organizations. If the state intervenes in this way, it removes the barriers that kept people from organizing beforehand, and can then bargain over regulation and enforcement with representatives instead of a mass of individuals. The theory builds on contributions from Olson (1965), Ostrom (1990), and Holland (2016). I then formalize the theory in a game theoretic model to show that the state and workers are strategically linked. I use the model to demonstrate the exact conditions under which we expect organization as a result of intervention. The theory specifies two mechanisms: first, lower capacity states have more difficulty covering enforcement

costs, which creates pressure to compromise with civil society. Conversely, higher capacity states face less pressure from enforcement costs and are more likely to enforce laws directly. Therefore, the theory expects that the lower (higher) a state's capacity, the more (less) it delegates to civil society, and that the more (fewer) incentives a state offers, the more (less) people participate. Second, state incentives encourage individuals to participate where they otherwise would not, leading individuals to use their preexisting resources to take advantage of state incentives. Therefore, the theory expects that people with more (fewer) resources participate to receive state incentives more (less) than people with fewer (more) resources.

Chapter 3 develops an ethnography of street vendors and their organizations in La Paz, Bolivia. The chapter is based on nine months of ethnographic fieldwork in the city, which included interviews, participant observation at dozens of meetings between bureaucrats and organized vendors, and working as a street vendor in a clothing market. I ground the game theoretic model's assumptions in observations: I show that unorganized street vendors create negative externalities, street vendors approach collective action decisions with a cost-benefit analysis, the state offers private benefits to organized street vendors, especially leaders, and that once organized, vendors self-regulate and bargain with the state. I then discuss how street vending has changed in the city and how the state intervened in collective action decisions as the sector grew. I turn to the theory's observable implications and show that the state increased benefits to organized vendors as the costs of regulating the sector increased. Additionally, the leaders that take advantage of these offers tend to have more resources than their colleagues, and as the offers increased, so did the level of organization among the city's street vendors.

Chapter 4 develops the theory in comparative context, by adding case studies

of organized and unorganized street vendors in El Alto, Bolivia and São Paulo, Brazil. Comparing La Paz to the neighboring city of El Alto holds many national-level features constant but varies city government capacity. São Paulo—the large, modern metropolis of the region’s richest country, with many employment opportunities, services, stable laws, and a history of labor organizing—should have more organized street vendors than La Paz, according to resource- or political context-based theories of collective action. Instead, only 2% of São Paulo’s 100,000 vendors are organized, compared to 75% of La Paz’s 60,000. I explain this difference with the interaction between individual resources and state capacity.

Chapter 5 provisionally tests the theory on a subsample of self-employed respondents from the Latin American Public Opinion Project (LAPOP) combined with World Bank development indicators. The logistic regression and machine learning analyses serve as preliminary evaluations of the theory with out-of-sample data. Researchers often use self-employment as a proxy for informality because most informal workers are self-employed and self-employment is easier than informal employment to define and measure cross-nationally through survey research (Husmanns, 2004, p.2-10). Additionally, while some self-employed individuals work as white-collar lawyers or web designers, globally most self-employed people make roughly minimum wage as domestic workers, day laborers, recyclers, or street vendors (Fiess et al., 2010, p.211-212).

Chapter 6 summarizes the project and discusses the broader implications of the argument for informal workers and other citizens. I advance the theoretical claim that when individuals break the law, they can paradoxically get help from states to organize. I elaborate implications for humane and effective formalization policies, using the mixed success example of a tax reform in Bolivia. The chapter concludes the

dissertation with implications for state intervention in civil society, as well as issues of corruption, violence, and state building.

Chapter 2

Theory: State Intervention in Collective Action

Natalia started working at 8 years old, selling toys and candy to other children outside of a school after her mother died. Decades later, she supports two daughters by working the same stall every day from 7 am to 7 pm, with no breaks because she fears being robbed. Though she helped found a street vendors' association before she had children, she and the other vendors on her block are now unaffiliated because organizing would take too much time away from work and family. Natalia's story is common; street vendors typically work long hours to make minimum wage, their jobs are often stressful and dangerous, and many also maintain a household. Most do not have extra time or money to organize and attend meetings or pay dues, and if they have some discretionary time or income, family, health care, or rest come first. Street vendors can list out the potential benefits of organizing with their colleagues: coordinating cleaning, fair dispute resolution, or hiring a block security guard. Still, they would rather leave it to someone else to spend the time and money necessary to put a group together. Street vendors typically will not organize unless they can get an additional, private incentive for participating. Thus, street vendors frequently

face a common but intractable collective action problem.

In this chapter, I discuss the relevant literature and alternative explanations for why informal workers organize. I then present my own argument: where enforcement is costly, states may take an active role in encouraging potential violators to organize and, once organized, regulate themselves. I present a theory in which state capacity, enforcement costs, and individuals' resources affect civil society participation. In the theory, individuals' disposable income is the most important resource that they can mobilize; empirically, I track individuals' educational levels as a proxy for income (Brady et al., 1995, p.273-274). For individuals, time and money form the primary costs of organizing. In this theory, governments' enforcement costs are primarily material: the money that it costs to pay police and bureaucrats to enforce laws and process paperwork.

The process starts with state capacity: lower capacity states typically spend less on enforcement than their higher capacity counterparts. States may materially encourage people to participate in self-regulating groups, as long as delegating enforcement to civil society costs less than government enforcement. People with more use their resources to participate in order to take advantage of these state incentives. Therefore, when lower capacity states target incentives to informal workers, people participate more, whereas higher capacity states that increase enforcement instead of incentives do not see an increase in participation. The individuals within a target population who participate tend to have more preexisting resources than their colleagues who do not participate. The theory contributes to work on collective action by demonstrating that state intervention and delegation to civil society can encourage people to organize where they otherwise would not.

2.1 The Dependent Variable: Organization

Collective action forms the core of many research puzzles in political science (Ostrom, 1998): why do people cooperate or not, and what implications do these decisions have for institutions, policies, and civil society? Many studies ask why people organize, particularly in unexpected situations, and offer building blocks and alternative explanations for the theory developed here.

In this project, I focus on organization as the outcome of interest. Collective action can lead to dozens of outcomes and different studies take cooperation (Olson, 1965), protest (Kitschelt, 1986), social movements (Meyer and Tarrow, 1998), cooperatives (Ostrom, 2015), public goods (Olken, 2010), or other phenomena as the dependent variable of interest. This study examines organizations because they can be clearly operationalized through both qualitative and quantitative work, and are durable and possible to track through time. Additionally, study participants confirmed that their professional organizations were their most important vehicle for collective action, and that much of their civil society and political participation revolved around establishing, maintaining, and making demands through their organizations. By looking at organizations, I largely avoid the methodological pitfalls of other possible dependent variables, like systematic under-counting of small events or units, which bedevils research on protests (Earl et al., 2004, p.67-68), or unclear conceptual boundaries, which is an enduring problem for social movement research (Della Porta and Diani, 2009, p.5-8).

I define an organization as a registered group with bylaws (refer to Table 1 of the introductory chapter). In the qualitative chapters, I focus on street vendor organizations, which I define as registered groups whose primary membership base

consists of street vendors. In the quantitative data, I look at people who attended a professional association meeting because such associations are typically registered groups with bylaws that primarily represent people of the same profession. In both cases, the dependent variable is a clearly defined unit that I and other researchers can track and verify over time through interviews, documents, archives, and survey data.

2.1.1 Research on Collective Action

Building on decades of collective action research, Ostrom (2007), Tarrow (2011), and Hardin (1982) offer theoretical frameworks for analyzing and explaining why people, including street vendors and other informal workers, form and join organizations. Their frameworks form the foundation of my theory.

Olson (1965) demonstrated that individuals have incentives to free ride on others' efforts where possible. As a result, individuals do not always cooperate when they can improve collective outcomes. A rich formal research agenda developed out of Olson's thesis as scholars tried to establish why people cooperate in some situations but not others (Axelrod, 1984; Hardin, 1982; Oliver, 1980; Schelling, 1978; Snidal, 1985). This work established that self-interested individuals with no central authority can still cooperate in many situations: for example, Hardin (1982) demonstrated that people with different preferences can coordinate mutually beneficial cooperation (p.67-69). Axelrod (1984) and his collaborators demonstrated formally that individuals interacting indefinitely can establish stable expectations that facilitate cooperation (p.11, 20-21). These findings have found widespread support in observational and experimental evidence, most notably in a global collaborative project between economists and anthropologists Joseph Henrich, Robert Boyd, Samuel Bowles, Colin

Camerer, Ernst Fehr, and Herbert Gintis that conducted ethnographic fieldwork and economic games in 15 remote communities and found an even greater diversity of cooperative strategies (Henrich, 2004). However, by looking at anarchic situations where cooperation is least likely, many of these scholars overlooked a key player in many citizens' real-world collective action decisions: the state.

Elinor Ostrom launched one of the most productive and applied research agendas on collective action by looking at when individuals, communities, and states cooperate to preserve common pool resources (Ostrom, 1990). Ostrom's work examined and compared collective action in the absence and presence of a central state authority. Ostrom, like Henrich (2004), found a wide variety of cooperative strategies, as well as many examples of failed attempts (Ostrom, 2009, p.14, 139, 180, 190).¹ Her later work (Ostrom 2007, 2009) developed broad frameworks for analyzing, understanding, and facilitating different types of collective action. Ostrom acknowledged the role of external authority and intervention in collective action, and criticized how policy interventions are designed, but did not elaborate a theory of state intervention (Ostrom, 1990, p.22-24, 29, 40-41, 190). My theory builds on Ostrom's work and adds the explicit logic that explains when states have incentives to intervene in and facilitate collective action, and clear conditions under which they free ride, intervene, or abstain.

Sidney Tarrow, Charles Tilly, and Doug McAdam developed collaborative research agendas around collective action, informed by decades of experience working with social movements and in historical archives (Tilly, 1986; McAdam, 1982; Tilly,

¹Elinor Ostrom tackled questions about informality and informal workers' organizations in side projects, most notably Guha-Khasnobis et al. (2007), where she and collaborators discussed what makes for successful formalization policies.

1978). Their combined efforts culminated in a comprehensive framework for understanding cycles of contentious politics, which brought together many factors and focused on the mechanisms behind collective contention (McAdam et al., 2003). Tarrow has continued this work by focusing on the emergence, maintenance, and decline of social movements and contentious politics more generally and developing a theory of political opportunity structures (Tarrow, 2011). However, Tarrow's work on political opportunity structures is primarily qualitative and does not offer clear guidelines for formalizing the theories or operationalizing concepts. My theory offers one solution for formalizing the relationship between a government and a potentially contentious group, and gives conditions under which the government will create opportunities for a potential group.

In summary, I expand on Ostom and McAdam, Tilly, and Tarrow's frameworks for analyzing diverse forms of collective action. I add an explicit governance-based logic that explains state intervention in citizens' collective action decisions. I develop the theory informally and formally and operationalize the concepts that I use with qualitative and quantitative data.

2.1.2 Research on Informal Workers' Organizations

Anthropologist Keith Hart coined the term "informal economy" in a 1973 paper (Hart, 1973, p.68), which contributed to the emergence of an interdisciplinary network of scholars studying unregistered economic exchanges. The first prominent studies on informal markets focused on the emergence or maintenance of these markets and their implications for international political economy. Initial studies documented unorganized and politically atomized workers; for example, in one of the first major

sociological studies of informal markets Castells and Portes (1989) and their collaborators argued that informal workers, because they were unorganized, threatened the gains made by formal unions in the last century (p.11, 30, 32). In one of the most prominent economic studies, de Soto (1989) documented the complex incentive structures that informal workers face and argued that changing that incentive structure could include millions of poor workers in inclusive growth, but made no mention of informal workers' unions or organizations. Many later studies building on this work either assume that informal workers are categorically unorganized (Kurtz, 2004, p.265) and politically atomized (Perry, 2007, p.1), or empirically establish that many are (King and Rueda, 2008).

Scholars outside of political science have tackled why and how informal workers around the world organize, and what explains the variation in their organizations. A number of studies responding to the first wave of research on informal markets document wide variation in the social and political participation of informal workers and offer explanations for this variance.

Bhowmik (2012) and his collaborators document startlingly wide variation in the level and types of organizations that street vendors participate in around the world. Bhowmik and his collaborators catalog street vendor organizations, their scale, and the problems that they face in dozens of countries, with representation from every region. For informal workers more generally, the online WIEGO database keeps a user-updated record of informal workers' organizations all over the globe. The database suggests that, in most countries, at least some informal workers in sectors from street vending to manufacturing to sex work organize.²

²The database is very useful for establishing wide variation across countries and economic sectors. However, it is user-driven and an incomplete record of informal workers' organizations and therefore

Other studies, by contrast, seek to explain these outcomes. Cross (1998) studied street vendor unions in Mexico City and their successful mobilization against the city government during PRI-controlled administrations. Cross (1998, p.229) argues that disagreement between state bureaucrats and politicians enabled the vendors' success at forming and maintaining politically active organizations. Additionally, Cross (1998, p. 6, 7, 230) argued that the authoritarian structure of the Mexican state gave these organizations autonomy that they could exploit, but speculated that a transition to a multiparty state would not take that autonomy away.³ Similar to Cross, I argue that informal workers interact strategically with bureaucrats and politicians, and that the state has incentives to intervene in informal markets instead of ignoring them.

Agarwala's (2013) work on informal workers' organizations in India establishes the foundations for my work in Bolivia and Brazil. Along with Bhowmik (2012), Agarwala's work provides examples outside of Latin America that corroborate the dynamics that I document in Bolivia and Brazil. Agarwala (2013) argues that informal workers use their power as voters to demand policy change and that these demands succeed where mass politics rules and governments pursue economic liberalization. In many ways, my study corroborates Agarwala's research: workers' relationship to the state is key to their individual profits and organization, and in Bolivia they have been successful at translating demands into policy in an age of mass politics. However, I find that informal workers have launched successful organizations even in places where

I do not use it in the quantitative analyses. For example, the largest organization that I worked with in Bolivia is not in the database and I had difficulty verifying the existence of some organizations recorded as being active in São Paulo. I suspect that if I had these problems with coverage in Bolivia and Brazil, it is likely that these problems exist for other countries.

³Interestingly, Cross's (1998) study and Elyachar (2005) are some of the only studies of informal workers' organizations under authoritarian regimes.

the government actively rolls back economic liberalization, like Bolivia. Additionally, Agarwala acknowledges that many informal workers choose not to organize or join existing organizations (2013, p. 13) but she does not seek to explain variation at an individual level.

Holland's (2014, 2015, 2016) work on enforcement and forbearance has put Latin American street vendors on political scientists' radars. Holland (2016) asks why states selectively enforce laws and argues that politicians strategically choose which laws to enforce based on voting incentives. Holland (2014) establishes that these forbearance strategies amount to massive transfers or subsidies from the state to poor voters.⁴ Holland (2015) uses multiple types of evidence from Bogotá, Santiago, and Lima to establish that, similar to Agarwala's argument, pro-poor parties are more likely to forbear and elitist parties are more likely to enforce. I build on Holland's work by taking her dependent variable, enforcement, as one of my key independent variables. I also diverge from Holland on the concept of state capacity: Holland (2016) argues at length that state capacity and enforcement costs are separate explanations for enforcement outcomes; I suggest that state capacity shapes enforcement costs. Finally, Holland's theory of forbearance and my theory of delegated regulation lead to different predictions for informal workers and markets: Holland predicts that high enforcement costs lead to forbearance which leads to continued informality, particularly under pro-poor parties, while I predict that high enforcement costs lead to delegated enforcement which leads to increased organization and the partial formalization of informal markets.

⁴In higher enforcement contexts like the United States, recent sociological research corroborates her argument by demonstrating that when governments aggressively enforce formality laws that primarily affect poor people, enforcement decimates household finances and violently disrupts daily life (Desmond, 2012; Goffman, 2015).

Finally, other researchers have noticed and studied the massive organizations of informal workers in Bolivia. Working with street vendors in El Alto, Lazar (2007a) examines how neighbors organize themselves into politically powerful groups like street vendor unions to make citizenship claims. My work corroborates hers on the internal dynamics of street vendor organizations and I use her research in my case study on El Alto in Chapter 4. Tassi et al. (2013) work with street vendors across Bolivia and argue that the absence of the state gives businesspeople the space to build their own institutions that take on state-like roles in many places, including La Paz, El Alto, and Santa Cruz. However, the largest street vendor organizations are in the country's largest cities, which also house state bureaucracies, and one of the main roles of the organizations in my and others' research (Agarwala, 2013; Bhowmik, 2012; Lazar, 2007a) is to build and maintain relationships with local and national governments, which calls Tassi et al.'s state absence thesis into question. Working in Cochabamba, Daniel Goldstein offers a more nuanced thesis of "organized disorder" and "disregulation" of intermittent and selective state engagement with informal markets and their organizations (Goldstein, 2016, p.7). Goldstein asks a different research question than this project: why and how do the poorest informal workers survive? He argues that poor workers survive through the state's hands-off reproduction of informality. His research corroborates the dynamics that I observed in La Paz and El Alto. In the following section, I use these past theoretical arguments and empirical examples of informal workers' organizations around the world to build a theory of state intervention in collective action.

2.1.3 Partisanship, Clientelism, and Corruption

Other studies document clientelistic relationships between street vendors, organizations, and administrations, and develop a partisan logic to explain these relationships (Cross, 1998; Holland and Palmer-Rubin, 2015). I also observed clientelist exchanges between officials and vendors in Bolivia and Brazil and interviewees elaborated on vendors' bit role in the partisan game between candidates, especially in local politics. I suggest that some governments directly intervene in collective action in order to increase compliance and regulate informal sectors and as an alternative to clientelistic strategies. The strategy can exist alongside clientelistic practices and within a partisan logic, as it does in India and Bolivia (Agarwala, 2013; Lazar, 2007a). As I discuss in the following chapter with ethnographic evidence, partisanship and clientelism exist in street markets in La Paz but do not appear to be a deciding factor in forming and maintaining organizations.

Corruption is common in La Paz's markets and organizations help perpetuate it (see chapter 3 for a longer discussion on how this happens). However, corruption also does not appear to cause street vendor organization. Instead, corruption appears to be a byproduct of weak institutions, poor enforcement capacity, and delegating power individual civil society leaders. First, no street vendor attributed organization or membership to corruption, even though many openly discussed corruption and the reasons they joined or formed organizations. In contrast, bureaucrats and vendors frequently discussed state delegation as a primary reason for organizing. Still, one might wonder if interviewees intentionally hide corrupt organizational roots. Second, corruption has existed at all levels of the La Paz city government for decades if not longer, as a former mayor admits in a book he wrote on reducing corruption in cities

(Klitgaard et al., 2000, p.12). MacLean states that he delegated municipal duties to professional associations—in the example, the city delegated developer licensing to an architectural association—because it freed up resources and reduced corruption.

"In fact, even if corruption had not existed, the formula's anti-corruption "medicine" turns out in many areas of city government to be perfect for avoiding costly inefficiency and delays as well as an expensive burden on municipal resources... I decided to propose that the professional association of architects make it possible for members to become certified by the city, so they could grant the construction permits on behalf of the city, complying with city norms and regulations, and for a fee which the market would set... The architects' association had to agree to help implement, monitor, and if need be sanction (Klitgaard et al., 2000, p.33)."

MacLean cites governance reasons, not partisan ones, for delegating municipal roles to a professional association. MacLean's description of delegation to the architects' association for capacity and enforcement reasons is strikingly similar to the strategy the city followed with street vendor organizations and continues to pursue today. In later years, as the city reorganized street vending administration under a new policy framework (see chapter 3 for a longer discussion), it wrested a source of bribes away from police, but mid-level bureaucrats and higher officials participated in corrupt exchanges with vendors both before and after the reorganization.⁵ On the other hand, state delegation increased with this policy, as did the magnitude of the street vendor organizations.

Governments intervene to encourage collective action, and they also engage

⁵Unfortunately, I do not have information on the magnitude of bribes before and after the policy, which would be ideal.

in corrupt, clientelistic, and partisan strategies. Local and national governments across Latin America employ a bundle of strategies in their dealings with civil society, and the process I discuss in this project coexists with other strategies that include corruption and clientelism or follow an explicitly partisan logic. However, corrupt or clientelist incentives do not appear to be driving government actors to encourage street vendors or other citizens to organize and regulate themselves. Instead, state actors like former mayor MacLean cite governance issues as the reasons behind their policies that encouraged civil society. The following sections elaborate the strategic logic of state intervention in collective action.

2.2 Theory

I argue that where enforcement is costly, states may take an active role in encouraging potential violators to organize and, once organized, regulate themselves. Holland (2016) demonstrates that governments reap political benefits by not enforcing laws against poor citizens in informal work and housing. However, foregoing enforcement can create additional political, public health, and material costs: forbearing on public space laws with street vendors can anger business owners and homeowners (Holland, 2015, p.358) while forbearing on building codes leads to deaths and scandals when buildings burn or collapse. Holland's contributions explain variation in enforcement; I extend this work by using enforcement costs to explain why informal workers organize. I suggest that where the state successfully encourages potential violators to organize, it keeps the political benefits of forbearance while civil society organizations assume partial responsibility for enforcement.

2.2.1 States

States pay enforcement costs while individuals pay organizing costs. When a state decides to attempt to enforce or not, that decision involves material costs like police salaries, training, and equipment. Enforcement costs also involve political considerations (Holland, 2015): does an action undermine a constituent or build relationships with new voters? Relatedly, with limited public resources, enforcement costs involve opportunity costs: every police officer or \$1,000 spent patrolling a market cannot support a homicide investigation or train new officers. States can create their own enforcement costs by deciding to regulate previously unregulated areas—for example, criminalizing new drugs or developing new intellectual property rights potentially increases enforcement costs. Citizens' actions can also directly create enforcement costs or increase negative externalities. If citizens' actions lead to negative externalities *and* the state decides to control those externalities by ramping up enforcement, then enforcement costs increase as a result of citizens' actions. Enforcement costs go up as budgetary resources decline, and as the number of violations increases.

Where the costs of compliance are more than the costs of breaking the rules, at least some people will decide to break the law. Noncompliance creates problems and costs for states, which must decide to expend resources on enforcement or accept the consequences of noncompliance (Holland, 2016). States can selectively enforce laws or reduce regulation to make compliance easier, as work on firm- and state-level regulation and compliance incentives demonstrates (Malesky, 2015). However, noncompliance or watered-down regulations can result in negative externalities like electrical fires, polluted water tables, or epidemics, and voters may punish parties for decreased law and order or social problems (Holland, 2015, p.359, 363). States can

also curtail violations by increasing enforcement to where the cost of breaking the law becomes higher than the cost of compliance, but doing so is materially and politically expensive for states (Ronconi, 2010, p.719). For example, the Brazilian government spends tens of millions of dollars every year on federal and military police tasked with confiscating counterfeit consumer items like off-brand dolls from suppliers and retailers, many of them informal importers or street vendors (Pinheiro-Machado, 2011, p.290-295).

Not all states have the capacity to increase their budgets and personnel by millions to catch misdemeanors. For example, law enforcement budgets in Bolivia are low and have few discretionary funds: with recent raises, Bolivia now pays entry-level police officers slightly above minimum wage. The state recently began paying for uniforms but requires officers to buy their own guns (Rojas, 05 July 2014; Villareal, 27 June 2012). Even if a municipality wanted to enforce all street vending laws, Bolivian police lack the training and discipline to carry out their work (Project, 2014; Goldstein, 2005). Thus, lower capacity states typically spend less on enforcement than their higher capacity counterparts.

States may benefit from encouraging organizations where unorganized people generate negative externalities and punitive enforcement is materially and politically costly. For example, where food vendors individually cut corners on the health code, they create negative externalities through food-borne illness, which may use more public health dollars and decrease economic productivity (Holland, 2015, p.358). If the state can incentivize a food vendors' association and then reach a deal with the association to enforce the health code, the state and vendors create a situation in which potential violators regulate themselves. Typically conservative constituencies like homeowners and developers can demand that cities clean up streets and markets.

However, in places where most voters know someone who routinely breaks minor regulations, punitive enforcement may alienate voters across the ideological spectrum. Collective action incentives may be one strategy that local administrations can use to enforce laws while building electoral coalitions with informal workers. For example, Palmer-Rubin (2016) finds that ideologically varied state governments in Mexico strategically offer incentives to micro-business organizations to build temporary and long-term coalitions. Where states can offer an incentive that is less than enforcement costs, states benefit from offering potential non-compliers an incentive to organize and then self-regulate.

State incentives include licenses, cash, public jobs, political positions, policy input, increased access, or shorter wait times. In this project, licenses are the primary state-supplied selective incentive. States may prefer to offer licenses because they serve multiple purposes simultaneously: licenses help states monitor and regulate an industry by making market access traceable, revocable, and dependent on compliance. Additionally, licenses move informal workers along the formalization continuum. Still, licenses do not fully formalize workers because many licensed workers ignore some regulations and remain outside of national tax and social security frameworks. For street vendors, vending licenses can mean the difference between subsistence and a business that generates a middle class income (Goldstein, 2016, p.x). Other research documents examples of states strategically allocating licenses to organization members: Cross (1998) finds similar arrangements with street vendors in Mexico City (p.229-230), and Goodfellow (2015) documented the Rwandan government revoking permission from informal transportation workers until they organized a self-regulating organization (p. 137). Ironically, in these examples, the organizations make the licenses more than a piece of paper by enforcing the rules in

the license more than the state. It is the actions of the organizations *and* the backing of the state that makes a license valuable.

As capacity increases, states can implement a wider range of laws and adequately fund enforcement. States typically triage law enforcement spending and put more resources toward serious crimes like homicide while lightly policing minor infractions like littering. Only high capacity states like the United States have the option to pursue broken windows policies, where authorities heavily police all violations, especially visible minor infractions (Goffman, 2015). This theoretical process suggests that as capacity increases, states offer fewer direct incentives for participation in self-regulating groups and put more resources toward enforcement. With fewer incentives, few informal workers organize. Additionally, the theory implies that with increased enforcement, informal workers in higher capacity states are more likely to interact with the criminal justice system than their colleagues in lower capacity states.

2.2.2 Workers

People pay material costs for organizing, like registration fees or dues, which can add up quickly for people working in poverty. Opportunity costs can also be high: for a person barely making rent and supporting children, an evening meeting that detracts from work and childcare constitutes a significant cost. People have varying levels of material and non-material resources that can help defray organizing costs. A person's disposable income is the resource that matters most. Vendors with savings or hundreds of dollars in disposable income can easily pay upfront registration and administrative costs of setting up an organization. They can also easily meet the dues and additional fees involved in maintaining membership in an established organization. They can contribute to rent costs for an association's headquarters or

meeting space, and they feel less pressure to work whenever possible, which makes participating in organizational activities easier. Empirically, measuring income is tricky. Instead, I proxy income with education, because education correlates highly with income and is much easier to measure (Brady et al., 1995, p.274). While income as proxied by education is the resource I focus on, individuals can pull on other personal resources as well. For example, a person with preexisting organizing experience has lower organizing costs than a person without that resource because they do not have to expend time learning how to manage logistics or build networks (Brady et al., 1995, p.273); personal attributes like age and formal education can similarly reduce organizing costs.

Empirically, informal workers typically start working as atomized individuals (Perry, 2007). States may initially ignore them or choose some level of enforcement. If the state offers organizing incentives, officials may make an offer when unorganized individuals approach the bureaucracy or seek redress after the state has punitively enforced. Groups of individuals with more resources—particularly income or education—are more likely to become political entrepreneurs who take advantage of state incentives and organize others (Meinzen-Dick et al., 2002, p.650-651, 658). Note that when states offer incentives to organize, they are not necessarily organizing a sector; they are offering resources that political entrepreneurs can use to create independent organizations. This tactic can be cheaper for states than organizing a sector directly, and is more likely to give rise to a representative organization that has leverage at the bargaining table.

Once workers organize, states can negotiate with group representatives instead of chasing thousands of individuals. States can negotiate for compliance with existing policy—for example, no vending in certain areas, no sale of counterfeits, the payment

of fees—which they can induce by offering compromises on policy and further material incentives. Sector leaders can offer new policies or negotiate for more benefits for their members. Representatives can offer monitoring and self-regulation, which lower states' enforcement costs, in exchange for policy concessions, or to gain leverage they can threaten noncompliance and protests if no deal is struck.

To whom do states offer incentives for participation? States are more likely to compromise with people committing minor violations because the smaller the infraction, the smaller the payoff for enforcement. Similarly, states are more likely to compromise with large groups of people than small ones because as groups grow, adequate enforcement becomes more expensive. Therefore, states may compromise more with street vendors, squatters, and undocumented migrants, especially where they constitute large groups of nonviolent, minor offenders. Conversely, states less frequently compromise with counterfeit suppliers or traffickers because if they have the resources, most states prefer to enforce laws against these smaller groups of more serious violators.

2.3 Model

The formal model demonstrates how interaction between the state and informal workers creates levels of organization ranging from atomized actors to small groups to universal organizations, as well as the conditions that lead to these different outcomes. The simplification of the model enables precise causal analysis, but the trade-off is that the model necessarily leaves out complexities that are important to collective action decisions and that the ethnographic account captures.

2.3.1 Why Use Game Theory?

I model the theory mathematically because the argument that states pay potential violators to organize is counterintuitive and the model demonstrates that the argument is logically consistent. There are sound theoretical and empirical reasons to expect that informal workers would not organize: organizing requires money and time that informal workers typically do not have (Olson, 1965; Ostrom, 1990) and informal workers typically do not organize in the OECD cities where many academics live and work (King and Rueda, 2008; Lindvall and Rueda, 2014).

It is counterintuitive that the state steps in and helps or pays people who are breaking laws. I use game theory to show when and why that happens. Additionally, I start with a canonical collective action model, an n -person public goods game, and show that the situation I model builds on existing canonical work. The model that I create contains Olson (1965) and Ostrom's (1990) equilibria as well as others. The modeling exercise makes it clear that we need only a few additional and realistic assumptions—namely, that another player exists that has a payoff distinct from the vendors but dependent on the public goods game—to have a situation in which a state pays people to organize. The model contributes to collective action theory by endogenizing selective incentives to a political bargaining process.

The model also addresses the alternative explanation that informal workers organize in a few places like Bolivia because those places are culturally distinct in an idiosyncratic way that facilitates organization. While culture can certainly play a role in collective action that is not addressed here (Peredo Beltrán, 1992; Tilly, 1986), the model demonstrates that we do not have to model or include culture to explain situations in which informal workers organize. Modeling the theory in this

way facilitates moving from the illustrative case of street vendors in La Paz to a more general explanation of why informal workers organize in some places but not others.

2.3.2 Basic Assumptions

I assume that all actors are rational in that they have goals in any given decision, are aware of their goals, and make decisions in pursuit of those goals. Note that rationality in a game theoretic model is different from the colloquial meaning of rationality (Quackenbush, 2004). Here, rationality means that an actor has stable preferences about the available choices for the duration of the game and does not sabotage them; in other words, actors know what they want and choose accordingly. Relaxing the rationality assumption may not change the results as much as one might think: for example, modeling bounded rationality with an error term, in line with random utility models or stochastic discrete choice games (Fischer and Qaim, 2012; Signorino, 2003), would probably produce high and low contribution equilibria similar to the existing model's results.

I assume that informal workers want to maximize their profits and their benefit from public goods and state incentives. Benefits could be material—for example, a selective incentive like a license for a larger stall increases the volume that a vendor can sell while a public good like market security decreases losses to theft—or immaterial, like symbolic representation in policy negotiations. In the empirical section, I show that vendors primarily consider material benefits in their organizing decisions; however, the model can accommodate workers with other considerations. Additionally, I assume that the government wants to minimize costs. This model's assumptions about actors, their costs, their options, and their interactions are listed in the notation table in Table 2 and illustrated in the game tree in Figure 1.

The model's results are robust to a range of changes: if costs are private instead of public, if the distribution of costs changes, if there is no k threshold, or there are more specific cost and benefit terms, the model produces similar equilibrium results (see appendix for robustness checks and extensions with club goods and a separate move for people joining an existing organization).⁶

What are the limitations of the model? The model explains organization with endogenous selective incentives; it does not directly model self-regulation. Self-regulation is an empirical fact in the ethnographic case study developed in the next chapter: virtually all street vendor organizations in La Paz that receive state incentives enforce at least some local ordinances. Additionally, public goods games are one way to model collective action decisions; a moral hazard or coordination game would model different aspects of the decision and produce different results.

2.3.3 Set Up

In the model, a state chooses to intervene in informal workers' decisions to cooperate or not. First, a group of workers plays a public goods game; in public goods games, players decide to contribute to a public good or not. This reflects the empirical situation of many informal workers, who start working as unorganized individuals and then decide to form a group or not. In this model, every worker who decides to join an organization pays a personal cost of time and money, and if at least k workers contribute, they generate a public good. The public good could be compliance with local laws or the order, safety, and steady flow of traffic that a street vendor organization can bring to an open-air market. While citizens may value a public good

⁶I thank Scott Wolford for suggesting game theoretic robustness checks; see Bell and Wolford (2015).

differently—for example, vendors in a market may value a clean and orderly market more than neighbors who shop there, who in turn value it more than residents across the city—all citizens can potentially benefit from public goods of compliance or order⁷. Every worker who does not join the organization benefits from the public good but does not pay an organizing cost and they generate a negative externality for the state. Organized workers then enter a bargaining stage where the state offers them a selective incentive, which we can think of as licenses, cash, or policy input. In this game, the selective incentive is endogenous to the model.

The game has complete information, which means that workers can anticipate if they will receive a selective incentive when they make their organizing decisions, even though the state offers the incentive in the following stage. This feature is similar to observed state behavior, in that governments often say that they will extend benefits to group members, but only deliver once an organization has formed. Finally, each person has an opportunity to accept or reject the offer. Table 1 summarizes the model notation and Figure 1 illustrates the structure of the game.

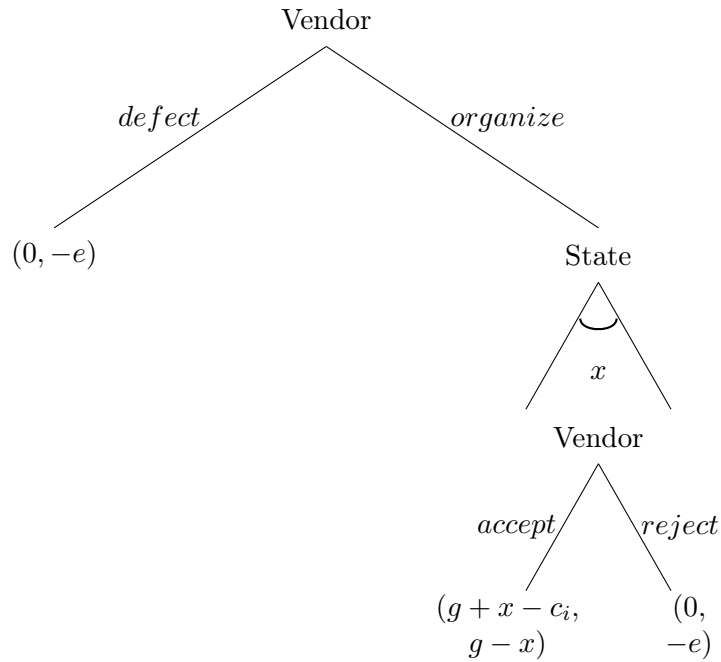
In the model, a state and n vendors play a finite and complete information game; therefore, subgame perfect equilibrium is the appropriate solution concept for finding the equilibrium (all proofs in the appendix). The model shows that the state offers an incentive that will encourage workers to organize as long as $x < e + \frac{g}{k}$, in other words, as long as the incentive is less than the public good and enforcement savings that compliers generate. The workers' calculus depends on whether the actions of their

⁷A more canonical example would be a park: any citizen can visit a public park and enjoy it as a public good. However, some people will value a given park much more than others. Many people will never go near the park, but that does not change the park's status as a public good. We can think of a clean and orderly public market in a similar way. The differences in valuation do not change the market's status as a public good.

Table 2.1: Game notation

v_i	a given worker; worker i .
s	the state.
x	the state's offer, where $0 \leq x \leq 1$.
n	total number of workers.
k	the number of workers needed to provide the public good, where $0 < k \leq n$.
m	the number of workers who organize.
g	the public good, where $0 \leq g \leq 1$.
e	the state's cost of enforcement where $0 \leq e \leq 1$.
c_i	the cost of organizing to worker i , where $c_i \sim U[0, 1]$.

Figure 2.1: Stylized representation of the game, where $n = 1$.



colleagues are enough to provide the public good, and whether the state's incentive sufficiently offsets their personal organizing costs.

2.3.4 Equilibrium, Outcomes, and Comparative Statics

The model has equilibrium strategies (stated formally in the appendix, with proofs) that account for organizational outcomes ranging from no organization to universal organization. These outcomes reflect the empirical record and existing collective action research. First, the model produces an equilibrium outcome in which no one contributes that is similar to Olson's (1965) work, where g is large but the state does not intervene and informal workers do not organize. Second, the model leads to an equilibrium outcome that resembles Ostrom's work (1990, 2007): some informal workers will organize to capture a sufficiently large public good, even without state intervention. This project shows that the state can free ride on workers' efforts: the state benefits from the public good and reduced externalities without contributing.

This model's contribution is in the following three equilibrium outcomes: if the public good is lower than the k th worker's costs, the state offers an incentive that offsets the k th worker's costs. In this situation, the state would rather offset workers' organizing costs than be left with the negative externality that the workers generate if they stay unorganized. This leads to a low contribution outcome where some workers with costs lower than the incentive organize, and a high contribution outcome where k informal workers organize. Finally, if enforcement costs are higher than any other parameter, the state will offer an incentive that induces universal organization. Under this condition, the state prefers to save money by paying everyone to organize, which prevents unorganized workers from creating a larger negative externality.

Relative costs explain variation in this model. To see this, fix the parameters

at given values save one and then examine how an endogenous variable moves with changes in that parameter (proofs in the appendix). Here, we look at how the state's offer, an endogenous variable, changes with the public good, organizing costs, and enforcement costs. First, as the value of the public good increases, the state's offer increases. Both the state and the vendors enjoy the public good, and as the public good increases, it frees up resources that the state can then spend on incentives. We can also fix g and restate this result in terms of individual organizing costs: as the workers' costs increase, they require higher offers from the state to organize.

The state's enforcement costs have a different relationship with its offer. Where enforcement costs are less than the k th worker's organizing costs minus the value of the public good, the state offers nothing. Once enforcement costs pass that threshold, however, the state will make an offer that maximizes the number of organized informal workers while still being less than its enforcement costs. The intuition here is that where enforcement costs are high, it is cheaper for the state to induce organization than pay for enforcement. Relative costs explain variation in these outcomes: as enforcement costs decrease, the state makes smaller offers and workers form smaller organizations. As they increase, all else equal, the state makes larger offers and consequently workers use them to form larger organizations.

To summarize without notation, the model presents a situation in which unorganized informal workers create costs for the state but organized workers provide a public good. Knowing this, the state can pay to change the structure of the workers' decisions by offering organized workers an endogenously determined private benefit. The negative externality pushes the state to endogenously incentivize a k group—the group of people that must contribute in order to provide a public good—because collective action helps the state avoid the burden of negative externalities. The model

shows the conditions under which the state will not intervene: when intervention costs more than the negative externality or where it can free ride on the informal workers' efforts. It also shows that the state will intervene when paying the workers to organize is cheaper than paying enforcement costs. Variation in relative costs explains variation in organizational outcomes: as informal workers' personal costs increase, they accept a smaller range of offers, decreasing the parameter values under which we observe organization. On the other hand, as enforcement costs increase, the state makes larger offers and workers form larger organizations.

2.3.5 Observable Implications

The theory specifies two mechanisms: first, lower capacity states have more difficulty covering enforcement costs, which creates pressure to compromise with civil society. Conversely, higher capacity states face less pressure from enforcement costs and are more likely to enforce laws directly. Therefore, the theory expects that the lower (higher) a state's capacity, the more (less) it delegates to civil society, and that the more (fewer) incentives a state offers, the more (less) people participate. Second, state incentives encourage individuals to participate where they otherwise would not, leading individuals to use their preexisting resources to take advantage of state incentives. Therefore, the theory expects that people with more (fewer) resources participate to receive state incentives more (less) than people with fewer (more) resources. The theoretical process and its mechanisms imply observable patterns for qualitative and quantitative data, summarized in Table 2.

The theoretical mechanisms imply that some states offer incentives to civil society while others do not and that some people participate because of those incen-

Table 2.2: Variables, theoretical mechanisms, available data, and predictions

Variable	Mechanism	Available Data	Supportive Case Data	Quantitative Prediction
State capacity	Enforcement costs push lower capacity states to offer participation incentives.	Cases: La Paz, El Alto, & São Paulo, LAPOP survey	Officials report compromise with civil society because they can't enforce. Street vendors report participation due to state incentives.	Lower capacity states have higher participation.
Individual re-sources	Individuals use preexisting resources to capitalize on state incentives.	Cases: La Paz & São Paulo, original surveys, LAPOP survey	Resource-rich individuals use specific skills or connections to create and participate in organizations.	People with more resources are more likely to participate.

tives while others do not. Each mechanism also implies specific patterns that different types of data can evaluate. Table 2 summarizes the theoretical mechanisms and the data that can evaluate aspects of those mechanisms. Table 2 then specifies what case data builds support for a mechanism and implications for the quantitative analyses.

The theory generates predictions for different conditions. The theory does not expect organization where individuals have few resources, regardless of state capacity. Where individuals have some resources and state capacity is low, the theory expects the state to encourage organization. The more resources individuals have, the more organizing we should see. Conversely, as state capacity increases, governments should offer fewer incentives. Where state capacity is high and individual resources are low, we should expect to see no organizing activity. However, if individual resources increase, we should expect to see small amounts of organizing without state intervention.

To summarize, I argue that informal workers are more likely to organize where governments benefit from negotiating with a representative group and provide incentives that help workers overcome barriers to collective action. This process is interactive in that informal workers' potential for noncompliance affects governments' enforcement costs. If violators push enforcement costs high enough, they create the condition under which governments may find it more efficient to solve their collective action problem than to enforce.

2.4 Conclusion

Using a formal model, I have argued that informal workers organize where their interactions with authorities increase the state's enforcement costs to where the state

prefers to solve the workers' collective action problem by offering selective incentives. This is surprising because scholars and policymakers rarely expect informal workers to organize and observers do not expect the state to pay potential lawbreakers to organize. However, the model demonstrates how strategic interactions between state actors and informal workers lead to outcomes that appear counterintuitive given existing research. Additionally, state intervention in collective action decisions often makes budgetary and political sense. States use these tactics to support national informal workers' organizations in countries including Bolivia and India (Agarwala, 2013; Bhowmik, 2012).

I develop the theory generally through a formal model. In chapter 3, I illustrate the model's dynamics with an ethnographic case study of street vendor organizations in La Paz, Bolivia. The theory should explain organization 1) where a group of unorganized people creates negative externalities for a large, external actor, typically a government; 2) where organization reduces those externalities; and 3) where the external actor can credibly pay a group that organizes. Returning to the theory's scope conditions, I expect that these dynamics can exist anywhere but are more likely in poor democracies. First, parties in democratic regimes can build loyal voters by incorporating people who are violating quality of life regulations into new political projects instead of punitively enforcing (Agarwala, 2013; Holland, 2016; Palmer-Rubin, 2016). While other regimes need supporters, they do not have the same immediate electoral incentives and richer democracies and autocracies may be quicker to punitively enforce when they can. Second, poor democracies may feel both the political and material components of enforcement costs more acutely than richer democracies, making poor democracies more likely to delegate to civil society instead of increasing law enforcement budgets. In poor democracies, voters demand

deliverables like orderly streets and markets. However, alienating informal worker voting blocs with enforcement can lose elections for parties of all ideologies. In these situations, local administrations may be more likely to offer selective incentives to self-regulating groups.

States offer organizing incentives to civil society actors in many contexts. This project contributes to collective action theory by elaborating the strategic logic behind policies that intervene in collective action and then delegate to civil society. This may be the main avenue for low resource actors like informal workers to overcome collective action problems, since effective selective incentives tend to demand significant resources. The state—as a large, established, and resource-rich organization—can provide selective incentives where individual activists cannot (Marwell and Oliver, 1993, p.6-7, 20, 181). Even weak administrations, like local governments in Bolivia, are vastly more resource-rich than the average citizen. The people that belong to the resulting civil society organizations stand to benefit. As chapters 3 and 4 will demonstrate, informal workers benefit from work-based organizations that bring predictability to markets and advocate for better policy. However, the following chapter also shows that those who benefit most are leaders who skim off the top, bureaucrats receiving substantial bribes, and politicians collecting favors, not rank and file members or unorganized free riders. While state incentives solve large collective action problems, the following chapters show that they create opportunities for leaders, politicians, and bureaucrats to exploit collective action for private gain.

Chapter 3

An Ethnography of Street Vending in La Paz

In La Paz, Bolivia, the crowded western market district begins at the Witches' Market off Sarganaga Street, extends through the Black Market on Graneros Street and the Tumusla Street clothing market and peters out after the produce, flower, skull, and tattoo vendors around the cemetery. Between 50,000-60,000 people—5% of the capital's population—work as street vendors and 31,906 of these hold vending licenses (de La Paz, 2015). Of La Paz's street vendors, a staggering 75% belong to a street vendor organization. Street vendors are part of the approximately 80% of working-age people in Bolivia who hold informal jobs (de Bolivia, 2013). Shamans, photographers, tattoo artists, shoeshine boys, and bakers all work as street vendors in La Paz and the hundreds of associations they belong to are just as varied: there is a wisemen's union and a champagne ladies' association, as well as the more common micro-retailers' unions and bread vendors' associations. The oldest of these organizations is an anarcho-syndicalist flower sellers' union founded in 1936 (Peredo Beltrán, 1992, p.1), and new organizations form every year. Each association belongs to one of four citywide federations, which are affiliated with the Bolivian Labor Central or

the Confederation of Street Vendors of Bolivia.

In La Paz, many people make a decades-long career out of street vending while others rotate in and out of the occupation to fill gaps in employment and make ends meet. Established vendors sell high-margin products like clothes and beauty products at licensed stalls, which can be permanent kiosks, carts, or tents and platforms that are reassembled every day. Less established vendors walk continuously while selling anything from gum to plants to coat hangers from small boxes or sacks. Most vendors make roughly minimum wage, but a significant minority make a middle class living—for example, 34% of La Paz survey respondents were homeowners—and a few have become wealthy (Tassi et al., 2013).

This chapter discusses the history and structure of street vendor unions in La Paz. I rely on original interviews with longstanding street vendor leaders as well as published oral histories, feminist, anarchist, and post-colonial historical work to construct a history of these organizations stretching back to the 1800s. Original ethnographic and survey data then establishes the plausibility of the modeling choices in chapter 2. Finally, original ethnographic work outlines the effects and implications of state intervention in informal market organizations in La Paz.

3.1 Methods

Over nine months, I conducted fieldwork with one of La Paz’s four street vendor federations, where I observed meetings, engaged in conversations, interviewed vendors and bureaucrats, and worked as a street vendor. I worked as a street vendor once a week in a prominent open-air market from March to May 2015 and helped out at the

stalls of individual street vendors in other markets.¹ All quotes and anecdotes come from the ethnographic data and have been anonymized, due to the semi-legal nature of participants' work. The names I use are pseudonyms and details like merchandise and location have been changed to ensure confidentiality.²

Research on informal work suffers from data paucity in part because actors have incentives to hide semi-licit activity (Jensen et al., 2010; Olken and Pande, 2012). Interview and survey methods capture some self-reporting, but respondents rarely trust enumerators and typically under-report the extent of their informal activities (Olken, 2009; Jensen and Rahman, 2015). Ethnographic methods rely on routinely triangulating sources' words with theirs and others' actions, and investigating discrepancies and changes over time (Jerolmack and Khan, 2014). Many ethnographic projects, including aspects of this one, revolve around the significance of documented discrepancies between words and actions (Lazar, 2007a; Lopez, 2007). Additionally, ethnography requires the researcher to build trusting relationships, which are particularly important for research on informal activities and other topics where sources have an incentive to misrepresent (Auyero, 2001; Goffman, 2015). In these ways, ethnography overcomes several of the limitations that researchers encounter with survey and interview methods, making the method particularly well-suited for studying micro-

¹All money I made as a street vendor I gave to the vendor I was working with. Additionally, I did not approach vendors and ask to work for them. After I made acquaintances with a vendor, I would ask to observe them while they worked and ask if I could do anything to help. Vendors asked me to help with babysitting, making change, running errands, filling an order, cleaning, or watching the stall and attending to customers while they ran an errand. Several times over the nine months, a vendor asked if I would work for them. I decided to work with one vendor that I knew well and for several months set up, worked, and packed up her stall the one morning a week that she was in church. Each week, we would meet up afterwards to talk about the day and I would give her any money I made, as well as the day's accounting

²Changes follow Institutional Review Board and National Science Foundation confidentiality guidelines. Anonymized field notes and interview transcripts are available on request.

level informal activity (Contreras, 2012; Nordstrom, 2007).

I began fieldwork by approaching the leadership of one federation and asking to observe meetings and work, as well as interview consenting vendors. The leadership agreed on the grounds that I would give something back to the federation, and the *ampliado*—the meeting of the governing council of the federation, consisting of the elected leadership of the 142 affiliated street vendor associations—voted to let me observe.³ The federation leadership initially suggested that I give back by teaching classes in Marxist philosophy and economics, but the *ampliado* asked me to teach workshops on street vending policies and regulations in the U.S. and Brazil instead. I gave two presentations, disseminated a final report on my work, and helped out around the office and in the markets where possible, primarily by running errands, watching stalls, and babysitting, and occasionally by translating or teaching English or computer skills. Most people in La Paz’s markets are bilingual or trilingual, and I also learned some Aymara to improve my rapport with older vendors. I made contacts by meeting people at the federation and city offices, and when research participants introduced me to colleagues in the markets.

Finally, in April 2015, a team of five survey administrators and I conducted a survey of 207 randomly selected vendors in 16 randomly selected neighborhoods in April 2015 (see appendix for survey instruments, sampling, protocol, and results). No ideal sampling frame exists for street vendors in La Paz, which is a common methodological issue in informal market research (Bodea and LeBas, 2016; Schneider et al., 2010). The city maintains a database of the 31,906 street vendors with licenses,

³This vote was taken after a debate between two leaders during the *ampliado* of whether or not I was an *espia yanqui* (Yankee spy), or an *hija del pueblo*, or (daughter of the people). The *ampliado* came to the consensus that I was a representative of the people of the United States, not American capitalist interests, and could continue working with them.

but this only accounts for 50-70% of street vendors in La Paz, depending on whose estimate one uses. Additionally, the city is extremely resistant to granting database access. Finally, bureaucrats illicitly grant extra licenses for favors and bribes, which allegedly results in fake names in the database. To create a sample, I randomized districts and my team approached every other vendor in randomly selected districts until we had surveyed 200. The neighborhoods are fairly representative of the city. Unless otherwise noted, all descriptive statistics on street vending in La Paz are from this survey.

3.2 A History of Street Vending Organizations in La Paz

Oral histories, historical photographs, and newspaper articles show that La Paz has a long and rich market history that pre-dates the republic and most likely began before the colonial invasion (Rojas, 1992, p.107). As a crossroads and then a capital, La Paz developed large street markets dominated by women whose business and community networks bridged the city and the countryside (Aramayo Cañedo, 2015; Dibbits et al., 1986). Based on interviews with small artisans, Rojas (1992, p.111) attributes the first vendor unions to independent craftsmen who sold their work in the street markets and founded *gremios*, guilds, in the 1850s. According to Rojas, the *gremios* became the first street vendor unions and started Bolivia's urban labor movement (1992, p.111). To this day, street vendors in Bolivia are known as *gremiales*—guildsmen—and call their unions *gremios*.

Gathering oral histories from a dozen anarcho-syndicalist street vendor organizers, Lehm and Cusicanqui (1988) trace an anarchist organizing tradition back to

the early street vendor unions. In the early 1900s, a few small, new unions were founded and run by former miners who had come into contact with Italian labor activists and anarchist philosophy while working in Chilean mines. When the miners returned to Bolivia, they brought labor organizing strategies and anarcho-syndicalist philosophy back with them. Some then became street vendors in La Paz and other cities and organized their new colleagues into unions. The street vendor unions, while small proportional to the city population, became active and well-known players in local and national politics, joining campaigns for expanded labor rights, shorter work days, and minimum wage (Lehm et al., 1988, p.274).

La Paz's street markets historically have strongly gendered boundaries (Barragán, 2005; Rivera Cusicanqui, 2004). Most street vendors are and have been women (Aramayo Cañedo, 2015; Peredo Beltrán, 1992). Men work as street vendors with specific trades, like cobblers and locksmiths, or corner the market on specific types of goods, like hardware and, increasingly cellphones, computer parts, and other consumer technology. Women have historically dominated food markets (Barragán, 2005; Peredo Beltrán, 1992).

The 1952 revolution fundamentally changed Bolivia's social and political landscape, especially with regards to labor (Kohl and Farthing, 2006, p.46). Revolting workers seized the mines and agricultural land from the ruling elite and ushered in a revolutionary coalition that nationalized the mines and instituted agrarian reforms (Albó, 2008). The government extended suffrage to women and the country's indigenous communities, including the majority of Bolivians in the state's definition of citizen for the first time (Kohl and Farthing, 2006, p.47). Activists connected to the revolutionary government founded a national street vendor and artisan organization (Rojas, 1992, p.116). However, this national federation, like many of the other ini-

tially revolutionary groups, became a largely symbolic organization that at best was a vehicle for patronage (Rojas, 1992, p.118).

In the late 1950s and early 1960s, government agents at various levels pushed street vendors in La Paz to start vendor unions. As several participants discuss later in the chapter, bureaucrats sometimes required vendors to unionize as a precondition for meeting with them, while other street vendors decided to unionize to capture newly legislated protections and privileges for union members. These small, local unions retained much more autonomy than the sector-wide organizations and proved more durable (Rojas, 1992, p.122). At least two dozen street vendor unions founded in the 1950s and 1960s are active in La Paz today.

In 1972, 70 street vendor leaders from the La Paz department⁴ founded the *Confederación Sindical de Trabajadores Gremiales, Artesanos, Comerciantes Minoristas y Vivanderos de Bolivia*; the National Confederation of Street Vendors, Small Retailers, Artisans, and Food Sellers of Bolivia (from here on referred to as the National Confederation of Street Vendors or the Confederation). The Confederation is an autonomous organization by and for street vendors that pushes street vendor issues with the national government (Rojas, 1992, p.122). The Confederation likely represents between 200,000-300,000 street vendors around the country, which would make it one of the largest street vendor organizations in the world and potentially the largest proportional to national population. Over the decades, the Confederation's power has waxed and waned and while it has occasionally allied with specific administrations (Rojas, 1992, p.118-123), it remains a largely grassroots labor organization.

The Confederation's membership rolls boomed after the passage of Decree

⁴In Bolivia, department is a subnational administrative designation similar to a U.S. state.

21060 in 1985 (Pereira Morató, 2008, p.1). The law was the centerpiece of a package of economic and political reforms, supported by international organizations and Bolivia's creditors, that was designed to stop runaway inflation and prevent worse economic crises in the future (Kohl and Farthing, 2006, p.73). In a massive blow to labor and formal employment, the law closed many of Bolivia's state-run mines and dismissed thousands of unionized government workers. Hundreds of thousands of people—some former unionized miners but many more unemployed people reeling from the spillover effects of Law 21060—migrated to Bolivia's cities seeking work in the next decade (Kohl and Farthing, 2006, p.74). The reforms did stop inflation and Bolivia has not experienced as profound an economic crisis since, but the solution cost the country's poor and middle class their savings and their jobs. Tens of thousands of people turned to street vending because it was an occupation that any person could try and that could bring daily cash flow (Pereira Morató, 2008, p.2). Pereira Morató (2008, p.1) uses municipal records and interviews to estimate that in 1951, La Paz had 369 street vendors. In the 1980s, that number had ballooned to 18,217. The rate of the sector's growth started to steady in the 2000s after reaching nearly 40,000 in 2003 (Pereira Morató, 2008, p.1). The number of street vendors continues to grow and the city government estimated in 2015 that between 50,000-60,000 people worked regularly as street vendors.

3.3 The Structure of Street Vendor Organizations in La Paz

All street vendor organizations that I came in contact with follow a remarkably similar structure and operational procedures. The organizations that Tassi et al (2013, chapter 4), Lazar (2007, chapter 6), and Goldstein (2016, prologue) work with in Santa Cruz, El Alto, and Cochabamba follow very similar organizational structures as well. These structures reflect union practices across Bolivia and contemporary Bolivian history (Dibbits et al., 1986; Peredo Beltrán, 1992; Rojas, 1992). While there are many similarities between organizations, the extent to which leaders and members follow each group's rules and uphold democratic principles varies widely.

Interviews, interactions, and participant observation at official and unofficial meetings established the following typical trajectory and structure of a street vendor union in La Paz: once a group of street vendors decides to found a new union, they buy a *libro de actas*, or book of acts, and write a founding statement. All founding members sign the notarized statement, which may also be notarized or signed by a federation or confederation leader. Under Bolivian law, a group needs 24 members to register as a union. Many but not all organizations try to round up 24 founding members to meet this requirement. Most street vendor organizations eventually register as unions because official unions receive *personería jurídica* or legal personhood, and this extra document from the Labor Ministry facilitates some bureaucratic processes and gives leaders more standing vis-a-vis officials.

Once the group has a founding document, the members elect a *secretaría general* as leader. The group typically elects additional officers. Practically all groups have a *secretaría de hacienda*, or treasurer, and a *secretaría de actas*, who records all

of the group's activity and is in charge of documents. The *secretaría de hacienda* or *secretaría de actas* can act as a vice president of the group, or the union can elect a *secretaría de relaciones*, who may also corral members or act as a second-in-command representative to officials. Larger groups may have a *secretaría de organización*, whose job is to call meetings and make sure members attend. Groups commonly also elect a press secretary, a health secretary, who collects donations from members if another member gets sick, a sports secretary, who organizes social events for the group, and a standard bearer, who carries the group's pennant in parades. Organizations can also have appointed or elected *fiscales*, older members who have served as leaders and form a semi-independent oversight committee to investigate allegations of corruption or abuse. Finally, the group may designate spokespeople and substitute representatives to attend bureaucratic or federation meetings. These one to 20-odd elected positions constitute the group's *directorio*, or elected leadership committee, which must be present to make demands to the government, represent the group to larger groups, and make decisions with members.

Groups then decide on their bylaws. Established unions or larger city or state federations often suggest a roughly standard collection of bylaws. These bylaws include but are not limited to the terms of all elected leaders (typically two years), how leaders call elections, how many members must be present for quorum, how frequently the membership meets, how much dues are and how often they are paid, what the procedure is for admitting new members (typically a membership-wide vote), what behavioral and business rules members agree to abide by, how to resolve disputes between members (typically a hearing in front of the full *directorio*), and a graduated schedule of punishments for members who break the rules.

Once a group has formed with its founding membership, it can admit new

members. Each group has its own process written into its bylaws; a typical process is that a prospective member approaches the *directorio* with a letter of intent. If accepted, the prospective member then presents her case to the full membership in a meeting. The membership then votes on her candidacy. If approved, she pays a joining fee of a few hundred *bolivianos* to a few thousand dollars. Some groups actively recruit new people while others are highly restrictive: for example, one organization, founded in 1965, that I worked with restricted their membership to 36 people and would only add a new affiliate if an older member retired. In other words, street vendor unions in La Paz are selective and highly structured groups that actively and extensively screen their members.

Take union pennants as an example of how minutely organized most of the street vendor groups are and how similar organizational practices are across groups. Shortly after they form, practically all groups make a pennant to carry in marches, protests, and at celebrations and parades. As the picture below shows, the pennants have very similar designs and carry the name and founding date of the organization and the seal of the city that the union operates in.

Punishments vary more across organizations than pennants but are still relatively standardized. If a member catches another member breaking a rule, she is supposed to report the offending member to the *directorio*. The *directorio* then calls the member to a meeting where she can present her case. Making a case can involve photographic evidence, witness testimonies, testimony of hardship, or a heated argument. If the *directorio* decides that a member has broken a rule, they can levy a fine or bar the member from selling for a number of days. Many bylaws let vendors choose between paying a fine or not selling. While fines vary widely in amount—and *directorios* may levy fines proportional to individual members' income or offense—



Figure 3.1: Unionized street vendors with union pennants outside of the La Paz city hall.

suspensions are more standardized: for a first offense, a vendor cannot sell for five days. For a second offense, she cannot sell for 15 days. For a third offense, she may be expelled from the union and the union leadership may make a formal request for the Markets Office to suspend her license.

In practice, different groups vary widely in how closely they follow their by-laws. Likewise, some groups are extremely democratic, while others exist as a club or cash cow for a long-term leader. Some groups do not formally elect leaders but instead rotate leadership and all members are required to serve for two year terms when it is their turn. For example, the small *champañeras*—champagne sellers—union consists of 12 affiliated champagne sellers and photographers and functions more as a cooperative with jointly-held property than a union. Technically, all members vote on leaders and decisions, but the group typically reaches a consensus before making a decision. On the other hand, another union I worked with had been headed by the same woman for over 30 years who had a reputation for intimidation, particularly through arson. She was reelected every time she called an election, which was sometimes every two years, as stipulated in the bylaws, and sometimes not. As members left, she often appropriated their stalls for herself or her family. Across La Paz, plenty of other groups exhibit an impressive level of deliberative democracy, like the *champañeras*, or a discouraging level of corruption, like the arsonist's association, and plenty more fall somewhere in between.

3.4 Grounding the Model's Assumptions in Ethnographic Data

The model in Chapter 2 makes several assumptions about informal workers and state interaction that are grounded in the experience of street vendors, which I demonstrate in this section. In particular, the model assumes that unorganized vendors create negative externalities, or additional costs, for the state. Interviews with police officers demonstrate that unorganized vendors create larger enforcement costs than organized vendors. Second, the model assumes that informal workers make organizing decisions based on a straightforward calculus: they consider the costs and benefits of each action and choose the action that gives them the most utility. Discussions with street vendors and field notes from markets and bureaucratic offices show that many vendors do approach organizing in a highly rational, cost-benefit fashion. Third, the model assumes that the state makes offers that have concrete value to informal workers. In this section, quotes from vendors and bureaucrats demonstrate that the state offers cash, licenses, and policy input on a regular basis. Finally, the model assumes that once formed, organizations self-regulate. Ethnographic evidence from police, vendors, and field notes show that vendor organizations regulate much more thoroughly than the state can alone.

3.4.1 *Paceño* Vendors

Who are La Paz's street vendors? The average⁵ vendor who we surveyed holds a license for a food stall, belongs to a street vendor association but does not identify

⁵This composite holds continuous variables at their means and uses the most common category for categorical variables.

Table 3.1: Binary variable proportions

Variable		
Organized	81% Nonparticipants	19% Participants
Licensed	61% Rural	39% Urban
Fixed Stall	81% Voter	19% Nonvoter
Gender	68% Men	32% Women

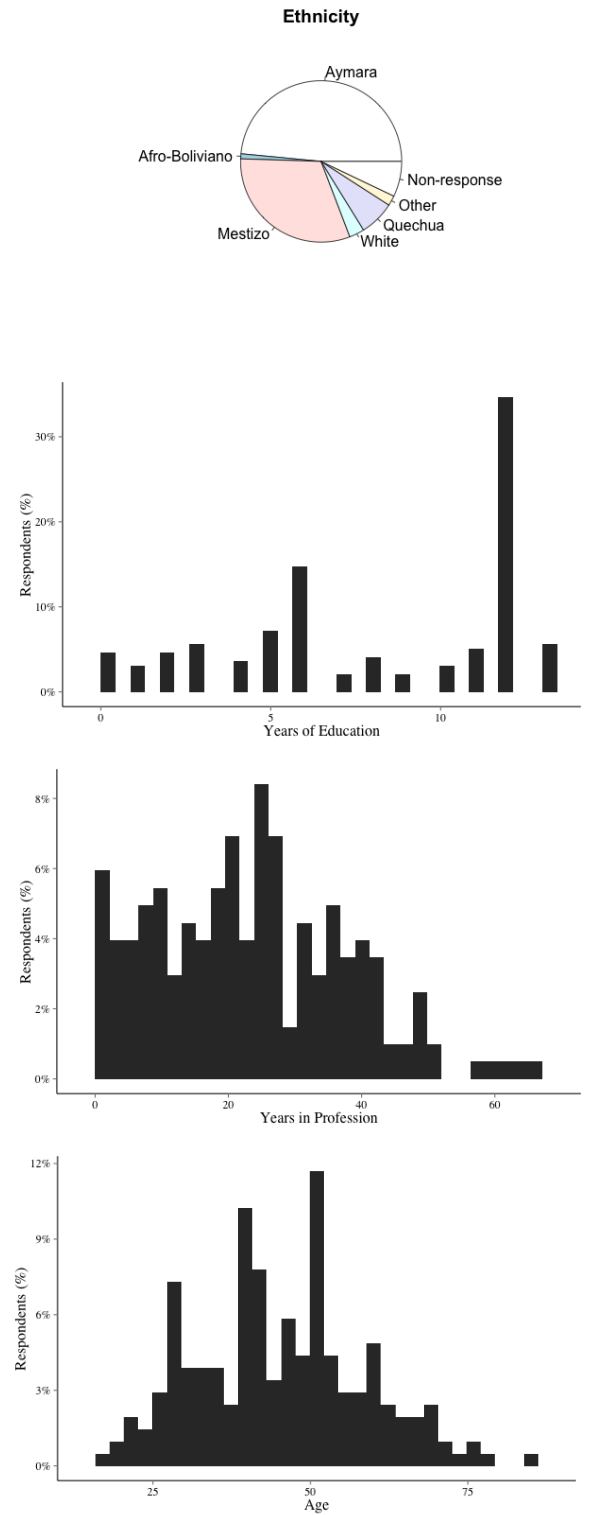
with a political party, and has worked as a vendor for 23 years. Demographically, she is a 45 year-old indigenous woman who completed eight years of school⁶ and who owns a television, refrigerator, and cell phone but does not have a vehicle or regular internet access. Women comprise 80% of street vendors in La Paz, though as vending has become more profitable, more men have joined and are overrepresented in leadership (Hummel, 2016). In other words, the average vendor in La Paz is a career street vendor who makes enough to get by and has some social capital. Figures 2 and 3 summarize descriptive statistics from the street vendor survey.

3.4.2 Negative Externalities

The La Paz municipal government employs 150 city guards to police commerce, including street vending. This is relatively small number considering that the city also employs 150 full-time traffic cops. The guards split their time between routine patrols, where they spot-check licenses, inspect merchandise, and sanction unlicensed vendors, and operations, where they send squads to remove repeat violators. Operations are the most costly for the state, which must pay several squads of guards to

⁶The average is eight but the distribution is skewed. 30% completed high school, which is the highest bar in Figure 2’s education histogram. The second highest bar is at the end of primary school.

Figure 3.2: Sector descriptive statistics



deal with a small number of violators, and for individual guards, who run personal risks.

For example, Elisa is a city guard who patrols markets in the afternoons and is frequently on-call for larger operations at irregular times. Like other guards, she makes a salary slightly above minimum wage and is not paid extra for late night or hazardous operations. She explains the different types of operations she participates in.

"When the operation is one stall, we can go during the day. But if we have to remove several, we have to go at night when [the vendors] aren't there. This happens when, for example, there are people that have permission to sell for one fair day and they stay for a week. Then, we go at night to remove them. In big operations, we are 50, up to 100 guards... Every time, there are more vendors, more illegals. Now we are receiving complaints that there are a lot of illegal vendors around Eguino at night. So we have to go at 11 pm."

On a police ride along, Elisa's colleague Jhonny talked at length about his least favorite parts of his job. He described the fights that occasionally break out between city guards and vendors:

"Sometimes they start fights, there have been guards that were hit or had their faces cut trying to confiscate. This can be a problem when we're in markets, especially around meat. A lot of times we check for expired or

uninspected meat, and if we find it we confiscate it, but the women have large knives and sometimes try to cut the guard."

The guards speak to how vendors create sizable negative externalities for the state by breaking laws repeatedly. Negative externalities contribute to enforcement costs. As discussed in chapter 2, states can try to ignore these negative externalities or try to control them, both of which come with associated costs. If the state attempts to control negative externalities, it must absorb the enforcement costs of doing so. These costs quickly spiral if vendors break laws en masse or if the number of non-compliant vendors increases. While plenty of organized vendors clash with the city guard, unorganized vendors create the most problems and the highest costs. These quotes suggest that if street vendors in La Paz were not as organized, the state would have to spend much more material and human resources on monitoring and enforcing basic public health and public space regulations. In short, these quotes demonstrate that unorganized street vendors do generate negative externalities for the state.

3.4.3 Vendor Cost-Benefit Analyses and State Offers

Organizing requires time, money, and skills that few vendors have in surplus. Vendors will only organize with their colleagues when they expect significant benefits. If vendors are not reasonably certain that they can get significant private benefits from the state by organizing, few choose to. Natalia, a former vendor leader who currently works as an *independiente*, or licensed but unaffiliated vendor, explained her situation in March 2015:

"We are 15 here and we have discussed it, I could organize the 15. Don Jaime (the federation leader) told me that we can start with this. But when you are a leader it absorbs you. You don't have time to work or to spend with your family."

Natalia goes on to explain that she does not need an association anymore because she has a license that she received through a now defunct union.⁷ In contrast, when vendors expect that they can get significant private benefits out of organizing, they do. In most cases, the biggest benefits come from the state in the form of licenses. Amelia points to these benefits when explaining why she founded a union:

"First, I wanted to help my colleagues. Second, I wanted more stalls... I've had a lot of stalls. I fought with the other founders, but I got four stalls in front [of her original stall] and three stalls in back. I have had others. First, I organized [a market street] and then the next street. Some stalls I sold, others I gave to my daughters."

In explaining her actions, Amelia pays brief lip service to altruism: she wanted to help. She then talks at length about the licensed stalls she has accumulated as a vendor leader, which are worth \$10,000 to \$80,000 each in the market where she works. While Amelia does not explicitly mention the state, only bureaucrats can

⁷The Markets Office issues licenses to individuals who belong to a union. If that union disbands, members with licenses keep them. Most choose to join another organization but some, like Natalia, become *independientes*. While it is legally possible for an individual to be licensed without going through an organization, it is very rare; I do not know of a single person who obtained a license without an organization.

issue licenses. Bureaucrats facilitate a gray market in vending licenses by legalizing dubious name changes on licenses and, vendors report, issuing additional licenses to vendor leaders as side payments. When the state offers incentives to individual street vendors for becoming leaders, it creates opportunities for leadership as well as rent seeking. Natalia recounted in March 2015:

"In past administrations, the city paid a monthly stipend to vendor leaders. All of us wanted to be the leader; who wouldn't want to earn a stipend on top of what you can get from the members? There were many fights between street vendors."

The state offers valuable incentives to street vendors who organize, particularly their leaders. In these quotes, the state selectively offers material incentives like valuable market licenses and even cash. In some instances—like the licensing scheme discussed in the following section—the state offers organized vendors policy input on the regulations that the vendors care about most. Vendors use these offers to evaluate their organizing options through cost-benefit calculations. In some cases, like licenses and input, it is ironically the vendors' actions that make some incentives so valuable. To the city government, licenses cost paper and time; it is the vendor organizations that enforce the rules printed on the licenses and make them valuable.

Natalia and Amelia embody the survey statistics for unorganized and organized vendors: both are middle aged women of indigenous descent with over 20 years in the sector. Natalia is slightly younger and has slightly less experience than Amelia, as well as slightly fewer assets. The main difference between them is in their cost-benefit analyses: Amelia has organized other vendors when she expected to receive

additional licenses from the state while Natalia does not organize her coworkers now because she does not need or expect this benefit.

Amelia's and Natalia's experiences demonstrate typical organizing sequences in La Paz, which are captured by the model: vendors start working as unorganized individuals, typically in an area with few or no street vendor organizations. For example, Amelia works in a hectic market square in central La Paz, but when she founded her first union in the 1980s, "Plaza Mamani used to be empty, not full like it is now. There were just a few of us, women who were selling some food." When the city finds unlicensed vendors, it intervenes punitively by issuing citations or confiscating wares. Officials or vendor leaders with access to officials tell the unorganized vendors that they can only get a license by starting a new union or joining an existing one. Some vendors organize, typically those with more resources, while others try their luck avoiding local authorities. Once organized, vendors receive licenses and can negotiate with the state over other problems or benefits in the future. The game theoretic model simplifies the steps, but captures the basic process: an unorganized group has a range of costs and concerns, members of the group decide to organize or not, a state actor makes an offer conditional on organization, and given the vendors' decisions, the state actor delivers on its offer.

3.4.4 Self-Regulating Organizations

Street vendor organizations in La Paz have clear statutes and organizational hierarchies that help them adjudicate disputes. Most associations' statutes and written agreements with the city include a clause stipulating that vendors will follow all relevant municipal and organizational rules and cooperate with their colleagues, or face expulsion from the organization and revocation of any license. Street vendors

frequently invoke these clauses. Isabel, a unionized clothing vendor, explains how agreements work between the city and the associations that operate in the market she works in:

The associations sign an agreement with the city government that they will follow the city's regulations. In effect, this means that the association enforces most things. The city government just enforces a few things in the licenses: time and place and having one. But if the city government finds something wrong, they'll just write a letter to the association saying "Your affiliates are doing this and you need to stop it."

City guards and their commanders volunteered that street vendor organizations actively collaborate with them in enforcing these rules. Guardswoman Elisa explains, "It's the street vendors themselves, the leaders, who call us. When we arrive, they are waiting to help us, and they facilitate our work."

In additional interviews, city guards and their commanders volunteered that street vendor organizations actively collaborate with them, as exemplified by a quote from city guard commander Major Rodríguez:

Frequently, the street vendors themselves make reports, about someone who is selling outside of their hours, or new illegal vendors, or people selling outside of their space... The street vendors regulate each other. Since it hurts them to have more street vendors, and they know when a new person shows up, they are the ones that regulate.

Additionally, street vendors actively seek out police and have established regular meetings with leaders and police managers where vendors and law enforcement coordinate their efforts. Major González, one of the officers charged with managing

the municipal guard, explained that, "They come here [to the city guard station] to coordinate. Every 15 days we have a meeting with the leader of the sector."

When 5% of the city sells on the street, it is prohibitively expensive for the state to effectively police them. In La Paz, the law enforcement unit that polices street vending relies heavily on organized street vendors to reduce costs. Outside of the guards' spot-checking patrols, street vendors are the primary monitors and sanctioners of other street vendors. Both guards and street vendors make it clear that the organizations self-regulate, internally enforce local ordinances as well as their own rules, and coordinate with the city.

For example, I worked at a licensed stall in a large clothing market, where over 6,000 people work in self-policed shifts from 5 am to midnight. The licensed vendor I worked for began enlarging her stall by tenths of a centimeter every week. The city guard walks past her stall every morning, but did not notice these minute violations. Instead, colleagues reported her to her association's leadership, which conducted a surprise inspection. Fifteen leaders crowded around her stall, declared her in violation of her license, gave her a time and date to appear before the full elected board to determine a punishment, and threatened to report her to the city if she did not comply. She complied, attended the association's hearing, and was barred from selling for 15 days. When we discussed the punishment, she told me that even if leadership reported her, the city would probably tell the association to sanction her themselves. She complied because her association can prevent her from working by directing members to destroy her merchandise or stop her from setting up her stall, not because she feared the city guard. In extreme cases, the association leadership presents testimonies that a member does not follow regulations and asks the Markets Office to revoke their license.

In this example and others, street vendors carefully monitor each other, use their own institutions to enforce city ordinances, and only call the city if their own adjudication fails. While the city supplies incentives that encourage this behavior, the organizations' management and regulation of the markets make incentives like licenses and market stalls valuable to vendors. In doing so, the organizations enforce local laws more thoroughly than the state.

3.5 Observable Implications

Using the assumptions discussed in chapter 2 and above, the model generates equilibrium outcomes and comparative statics about state behavior and workers' organizations. If this model is useful for explaining state intervention in collective action, the model implies that we should observe specific empirical patterns. In particular, we should observe that a) states make increasingly large offers to workers as negative externalities increase; b) as offers increase, the level of worker organization should increase; c) workers with more resources are more likely to take advantage of the state's offers.

3.5.1 Increasing Offers and Increasing Levels of Organization

As discussed in the history section of this chapter, activist miners returning from Chile with anarcho-syndicalist strategies founded some of La Paz's first street vendor organizations (Lehm et al., 1988; Dibbits et al., 1986). These became active in the city's labor movement, at turns cooperating and clashing with the government over public space and labor laws. These small organizations came and went until after the 1952 revolution, when the Bolivian Labor Central was founded and the new

regime pressured street vendors to affiliate with it (Rojas, 1992, p.118-120). In response to local politicians, many of the several hundred street vendors in the city (Pereira Morató, 2008, p.1) formed small unions in the 1950s and 1960s, like Elena's union, which was founded in 1965:

"[My mother's union] was organized because of the problems they were having with the city administration. [The city] said they needed licenses, so the women formed a union."

In this brief history, we see no organizations and then a few experienced individuals founding small organizations that wax and wane with their leaders and their interactions with the state. At first, this pattern is consistent with the model's first and second equilibrium outcome at different times: no organization in the absence of state intervention, despite common interests, and at other times some organization by particularly motivated individuals in the absence of state intervention. We see more vendors forming and joining organizations after a revolutionary regime intervenes in the 1950s, consistent with the third class of equilibrium outcomes, but their organizations are still small. This changed in the 1980s.

During the hyperinflation and resulting economic crisis of the 1980s, over 18,000 unemployed Bolivians in the capital turned to street vending to survive (Pereira Morató, 2008, p.2). This dramatic increase in vendors also increased the city's enforcement costs materially and politically: the city needed more personnel to enforce public space laws but evicted street vendors could not find alternative employment amidst rampant unemployment. New unions formed in response to the city government's

carrot and stick approach to street vendors, which licensed organized vendors who supported the government and evicted others, as Amelia experienced:

"One day, the municipal guard came to remove us. We asked ourselves, what will we do, what will we do? I had a friend who worked for the mayor and she said, why don't you form an association? ...We got the people, we went to the federation to affiliate, then we went to the city to ask for help... Dr. MacLean [mayor from 1987-1991] said, "Help the party and I will help you." So we went to the party, we helped, and Dr. MacLean followed through. After a year, we all received licenses."

In Amelia's story, we see evidence of forbearance—the city selectively enforces in order to extract political support (Holland, 2016, p.232)—but also something more. The city does not just ask for votes, it requires vendors to organize and then distributes a large, concrete individual benefit to those who do. As its enforcement costs from street vending increased, the city actively pursued a strategy of selective enforcement against atomized actors while also increasing legal benefits for people who formed organizations, in line with the model's observable implications. As the state's offers to organized vendors increased, the vendors' levels of organization increased as well, with more and more unions forming and affiliating with umbrella organizations at the local and national level.

In the 2000s, the city and the federations began bargaining over a new licensing system—the *pago único municipal*—that would give semi-permanent licenses and other incentives primarily to organized street vendors. After rounds of public protest and closed-door negotiations, the city and the organizations agreed to the new system: all vendors who could demonstrate *sentaje* payments—an arbitrarily-collected daily

tax—since 1994 could apply for a license, which they would maintain by following city vending ordinances and paying an annual fee. On paper, licenses are issued to any individual with a legitimate claim, but in practice, the rules are so vague and contradictory that bureaucrats only approve applications that are filed with a known vendor leader. Still, bureaucrats and vendor leaders claim the *pago único* as a victory that institutionalized organized street vending. Jorge, a former Markets Office bureaucrat, describes the importance of and changes wrought by the licensing program:

"This unified, clear tax was a victory. This creates institutional relationships, an institutional relationship between the city and the federation... The street vendors achieved recognition from the government, and since then it has been much more stable, people don't have to worry about what will happen tomorrow. The conflicts are no longer about stalls, they are about rules and schedules."

In this quote, Jorge explains that the *pago único municipal* is mutually beneficial for vendor organizations, the city government, and many vendors *because* it strengthens vendor organizations and reduces conflict. The *pago único municipal* gives street vendors an important benefit—semi-permanent licenses—in exchange for a small fee. Importantly, it is the street vendor organizations that facilitate those licenses and channel this benefit from the government to individual members. This creates more stable and longer term relationships between the organizations and the city government. These established, mutually beneficial working relationships then reduce conflict between the city and the sector and encourage new vendors to form or join organizations that follow the city's laws in order to get and maintain licenses and

other benefits.

Vendor leaders state that the *pago único municipal* brought important and positive changes to street vending. They claim the program as their achievement, as federation leader Don Jaime declared many times in meetings and rallies, for example, "The *pago único municipal* was our victory. It was the federation, we worked hard for it for many years, it was our struggle."

In the fall of 2014, street vendors mobilized protests against a city council proposal to make restrictive changes to the *pago único*. Among the protest chants, printed and distributed to marchers on slips of paper, was "Long live the *pago único municipal*!" Protesters also chanted for the long life of the federation and for the death of opposing city council members. This protest, which ended in a meeting with the city council, is one of many instances in which street vendor organizations, once organized, engage the state to bargain over policy and enforcement. It is also a sign that while the vendor organizations work with the government and enforce local laws, they remain independent and autonomous.

Why did the city negotiate a partial legalization of street vendors in 2003? In the 1990s and 2000s, thousands of new, largely unorganized vendors were joining a sector that was growing, but at decreasing rates. Thus, new vendors drove up the city's enforcement costs, but not as drastically as they had in the 1980s. However, negotiations over a new licensing system occurred under a conservative city government after citywide vendor protests and during nation-wide mobilizations that forced the resignation of presidents. The city government faced moderate increases in material enforcement costs from increasing numbers of vendors but potentially high political costs from continued protest. Conversely, the city stood to gain significant benefits from an institutionalized and cooperative street vending sector: it would save money

by shifting more enforcement and monitoring responsibilities to the federations and benefit from their political support. In fact, the administration did maintain control of city hall while conservative parties across the country lost to the *Movimiento al Socialismo* (MAS) party over the following decade and successfully shifted monitoring and enforcement to street vendor organizations. Therefore, following the expectations of the model, growing enforcement costs over time led to increasing offers from the state to organized vendors, which in turn boosted the levels of organization among street vendors.

Similar patterns occur spatially. In established neighborhoods, street vendor associations internally regulate existing vendors and the city refuses to issue new licenses. This arrangement is mutually beneficial: a stable, regulated street vending sector limits competition and uncertainty, which benefits existing vendors, and keeps the city's enforcement costs low. In new neighborhoods without organizations, unorganized vendors set up shop and the process repeats itself.

I accompanied the *champaneras*' union, a small cooperative that sells wedding services in a peripheral neighborhood plaza, through part of this process. Like most new vendors, the *champaneras* began working as unorganized individuals, selling in the plaza after infrastructure improvements increased traffic and made it a potentially profitable location. Shortly after, the city guard began issuing them citations for selling without licenses. The women went to the Markets Office and asked established vendors how to obtain licenses. Other vendors told them to form a union and affiliate with the main street vendor federation, which they did. Once affiliated, they negotiated over licenses with the Markets Office. The *champaneras* reported that the city guard ceased patrolling the plaza as soon as they submitted their union paperwork and licensing petition, even though none of them were legally allowed to

sell until years later.

The city tacitly bolsters the organizations' authority by making it exceedingly difficult for unorganized vendors to access the bureaucracy. In the above anecdote, the *champaneras* had to form a union and affiliate with a federation before meeting with the Markets Office director. In interviews, bureaucrats confirm that they encourage vendors to form and join specific groups. Bureaucrats like Markets Office director Ángel Gómez state that they prefer to work with specific organizations:

"If there are conflicts between organizations, we have a meeting with the leadership that supports us. It would be better if there were only one federation."

As Gómez went on to explain, anyone can come with their organization or as an individual, but he prefers to work with one specific leader, makes exceptions for that leader, and supports him over others in inter-organizational conflicts. As vendors explained and I witnessed dozens of times, the office's official scheduling process serves to screen out the unorganized: individuals submit a notarized petition and letter into a city-wide system, take the receipt to the Markets Office, follow up in person a week later to receive a meeting date and additional letter, and return to be rescheduled or told to wait for hours until they leave, at which point the process is dropped and must be restarted. As Auyero (2012) finds in the welfare bureaucracy in Buenos Aires, the waiting and bureaucrats' arbitrary discretion over poor people's lives grinds them down and encourages individuals to give up. Faced with maddening futility if they try to petition bureaucrats as individuals, the bureaucracy pushes

vendors to organize if they want access.

Ricardo, a photographer in the champagne sellers' association, explains the process he and his colleagues went through:

Our licenses came this year. For this, we joined the champagne sellers, because [city bureaucrats] do not want to give licenses to individuals, but an association helps... The first month, people from the city came by asking for our licenses. You know, the day we submitted our paperwork they disappeared, they haven't come back to bother us.

Ricardo states the common knowledge: The city will not license individuals but it will license union members. Ricardo then explained that photographers typically work in private buildings where they do not need vending licenses. The photographers only joined the union to get licenses and would not have joined if the city had not insisted. Once the union could demonstrate that they had begun the process of registering an organization—which is not a requirement for legally vending—the city guard stopped issuing warnings.

3.5.2 Who Leads and Who Follows?

Why do some street vendors organize while others do not? In line with the model's observable implications, the 25% of surveyed vendors who do not belong to a street vendor organization tend to be slightly younger, newer to street vending, and have fewer assets than organized street vendors, though none of these differences are statistically significant in logistic regression analyses (see appendix and Table 2). Descriptively, 89% of organized vendors hold licenses but only 46% of unorganized vendors do, and this difference is statistically significant (see Table 2).

Logistic regressions on original survey data from La Paz (see Methods section of this chapter and appendix for sampling strategy, protocol, and instrument) examine these differences between organized and unorganized vendors by looking at the predictors of organizational membership.

The analyses take a dichotomous variable for the outcome variable: did a respondent report belonging to a street vendor organization or not? Following the theory, the analyses include several proxies for individual attributes that should contribute to individual costs: whether or not the respondent went to college, whether they have been a vendor leader, and a measure of their assets. Instead of asking for respondents' income, which people tend to misreport or refuse to report, we asked respondents whether or not they had a cellphone, refrigerator, television, internet access, extra stalls, car, or owned their own house, and then made an index out of a simple count and then a weighted count as a robustness check. Additionally, the analyses include information on vendors' license status, gender, ethnicity, age, and merchandise. For the ethnicity variable, mestizo is the omitted category; for merchandise, food is the omitted category. Table 2 presents the results of two logistic regression models on the survey data, with and without licenses as a control. Note that the reported numbers are odds ratios.

Table 2 presents trends in the directions that the theory implies: people with more resources, like education, assets, and experience, are more likely to be organized (in other words, the coefficients on these variables are positive when predicting organizational membership) but the only consistently significant variable is whether a respondent is licensed or not. However, per the theory, licensing may be endogenous to organization. If the analyses omit license as a control, gender and ethnicity approach significance.

Table 3.2: Logit regressions on street vendor survey data

	Models	
	Logit 1	Logit 2
Past Leadership	1.41 (.73)	1.68 (.76)
College	6.03 (7.06)	3.59 (3.93)
Assets	1.04 (.24)	1.28 (.26)
License	11.56* (5.57)	
Gender	2.29 (1.31)	2.69* (1.38)
Age	1.0 (.01)	1.0 (.01)
Aymara	.2* (.1)	.76 (.58)
Quechua	.38 (.33)	.96 (.70)
White	.56 (1.01)	1.31 (1.82)
Other/NR	.68 (1.03)	2.14 (2.98)
Drinks	1.53 (1.35)	1.45 (1.14)
Clothes & Accessories	2.87 (2.03)	2.03 (1.27)
Books & Newspapers	3.06 (3.79)	2.54 (1.85)
Other Merchandise	.95 (.66)	.60 (.36)

Original Data N = 169

Standard errors in parentheses below odds ratios. All tests are two-tailed.

* $p \leq .1$

This is evidence in support of the observable implication that states offer licenses to vendors who organize. While the survey is a snapshot and cannot tell us if vendors get licenses because they organize, or if vendors organize because they are licensed, ethnographic evidence can help disentangle possible endogeneity.

Compare Amelia, a longstanding union leader, and Natalia, an unorganized *independiente*: on one hand, both are women of indigenous descent who started working as children and have decades of experience in the sector. Both have licenses, an important factor that this informal comparison holds constant. However, Amelia has 38 years of union experience, much of it as a leader. Additionally, Amelia has more time and resources than Natalia: at 56, Amelia has adult children and more material assets than Natalia, who at 40 supports two children in a rented house. Descriptively, Amelia and Natalia illustrate the model's implication that vendors with lower costs organize more.

In line with research that finds that people with more resources participate more than people with less (Ostrom, 2007; Meinzen-Dick et al., 2002), vendor leaders tend to be better off relative to other street vendors: rank and file vendors actively promote leaders with a college education, and leaders are disproportionately male and mestizo (Hummel, 2016). For example, the head of La Paz's main vendor federation has a social science degree from a French university and his second in command has an architectural degree from Bolivia's main university, while the leader of the second largest federation holds a law degree from the same Bolivian university. These leaders have spent decades as vendors, but they are much more educated than most of their colleagues: we found that only 6% of survey respondents reported attending university.

Additionally, only relatively well off vendors tend to accept leadership posi-

tions because they have enough income to redirect their time to the organization and away from vending. However, income may be endogenous to leadership: many leaders engage in corrupt exchanges and can use their positions to embezzle funds and acquire multiple vending licenses, which can be worth tens of thousands of dollars each.

3.5.3 Partisanship and Clientelism

In the case of La Paz, state intervention in collective action explains street vendor organization while clientelism does not and the strategy is not restricted to one ideology. In La Paz, the elitist, conservative government delegated enforcement to and worked with street vendor organizations. Of the four federations in La Paz, one was affiliated with the MAS party, one with the conservative party in control of the city government, and two were unaffiliated with a party. The federation I worked with was openly Marxist, but worked with the conservative local party. In El Alto, the leftist MAS government worked extensively with the street vendor organizations as well. When an opposition party won in El Alto, it made overtures to the El Alto vendor organizations.

While I observed officials making clientelist offers to street vendors and organizations, most vendors brushed those offers aside as either petty, in the case of party-branded clothing, or suspect, in the case of promises of expedited licenses. Clientelist offers did not appear to drive organization; instead, they existed as a byproduct. For example, one organized vendor that I talked with at a rally for the city government's party during the 2014 presidential elections said, "I have my stall and well, they need more people... I'm here because there's so few, look. It makes me sorry for them. It's pitiful, isn't it?"

3.6 Who Benefits from Organized Street Vendors?

When governments pay street vendors to form organizations that monitor and enforce, the government does not necessarily give up control. Governments can manipulate the number and leadership of organizations by offering incentives only if organizations unify or only to a preferred leader and her followers. If the state does not want to negotiate with a unified and therefore more powerful sector, the state can fracture existing organizations by offering incentives to breakaway organizations. Unifying or dividing street vendor organizations curtails an organization's potential to benefit its members, either by favoring leaders who are dependent on the state and therefore reluctant to bargain hard, or by cleaving an organization and therefore reducing its potential bargaining power. Luisa, a prominent vendor leader, explains, "The parties divide us with money. And then there's the government, the Markets Office, they give things to one [organization] but not others."

For example, El Alto, Bolivia had a unified street vendors' federation for over a decade that represented over 200,000 vendors. The leftist city government, run by a street vendor and former federation leader, would only work with vendors associated with the federation. Additionally, the city and federation had an agreement that returned 50% of vending license fees to the federation to use for public works. However, when an opposition candidate won in 2015, the federation lost its monopoly and threatened not to cooperate with the new mayor. A breakaway federation immediately sprang up, allegedly supported by the new, conservative city government (Columba, 2015). In this example and others in Bolivia, parties across the ideological spectrum court street vendors and their organizations. The wide appeals and post-election timing suggest that, in this case, governance concerns like enforcement impact

state intervention in informal workers' collective action more than ideologically-driven electoral strategies or other motivations.

In the model, actors exchange incentives and the model is agnostic on whether those incentives are legal or normatively desirable, but empirically, corruption is one way to supply or manipulate incentives. Vendor leaders and officials allegedly participate in corruption—the misuse of public office for private gain (Treisman, 2000, p.400)—either when officials use public funds to illegally pay leaders or when leaders bribe bureaucrats for favors. Vendors commonly state that federation leaders are on the city and national governments' payrolls, and these accusations are repeated in the national press (Columba, 2015). No vendor leader admitted to me that they had received money this way—which is illegal—but both bribery and the accusation are common enough to suggest that state actors sometimes offer cash payments to vendor leaders (Lazar, 2007a). Fabiana, an unaffiliated former leader, explained how governments can use incentives to control organizations as well as encourage them:

The city and national government buy off leaders; they get extra stalls. If you're complaining a bunch they take you aside and say, look, why don't you be quiet and we'll give you another spot.

These quotes illustrate the model's second and third implications: The government targets vendors with incentives, including cash, to induce organization, and vendors increase organizing activity when offered more incentives. The state materially and politically encourages street vendors to form self-regulating organizations because it benefits from delegating monitoring and enforcement. Organizations give street

vendors greater certainty, dispute resolution, and institutional support, which allow them to plan for and invest in their business. These benefits outweigh the costs of joining an association and dealing with manipulative leaders and officials. However, vendor leaders and bureaucrats can extract favors and rents through the organizations and benefit much more than the rank and file vendors, or unaffiliated free riders.

3.7 Manipulating Collective Action for Private Gain

In La Paz's street markets, the work status and careers of tens of thousands of vendors depend on dozens of minute regulations and decisions made by a handful of bureaucrats in the Markets Office and then enforced by the unions. Bureaucrats interpret local ordinances and decide what and where vendors can sell, how many vendors can work legally, how large their stalls can be down to the tenth of a centimeter, and what they can be made of, to name a few issues, which are then enforced by street vendor organizations. This section shows how state intervention in street markets can incentivize street vendor leaders to become intermediaries between bureaucrats and vendors negotiating bribes for favorable, and in some cases illegal, decisions.

Street vendors frequently engage in corruption when they interact with the local bureaucracy. When a street vendor has a problem, he goes to a street vendor leader, and then accompanies the leader to the Markets Office. At the office, the street vendor files a request for a change or an audience with a bureaucrat and enters the official request, called a *tramite*, into the city's computerized tracking system, along with any required supplemental information. The vendor will follow up with the office until he gives up or receives a meeting with a bureaucrat. Typically, the bureaucrat is a lawyer in charge of licensing decisions. Street vendors report that bu-

reaucrats will not accept bribes from people they do not have a previous relationship with.

For example, Juanita is an older, former vendor leader, who prides herself on having turned a profit on everything from unregulated pharmaceuticals to packing tape. As a former leader, she does most of her own paperwork, and explains that individual leaders and bureaucrats have mutual bribery agreements. The agreements block rank-and-file vendors from bribing bureaucrats directly, which is why they give money to an established leader to resolve their issues with the Markets Office:

"Members give money to their leader to do a specific thing. And this leader will pocket part and give the rest to the official. They have an agreement... They will not accept just anyone."

In private, street vendors confirm that most of them pay bribes to resolve problems, especially legally dubious problems, at the Markets Office. For example, the city issues vendor licenses to individuals, who are legally allowed to transfer the license to another person only if the vendor can no longer work, the family can demonstrate hardship, and the new license holder is a family member. In practice, vendors treat licenses similar to real estate deeds and sell them to unrelated people for thousands of dollars. A license's value depends on the stall's location and the status of a license: a centrally located stall with a full day license and no outstanding license issues can sell for \$50,000 or more. Open bureaucratic processes can halve the value of a license while licenses in peripheral markets sell for a few thousand dollars to a few hundred. Bureaucrats accept bribes, typically percentages of the estimated sale price, to rub-

berstamp these legally dubious license transfers as officially sanctioned changes to the license. Street vendors resent corruption and extortion in street markets, but most prefer paying a bribe for a favorable and illegal decision, like selling a license, to receiving an unfavorable legal resolution.

Many career street vendor leaders work for years with the same mid-level bureaucrats. Vendors know that these specific leaders have *muñeca*—which literally means "wrist" or "doll," but that colloquially means influence—with specific bureaucrats. Street vendor leaders typically charge members and other leaders for their services. Some expect payment on delivery or that vendors pay for taxis to the Markets Office and lunch, while others charge set amounts for small services like writing official letters or finding supplementary documents.

Juanita states that all leaders participate in these exchanges, "All of the leaders take money." Eliana explains what rank-and-file vendors are expected to do when they ask for one prominent leader's help, who is widely regarded as fair, but only somewhat effective:

"Here's how it works: Keep [him] company, pay for the taxi there and back, go back with him, pay for food. You pay him at the end but he doesn't ask for it, you give him what you think it's worth. I paid him but it was not that much."

I observed street vendor leaders accepting taxi rides and lunch from members they were helping and routinely taking small amounts (10-30 *bolivianos* or U.S. \$1.50-4.50) for typing up supplemental documents and letters on official letterhead.

Rank-and-file vendors and leaders agree that this is common and acceptable, but that most leaders ask for more from members or take more from association bank accounts. One association member waved away questions about electing clean leaders with the Aymara word for stealing, "They all *lunthatapjje*." Juanita followed up with, "They are all extortionists... The problem isn't the extortion, everyone does that, but how it is handled."

Juanita went on to explain that when street vendors elect new leaders who are not corrupt, most quickly decide to make extra money from bribes when given the chance. When a rare leader refuses to participate in corruption, bureaucrats refuse to work with them. The leader then becomes sidelined because they cannot use extralegal channels to help their members resolve problems with the Markets Office. On the other hand, if a leader cultivates working relationships with bureaucrats, they can pull strings for their members and position themselves as indispensable representatives, advancing their careers as civil society leaders.

Once civil society leaders start working as intermediaries in corrupt transactions, they become implicated in and dependent on corruption and are unlikely to denounce the officials they work with. Street vendors are small business owners who typically work hard for small profits; those who become organization leaders have little incentive to denounce corruption and lose that additional income. As one vendor puts it, "There are people who like being leaders, they get economic benefits from it." Silvia, an occasional intermediary herself, explains that the collusion is too profitable to denounce: "Everyone knows, but they make money off of this."

Corrupt vendor leaders help bureaucrats advance their careers by limiting who witnesses bribery and therefore who can make a compelling denunciation. When leaders take and deliver money, bureaucrats have plausible deniability. In interviews,

bureaucrats deny corrupt activities and blame the street vendor leaders who take money from their members. For example, Benjamín López, a Markets Office bureaucrat, places all of the responsibility on street vendor leaders:

"People think that there are economic agreements, bribery agreements, between me and the leaders and that is a disadvantage. That's another reason why I [was promoted]: transparency... We've made the Markets Office much more transparent. I don't like that [the leaders] charge their members so much. We know that they take a lot of money out of them."

Privately, Silvia detailed bribing López and many more retold stories of others bribing him. Three vendors independently repeated the same story about one association giving López a truck, and he publicly discussed the gifted truck in front of me and other vendors. Beyond the accusations, which I could not independently verify, López and others exhibit a level of consumption much higher than their official salaries could allow. For example, López's salary should have been around 9,000 *bolivianos* or U.S. \$1,304 per month, given his position and the city's public salary grades at the time of research. Yet he publicly discussed international vacations, wore designer shirts that cost hundreds of dollars, wore a designer watch, and owned a large house in a wealthy neighborhood where houses cost hundreds of thousands of dollars—supposedly paid for with a public salary of around U.S. \$15,000 a year. Other bureaucrats were less conspicuous, but often showed up to work in designer shirts and accessories that would be difficult to afford on a public salary.

Bureaucrats do not ask for money directly, despite prevalent corruption. Uncertain about the informal rules and blocked from bribing bureaucrats directly, street

vendors ask their association leaders for help. Leaders then capitalize on their relationships with bureaucrats and their members' uncertainty, and take a cut before passing bribes on to bureaucrats.

Vendors expect that association leaders help their members—for a fee—as a matter of course. Sometimes leaders charge more for clearly illegal requests or to help more successful vendors or people who are not affiliated with their associations. For example, vendors from the central and most profitable markets tend to pay higher bribes than vendors from peripheral markets because leaders and officials know that people with central stalls make more money. Leaders may also charge large amounts if they have monopolized access to a bureaucrat or have a particularly privileged relationship. For example, Judith is an energetic young union leader who leads an umbrella group. As a representative for thousands of members, Judith interacts with the bureaucracy as an intermediary every day and maintains close relationships with several officials. The new leader of Judith's former association alleges that Judith, now in a higher position, has used her privileged relationships with officials to lucrative ends:

Judith was my association leader. And we found out that she was taking a lot of money from people to change documents at the Markets Office. I have receipts with her signature. She was charging 400, 600 [U.S.] dollars for her signature.

Other street vendors report that bureaucrats and leaders occasionally manufacture problems to shake down rank-and-file vendors. For example, bureaucrats and leaders frequently decide which vendors can stay or move during construction projects. These

decisions can be worth thousands of dollars to vendors because those who stay face less competition and maintain stalls in high-traffic areas. By contrast, the city sends most of those who move to emptier and less profitable areas. Additionally, these temporary moves frequently become permanent if the city never finishes the project or refuses to reissue licenses after construction. Judith alleges that decisions are based on which vendors pay the highest bribes, an accusation that came up several times in conversations with other street vendors and union leaders:

"There are accusations against the leaders [of another organization]. Like on Hidalgo Street, they did a project and moved many stalls, not all but many, and it was the members who paid the most who stayed."

Vendors report that both street vendor leaders and bureaucrats survey who can pay bribes and allow them to stay. If a vendor cannot afford bribes, the leader will alert the city, which will then revoke the vendor's license.

The city government campaigned on an anti-corruption platform, runs anti-corruption publicity campaigns, and established transparency offices inside every city department. Scholars and journalists hail the municipal government's efforts as a success (Zúñiga and Heywood, 2015). Nevertheless, corruption continues and collusion between bureaucrats and civil society leaders keep vendors from denouncing corruption. Silvia recounts a conversation with a street vendor whom a bureaucrat had extorted:

"There is another vendor who asked me for help. I told her that she should denounce this official, but she said no. And it's true: the whole

city hall could grab her and she could lose everything... They want us to think that there is a Transparency Unit, but if we make anonymous reports they don't do anything and if we denounce in person, what will happen? Who are we going to open our mouths to?"

Instead of publicly denouncing corruption to the Transparency Units, street vendors complain to civil society leaders whom are themselves implicated in corruption. Sometimes, street vendors directly confront leaders who they have paid but who have not delivered on their promises, as I witnessed several times. Like bureaucrats, leaders place all blame on the bureaucrats they work with when members confront them. More frequently, rank-and-file vendors denounce corruption to other leaders, like Judith: "Many come here, they don't want to denounce publicly, they are afraid of denouncing publicly or to the city, so they come and denounce to me."

Corruption enters into street vendors' interactions with officials in La Paz. However, vendors rarely bribe officials directly because they will not accept bribes from just anyone. Instead, vendors bribe officials through their civil society representatives. Officials develop illicit relationships with specific leaders, who collect, bundle, and deliver bribes. These relationships enrich and advance the careers of officials and leaders at the expense of rank-and-file street vendors.

3.8 Conclusion

This chapter discusses the history and development of La Paz's active street market organizations. It elaborates on the organizations' strong structural foundations and complex institutions. Extensive ethnographic data establish that the modeling choices in chapter 2 are grounded in the reality of La Paz's street vendors. The

model's mechanisms and implications help explain the variation that street vendors and their unions experience across time and neighborhoods, and from person to person. In the following chapter, case studies from El Alto, Bolivia and São Paulo, Brazil examine additional geographic and individual variation.

La Paz's street vendor organizations have a powerful union history that reaches back to the 1800s. The artisan guilds and anarcho-syndicalist activists that gave rise to contemporary unions contributed to today's democratic standards, bylaws, and consensus-based decision-making. As a result, street market organizations in La Paz are not small voluntary groups begging for members; the organizations' bylaws and recruitment policies thoroughly screen potential new members, and demonstrate that street vendor unions are selective organizations.

The model generates several observable implications that should exist in empirical data if the model's mechanisms are operant. The empirical evidence in this chapter shows that street vendors in La Paz embody the model's range of equilibrium outcomes, and do so in the ways that the model implies. As conditions have changed over time and for individual vendors, the state has changed what it offers to potential organizers and joiners, and individuals update their cost-benefit analyses in predictable ways.

On paper, all of La Paz's street vendor organizations have a strong commitment to democratic practices and respect for consensus-based practices. In reality, some organizations live up to deliberative democratic ideals, but many do not. Many vendors benefit materially and politically from state intervention in street markets, but the state's involvement creates many opportunities for manipulation and corruption. As a result, the primary beneficiaries of La Paz's impressive street vendor unions are corrupt leaders and bureaucrats who manipulate members' collective action for

private gain.

Chapter 4

Street Vending in La Paz, El Alto, and São Paulo

This chapter compares La Paz and El Alto to show how low capacity pushes governments to delegate to civil society, increasing participation among street vendors. I then show how in São Paulo higher capacity than in La Paz enables increases in enforcement, which reduces participation. Within each case, some people participate and some do not; I compare individuals *within* cases to establish the role of resources in individual participation decisions. State capacity is low in El Alto, higher in La Paz and higher still in São Paulo; I compare city governments *across* cases to establish the role of state capacity. I organize the discussion around the two mechanisms identified in chapter 2's theoretical model. The case studies provide additional evidence that the mechanisms are operant by confirming the model's observable implications.

In this project, the primary unit of analysis is the individual. Individuals are then grouped in administrative units. For the purposes of this study, the most relevant administrative unit is the city government, which in Bolivia and Brazil sets local vending policy and oversees enforcement. National government is relevant but secondary in the lives of street vendors; national governments set broad policy and

distribute resources that impact enforcement. Therefore, a case in this study is a municipality because municipalities have both a population of street vendors and a government that vendors interact with.

The case studies in this chapter are a two-way paired comparison to La Paz: first, pairing La Paz with neighboring El Alto holds many national-level variables constant while adding useful variation on theoretically important variables (Seawright and Gerring, 2008, p.296). In the La Paz-El Alto comparison, local city governments differ in their administrative capacity. While demographic statistics in each city differ (Lazar, 2007b, p.237), many of the street vendors in each case study work in both La Paz and El Alto. This enables an imperfect most-similar comparison of subnational cases (Seawright and Gerring, 2008, p.298).

Pairing La Paz and São Paulo adds a more representative case of street vendor organization as well as additional variation on theoretically important variables (Seawright and Gerring, 2008, p.296-297). Individuals in São Paulo come from a wider range of backgrounds and bring a wider range of resources to their work than in La Paz. São Paulo's city government has more resources and options than La Paz's government, as well as more administrative capacity, but is still far from being able to enforce and regulate as well as its administrators would like. Street vending in São Paulo is also more representative of street vendor experiences in Latin America, and appears to be similar to street vending in large cities around the world (see Bhowmik 2010 for a global survey of street vendors and vending policy around the world, including São Paulo on pages 256-274).

In this chapter, I look at local administrative capacity instead of state capacity writ large because the cases are of cities instead of countries. I use several different measures to approximate capacity in each city, because different data is available in

each place. At an estimated \$388 billion a year, São Paulo has a higher GDP than all but a few cities and many countries, according to PricewaterhouseCoopers.¹ São Paulo's annual GDP is more than 10 times Bolivia's GDP and its tax base is much larger and much wealthier than La Paz or El Alto's. Comparing La Paz and El Alto, Arbona and Kohl (2004) claim that La Paz collects five times as much tax per capita as El Alto (p.262). While these numbers have likely changed in intervening years, the observable infrastructure, services, and new projects, as well as the partially observable corporate and real estate tax base, in each city imply that São Paulo has considerably more money than La Paz, which in turn continues to generate more tax revenue than El Alto. Turning to enforcement costs and law enforcement capacity in markets, São Paulo has one military police officer per 50 vendors while La Paz has one city guard per 400 vendors. I do not have data on how many city guardspeople or other officers El Alto has, but I rarely saw any law enforcement in any market in El Alto. Additionally, El Alto is infamous for vigilante justice, especially lynchings of suspected lawbreakers. Community leaders attribute vigilantism to residents' expectations that the police will not respond to calls or investigate reported crimes (Derpic and Ayala Ugarte, 2013; Rivas, 2016). By comparison, lynchings are rare in La Paz. Throughout the cases, I use additional information, such as how often bureaucrats showed up to work, to further establish the degree of local administrative capacity in each case.

¹Page 22: <http://pwc.blogs.com/files/global-city-gdp-rankings-2008-2025.pdf>. I found an unsubstantiated claim that São Paulo collected R\$90 billion in taxes in 2015 and that the city budget was R\$15 billion. If that is true, São Paulo's annual tax revenue would be on par with Bolivia's entire GDP.

4.1 Methods

In addition to research in La Paz from 2014 to 2015, I conducted interviews with bureaucrats and street vendors in El Alto, and engaged in participant observation in El Alto's markets and during several parades and protests. Prior to my work in Bolivia, I co-administered a survey to street vendors in São Paulo in July and August 2014.² A collaborator and I supplemented the survey with 30 interviews. During July 2015, I conducted additional interviews and a mini-ethnography with street vendors in São Paulo. For the mini-ethnography, I sold electronics with unorganized street vendors on a central market street. The following case comparisons use this original data unless otherwise noted. I largely rely on the material in Chapter 3 when discussing La Paz. All names have been changed to comply with Internal Review Board confidentiality requirements and interested readers can find additional information in the methodological appendix.

I held different recruitment criteria for different groups of interviewees. For the few academics that I interviewed, I snowball sampled by getting in contact via email with the people whose work I had read and then asking for recommendations. For bureaucrats, I went to the offices of everyone I could find in the El Alto city governments that held bureaucratic decision-making positions over street vendors, which is only about a dozen bureaucrats in each city. For street vendors, I approached vendor leaders in person initially and then asked most people that I had developed a rapport with by the end of fieldwork for interviews. In São Paulo, I asked academics and activists to put me in touch with the street vendor leaders who they worked

²The La Paz survey has 204 responses while the São Paulo survey has 241. Both surveys had identical demographic questions but different participation questions and sampling strategies. Therefore, I limit my use of the original survey data to descriptive statistics and compare them informally.

with and then asked leaders to recommend others; I also asked a few academics to put me in touch with unorganized street vendors. Additionally, I approached some unorganized vendors on the street and asked for interviews after introducing myself and the project. In all cities, I asked people in person for interviews; if they said no, I left them alone, if they punted (typically by saying "maybe next week"), I asked up to three times and then assumed the person did not want to interview. All interviewees determined the place, time, and length of the interview.

While I tried to get a range of experiences and perspectives—organized and unorganized vendors, vendor leaders, rank and file, older, younger, city managers, lawyers, rank and file bureaucrats and police—I make no claims that I systematically sampled interviewees. The interviews enabled me to discuss key themes in-depth; because of that, I targeted people who knew me and were therefore more likely to be forthcoming about potentially sensitive topics like conflicts within organizations, breaking municipal ordinances, and bribes. Interview questions were largely pulled from the survey instruments, though I often inserted questions specific to the person I was interviewing. I gave people a list of interview questions beforehand if they requested one. Interviews ranged from 10 minutes with very tight-lipped bureaucrats to three hours with street vendors I knew well. A typical interview lasted 30-60 minutes.

In São Paulo, I conducted a mini-ethnography: I worked as an unlicensed street vendor for one to two days a week for four weeks. In the cases, I rely heavily on interviews and use ethnographic field notes sparingly to contextualize unlicensed vendors' working conditions. I contacted a vendor whom I had met previously who had offered to teach me how to sell as an unlicensed vendor, and they enthusiastically agreed to. I would meet them in the morning at 25 de Março, we would put roughly

\$15 into half a dozen phone chargers and selfie sticks from their wholesaler contact on the street, we would buy a cardboard box and cheap cloth to make a mobile stall, and then sell on the sidewalk. The vendor had a group of people who normally worked on the same block close to each other, and we would typically sell around them. I would sell until my partner decided to go home, typically after 4-6 hours of work. I had a notebook with me where I would mark down initial investment, costs, sales, and (frequent) police patrols, as well as notes. Military police frequently patrol; when they started walking down the street, we would pack up in seconds and quickly walk away. While selling in public space without a license is against municipal ordinances, it is less than a misdemeanor: people cannot be arrested or even directly fined for it; police impound wares and vendors can pay a fine to get them back. Again, I did not make money doing this; I gave all profits, typically \$10-\$20, to my colleague.

For the survey, I collected 241 survey responses with a male, graduate student collaborator in three districts of São Paulo. Both of us are white, have lived for years in São Paulo, and are fluent in Portuguese. We each drafted questions specific to our projects and used tested demographic questions from the Latin American Public Opinion Project (LAPOP) and a survey from Women in Informal Employment Globalizing and Organizing (WIEGO). Prior to administering the survey, we obtained feedback on the questionnaire from academics in the U.S. and Brazil, and we pretested the survey with street vendors in São Paulo.

São Paulo has 31 municipal districts, not all of which contain licensed street vendors. We knew from government sources that the total number of licensed street vendors citywide hovered around 1,500. An updated, centralized database was not available; each district manages its own roster. Only the downtown district of Sé had a publicly available updated list of its 479 registered street vendors. We contacted each

of the other 30 municipal districts. Most districts did not have licensed street vendors, and some of those that did were reluctant to provide us with information about them. The district of Lapa provided us with a list of its licensed street vendors and city officials at the São Miguel Paulista district confirmed that all licensed street vendors were clustered along one street where all stalls could be easily located. Hence, we decided to carry out a census of the licensed street vendors in three districts: Sé, Lapa, and São Miguel Paulista. In total we solicited responses from 761 stalls, roughly 50% of the licensed vendor population in São Paulo. Moreover, the three districts surveyed cover the spectrum of street vending in terms of the socioeconomic characteristics of the neighborhood and the clientele. Sé is the main commercial zone. Its street vendors practice retailing and wholesale of a wide range of products for customers from across the city as well as salesmen from other parts of the country. By contrast, São Miguel is a working-class residential area in the outskirts of São Paulo where traders cater mostly to local residents, and Lapa is a middle-class residential neighborhood not far from downtown. Based on information collected during preliminary fieldwork, these three districts are the main sites of street trade.

4.2 El Alto

El Alto is a sprawling, indigenous, self-built city on the plains above La Paz (Arbona and Kohl, 2004; Lazar, 2007a; Tassi et al., 2015). La Paz and El Alto differ in their administrative capacity (Arbona and Kohl, 2004, p.255, 258, 260): the La Paz city government has a clear organizational structure staffed by career bureaucrats who keep the city functioning on a constrained budget, while the El Alto city government struggles to convince employees to show up for work. Both cities rely on civil soci-

ety organizations to enforce local laws but lower capacity El Alto delegates more to groups like street vendor unions.

Hundreds of thousands of people work as street vendors in El Alto and virtually all belong to one of 538 street vendor unions (Lazar, 2007a, p.12, 53). The Confederation claims that 400,000 of El Alto’s roughly one million inhabitants work as street vendors and that virtually all belong to unions affiliated with the Confederation (de Bolivia, 2013). This would mean that most of El Alto’s adult population and many of its teenagers work in the markets. The claim is likely inflated, but not far off: all neighborhoods in El Alto have a neighborhood market where many residents work a stall once a week³ and the city hosts the largest market in Bolivia. Additionally, most teenagers and many smaller children in El Alto work at least part time to supplement their households’ incomes (Rojas, 2014).⁴ The massive 16 de Julio market, or *jach’a qhatu*, takes over the city center on Thursdays and Sundays, with over 300,000 vendors covering most of the city center (Tassi et al., 2013, p.207).

4.2.1 History

El Alto sits over 4,000 meters above sea level on a plateau above La Paz. Both cities are ringed by Andean peaks, but El Alto sprawls across the flat, windswept *altiplano* while La Paz sits in a protected and considerably warmer river canyon below. For

³The Confederation, the city government, and many *alteños* claim that almost everyone works a stall somewhere in the city. While I was not able to verify this for the entire city, every *alteño* I know—from career street vendors to housekeepers to my rugby teammates to hip hop artists—worked at a neighborhood market or 16 de Julio at least once a week.

⁴Bolivia passed a controversial child labor law in 2014 that legalized child labor for minors 10 and older. Lawmakers and child labor activists—many of whom are unionized minors with the Union of Child and Adolescent Workers, UNATSBO—support the law on the grounds that it legalizes and regulates an economic reality that will exist as long as working parents cannot cover household expenses with full-time jobs (Shahriari, 2014).

much of La Paz's colonial history, the city government prohibited the indigenous population from living in the city center (Kohl and Farthing, 2006, p.41). Families settled on the precarious slopes of the canyon, creeping upward toward the canyon rim. Immigration from other parts of the *altiplano*, the train, and expanding water services built communities on the plateau in the 1900s (Arbona and Kohl, 2004, p.258). As internal immigration increased in the second half of the 20th century, El Alto transformed into a booming satellite community and separated administratively from La Paz in 1985 (Arbona and Kohl, 2004, p.262).

Long considered a *ciudad dormitorio* or bedroom community, El Alto became a social, political, and economic powerhouse in the 1990s and 2000s (Arbona and Kohl, 2004, p.258, 261). With cheaper land and labor, most of the La Paz metropolitan area's industry and manufacturing started in or moved to El Alto (Tassi et al., 2013, p.5, 15, 226). Activists quickly learned that the city's placement between the capital, the international airport, and major highways made it possible to shut down the capital city with a couple hundred people and a few barricades (Dangl, 2007, p.139-140). Its neighborhood associations and unions, particularly the Federation of Street Vendors of El Alto, played a major role in the 2003 gas war that barricaded the capital, toppled the government, and is widely credited to have brought Evo Morales, the country's first indigenous president, to power (Farthing and Kohl, 2014; Madrid, 2012).

The Confederation of Street Vendors of Bolivia was founded by 70 street vendor leaders in 1972 and now represents hundreds of thousands of workers. The Confederation has its headquarters in El Alto, in a historic building above the offices of the *Central Obrero Regional*, or the El Alto Regional Labor Central, and the *Federación de Juntas Vecinales*, the neighborhood associations. Together, these three organiza-

tions represent most of the city's residents and El Alto's social and political power on the local and national stage (Lazar, 2007a, p.12, 53-56).

The Confederation has since its founding negotiated and worked with the city government, alternating between amicable and openly hostile relations. After a particularly bitter end to one city administration (Lazar, 2007a, p.115), the *Movimiento al Socialismo* backed Edgar Patana, a former *Central Obrero Regional* director and Confederation leader who sold books in the 16 de Julio market. At the height of the Confederation's local and national power, Patana won two elections and served as mayor until 2015.

4.2.2 Mechanism 1: Lower Capacity Increases Delegation to Civil Society

The La Paz city government encourages street vendors to form and participate in unions by offering licenses and bureaucratic access to organized vendors. Association leaders frequently reported that they formed an organization when a bureaucrat or colleague told them to, often after the city guard issued warnings for selling without a license, as the *champañeras* association's and Amelia's union's founding stories illustrated in chapter 3. Once organizations form, the La Paz city government delegates enforcement and encourages street vendors to participate as union members in order to boost compliance with local laws.

The La Paz city government does not have the resources, personnel, or political capital to enforce vending regulations on its own and works with the street vendor organizations to achieve basic compliance or policy goals. Jorge, a former city bureaucrat, details the extent of the city's negotiations with street vendor organizations:

To do these [infrastructure projects], we have to go to the federations and lobby them... The other way is bottom up: We approach the vendors at their stalls and see how everything is, what they are missing, to know how we could frame something so that it's favorable to them... And if we reached an agreement with them, we would go to the federation with the agreement so that the federation could approve it. From the smallest thing, like moving a stall a meter to avoid blocking a garage, we have to negotiate.

Jorge explains that the city government must negotiate with street vendor organizations; it does not have the capacity to implement policy unilaterally. As a result, the city government offers incentives to induce policy compromises with the organizations. The city also offers individual members benefits like stall improvements for participating in ways that benefit the city government.

In El Alto, the city government signed a ten year agreement (see Figures 1-3) with the Federation of Street Vendors of El Alto that went much further. The agreement codified monthly coordination meetings and low annual vending fees while offering significant incentives for working with the government and internally enforcing local vending laws. In the 19-point agreement, the city agreed to return 50% of vending fees to the sector in the form of public works, finish infrastructure projects that affect vendors within 60 days, and never remove stalls, among other things.

In return, civil society organizations like street vendor unions enforce dozens of local laws. In El Alto, vendor organizations also finance and construct infrastructure projects like roads that public sectors usually provide (Tassi et al., 2013, p.122-124). Goldstein (2016) documented similar agreements in Cochabamba, Bolivia (p.76). Figure 1-3 show the main text of the agreement. Several of the agreement's points were



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CONVENIO GREMIAL

Conste por el presente convenio que suscriben El Gobierno Municipal de El Alto y la Federación de Gremiales de la Ciudad de El Alto, la misma que contiene las cláusulas siguientes:

PRIMERA.- Se acuerda las Ordenanzas Municipales de Asentamiento de Comerciantes Minoristas y Artesanos Vivanderos ratificando su inamovilidad de puestos de venta, mientras el municipio no decida ejecutar obras en esas áreas.

SEGUNDA.- Se gestionará una Ordenanza Municipal que reglamente el mejoramiento de puestos de venta por razones de seguridad e higiene, en coordinación con la repartición correspondiente del Municipio. Así como que legalice los asentamientos mayores a cinco años.

TERCERO.- Se concluirá en sesenta (60) días las obras en las diferentes zonas de esta ciudad, donde se encuentran asentados comerciantes Minoristas en la diferentes Avenidas, calles, plazas de esta ciudad, como ser la Av. Alfonso Ugarte, Av. 16 de julio, Av. Adrián Castillo de Alto Lima y otras.

CUARTO.- Gestionar la construcción de un Multifuncional-Gremial en una superficie de 40 x 60 mts². en predios del ex Banco Minero, para dar utilidad en actividades culturales, sociales, deportivos, ampliados, congreso y otras actividades, que estará bajo tuición del Comité Ejecutivo de cada Gestión.

QUINTO.- Coordinar con la empresa de asco para efectuar de manera constante campaña de Limpieza en todas las ferias de esta urbe, dejando en lo posible un contenedor en cada feria o recorrer con movilidad desde horas 16:00 p.m. en coordinación con dirigentes de asociaciones y Sub Alcaldes de Distritos estableciendo montos accesibles para este servicio, de acuerdo a requerimiento.

SEXTO.- Coordinar con OCDECO y la Federación de Gremiales de El Alto, batidas a ambulantes no organizados para coartar el crecimiento de comerciantes minoristas, debiendo en los decomisos existir el inventario registrado para evitar extravíos en aplicación de la O.M. 106/2004.

SEPTIMO.- Investigación inmediata de los terrenos que habría cedido el ex alcalde Aparicio, en la Zona Rosas Pampa altura Molino Andino el cual será destinado para la construcción de un Hospital Gremial.

Se autorizará en un lugar específico para la instalación de la antena de Radio Comercio 88.1 FM patrimonio de los Gremiales.

OCTAVO.- El Ejecutivo Municipal y Concejo Municipal para viabilizar cualquier reclamo de asociaciones será realizada a través del Comité Ejecutivo de la Federación de Gremiales de El Alto legalmente establecido en el Edificio COR El Alto 2do. Piso.

NOVENO.- Los requisitos para cualquier trámite Gremial deberán ser sencillos y ágiles, debiendo aplicarse la Ley 2028 donde no autoriza a los gremiales a retribuir

Dx. José Luis Torales Miguera
ALCALDE
EL ALTO

Figure 4.1: Ten year agreement between the El Alto city government and the Federation of Street Vendors of El Alto, p.1 114



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ningún beneficio económico a las Juntas Vecinales en vista de que los gremiales están asentados en vía pública. La reposición de carpetas seguirá vigente.

DECIMO.- Respeto a la independencia sindical gremial.

DECIMO PRIMERO.- Los niños menores de 10 años deben tener acceso gratuito a cualquier mingitorio público o privado al igual que los mayores de 60 años.

DECIMO SEGUNDO.- Gestionar la entrega de terreno para sede social a la junta vecinal y asociaciones gremiales del sector Río Seco.

DECIMO TERCERO.- Se autoriza a las Ferias la instalación de mingitorios móviles.

DECIMO CUARTO.- El Gobierno Municipal de El Alto, se compromete a gestionar en las instancias pertinentes tales como el Viceministerio de Política Tributaria del Ministerio de Hacienda y el H. Senado Nacional el "Pago Único Anual de la Patente Eventual de Actividades Económicas Desarrollado Sitio Público", para que a partir de la gestión 2005 el arancel por este concepto sea:

1. Zona A	Bs.- 20.-
2. Zona B	Bs.- 13.-
3. Zona C	Bs.- 6.-

Las Zonas tanto A, B y C estarán a la definición en Ordenanza Municipal expresa. Dichos aranceles, por compromiso del Gobierno Municipal de El Alto no sufrirá actualización ni mantenimiento de valor por el lapso de diez años. Siendo necesario para ingresar a este régimen no tener adeudos pendientes en el GMEA.

A partir de la presente gestión, el 50% de lo recaudado por la Patente Eventual de Actividad Económica Desarrollada en Vía Pública en su nuevo arancel, será utilizado para la ejecución de obras que decida la Federación de Gremiales.

DECIMO QUINTO.- Se gestionará que las asociaciones asentadas en zonas marginales tengan un trato de pago atendiendo aspectos sociales así como un trato especial a personas de la tercera edad, madres solteras y minusválidos, previo estudio social a través de la Dirección de Gestión Social del Gobierno Municipal de El Alto.

Sobre este artículo deberá proyectarse una Ordenanza Municipal debiendo ser consensuado con esta entidad sindical.

DECIMO SEXTO.- Una vez transferido por el Gobierno se construirán mercados en predios del aeropuerto a favor del Comercio Minorista de El Alto con toda su infraestructura con carácter de propiedad gremial.

DECIMO SEPTIMO.- El Gobierno Municipal a solicitud expresa de la Federación de Gremiales de El Alto a través de la Unidad de Asentamiento habilitará lugares para nuevos asentamientos de acuerdo a Ordenanza Municipal 106/2004 no se autorizará por el ejecutivo Municipal la sobreposición de asentamiento debiendo existir la respectiva inspección.

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Figure 4.2: Ten year agreement between the El Alto city government and the Federation of Street Vendors of El Alto, p.2 115

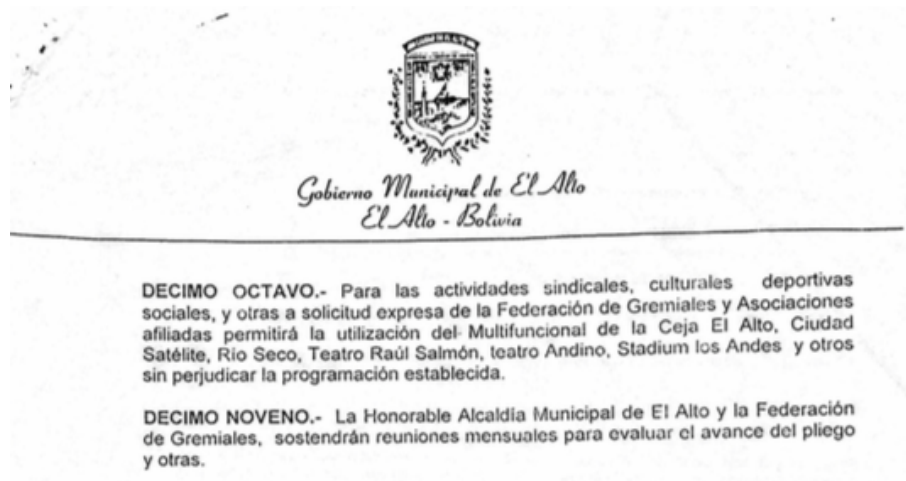


Figure 4.3: Ten year agreement between the El Alto city government and the Federation of Street Vendors of El Alto, p.3

never implemented, especially the ones that required more planning and resources from the city government. In particular, the fourth article promises a new street vendor headquarters and the seventh article reserves city land for a publicly funded Guildsmen's Hospital. These structures were never built. Likewise, the city routinely spent years on dubious infrastructure improvements that displaced vendors, instead of the agreed upon 60 days in article three. The fourteenth point in the agreement freezes annual licensing fees for a decade and pledges that the city will return 50% of those fees to the sector. The city collected the fees but how they were spent is part of an ongoing and very public scandal and debate.

The city did implement many points in the agreement, to the material and political benefit of the Federation, its leaders, and many of its members. Vendors had much more success getting benefits from the city that required little action or passive nonenforcement; again, evidence of forbearance (Holland, 2016, p.232) but also something more. As previously stated, the agreement froze licensing fees at pocket change levels for ten years: the most profitable zone paid 20 *bolivianos*, or less than

\$3, a year while the peripheral zones paid less than \$1.

Additionally, the city worked closely with the Federation and street vendor leaders on a daily basis. The coordinating meetings between the city and the Federation set out at the end of the agreement happened on a mostly regular basis, according to interviewees. Participant observation at the El Alto Markets Office and interviews with vendors and their leaders demonstrated that the city did pass local ordinances that the Federation requested and that streamlined and centralized requests at the Markets Office.

However, by largely delegating street vendor requests and centralizing requests, authorization, and representation in the Federation and its leadership, the El Alto city government handed the Federation a monopoly over street vending in the city. This centralized an incredible amount of authority in Braúlio Rocha,⁵ the leader of the El Alto Federation and the National Confederation. For ten years, any street vendor making any request to the city had to get a letter from Rocha. Rocha faced constant accusations of corruption, and he has been arrested on corruption charges several times over 15 years.

Bureaucrats at the El Alto Markets Office and the Collections Office volunteered examples of how they frequently worked with the Federation. The offices relied on the Federation much more than the La Paz city offices. On multiple occasions, bureaucrats recommended that I go to the Federation for information on local laws, data, and vending practices because the Federation, not the city bureaucrats, was the clearinghouse for information on the city's street vending regulations. Additionally, the Federation appeared to have more administrative capacity and certainly a longer

⁵I am considering him a public figure because he is an elected union representative and his name and picture frequently appear in the newspaper.

institutional memory and paper trail than the city government.

The El Alto Healers' Association (see Figure 4) is one example of how the city's delegation to the Federation presents trade-offs for street vendors in El Alto. The association of (self-identified) witches, healers, wisemen, and fortunetellers monitors and regulates a high-traffic area in the center of El Alto. The association organized decades ago to secure the area and now coordinates with the city and the Federation. Members pay annual licensing fees to the city as well as association dues; in return, the city maintains their licenses, which allow a cabin-like concrete stall where they can store merchandise and conduct business. With this infrastructure, each member of the witches' union holds a license worth tens of thousands of dollars on secondary markets. In this sense, the city pays potential violators to participate in civil society organizations that regulate members and markets. While an association representative stated that they benefit from the organization and their licenses, he also stated that they *had* to affiliate with the Federation in order to work with the city; unlike La Paz, rank-and-file vendors and small organizations have little to no choice in who they affiliate with in El Alto.

Both the La Paz and El Alto city governments turn to civil society organizations like street vendor unions to internally enforce local laws. Both city governments compromise by offering incentives to organizations and their members in exchange for self-regulation. Neither government has the capacity to unilaterally enact even basic policy objectives. However, lower capacity El Alto delegates more power to civil society than La Paz and sustains higher civil society participation.



Figure 4.4: A row of large stalls belonging to members of the El Alto Healers' Association.

4.3 São Paulo

São Paulo is the largest city in the southern hemisphere. 12 million people live within the city limits and another two dozen neighboring municipalities bring the metropolitan area's population to 22 million. The city sprawls out over central São Paulo state, in southeastern Brazil.

The city has hundreds of market areas and tens of thousands of vendors (Pamplona, 2013). The most concentrated and important street markets sit in the historic city center, though most boroughs have their own unofficial market center and nearly every neighborhood has a roving, once-a-week household goods market, known as a *feira*.

In the city center, thousands of vendors work from pre-dawn to well after midnight. They sell consumer goods from around the world, a staggering array of counterfeits, food, and artisan crafts. Two markets see the most activity and supply the rest of the country with cheap consumer commodities, especially clothes: Rua 25 de Março (25 of March Street) and the Feira da Madrugada (the Dawn Market). After a years-long battle with the city government, in which the government prevailed, the Feira da Madrugada now sits in a hangar in Brás, a mile away from 25 de Março.

In the center of the old commercial zone of the city center, four blocks make up most of 25 de Março. A block away, the historic São Paulo Market, the *Mercadão*, is now a tourist attraction. The area is full of warehouses, wholesale stores, and informal malls filled with stalls mostly selling counterfeits, and the stores are largely owned by businesspeople from successive waves of immigration from Asia, the Middle East, Europe, and other parts of Latin America. On the street, primarily Brazilian vendors head the zone's small retail businesses.

4.3.1 History

Street vending has been a constant in São Paulo since the city's founding. Historians and travelers documented street vendors in São Paulo in the 1700s (Itikawa, 2010, p.248). When São Paulo incorporated as a city in 1711, its few street vendors begin to form more permanent markets and the city council first discussed street vending policy in 1726 (Itikawa, 2010, p.249). The city council passed a comprehensive street vending law in 1898 which regulated where, when, and how vendors could legally work and set up the city's first licensing scheme (Itikawa, 2010, p.249). Street markets grew with the city over the decades, providing newcomers and professional vendors with cash incomes. In 1953, Decree 2201 designated disabled vendors and older vendors as demographic categories that the city should give preference to in licensing (Itikawa, 2010, p.250). Pressures started to increase in the street markets and on the city council in the 1970s, as sustained urban migration pushed the city's vendors to a 40,000-person workforce competing for one of 1350 licenses (Itikawa, 2010, p.250). Increased pressures and rising unemployment led to a change in street vending policy in 1991, which recognized vendors as workers with rights to city services and set out criteria for obtaining a license, maintaining preferences for disabled and older workers (Pamplona, 2013, p.230). While the law is still in force, later administrations have maintained some rights for licensed vendors while restricting licenses and increasing policing against unlicensed vendors. Thus, São Paulo has a three century-long history of making and imperfectly enforcing street vending policy.

Street vending organizations are a recent and fragile phenomenon (Itikawa, 2006, p.342). Only a dozen organizations exist, representing 1-2% (Itikawa, 2006, p.344-345) of the city's 100,000 street vendors (Pamplona, 2013, p.226). Organiza-

tions rise and fall with their founders, have a largely absent member base, nonexistent bylaws, and infrequent meetings. Most street vendors do not participate in work-based organizations (Itikawa, 2010, p.82). The few street vendors who are unionized belong to the one small category that the state does negotiate with—disabled license holders—or have exceptionally high resources relative to their colleagues (Cuvi, 2016, p.396, 404-405). São Paulo has the resources and administrative capacity to imperfectly enforce its laws and it does, even against petty violators like street vendors; as the city’s administrative capacity and financial resources have improved in the last two decades (Pamplona, 2013, p.237), successive administrations have ramped up law enforcement in street markets (Itikawa, 2010, p.254).

4.3.2 Mechanism 1: High Capacity Increases Enforcement

The São Paulo city government started a licensing program in the 1950s that granted licenses to disabled street vendors (Itikawa, 2010, p.250). The city institutionalized street vending in 1991 with Decree 11039 and periodically opened registration for new licenses in the 1990s, coinciding with periods of low growth and high violent crime rates, which suggests that city governments may have been more willing to distribute licenses as enforcement capacity declined. As economic and administrative indicators improved, both conservative and leftist administrations increased enforcement and revoked licenses: in 2001, at the beginning of Marta Suplicy’s leftist Workers’ Party administration, 23,000 street vendors had licenses but by 2004, only 6,000 licensed vendors remained (for Human Rights, 2014, p.35-37). Between 2006 and 2013, José Serra and Gilberto Kassab’s conservative administrations revoked nearly 4,000 licenses and then declared the rest invalid. A court overturned the decision, but leftist mayor Fernando Haddad attempted to revoke all licenses again in June 2015. Paulo,

an older, articulate vendor leader with decades of union experience, links the state, the economy, and vendor disorganization explicitly, "We will always have illegal vendors because the state... the state is not interested in organizing them."

The Brazilian state's interventions in street vending are largely punitive. The federal government offers limited tax incentives for informal workers to formalize, but few workers know about or are able to access these programs; the federal government does not work with informal workers' organizations to promote its formalization programs, nor does it conduct much outreach to educate workers about new programs. On the other hand, the federal government has spent millions of dollars to cut off supply chains of counterfeit, off-brand, and improperly taxed consumer goods by sending federal police into street markets and on supply routes throughout the country, with mixed success (Pinheiro-Machado, 2011, p.290-292).

Pinheiro-Machado (2011, p. 27-34) conducts research in street markets and along supply routes in Shenzhen, China, Ciudad del Este, Paraguay, and throughout southern Brazil, including São Paulo. She finds that federal police successfully interrupted supply routes across Brazil, following stricter tax compliance policies in the 2000s (2011, p. 290-292). However, they did not stop informal retail; some people rerouted or charged higher prices to reflect a higher risk of confiscation. Many street vendors turned from legal goods that lacked a complete paper trail to higher margin counterfeits, reasoning that if all products faced higher scrutiny and a chance of confiscation, they might as well sell more legally dubious but higher margin products;⁶ vendors that I interviewed in 2015 reiterated this logic.

The São Paulo city government employs thousands of military police and sev-

⁶Pinheiro-Machado presentation at the Latin American Studies Association annual conference, May 30th, 2015 in San Juan, Puerto Rico.

eral squadrons of city guards solely to police street vending. Mayor Gilberto Kassab dramatically increased the number of police dedicated to street vending by signing an agreement with the military police in 2009 (Cuvi, 2016, p.403). The agreement assigned 3,900 off-duty military police to patrol street markets throughout the city from 7am to 10pm every day (Cuvi, 2016, p.404). At the city level, heavy enforcement has persisted across changes in power between conservative and leftist administrations: despite campaign promises to social movements representing street vendors, the leftist Suplicy and Haddad administrations maintained levels of policing similar to their conservative predecessors (Itikawa, 2010, p.254), though they backed off the conservative administrations' eradication policies (Cuvi, 2016, p.407).

São Paulo pays for one law enforcement officer per 50 vendors while La Paz pays for one per 400 vendors. Despite years of heavy policing and the publicly stated goal of removing unlicensed vendors from busy areas in São Paulo, tens of thousands of street vendors still work in these areas, and many sell counterfeit, untaxed, or uninspected goods. The Brazilian state and the São Paulo city government have the resources and organizational capacity to sustain this level of enforcement across multiple administrations. Police-heavy enforcement with the stated goal of eliminating at least some informal activity began under leftist President Lula da Silva's national administration and Gilberto Kassab's conservative city administration, and then continued under leftist President Dilma Rousseff and mayor Fernando Haddad.⁷

Police attempt to deter newcomers and confiscate unlicensed vendors' goods.

⁷During the writing phase of this dissertation, Rousseff was impeached and her more conservative Vice President Michel Temer assumed the presidency. Shortly after, João Doria of the center-right PSDB party won the São Paulo municipal elections, unseating Haddad as mayor. Since January 2017, he has signaled a continuation of punitive vending policies, potentially reviving Kassab's eradication campaigns in some neighborhoods.

Licensed vendors report that the São Paulo city guard comes by once or twice a day to verify licenses and ensure that vendors follow regulations. This is a high level of policing; it means that even the 1-2% of vendors in full compliance with city law must maintain that compliance daily. Even licensed, fully compliant vendors reported during interviews that they were harassed on a daily basis by police looking for any excuse to fine them or revoke a license.

Unlicensed vendors in residential neighborhoods—typically individuals selling food on street corners—reported in interviews that military police or the city guard came by once or twice a day as well, and that they run or hide when this happens. One snack vendor admitted that she bribes a police officer monthly to call her ahead of time and then hides in the shop where she stores her wares overnight; she suggested that this is a common practice. An elderly fruit vendor on a quiet street corner reported giving up his former, more lucrative spot to a younger vendor during the Kassab administration because, at 70, he could no longer run away from the police on a daily basis. He lamented that even in his new and quieter spot, he occasionally has to run from the police while pushing a heavy fruit cart. He recounted one instance in which a military police officer pulled a gun while chasing him and his 50 pound cart of unlicensed guavas and pineapples.

Conversely, unorganized and unlicensed vendors working in busy commercial areas contend with constant policing. For example, while working as an unlicensed vendor on the city's busiest commercial street, I hid from military police patrols with other vendors an average of 7 times per hour, or every 8.5 minutes. The patrols varied from groups of officers passing every two minutes to breaks between patrols of 20 minutes at a time. The vendors who I worked with had adapted their routine to the constant policing.



Figure 4.5: A vendor hiding merchandise in a tablecloth and carrying a cardboard box stall as he heads away from police on a busy market street in São Paulo.

One vendor taught me these strategies: buy a small amount of stock daily, usually 5-10 pieces at a time, and buy more after half sells. Buy a cardboard box and a cheap tablecloth for \$1, and make a stand with them; this is your *loja* or shop. Arrange the products carefully, so that the few pieces look crowded on the stand. If the police come, grab the merchandise up in the tablecloth, pick the box up, and run or walk away. The small amount of merchandise and infrastructure make it easy to get away from police and minimize losses to about a day's profits if a vendor is caught.

Vendors noted that these strategies were recent developments and that, prior to the increase in policing or in less policed areas, they invested in more product at a time and more expensive wooden carts and tables to sell from. In the month that I worked as a street vendor in São Paulo, only one of the 10 unlicensed vendors who I worked with had merchandise confiscated, though I saw police confiscating wares from less experienced vendors almost daily.

For most street vendors in São Paulo, stringent enforcement keeps their resources low by discouraging those with other options from entering the sector and draining persistent vendors' resources through frequent confiscation and repression. On paper, policing street vendors means confiscating excess, improperly documented, or unlicensed goods, which inflicts financial losses on petty violators. In practice, many military police use arbitrary force while confiscating merchandise. For example, in 2014, a military police officer shot and killed a counterfeit CD vendor at point blank range while confiscating merchandise (Globo, 09 September 2014).

While working as a street vendor in downtown São Paulo in June and July 2015, I regularly saw military police draw their guns while chasing vendors, and several of the vendors who I worked with had scars from police beatings. Most ven-



Figure 4.6: The author at her stall on a busy market street in São Paulo.

dors, licensed and especially unlicensed, had stories of police brutality. Additionally, younger vendors told me about colleagues who had stopped working as vendors because the constant threat of confiscation and violence was too much for them. Older vendors told of colleagues who had worked for years as vendors and left after the city revoked their licenses or police confiscated a particularly large amount of product; both actions can erase years of hard work and leave a vendor destitute. Cuvi (2016, p. 410) documented similar accounts, including vendors who died after suffering mental or physical breakdowns upon losing their licenses or wares.

Without state incentives, the vast majority of São Paulo's street vendors do not organize. Walter, a middle-aged street vendor in peripheral São Paulo, links the majority's lack of organization to the city's refusal to delegate or negotiate, "Why don't unlicensed vendors organize? Because it's very difficult to get anything out of

the authorities." Talking about his unlicensed colleagues, Benedito, a licensed vendor working in downtown São Paulo, agrees, "They don't organize because the city government won't meet with them, it will never give them [licenses]." These quotes explicitly connect the state's actions and street vendors' calculations about the potential costs and benefits of participating in work-based organizations. Vendors discuss how licenses function as important incentives; Benedito suggests that if organizations could secure licenses from the government, people would form or join vendor organizations. In the absence of this state-supplied incentive, organizations have little pull over vendors and most vendors remain unorganized.

São Paulo's only enduring street vendor organization represents the one small category of people, disabled vendors, that the city occasionally and reluctantly negotiates with. The city's largest vendor union began in the 1990s in part to maintain the benefits extended to disabled license holders under the 1991 vending law. Today, it primarily exists for that reason and its membership base of several hundred is largely older, blind, deaf, or wheelchair-bound disabled license holders who have held licenses for decades. The union maintains an alliance with a state politician, but other than the occasional exchange of favors with this union in election years, the state does not work with vendor organizations.

Vendors whom I interviewed attributed these limited negotiations to the bad publicity that disabled activists create for the mayor whenever policies encroach on their licenses, relative to the small number of licenses that those activists ask the city to preserve. When Haddad attempted to revoke licenses in 2015, I attended a protest outside city hall where 300 older street vendors in wheelchairs and with walking canes gave speeches to the press about their right to work and their dependence on the income that a licensed stall produces. The leftist mayor reversed his stance within a

few weeks.

The Brazilian state has succeeded in curtailing unlicensed vending and deterring many newcomers. However, it has not eliminated street vending and essentially plays a massive game of whack-a-mole⁸ with unorganized vendors. The individuals that these policies target are overwhelmingly poor and have little formal education. As a result, few São Paulo street vendors participate in work-based organizations. Across the border in Bolivia, the conditions reverse: weak city governments actively encourage street vendors to participate in unions, and experienced vendors form and maintain these organizations to capture state incentives. Chapter 5 establishes this pattern with quantitative data from across the Americas: where state capacity is lower, more workers participate in civil society organizations.

4.4 Mechanism 2: Who Organizes in Each City?

In La Paz, El Alto, and São Paulo, some vendors found multiple unions while others are joiners and some actively refuse membership. What explains this individual-level variation? In all three cities, workers with more resources—especially education—are much more likely to participate in informal workers’ organizations than their colleagues with less. Additionally, the more education a vendor has, the more likely they are to be licensed, and university-educated street vendors are particularly likely to reach leadership positions. In other words, education appears to correlate with deeper forms of participation.

Bolivian street vendors come from many demographic groups: vendors come

⁸Whack-a-mole is an old American arcade game where the player uses a mallet to hit plastic moles that pop out at random from holes in a board.

from different indigenous communities, speak multiple languages, and include children and grandparents. While many vendors have only a few years of formal schooling, others hold law degrees. Many vendors barely subsist on their earnings while others have multiple cars and houses. In line with research that finds that people with more resources participate more than people with less, vendor leaders tend to be better off relative to other street vendors. In the La Paz survey, union members were twice as likely as unaffiliated vendors to own a car, and also more likely to own a house. Assets and income could be endogenous to leadership positions; education, however, is not, as most vendors complete their education before working full time or before moving into leadership roles.

Education is particularly important: in the La Paz survey, street vendors who had attended college were three times more likely to be union members than people who had not. Furthermore, rank and file vendors actively promote leaders with a college education, and leaders are disproportionately male and mestizo (Hummel, 2016, p.340-344). Fabiana, a former vendor leader who works in both La Paz and El Alto, points to education to explain why a federation leader will continue in his post, "Jaime Santana is the only one with the academic background, the diplomatic education, to do it." The federation leader in question has a social science degree from a French university. Likewise, Lazar points to the founding of the Universidad Pública de El Alto and its subsequent training of young leaders, many of them street vendors, and support of social movements and civil society groups as a driving force behind El Alto's politics (Lazar, 2007a, p.52).

In São Paulo, organized vendors like Benedito are better off in terms of education and income than their unorganized colleagues. Most street vendors in an original survey (see appendix for survey protocol and instrument) and Pamplona's city-wide

study (2013, p. 237-240) make roughly minimum wage and did not finish high school. From the 1700s until today, street vendors have primarily been migrants to the city with low levels of education relative to other workers (Itikawa, 2010, p.249-250); in fact, Pamplona (2013, p. 240) finds that as education levels for most Brazilians and most categories of workers in São Paulo steadily increased over the second half of the 20th century, street vendors retained low levels of education and in some decades the average level of education decreased.

However, I find that organized vendors often came to the profession with more education and earn higher profits from their work. For example, Lourenço is blind and from a poor family in rural Brazil. As a child, he was sent to São Paulo to attend a school for the blind, where he completed schooling and initially found a formal office job. When he was laid off during a recession, he became a vendor and, with more experience than most of his new colleagues, a vendor union leader. Another union leader, Augusto, attended university and used his advantages to start a union.

I took advantage of my secure situation... That's where I went after more information, investing time and money out of my pocket. I researched and discovered [The Workers' Trade Union Central] and started to get involved. And, at the time, I started a union. –Augusto, quote from interview transcription (for Human Rights, 2014, p19).

Unlike the La Paz and El Alto governments, the São Paulo city government and the Brazilian state more broadly have the capacity to forgo dialogue with street vendors and pursue an elimination strategy. São Paulo has a large population of Bolivians who migrate to São Paulo to work in textile and construction jobs. Many Bolivians working in São Paulo, including several that I interviewed, also work as street vendors, and

many worked as street vendors in Bolivia before migrating. Most do not belong to a street vendor organization in São Paulo, even if they belonged to one in Bolivia. Their experiences as street vendors in both countries allow an assessment of one alternative explanation: that Bolivians organize because they have a history and a culture of civic participation, while Brazilians are less inclined to act collectively. However, for Bolivians living in São Paulo, the main difference is in the state's capacity and resulting vendor policies, not their culture. For example, Eduardo, a street vendor from La Paz working in São Paulo, contrasts the two environments:

Bolivia and Brazil are extreme opposites. In La Paz, any group can block the highways and the city... The government gives too much power to social organizations. But here? Nobody does anything.

Eduardo points to the states' positions relative to the organizations and their willingness to delegate as deciding factors between how civil society operates in Bolivia versus Brazil. Interviews in Bolivia confirmed Eduardo's experience: one street vendor with relatives in São Paulo stated that her relatives and their associates did not organize or participate in existing street vendor organizations, in contrast to La Paz. Another vendor who had worked in São Paulo and Buenos Aires before returning to La Paz stated that she had not joined any organizations in Brazil or Argentina, but had quickly joined one in La Paz to get a license. Finally, in an interview, an academic who studies the Bolivian diaspora in São Paulo recounted that migrants form cultural organizations and few if any work-based organizations, but that the diaspora organizations are fragile compared to similar organizations in Bolivia.

4.5 Conclusion

In summary, street vendors operate under vastly different conditions in La Paz, El Alto, and São Paulo. In La Paz and El Alto, individual street vendors have several options about how and where they work. To a certain degree, street vendors also have choices about their legal status and relationship with the city and federal governments. Individuals typically join autonomous street vendor organizations that offer services to members, represent their memberships' interests to the state, and enforce local laws. The cities delegate regulation to these organizations because the cities' limited administrative capacities preclude adequate law enforcement. While the work and organizations are far from ideal, street vendors benefit from having options and, on average, from belonging to organizations that work with the government.

Conversely, street vendors in São Paulo face starker choices: work illegally or find a different job. Street vendors can choose where they work and what they sell, but their options end there. Ninety-eight percent of São Paulo's street vendors work without a license and under constant threat of being stopped by the military police. The city has plenty of resources to spend on law enforcement and urban development, and it has chosen a punitive strategy towards street vending, other types of informal work, and the urban poor more generally. Most street vendors do not belong to a union or other association and see participation as futile, precisely because the city largely refuses to negotiate with street vendor organizations. Organizations occasionally form, but without any benefits to offer members, they rarely grow or last very long.

Across the three cities, individuals with more resources participate more than their less well-off counterparts. Individuals with more education, time, and money

use those attributes to access or create more options for themselves. For example, street vendors with more money have more choices about what they sell, where they work, and how much to formalize their business, because they have more money to buy different types of products in bulk, pay stall fees in prime markets, or purchase a license or a lawyer. Street vendors with more education and time more readily turn to joining or starting a work-based organization. Street vendors with more education and other experience see organizations as a powerful way to approach governments and their agents. They are also more likely to know or learn the logistical and legal steps necessary to establish an organization. More educated people are also more likely to know how to navigate the bureaucracy and make politicians and bureaucrats listen to their demands. Finally and crucially, officials are more likely to listen to individuals with educational credentials and, in part because of that, other vendors elect them to leadership positions.

The three cases demonstrate the different conditions that street vendors face working with local governments of varying administrative capacity. The cases also demonstrate that the options available to street vendors and, consequently, their participation decisions, depend in part on the resources available to a given individual. The original research and secondary literature in these three cases demonstrate considerable variation on the independent variables of interest, resources and state capacity, as well as collective action outcomes. However, the three cases do not capture the full variation that we see across Latin America, or globally. The following chapter examines these variables through quantitative data from the Latin American Public Opinion Project, the OECD, and the World Bank, and finds similar patterns in different types of data.

Chapter 5

Quantitative Analyses of State Capacity and Participation

Why do informal workers organize? Chapter 2 introduced a theory of state delegation to civil society groups, where state incentives encourage informal workers to form organizations. Chapters 3 and 4 presented ethnographic, case study, and survey data from La Paz, El Alto, and São Paulo. This chapter introduces and analyzes survey data from across Latin America over 10 years. The data come from the Latin American Public Opinion Project (LAPOP), the World Bank, and the Organization for Economic Cooperation and Development (OECD) and contain measures for state capacity and individual resources. The quantitative analyses in this chapter establish patterns in countries across the region that are analogous to the trends in the qualitative data from chapters 3 and 4.

This chapter's quantitative analyses serve as preliminary evaluations of the theory's observable implications using out-of-sample data. I established the theory and the qualitative trends before analyzing the quantitative data in this chapter; therefore, these analyses serve as a preliminary test of the observable implications from chapter 2. The chapter uses survey data from a subsample of self-employed

respondents from the Latin American Public Opinion Project combined with World Bank development indicators and OECD tax data. I use data on self-employment instead of informal employment because LAPOP asks respondents if they are self-employed but not if they are informal. There are sound survey methodology reasons for this: "informal" is a loaded or complicated term in some Latin American countries,¹ but "self-employed" retains a similar meaning in different contexts and overlaps significantly with informal employment (Fiess et al., 2010, p.211-212). Globally, most self-employed people are also informally employed (Fiess et al., 2010, p.211-212): most make roughly minimum wage as domestic workers, day laborers, recyclers, or street vendors and survey researchers often use self-employment as a proxy for vulnerable or informal employment (Husmanns, 2004, p.2-10).

I use two methods to analyze the data. First, logistic analyses establish a relationship between proxy measures for state capacity, proxy measures for individual resources, and measures of civil society participation. In the logistic models, lower state capacity measures and higher individual resources are associated with increased participation. This finding supports the theory and reflects the empirical patterns from earlier chapters. However, the analyses assume but cannot establish that the logistic models' identifying assumptions are met. Unfortunately, the data do not have features that allow for rigorous identification. I reanalyze the data with a machine learning technique called random forests, which predicts outcomes without requiring identifying assumptions. This nonparametric approach supports the logistic analy-

¹For example, the few times that I called Bolivian street vendors *trabajadores informales*, I elicited an angry reply from a vendor about how they were not *ilegales*, they were hardworking, taxpaying workers whose right to work is guaranteed in the Constitution (there is a vaguely-worded right to work in the Constitution that applies to all citizens, and few Bolivians pay income tax, but everyone pays VAT and street vendors consider licensing fees a tax as well).

sis by finding similar and stronger patterns in the data without making any causal assumptions or claims. Multiple data sources and analytic frameworks examine the proposed theoretical process from different angles and point to the same conclusions, which builds confidence in the theory and empirical results, despite barriers to rigorous identification.

5.1 Self-Employment and Informality in Latin America

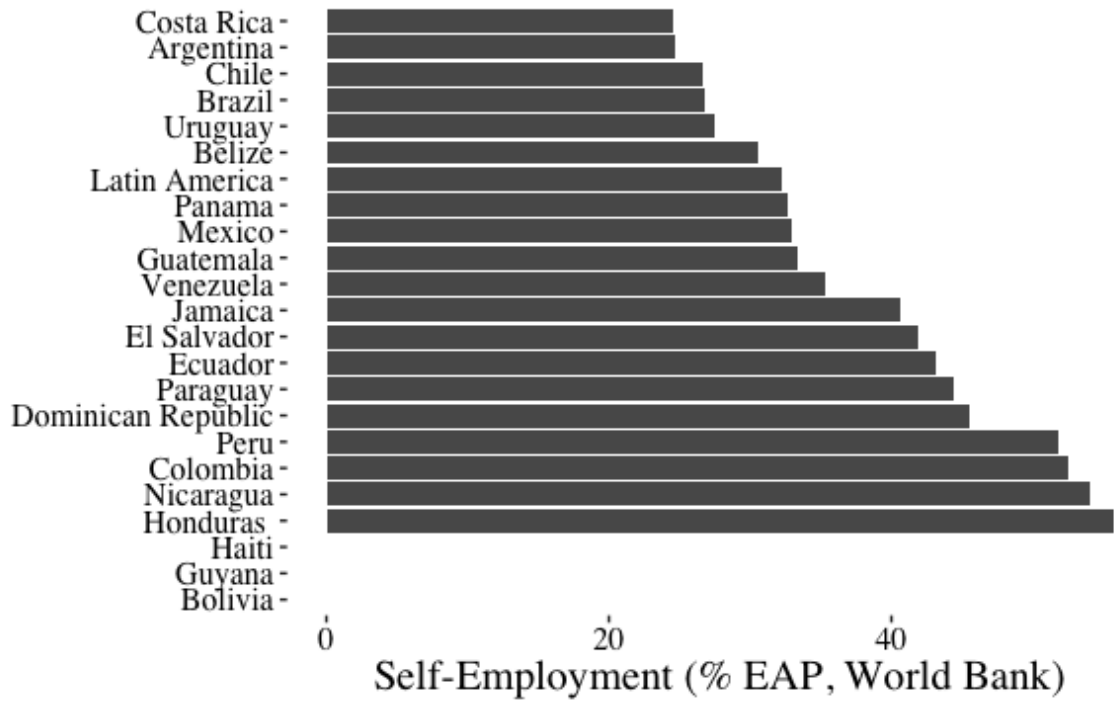
Rates of self-employment and informal labor vary significantly across the Americas (Vanek et al., 2014, p.7-9). Self-employment and informal work are common in every economy in the region and the two categories overlap extensively (Vanek et al., 2014, p.34-35). The World Bank found that, in 2013,² around 32% of people employed in Latin America were self-employed. By country, Costa Rica had the lowest rate of self-employment at 26% of economically active people while Honduras had the highest rate at 56%.³ Figure 1 tabulates self-employment rates in Latin America by country.

The International Labor Organization recorded informal employment for 16 countries in Latin America in 2014 (Vanek et al., 2014). The ILO considers self-employment to be one component of informal employment. Comparing the World Bank and the ILO data, one of the ILO's measures for informal employment is close

²The World Bank Data Bank does not have self-employment by country for all countries and years. For the numbers in this paragraph and Figure 1, I took the most recent data. For the region and most countries, the data is from 2013. Argentina, Paraguay, and Panama had information from 2014, Jamaica and Peru last reported in 2012, Chile's most recent self-employment numbers are from 2011, and Belize stopped reporting in 2005. Bolivia, Guyana, and Haiti are missing recent self-employment data.

³The range may be truncated, since the World Bank is missing data for Bolivia, Guyana, and Haiti, which are high informality countries.

Figure 5.1: Self-employment in Latin America



to but slightly higher than the World Bank's self-employment data, while a broader measure of informal employment shifts an additional tenth to a third of each country's working population into informality. The ILO's data suggests that, if anything, using self-employment as a proxy for informality undercounts informal employment.

Schneider et al. (2010) found similar trends across the region when they estimated the informal sector's share of GDP in each country. Using a dozen economic indicators from 1995-2007, they generate estimates of the size of the informal economy (which they call the "shadow economy") for 162 countries, including most of Latin America. The authors' estimates for the region range from a low of 20% of GDP in Chile to a high of 68% in Bolivia. Schneider et al. (2010) estimate share of GDP, not number of people, and during a slightly different time period, but their data for the region, summarized in Figure 2, shows similar trends to those in Figure 1.

5.2 Data, Measurement, and Operationalization

The analyses use a dataset from the Latin American Public Opinion Project with 44,184 self-employed respondents. The dataset has 26,304 complete observations from 17 countries for nearly two dozen measures (see Figure 3). In-person interviewers surveyed respondents in these countries every two years from 2006 to 2014. I do not impute missing observations because most missingness comes from added or discontinued questions over different waves, not nonresponses. The samples from each country are nationally representative and LAPOP ensures that enumerators solicit responses from rural areas and small towns and in multiple languages; unlike many public opinion surveys, respondents are not just from large cities. While the samples are random and nationally representative, the data is pooled cross-sectional data and

Figure 5.2: Informal sector's share of GDP in Latin America, from Schneider et al 2010

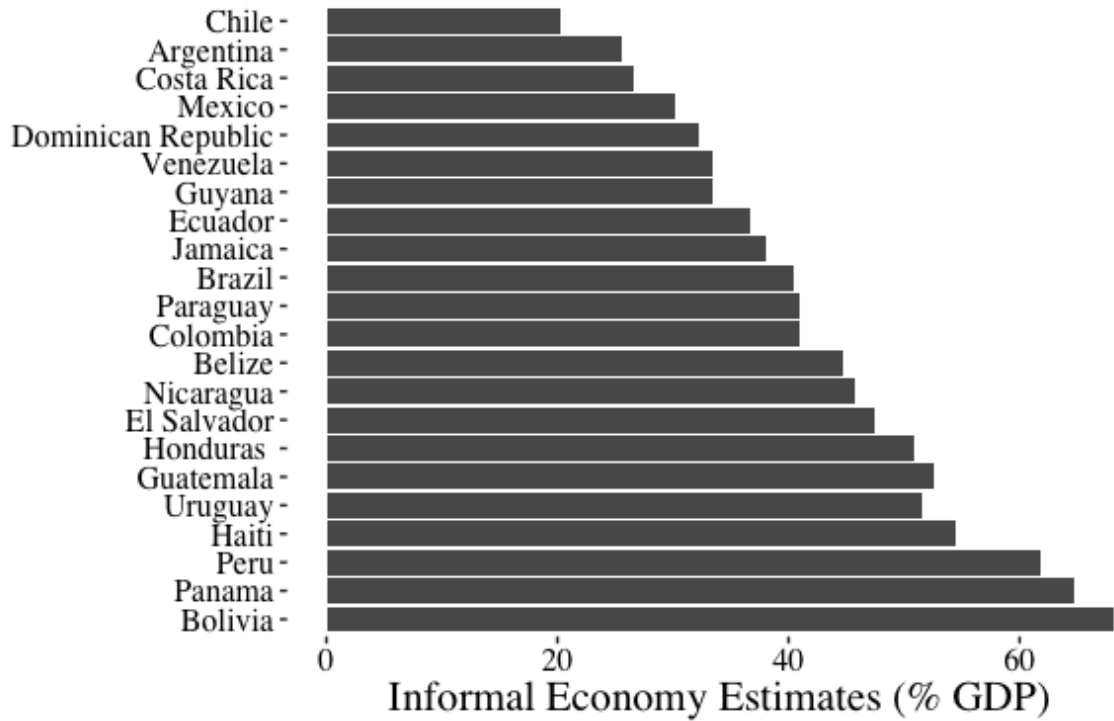
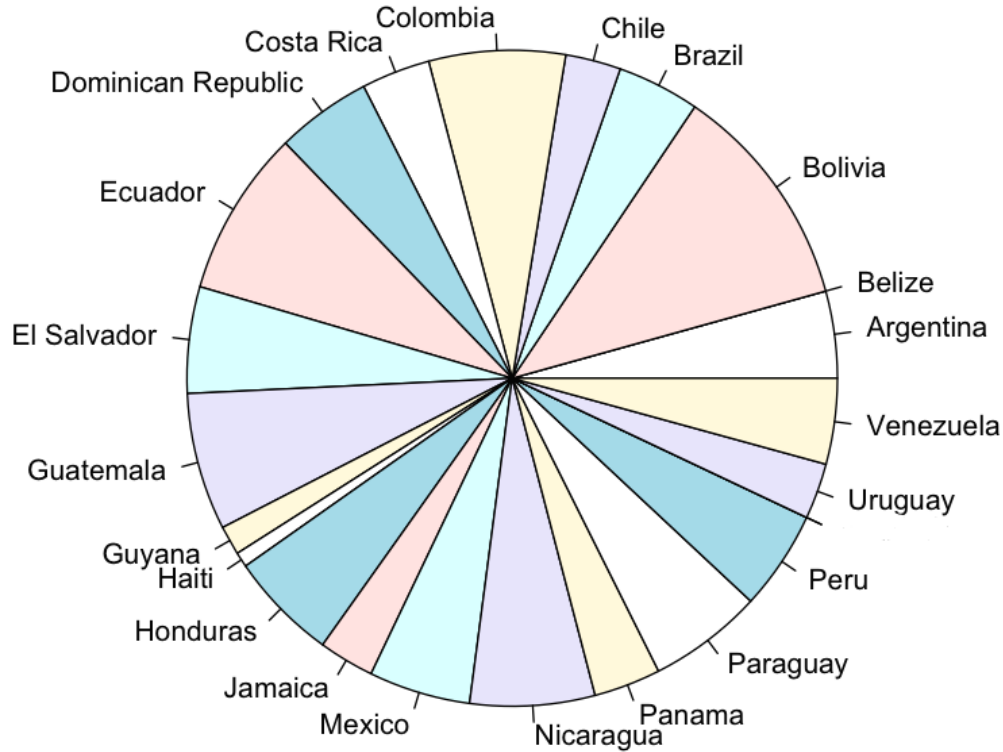


Figure 5.3: Respondents by country



not panel data; administrators sampled new respondents for every wave and added countries in later years.

I use tax and gross domestic product (GDP) measures from the OECD and the World Bank to proxy state-level variables. The data come from government statistics bureaus reporting national data to these international organizations. These data are panel data, but are treated as pooled cross-sectional data when added to the LAPOP dataset.

The dependent variable of this dissertation is informal worker organization. I operationalize informal worker organization in this chapter as individual-level participation in a professional association. Specifically, the analyses use a binary variable

Table 5.1: Participants and nonparticipants by country

Country	Nonparticipants	Participants
Argentina	90%	10%
Bolivia	68%	32%
Brazil	83%	16%
Chile	85%	15%
Colombia	84%	16%
Costa Rica	84%	16%
Dominican Republic	74%	26%
Ecuador	78%	22%
El Salvador	85%	15%
Guatemala	85%	15%
Guyana	89%	11%
Haiti	85%	15%
Honduras	81%	19%
Jamaica	86%	14%
Mexico	81%	18%
Nicaragua	78%	22%
Panama	87%	12%
Paraguay	86%	14%
Peru	71%	29%
Uruguay	86%	14%
Venezuela	91%	9%

for if a respondent reported attending professional association meetings in the last 12 months: 19% of the sample attended at least once. Table 1 tabulates participation by country.

The descriptive statistics lend mixed support to the theory: some lower capacity countries like Bolivia, Ecuador, Peru, and the Dominican Republic experience nearly double the rates of participation than higher capacity countries such as Brazil, Uruguay, and Costa Rica. Additionally, research on informal work indicates that Bolivia, Ecuador, and Peru have considerably organized informal sectors while Brazil and Costa Rica do not (Bhowmik, 2012). However, some low capacity countries with

large informal sectors, like Paraguay and Venezuela, have little participation, while some middling capacity countries with notable informal worker organizations, like Argentina and Mexico, have low participation in professional associations. Thus, the descriptive statistics suggest mixed support for the theory.

Note that professional association attendance is a conservative measure of informal worker organization: if an individual reports attending an association's meeting, that implies that the association exists and the individual participates in organizational activities. For example, in Brazil, many informal workers who I worked with that consider themselves organized would report themselves as self-employed but may not report attending a meeting in the last 12 months because meetings are infrequent and not required. Based on similar information from Bhowmik (2012), p.210-211, on six Latin American cities, Roever (2005), p.117-135, on Lima, and Itikawa (2006), p.344-345, on São Paulo, I suspect that this association measure undercounts organized informal workers across the region.

I proxy state capacity with tax revenue per capita data from the OECD. Comparing 15 common operationalizations of state capacity, Hendrix (2010), p.274, recommends that researchers operationalize the concept with variables that measure a state's revenue-generating capacity, because revenue measures account for more variation than other options. I use tax revenue per capita because it measures a state's ability to collect the taxes it levies and the material resources that governments can allocate to different policy areas. Additionally, tax revenue per capita data exist for most countries and years in the dataset while other potential measures, like homicides per 100,000 or statistical capacity, have severe missing data. The analyses do not use composite measures or indexes of state capacity because most do not cover the years in the public opinion dataset that supplies individual-level information. The OECD

Table 5.2: Correlation between state capacity measures

Measure	Tax per capita	Social Security	GDP per capita
Tax per capita	1	.90	.78
Social Security	.90	1	.60
GDP per capita	.78	.60	1

has tax revenue and social security data for all Latin American countries and years covered by LAPOP, and I used World Bank population data to construct per capita measures.

Table 2 is a correlation matrix for tax revenue per capita and two alternative measures of state capacity: GDP per capita, a common and valid state capacity measure (Hendrix, 2010, p.283), and social security contributions per capita, a revenue measure that captures the state’s revenue generating capacity in labor markets.

The three measures are highly correlated, with tax per capita and social security moving closely together, and tax and GDP per capita largely moving together. GDP per capita and social security per capita are correlated but not as highly at .60. To further allay concerns about how I operationalize state capacity and how sensitive the analyses are to measurement decisions, I have included robustness checks with two different proxies for state capacity. In fact, the imperfect correlation lends additional support to the finding: even using measures for state capacity that are not very highly correlated, like GDP and social security per capita, the analyses generate similar results. All state capacity measures are continuous and I report descriptive statistics in Table 3.

I operationalize individual resources with education in the quantitative analyses. For individuals, education is one of several key personal resources that people frequently leverage in political participation (Fischer and Qaim, 2012, p.1258). This

Table 5.3: Descriptive statistics for continuous variables

Variable	Mean	Median	Standard deviation
Education (years)	8.34	9	4.37
Tax revenue per capita (dollars)	1151.83	730.34	1009.73
GDP per capita (logged)	8.04	8.1	.66
Age	40.42	39	13.71
Children	2.53	2	2.31
Vehicles	1.31	1	.58

project uses education because people reliably report their education levels in surveys, unlike other important resources such as income or social networks. Importantly, most people complete formal education before they enter the workforce; unlike income or social networks, education is a personal resource that is causally prior to civil society participation for many individuals. Additionally, I can trace education across the case studies and the large n data. LAPOP's educational variable is an ordinal scale that records the number of years a person spent in formal education.

In some models, I include alternative measures for individual resources, in particular, household assets and age; other studies also use age as a measure for social capital (Fischer and Qaim, 2012, p.1258). Household assets are binary variables: did a respondent have a telephone, TV, or refrigerator or not, except in the case of vehicles, which is measured as a short ordinal scale. Age is a continuous variable starting at 18.

In addition to the two independent variables connected to my theory, I include a battery of controls that the literature on civil society participation has identified as potential confounders. I include important demographic information, in particular,

children and gender, as well as other forms of political participation. Children is a continuous variable while gender is measured as a binary variable.⁴ Church attendance, community association participation, political meetings, and school committee participation are measured as binary: did a respondent attend a meeting in the last 12 months or not. Voting is also a binary variable that measures if the respondent voted or not in the last election. I recoded political interest from a scale to a binary variable where the cut point was some interest. Finally, I include a binary control for whether respondent lives in an urban or rural area, as workers in urban areas and rural areas have different social networks and infrastructure to pull on when organizing, and have different employment and educational opportunities not captured by other variables. Table 4 lists binary variables' proportions.

While an important literature exists on how individuals use ethnicity as a resource in collective action (Madrid, 2012; Varshney, 2001), I do not include controls for ethnicity because LAPOP's ethnicity questions change by country, and the resulting 27 categories have significant missing data. I include ethnicity as a robustness check in the appendix and the fixed effects results do not change significantly, though the variable prevents the random effects model from converging.

5.3 Logistic Regressions

I use logistic models because the outcome is measured as binary categories. I use fixed effects for years because the data do not have a long or consistent enough time series to make a time series model appropriate. The analyses feature fixed effects for

⁴In the São Paulo survey, where a minority of street vendors identify as gender nonconforming, we included multiple gender categories. However, no respondents identified as gender nonconforming to us, and for analyses we used a binary variable.

Table 5.4: Binary variable proportions

Variable		
Professional Association	81% Nonparticipants	19% Participants
Gender	68% Men	32% Women
Urban	61% Rural	39% Urban
Voter	81% Voter	19% Nonvoter
Interested in Politics	33% Uninterested	67% Interested
Religious Meetings	42% Nonparticipants	58% Participants
School Meetings	56% Nonparticipants	44% Participants
Community Association	67% Nonparticipants	33% Participants
Political Meetings	86% Nonparticipants	14% Participants
Television	10% Do not own	90% Own
Fridge	28% Do not own	72% Own
Landline	61% Do not own	39% Own

countries because we should expect different countries to have different trajectories that shape individuals' organizing decisions and country fixed effects capture some of this variation (Putnam et al., 1994, 182). The appendix includes models with random effects for countries as well; these analyses are not consistently significant, likely because several countries have small numbers of self-employed respondents and the analyses do not have sufficient power within countries when I include full controls. With that exception, results are generally consistent across specifications and estimators.

Table 5 reports the results of two fixed effects logistic regressions with different specifications. The first column reports results from a sparse model with the effects of the independent variables of interest—education and tax revenue per capita—on professional association participation, and includes country and year fixed effects. The second model includes full controls as well as country and year fixed effects. One

star connotes significance at the .05 level.

The estimates are in line with the theory's observable implications. Tax revenue per capita—a revenue-based proxy for state capacity (Hendrix, 2010, p.274)—is consistently negative and significant, suggesting that self-employed workers in lower capacity states are more likely to participate in professional associations than their counterparts in higher capacity states. Similarly, living in a rural area, where states tend to have less control relative to urban areas, increases the chance that a worker participates. Both results support the expectations of the first theoretical mechanism: lower capacity states encourage informal workers to organize.

Individual-level resources also matter: the more educated a worker is, the more likely they are to participate. Likewise, owning vehicles, a proxy for wealth, boosts the likelihood of participation. These results support the expectations of the second theoretical mechanism: people use preexisting resources to participate. Supporting past work on civil society participation (Putnam et al., 1994, p.172-174), people who are more interested in politics are more likely to participate in work-based organizations and participation in any other type of organization greatly increases the likelihood of engaging in a professional association.

The graphs in Figure 4 plot the predicted probabilities of participation as tax revenue per capita (top) and years of education (bottom) increase. Looking at the graph on the left, Figure 4's first takeaway is that as tax revenue increases, the likelihood of participation decreases. For example, a person who lives in a country with very low tax revenue per capita has a 22% chance of participating in a professional association in a given year. By contrast, a person who lives in a country with high tax revenue has a 11% chance of participating. In other words, a person in a high capacity country is 50% less likely to participate than a person with the same level

Table 5.5: Individual and state-level effects on professional association participation in Latin America, 2006-2014

	Fixed Effects Logit	Fixed Effects Logit (Full Controls)
Education	.03* (.00)	.06* (.00)
Tax revenue per capita	-.0002* (.00)	-.0002* (.00)
Female		-.38* (.04)
Age		.01* (.00)
Rural		.47* (.04)
Political Interest		.21* (.04)
Children		.01 (.01)
Religious Meeting		.36* (.04)
School Meeting		.30* (.04)
Community Meeting		.95* (.04)
Political Meeting		.75* (.04)
Non-voter		-.26 (.05)
TV		.12 (.06)
Fridge		-.13* (.05)
Landline		-.02 (.04)
Vehicles		.31* (.10)
	N = 28,184	N = 26,304

Year and country fixed effects suppressed; reported in appendix.

Standard errors in parentheses below coefficients. All tests are two-tailed.

* $p \leq .05$

of education in a low capacity country.

Looking at the graph on the bottom, Figure 4's second takeaway is that the more education a person has, the more likely they are to participate at any revenue level. For example, a person with no schooling has a 15% likelihood of participation while a person with a graduate degree has a 25% chance of participation, an increase in likelihood of 63%.

Figure 5 combines these predicted probabilities and plots the predicted probabilities of participation at different levels of education as tax revenue per capita increases. Figure 5's first takeaway is that as tax revenue increases, the likelihood of participation for people at all education levels decreases.

Figure 5's second takeaway is that as tax revenue increases, all respondents converge towards nonparticipation and the differences between more or less privileged people shrink. Combining the education and tax revenue results, a person without formal education in a high capacity country has a 5% likelihood of participating, compared to the 30% likelihood of a highly educated person in a low capacity country; in other words, the second individual is six times more likely to participate in civil society. Combining these dimensions, one in 50 people with no formal education participate in high revenue countries, but in low revenue countries, the least educated workers are just as likely to participate as the most educated workers in high revenue states: one in six in each condition participate.

Considering the lively debate on state capacity and how to measure it, one concern is that the results are sensitive to differences between state capacity measures. Tables 6 and 7 demonstrate that proxying state capacity with GDP and social security per capita does not change the results by much: the sign and significance remain the same. Table 6 reports results from the sparse model and the main model

Figure 5.4: Predicted probabilities of participation

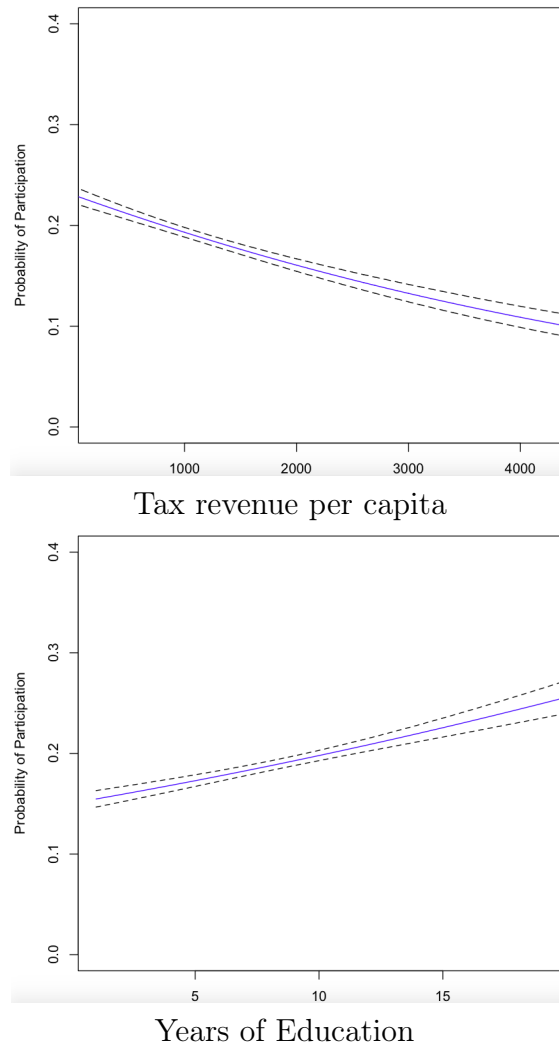
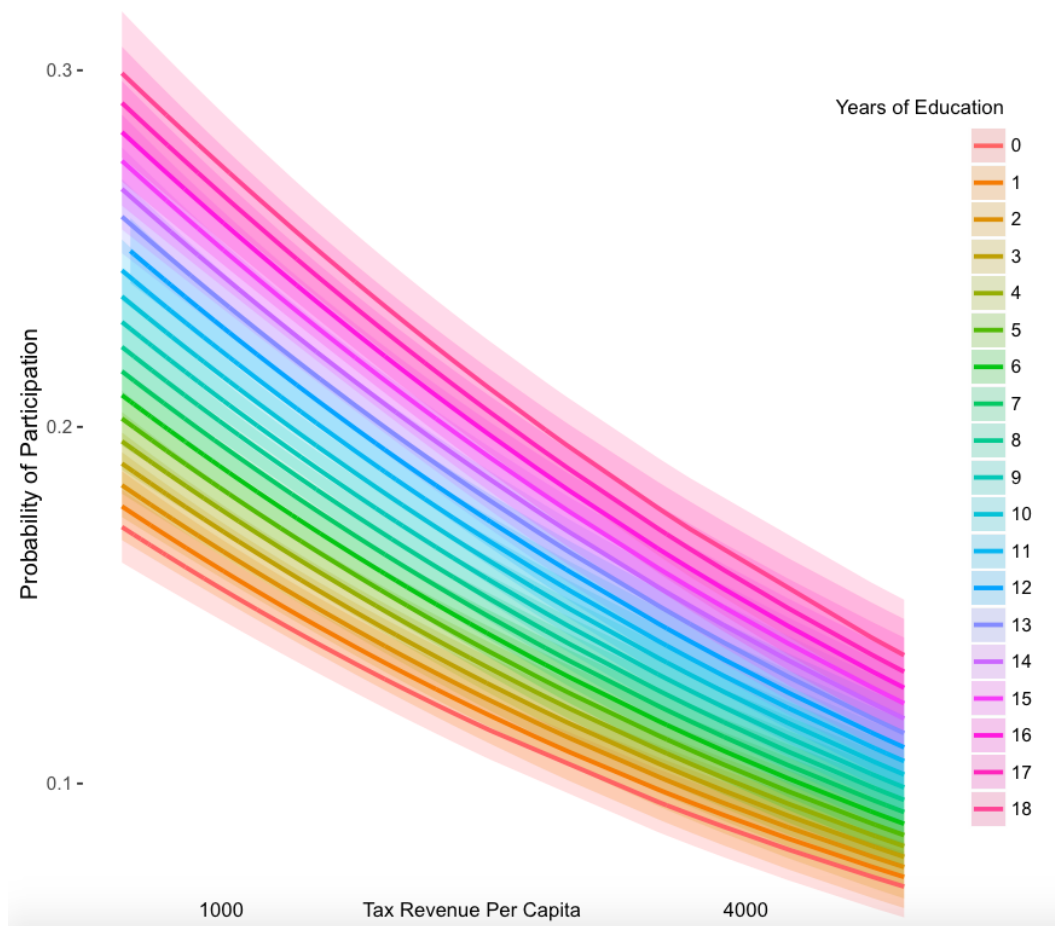


Figure 5.5: Predicted probabilities of participation



with full controls, using GDP per capita instead of tax revenue per capita.

As another robustness check, Table 7 reports results from a sparse model and the main model with full controls, using social security contributions per capita instead of tax revenue per capita. Again, the results are consistent with analyses that use different measures of state capacity. Additional robustness checks on subset data are in chapter 5's appendix. Results from subsetting the data on urban population, gender, and country are mixed: the results are similar in direction, magnitude, and significance for men and rural workers, and when Bolivia and Brazil are excluded from the sample, but tax revenue loses significance on female and urban subsamples. However, subsetting the data greatly restricts the sample and the mixed results may be an artifact of a different and smaller sample See Appendix D for tables with results on different subsets of the data.

The logistic analyses suggest that the patterns identified in the case studies are present in other Latin American countries. However, the results are far from conclusive and we currently lack more specific measures or longer time series which could help distinguish between confounders, clearly identify the data, or model time and levels more appropriately. Further analyses in the appendix demonstrate that the relationships are robust to many but not all common objections and checks. In the following section, I use a nonparametric machine learning framework to reanalyze the dataset without making strict assumptions about the data.

5.4 Machine Learning Models

The machine learning approach adds to and supports the logistic regression analyses by demonstrating that proxies for state capacity and individual resources matter more

Table 5.6: Individual and state-level effects on professional association participation, GDP per capita.

	Fixed Effects Logit	Fixed Effects Logit (Full Controls)
GDP per capita	-.0001* (.00)	-.0003* (.00)
Education	.04* (.00)	.05* (.00)
Female		-.40* (.04)
Age		.01* (.00)
Rural		.47* (.04)
Political Interest		.21* (.04)
Children		.01 (.01)
Religious Meeting		.36* (.04)
School Meeting		.31* (.04)
Community Meeting		.98* (.04)
Political Meeting		.74* (.04)
Non-voter		-.03 (.05)
TV		-.10 (.06)
Fridge		-.14* (.05)
Landline		.02 (.04)
Vehicles		.31* (.03)
	N = 29,646	N = 27,672

Year and country fixed effects suppressed.

Standard errors in parentheses below coefficients. All tests are two-tailed.

* $p \leq .05$

Table 5.7: Individual and state-level effects on professional association participation, social security contributions per capita.

	Fixed Effects Logit	Fixed Effects Logit (Full Controls)
Social security contributions per capita	-.001* (.00)	-.001* (.00)
Education	.04* (.00)	.06* (.00)
Female		-.38* (.04)
Age		.01* (.00)
Rural		.47* (.04)
Political Interest		.21* (.04)
Children		.00 (.01)
Religious Meeting		.36* (.04)
School Meeting		.31* (.04)
Community Meeting		.98* (.04)
Political Meeting		.74* (.04)
Non-voter		-.02 (.05)
TV		-.12 (.06)
Fridge		-.14* (.05)
Landline		.01 (.04)
Vehicles		.31* (.03)
	N = 28,184	N = 26,304

Year and country fixed effects suppressed.

Standard errors in parentheses below coefficients. All tests are two-tailed.

* $p \leq .05$

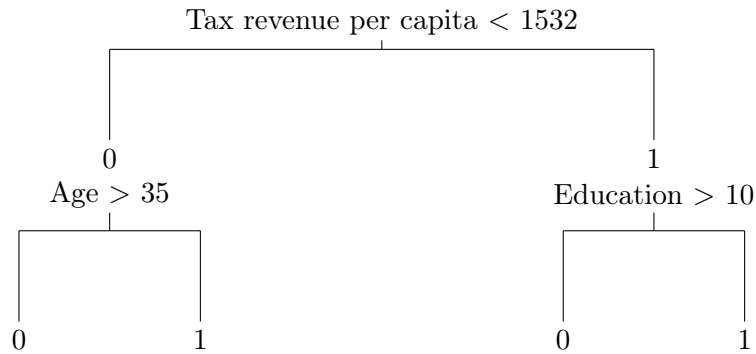
than most other variables in predicting participation, even without the assumptions necessary for the logistic models. Importantly, the technique uses complex conditional relationships to make predictions; these conditional relationships are closer to the proposed theoretical process than the additive effects of the regression models. Finally, prediction can be a valuable endeavor in and of itself; for example, governments that want to delegate to civil society may need to predict future participation to assess if a policy is worth the time and effort.

In a frequentist statistics approach, researchers specify a model and then evaluate it with data, as in the previous section's logistic regressions. In a machine learning approach, researchers feed data into an algorithm that learns patterns to predict output (Breiman, 2001b, p.199). To nonparametrically analyze the dataset, I use a random forest classifier, which generates predictions from n decision trees.⁵ Random forest is one technique in the field of machine learning methods (Breiman, 2001a, p.5). Machine learning methods like random forest classifiers typically outperform OLS and logistic regression in making predictions, *but machine learning methods make no causal assumptions or claims* (Muchlinski et al., 2016, p.88).

Random forest classifiers create decision trees to partition the data (Breiman, 2001a, p.5). As the stylized example in Figure 6 illustrates, decision trees partition data to classify observations, creating conditional relationships between the variables. Random forest classifiers are particularly useful for social scientists because, unlike several other machine learning methods, they can handle continuous and discrete variables, missing data, and unbalanced classes, and produce useful metrics like error

⁵Specifically, I use the off-the-shelf random forest classifier in R's caret package. Details in the replication code and caret documentation. See Muchlinski et al. (2016) for an excellent comparison of random forests and logistic regression in R using the caret and randomForest packages.

Figure 5.6: Stylized example of a decision tree classifying participants and nonparticipants



rates and variable importance measures (Muchlinski et al., 2016, p.89).

Decision trees are analogous to flow charts: the highly stylized decision tree in Figure 6 illustrates how a decision tree partitions data into increasingly smaller groups in order to make a prediction. Each terminal node in the decision tree is a prediction. In this example, if a respondent lives in a place where tax revenue per capita is less than \$1,532 a year (Figure 6’s first split, to the left) but the respondent is younger than 35 (Figure 6’s second split to the left), the tree ends in 0, which means that it predicts that the respondent did not participate. Conversely, if tax revenue per capita is less than \$1,532 a year, but the respondent has more than 10 years of schooling, the tree ends in 1, in other words, the tree predicts that the respondent did participate. Variables further up in the decision tree carry more weight because they contribute to more partitioning. For instance, tax revenue per capita partitions all observations in this example and is therefore more important to the model than education, which partitions many but not all observations. Again, Figure 6 is a highly stylized example; the decision trees that preliminary analyses grew for this project frequently had dozens of distinct conditional relationships between two

dozen variables.

5.4.1 Random Forest Results

Random forest techniques grow a large number of decision trees—this project used 1,000, which is the point at which additional complexity does not increase the precision of this analysis’s results—from randomly selected variables in a dataset. The model randomly samples variables at every node, making each decision tree different. The model learns by finding the optimal local split or value of the sampled variable at that node that most clearly separates all remaining participants from nonparticipants. After growing a forest of decision trees, the random forest technique bundles and averages decision tree predictions to generate results (Breiman, 2001b, p.205).

Selecting parameters like the number of trees to grow is an iterative process that relies more on guidelines than formulas (Muchlinski et al., 2016, p.94). To select parameters, I compared dozens of models with different threshold values for different parameters and selected the values that maximized precision without adding unnecessary computational complexity. For example, a model with 1000 trees takes several more hours to run than a model with 100 trees, but the results are much more consistent across models. A model with 2000 trees generates very slightly more precise results and adds considerably more computing time.

Random forests models generate several types of results, which are largely distinct from the results that most social scientists expect from regression models. First, random forest models generate error matrices, which are categorized predictions. Logistic and other regression models can generate these matrices, and some of the comparisons later on in the section rely on these results. Second, random forests

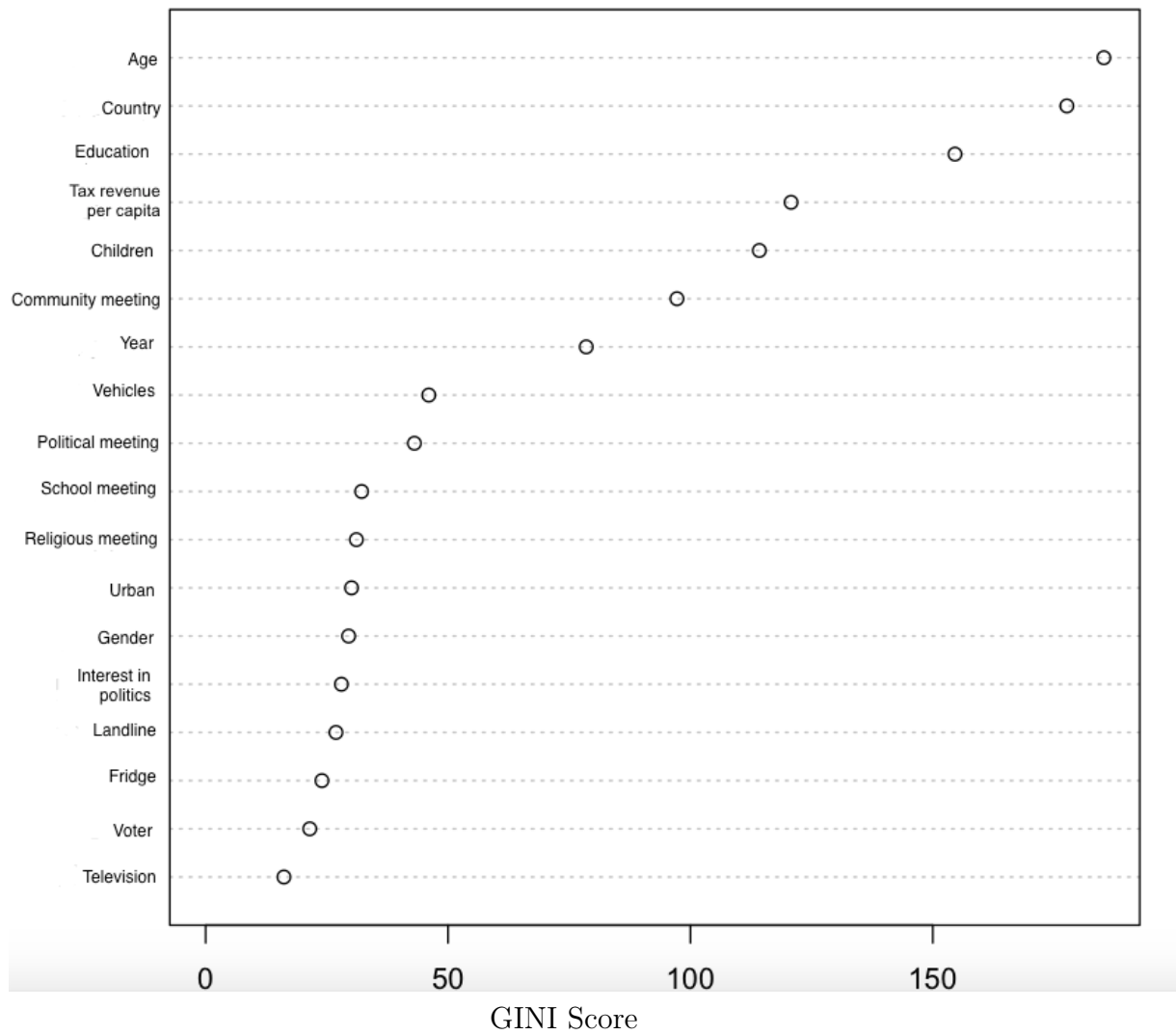
models can back out which variables contribute most to the predictions, which we examine in the variable importance plot below. Finally, with current methods, random forest models *cannot* generate coefficients, confidence intervals or other measures that social scientists typically use in causal inference.

Figure 7 plots each variable's contribution to the random forest model. The measure on the x-axis is the mean decrease in GINI score for each variable. The GINI score measures predictive accuracy by assessing how the model worsens when a given variable is removed (for a more thorough discussion, see Muchlinski et al. 2016, p. 97-98. Note that the GINI score is unrelated to the Gini index of inequality). Therefore, the higher a variable's decrease in GINI score, the more important it is to the model's accuracy.

Again, random forest models predict data but make no causal claims. Figure 7 supports the logistic results and the theory by showing that education and tax revenue per capita remain strong predictors of professional association participation patterns even without making any strong assumptions about the data.

Additionally, Figure 7 has interesting implications for collective action research. The variable importance plot confirms some established findings: the country a person lives in greatly impacts their collective action decision, as does year of survey, education, experience, operationalized as age, and other types of participation. However, the graph runs counter to many established findings. For example, number of children, a variable that researchers rarely discuss, strongly predicts participation patterns, suggesting that family structure greatly impacts civil society participation. While the results do not reveal how the number of children impacts participation, research in the American context finds, unsurprisingly, that children reduce adults' free time, which reduces forms of political participation that require significant amounts

Figure 5.7: Variable importance in the random forest model, ranked from highest to lowest predictive power, as measured by GINI score



of time (Brady et al., 1995, p.285). Surprisingly, several indicators of political engagement and participation, like voting in past elections and reported interest in politics, do not contribute much to the model.

5.4.2 Comparing Predictions from Logistic and Random Forest Models

The random forest model readily predicts nonparticipation: the model correctly classifies a person as a nonparticipant 89% of the time. On the other hand, it correctly predicts participation in a professional association 41% of the time. Overall, it makes a correct prediction for 79% of the data. In comparison, the logistic model in Table 5 with full controls correctly predicts nonparticipation 97% of the time, at the expense of participation, which it correctly predicts 15% of the time.

ROC plots visualize the models' utility. The ROC plot in Figure 8 shows the random forest and logistic classifiers' true positive rates as the prediction threshold changes. In other words, the ROC plot shows how well each classifier predicts both classes.

The ROC curves show that both models perform well, reliably separating and classifying respondents as participants and nonparticipants. However, the random forest model performs better at predicting both classes while the logistic model primarily predicts nonparticipation.

Separation plots visualize the models' utility by plotting how well models sort classes within the data (Muchlinski et al., 2016, p.94). The separation plots in Figure 9 contrast Table 5's full logistic model with the random forest model's classification. Participants appear as black lines and nonparticipants appear as white lines. The horizontal black line plots predicted probability. The triangle indicates the number

Figure 5.8: ROC plots of true positive performance of logistic and random forest models

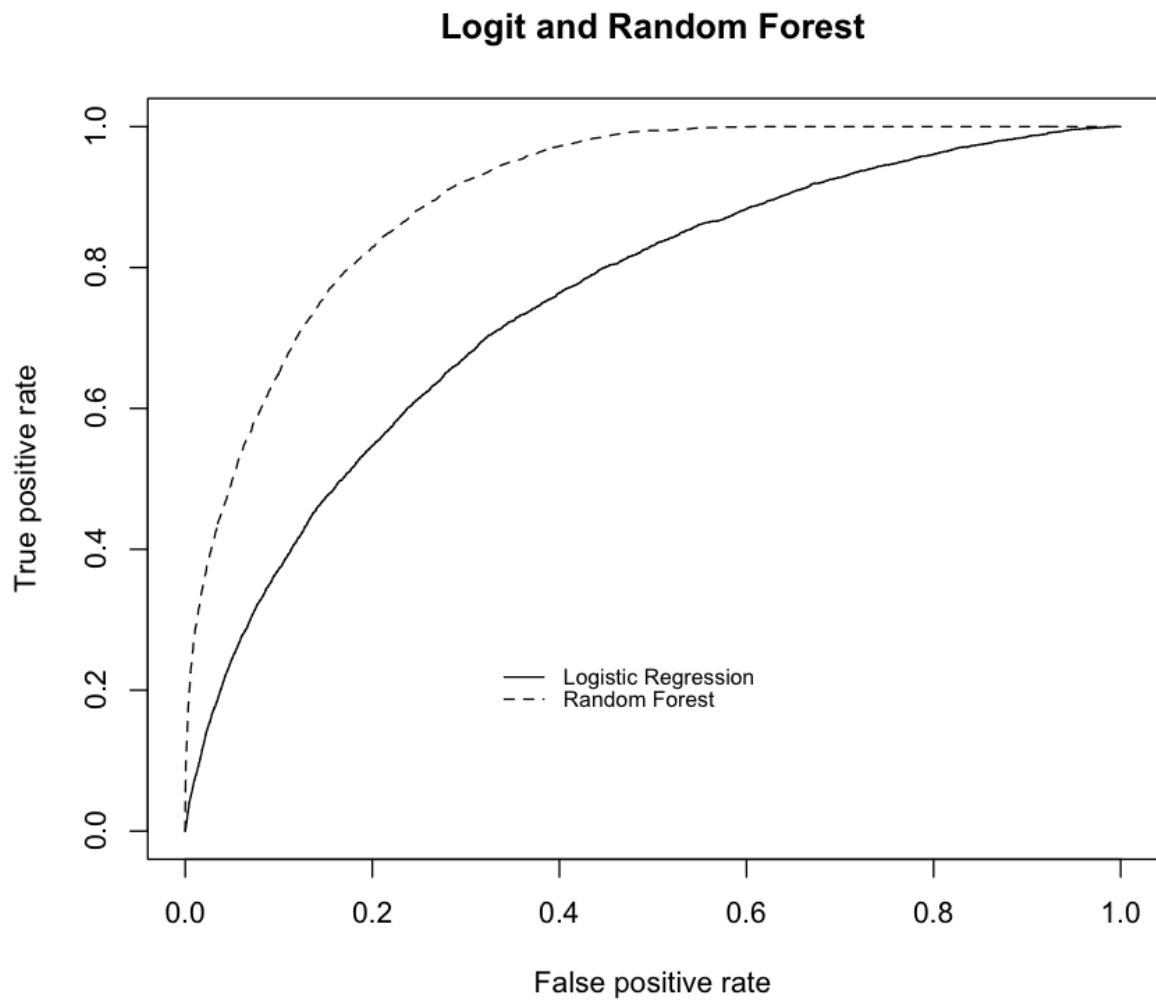
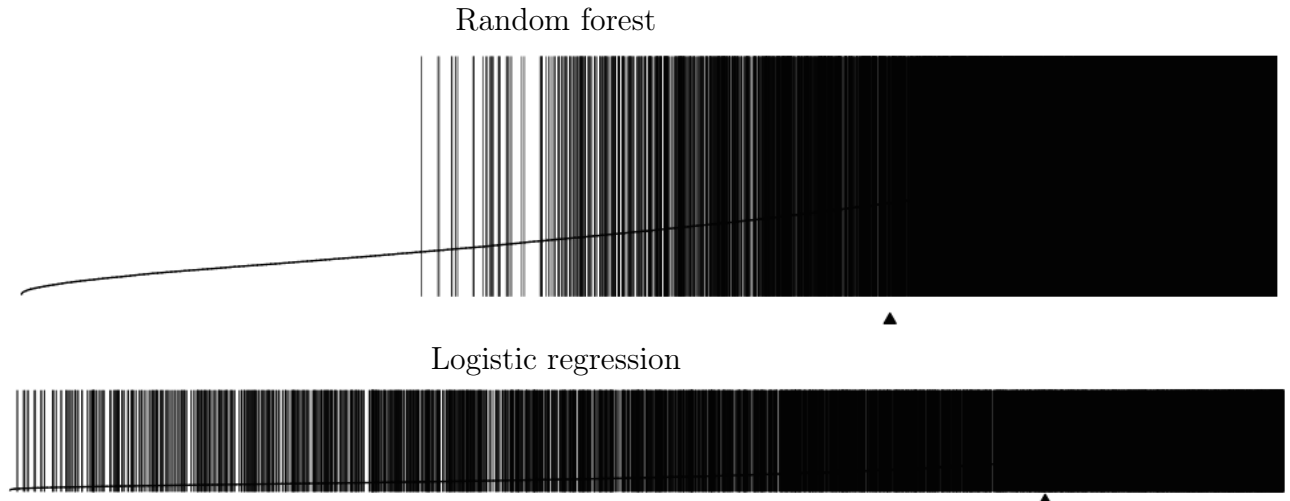


Figure 5.9: Separation plots for models predicting participation, where black lines are participants, the triangle is expected participants, and the horizontal line plots predicted probabilities



of participants that the model predicts. A model that perfectly classifies the data would have all white to the left of the triangle and all black to the right. Any black lines to the left of the triangle are participants misclassified as nonparticipants and vice versa.

Figure 9 shows that both models separate the data but that the random forest classifier performs better in both classes and accurately predicts more participation. In the random forest plot, most participants are correctly classified to the right of the triangle, but a number of participants are misclassified as nonparticipants (any black lines to the left of the triangle represent misclassified participants). Conversely, the logistic plot shows that the model sorts nonparticipants to the left of the triangle. However, the random forest model performs better because it accurately predicts both participation and nonparticipation, instead of excelling at one.

To summarize, the logistic regressions suggest that more education and a lower

capacity state encourage self-employed workers to participate in work-based organizations. Moving away from parametric data assumptions, the machine learning analysis supports the theory by showing that conditional relationships between education and other individual-level proxies for resources and tax revenue per capita as a proxy for state capacity predict self-employed people's participation in work-based collective action.

5.5 Conclusion

Globally, most adults work and most are poor. Available jobs tend to be informal, precarious, and bring in low wages with few if any benefits (Neuwirth, 2012, p.27-28). Many workers experience poverty, informality, and precariousness in other parts of their lives as well: in informal housing, transportation, and unregulated health care (Desmond, 2012; Holland, 2014; Goodfellow, 2015). Existing theory predicts that informal workers rarely organize and participate in civil society (King and Rueda, 2008, p.292-293). Scholars and policymakers assume that informal or self-employed workers rarely participate because of additional barriers to collective action like high turnover and uncertain legal statuses (Perry, 2007, p.xi). Contrary to this assumption, informal workers around the world participate in civil society and frequently improve their working and living conditions when they do (Agarwala, 2013; Bhowmik, 2012; Hondagneu-Sotelo, 2001).

I argue that states and informal workers interact to encourage civil society participation in some places but not others. I suggest that where states do not have the capacity to enforce regulations, they offer incentives to workers to form and join civil society organizations that regulate daily life. Workers who have the

education and other resources to harness these incentives may then opt to participate and negotiate collectively with the state. By contrast, states with more capacity enforce laws against activities like street vending, and these punitive strategies take resources away from workers (Holland, 2016, p.233). Punitive enforcement strategies create considerable barriers to organizing and as a result, informal workers participate less in high capacity contexts. In support of the theory, I have presented out-of-sample logistic and machine learning analyses on survey data from self-employed workers across Latin America.

Chapter 6

Conclusion

Half of the world's workers labor in informal jobs (Ronconi, 2010, p.719). Most informal workers do not join unions or other civil society organizations, and they are more likely to withdraw from political participation than formal workers (King and Rueda, 2008, p.292-293). However, in countries like Bolivia, India, and South Africa, massive informal workers' organizations represent millions of people and make their members' livelihoods more secure (Agarwala, 2013). In cities across the globe, from São Paulo to Lagos to Bangkok, sizable city-wide workers' associations represent thousands of informal workers and frequently lobby local governments to improve their members' working conditions (Bhowmik, 2012; Grossman, 2017). Why do some informal workers join and form organizations even as the majority do not?

The preceding chapters advance the argument that where enforcement costs are high, governments benefit from encouraging violators to organize self-regulating groups. The project demonstrates that governments can offer private incentives to informal workers who organize self-regulating associations, which helps workers overcome barriers to collective action. Aspiring leaders use state-supplied incentives to convince their colleagues to join and participate in informal workers' organizations.

Governments negotiate with established organizations about legalization, regulation, and enforcement, and the organizations enforce rules in markets.

If membership brings clear benefits like Agarwala (2013) and I claim, why don't more workers organize? In line with past research on informal economies, this study demonstrates that informal workers face significant barriers to organizing. Most workers are poor and work long, grueling hours in order to support their families on low and unpredictable incomes. Every hour spent organizing is an hour of lost income or rest, and most workers do not have experience organizing or extra resources to dedicate to activism. Additionally, in many typically informal jobs, such as street vending, unlicensed transportation, or recycling, workers compete with their closest colleagues. An informal worker's coworkers are fierce competitors, not natural allies, in contrast to many types of formal employment. With these significant barriers to collective action, many informal workers never form or join a workers' organization, even when they know they could benefit.

Chapter 2 introduced the theory and then formalized the argument with a game theoretic model. First, unorganized informal workers create problems for local and national governments. Informal workers typically do not pay taxes and ignore dozens of health and safety laws, which decrease governments' potential resources and make public health and safety crises more likely. Many informal workers, like street vendors, scavengers, gypsy cab and mototaxi drivers, work on public land or use public infrastructure in the course of their business, leading to conflicts over public space with other workers, formal business owners, and residents. Most governments would probably prefer if informal work did not exist and are reluctant to engage informal workers and their representatives. However, the problems and conflicts that informal workers create can push governments to intervene.

In chapter 2's formal model, a government can choose to intervene with positive incentives in informal workers' collective action decisions. The model establishes conditions under which governments intervene or not: first, where workers can organize without external incentives, the government free rides on their efforts and does not offer any additional help. Second, if incentives cost more than the problems that unorganized workers create, the government does not intervene. However, if the government can save money by providing an organizing incentive, it will make an offer.

The model also establishes conditions under which workers organize: where workers do not see private or collective benefits from organizing, they do not, nor do they organize where incentives are lower than the costs of joining. Second, where workers get something from the organization, they form one even without government help. Finally, if the government offers an incentive that covers a worker's organizing costs, she acts. The model endogenizes selective incentives and partially endogenizes collective action to political negotiations. Depending on the parameter values, workers and the government interact to create a range of outcomes in equilibrium, from no organization, to small organizations, to massive groups. The model leads to outcomes where people who would not organize on their own choose to organize in anticipation of policy input or legal benefits. The equilibrium outcomes reflect the range of organizational outcomes that we observe in informal markets across the globe.

The theoretical model contributes to collective action theory by demonstrating when and why a simple state intervention can influence people who will not overcome collective action problems on their own. The model replicates canonical findings by Olson (1965) and Ostrom (1990) while adding novel equilibrium results. Most importantly, where unorganized people create problems for the government and will not overcome barriers to collective action on their own, governments benefit by stepping

in with organizing incentives. Where possible, governments will free ride on individuals' contributions: if citizens can produce public goods without external help, governments readily free ride on those efforts.

The theory relies on two mechanisms that suggest implications for the empirical record. In the first mechanism, enforcement costs put pressure on low capacity governments to offer incentives for self-regulating groups. If this happens, the cases should show that officials in low capacity areas report that they give incentives and delegate enforcement to civil society groups because of cost and capacity pressures. Conversely, officials should not report this in higher capacity areas and should be more likely to increase enforcement against informal workers. The qualitative data in chapters 3 and 4 demonstrate just that: city governments in La Paz and El Alto delegate enforcement to large civil society groups and report that they cannot regulate sufficiently without these organizations. Lower capacity El Alto delegates more than La Paz. Civil society groups in both cities regulate their members remarkably well—and much more effectively than the police force could hope to—and attract members with incentives like licenses and government access, which the groups receive from the state.

Local and national governments that have the administrative capacity and law enforcement resources to enforce laws against informal work often choose to do so. For example, the United States has one of the lowest rates of informality in the world. This is in part because robust labor markets and clear self-employment regulations give workers many employment options and clear paths to formalization. However, the U.S.'s powerful enforcement agencies also discourage informality and are relatively successful at catching people who persistently skirt the law. Unlicensed street vendors spend much of their time dodging police and getting caught can have

fatal consequences. Police across the country kill street vendors during on-the-job altercations, from Amadou Diallo's death in 1999 and Eric Garner's death in 2014 in New York, to Alton Sterling's death in 2016 in Louisiana (Baker et al., 2015; Cooper, 1999; Fausset et al., 2016).

Chapter 4 covers street vendor policy in São Paulo and El Alto. In Brazil over the last decade, local and national decision-makers used increasing levels of resources and capacity to ramp up enforcement against informal markets. The enforcement campaigns have dedicated thousands of federal and military police to patrolling markets and successfully disrupted supply routes along the Paraguayan border as well as unlicensed markets throughout the country (Pinheiro-Machado, 2011, p.287-312). Studies document significant decreases in the number of informal workers following the campaigns: for example, Cuvi (2016), p.404-406, found that tens of thousands of street vendors in São Paulo left vending after the economy improved and the city government started an eradication campaign.

Chapter 4 discusses how the São Paulo city government has dramatically increased enforcement against informal workers as its capacity and resources have increased, and refuses to regularly discuss, much less delegate, anything with the few informal workers' organizations that do exist. Chapter 5 establishes similar counterintuitive patterns in the regional survey data: self-employed respondents in states with lower tax revenue, which is the project's measure for state capacity, participate in civil society organizations more than workers in high revenue states. The pattern is generally robust to changes in the operationalization of state capacity, model specification, and estimator.

In the second theoretical mechanism, informal workers use preexisting personal resources—in particular, education as a proxy for income—to take advantage of any

state incentives. If this happens, the cases and the quantitative data should show that informal workers with more education form and join organizations more than their less privileged colleagues. While the project primarily operationalizes individual resources with education, I supplement the data with information on experience and material resources where available. Chapters 3, 4, and 5 all demonstrate that workers with more resources, especially education, are more likely to start and lead organizations, and are also more likely to join existing groups, than their colleagues with less education and other resources.

This project contributes to research on collective action, civil society, and informal economies by demonstrating that governments can encourage informal workers to organize and regulate each other. Where unorganized people create problems that an organization could resolve, governments can intervene with incentives that promote organization. In places like Bolivia, where national and local agencies do not have many resources to increase enforcement, governments have implemented positive and negative incentive structures to encourage informal workers to form, join, and participate in civil society organizations that enforce local laws.

The incentives that governments use to encourage self-regulating civil society groups are much cheaper than increasing law enforcement, and can often be implemented within existing administrative structures and without additional budgetary allocations. For example, in La Paz and El Alto, Bolivia, local authorities use licenses as a positive incentive to encourage informal workers to organize. Only organization members can receive licenses, and if an organization does not exist in the area that a person works in or if they do not like existing groups, they must form a new one. Licenses give workers certainty and enable investment and planning, and can be resold on unofficial secondary markets for thousands of dollars. This valuable incentive only

costs the government the time it takes a bureaucrat to review and grant an application. Governments also encourage organization by only granting organized workers access to the bureaucracy; access can be a powerful incentive for individuals, and it has no direct impact on the city's budget. Street vendors in La Paz report that the city government has paid street vendor leaders in the past to work with it, and even cash payments can be cost-effective compared to additional police salaries.

6.1 Policy Recommendations

The theory's major policy-relevant implication is that delegation to civil society can increase compliance with local laws while also promoting political engagement, particularly within vulnerable groups. However, this strategy could also increase opportunities for corruption. Conversely, increasing enforcement for minor laws increases alienation and decreases local resources. Many lower capacity governments already delegate to civil society; policymakers in higher capacity contexts may want to consider following their lead as a way to increase engagement, decrease incarceration, and save money.

Policymakers can use the logic of state intervention in informal workers' organizations to help workers formalize and incorporate them into policy processes. Officials around the world frequently launch formalization programs for informal and self-employed workers, but these programs rarely hit their enrollment targets (Bruhn and McKenzie, 2014). Yet this study and others document informal workers going to extensive lengths to acquire documents or resources for formalization, such as licenses and loans, and flocking to easier opportunities for either. For example, Agarwala (2013) documents informal workers' unions that successfully demanded health

cards from the state and ID cards certifying them as informal workers (p.3-4, 16). Agarwala (2013) claims, "As a result of this strategy, informal workers are ironically pulling the state into playing an even more central role in their daily lives than it has traditionally done for members of formal workers' movements (p.15)." Street vendors in La Paz echo these demands; for all of their frustrating experiences with the bureaucracy, most vendors that I worked with seek out officials and demand more attention from officials and more state resources.

With this level of interest from informal workers, why do bureaucrats struggle to enroll workers in formalization programs? I learned from conversations with street vendors and bureaucrats in Bolivia and Brazil that officials rarely design programs that match the needs of informal workers because many officials do not coordinate with informal workers or their representatives. As a result, existing programs often put a heavy burden of proof and documentation on informal workers while providing delayed or unnecessary benefits. In contrast, when cities or national governments set up formalization programs in consultation with informal workers' organizations and take their needs and resources into account, demand can quickly outstrip supply. For example, any licensing program typically has more applicants than licenses, as La Paz and São Paulo experience. New York City, which has a street vending sector that is smaller but in many ways similar to São Paulo's, has a licensing program for 5,000 licensed vendors, a years-long waiting list, and faces pressure from vendors to increase the number of licenses (Schmidt, 2016).

In designing effective formalization policies, policymakers should recognize that, like most individuals, informal workers have many competing demands for their time and resources. Policymakers should approach informal workers and any existing organizations, not wait for workers to approach them or find programs on their own.

Policymakers should seek out and incorporate the input of informal workers and their organizations multiple times during the policy process. Policymakers should also design programs with quick, clear, and simple enrollment guidelines and concrete, immediate benefits. Any formalization measure—for example, business registrations or micro-business tax brackets—should minimize paperwork and offer clear, material incentives. For example, a micro-business tax should require minimum proof of income for individuals to enroll and governments should assume the responsibility for investigating businesses that might hide in the lower tax bracket. Requiring individuals to provide extensive proof that they run a micro-business at the outset discourages those individuals and does not remove the incentive for larger businesses to hide in a lower tax bracket. Additionally, informal workers are much more likely to participate in formalization policies if they receive concrete incentives like licenses, business loans, or health care for participation.

For a mixed success example, Bolivia has a simplified low tax bracket for self-employed people and micro-enterprises, virtually all of which are informal in the country. The *Régimen Tributario Simplificado* started in 1987 as part of a tax reform package and in 2015 had 49,452 enrolled contributors.¹ In an interview, an official stated that the program’s purpose is to slowly formalize the sector, not to extract significant revenue.

Of the hundreds of street vendors that I spoke with in Bolivia, I met one who was enrolled, one who had tried, and many who did not know about the RTS. The vendor who tried to enroll said she gave up because the proof of income and other required documentation was more than she had and because she realized that the reg-

¹These numbers are from the official I interviewed, who pulled them from an internal database.

ulations attached to complying with the RTS once enrolled were too onerous. The one who was enrolled was an older, prosperous street vendor who had enrolled with help from a lawyer to receive additional documentation proving her business's legitimacy. To her, the incentive for enrolling was not a lower tax bracket, but documentation that she could use in dealing with the state and banks.

On one hand, the RTS is a success because tens of thousands of informal workers have voluntarily enrolled in the tax system through it. The program's success appears, in part, to come from providing an incentive that informal workers seek out—official documentation—and RTS officials know this. The RTS falls short by enrolling a small minority of the country's microbusinesses, partially because the bar for enrollment is too high for many, but also because many eligible people are unaware that the program exists. The RTS and other simplified tax programs for informal workers could potentially expand much further if they lowered barriers to documentation and actively coordinated with informal workers' organizations.

The case of La Paz's street vendors comes with a dark side that policymakers should guard against: state delegation to civil society groups may have increased opportunities for corruption. Importantly, relationships between bureaucrats and civil society leaders—which are necessary if a government works closely with civil society—appear to hide and perpetuate bribery. The ethnography in Chapter 3 demonstrates that leaders become intermediaries between bureaucrats and rank-and-file members who need a problem solved. As intermediaries, leaders bundle and deliver bribes to bureaucrats, and benefit by taking a cut in the process. This practice advances the careers of bureaucrats and civil society leaders at the financial and political expense of rank-and-file members. By mediating corruption, leaders develop working relationships with bureaucrats, which makes them indispensable to their members—even as

leaders make money off their members' problems. Additionally, when leaders bribe bureaucrats, members do not witness the transaction and cannot make an eyewitness denunciation later. This protects bureaucrats' careers by reducing their accountability to the people they serve. Governments interested in adopting a delegation strategy should create independent monitoring systems to catch corruption and reduce the incentives for engaging in it.

6.2 Broader Implications

This project develops a state intervention theory of collective action to explain informal worker organizations. States offer organizing incentives to civil society actors in many contexts. State delegation may be one of the main avenues for poor citizens to overcome collective action problems, since effective selective incentives tend to demand significant resources. The state—as a large, established, and resource-rich organization—can provide selective incentives where individual activists cannot. This project argues that where governments cannot directly enforce, they are more likely to incentivize and delegate to civil society groups that can. The theory has implications for corporatism and contentious politics. First, the process of state intervention in unorganized markets could launch a process of corporatist state-building. Second, delegation to self-regulating groups carries risk for governments: by empowering civil society groups to develop strong organizational structures and enforcement capacity, governments can inadvertently build organizations strong enough to oppose the state, make onerous demands, and disrupt other projects.

6.2.1 Corporatism

Corporatism is seen as an older state-building process that brought together guilds, communities, the state, and the church over decades or centuries in western Europe (Iversen and Soskice, 2009). Soskice and Iversen (2009, p.446) theorize that the timing of state development led those that developed before the industrial revolution to be more egalitarian than those that developed afterward, in part because early developers built corporatist structures that employ centralized wage bargaining. There is evidence that some early state-building tactics relied on bringing informal businesses into the state's regulatory system through legalization and limited self-regulation (Andreas, 2013). These businesses were key to the success of early political projects because they gave crucial monetary and in-kind resources to a weak state and held valuable knowledge, like trade routes and locations of foreign operatives. Neo-corporatism extends further to include some non-European countries (Streeck and Kenworthy, 2005). Part of the intervention and delegation process that Bolivia and India have followed reflects early corporatist state-building projects and is part of what Streeck and Kenworthy call neo-corporatist: organized social groups with political representation that recognize the supremacy of the state (2005, p.441). Calling attention to the organized interaction between emerging neo-corporatist states and citizen groups, (Schmitter, 1985) calls for the neo-corporatist literature to examine how states intervene in citizens' collective action. Similar to the dynamics that we see in Bolivia, Streeck and Kenworthy (2005, p.441, 447) claim that neo-corporatism helps states handle conflict in modern democracies, and these social groups moderate conflict in areas that the state is ill-equipped to fully reach, like workplaces.

Delegation to civil society groups can make sense for weak states, as this

project has argued. Elaborating the microfoundations of the theory further, successful delegation helps politicians and bureaucrats achieve medium-term governance goals. Voters reward order and predictability and demand deliverables like lower crime, improved traffic, and adequate services, particularly in local elections. The individual politicians and especially bureaucrats tasked with reaching those deliverables face budget constraints and professional rewards that strongly encourage improving governance without large expenses. Cheap or non-monetary incentives and delegation to civil society is one route to improving governance without straining the budget. Additionally, delegation builds ties with politically active community groups, yet another deliverable that politicians and bureaucrats alike can point to, particularly to their superiors. Returning to the neo-corporatism literature, delegation builds neo-corporatist structures by giving organized social groups durable representation in state systems. Additionally, this representation does not necessarily depend on parties and is not limited to election cycles or elected officials.

State actors will only step in if they have a reason to intervene. Chapter 2 suggested that unorganized people can create costs for the state, while organizations reduce costs. Unorganized people can create costs in many ways: for example, unorganized neighbors can strain infrastructure and increase policing costs, while organized neighbors can reduce crime through monitoring, intervention, and mediation and supply public goods like clean parks (Sampson et al., 1997, p.918). Similarly, reaching individual voters is a challenge for political campaigns around the world, and citizen groups make targeting voters easier and more efficient (Auyero, 2001, p.26, 84). As previously suggested, local officials can take credit for the order and services that organizations provide, as Boulding and Gibson found with NGOs in Bolivia; the same may happen with other types of civil society organizations, like business associations

(Boulding and Gibson, 2009, p.480).

Broadly participatory civil societies may return resources to the state over time (Amengual, 2013, p.528), in the form of tax revenue, savings on law enforcement, and trained personnel. Governments across the world delegate to NGOs and private contractors, often with the stated goal of saving money and improving service delivery (Besley and Ghatak, 2001, p.1363-1365). Larger nongovernmental entities, like the United Nations and the World Bank, frequently encourage delegation to NGOs and contractors because they save money, improve outcomes, and reach poorer citizens more than most state bureaucracies (Besley and Ghatak, 2001, p.1365). If delegation increases revenues while decreasing law enforcement costs, then delegation returns resources to the state. Successes with NGOs documented elsewhere and the workers' associations documented here suggest that states can build capacity over time by making investments in civil society instead of state-based enforcement mechanisms.

6.2.2 Contentious Politics

Delegation to civil society raises other governance issues for states. By providing resources and empowering civil society, governments can encourage broad-based mechanisms of social control (Ostrom, 1990). However, by building up powerful social organizations instead of state enforcement agencies, governments run the risk of building strong opponents. Civil society groups will have preferences that diverge from governments, bureaucracies, and officials (Migdal, 1988). Delegating enforcement to these groups sets up a principal-agent problem: the government, as the principal, wants groups to monitor their members and enforce regulations, and provides incentives to build and strengthen groups that can do so. The organizations, as the agents, benefit from increased resources but may prefer to enforce some regulations and not others,

and enforce against some people more than others.

Civil society organizations may also use their power to demand more from the government. Demands from powerful organizations can put resource-poor governments in a bind: administrations need the support of these groups, but they have limited political and material capital to expend appeasing them (Huntington, 1968). Governments can threaten to cut off incentives, but the groups can also threaten to stop enforcing or actively break laws, quickly creating large and expensive enforcement problems for governments—which civil society groups do on a regular basis in Bolivia. For example, a common protest tactic is to block highways to stop trade or access to politically important areas (Dangl, 2007). Additionally, government incentives may be crucial for starting and building organizations but less central as groups develop their own bases of support.

Resource-strapped governments stand to improve order, compliance, and engagement with civil society by incentivizing organized groups and delegating enforcement roles to them. However, the tactic presents a risky trade-off: by giving money and power to social groups, local governments empower external actors instead of building up in-house enforcement capacity. Delegation over time could create powerful social groups beyond the government's control.

6.2.3 Accountability and Corruption

Palmer-Rubin (2016), and Auyero (2001) find that parties in Argentina and Mexico target resources to strong civil society organizations and their members for electoral support, instead of dispensing loans and subsidized food programmatically to all citizens (Palmer-Rubin 2016, p.97). Similarly, Agarwala (2013) documented organized informal workers in India lobbying the state for expanded social programs like health

care and scholarships, but only for organization members (2013, p. 59-60). These efforts create new groups of privileged workers instead of improving the lives of all workers. Additionally, citizen groups are accountable to members, not a broader group of voters, and citizens may struggle to hold civil society service providers accountable for corruption or poor performance. Future research could test these implications, and more thoroughly investigate if the civil society groups that emerge from these processes build or undermine democratic institutions.

Raising further accountability concerns, the ethnographic evidence in chapter 3 suggests that selective incentives may fuel rent-seeking. In La Paz, leaders use diverse selective incentives to start and maintain organizations. However, leaders with the power to enforce rules also have the power to extort (Grossman, 2017, p.4). Rent-seeking may be one of reasons why people become leaders, and one union leader quoted in chapter 3 suggests that she became a leader to illegally acquire more stalls and licenses. In many of these organizations, extra but illicit incentives for leaders encourage people to take on the considerable responsibilities of union leadership. Rent-seeking then becomes members' main conflict with the organizational leadership. Bhowmik (2012) and Grossman (2017) document similar dynamics in market organizations in Asia and Africa. This phenomenon suggests that rent-seeking could help overcome initial barriers to collective action by giving individuals a reason to take on additional roles and costs. Rent-seeking rewards leaders who manipulate collective action for private gain, and may limit what the group can deliver in the future.

Rank-and-file members in Bolivia also suspect that their civil society representatives often rally large demonstrations and then take payments from government officials to stop pushing the issue. If leaders manipulate collective action for private gain, why do people join and participate in their groups?

Future research could examine if leaders take side payments to call off contentious collective action. If they do, future research could look at the moral hazard issues that the government offering the payment faces, the strategies that they use to control protest, and how this behavior has changed over time. Additionally, if leaders successfully call protests and then use this mass collective action to pocket private payments, why do ordinary citizens participate? How do leaders convince people that protesting is in their best interest or how do leaders compel members to attend? Can citizens distinguish between protests used for leaders' private gain and protests that could lead to real policy change?

Preliminary research suggests that civil society leaders use a complex array of positive and negative selective incentives to produce essentially sham contention, but that many protests and other forms of action produce real benefits for ordinary participants. The experiences of vendors in Bolivia and Brazil provide two reasons why people participate in groups where leaders manipulate collective action for private gain. First, vendors accepted some rent-seeking from leaders, provided that it was not excessive and rank-and-file members also received benefits. Second, established groups develop an array of positive and negative selective incentives. In La Paz and El Alto, many vendors who joined established groups stated that they would face negative consequences if they did not participate in events or left the group and continued to sell in the same area. For example, some associations fine members who do not attend protests or meetings, or try to evict members and nonmembers who do not follow their rules.²

²Conversely, some union leaders state that their biggest headaches come from unorganized vendors who harass them. I observed both dynamics and it appeared much more common for leaders to mobilize evidence and members against a few nonconformists than for independent vendors to harass organized ones.

6.2.4 Enforcement and Incarceration

The argument suggests that states with lower capacity can encourage participatory civil societies while higher capacity states may track informal and other poor workers into law enforcement systems. The theory implies that higher capacity states track informal workers into the criminal justice system more frequently than their lower capacity counterparts, precisely because higher capacity states can effectively enforce even minor laws. This implication supports recent reports in the U.S. on modern debtors' prisons (DOJ, 2015) and ethnographic work in urban sociology which finds that heavy enforcement for minor infractions like driving without a license or falling behind on payment plans can trap people in poverty and the justice system (Desmond, 2016; Goffman, 2015). Additionally, the case studies support research in the American context which finds that increased interaction with criminal justice systems decreases political engagement (Weaver and Lerman, 2010, p.818).

Agarwala (2013), Auyero (2001), Holland (2016) and others argue that poor people's votes matter, and as a result, parties and governments try to secure those votes with pro-poor policies, goods, and discretion in the run-up to elections. This project demonstrates that between elections, citizens' compliance matters. Noncompliance can create large and expensive problems for governments, from lost tax revenue to epidemics to spiking crime rates. In contrast to wealthier citizens, many poor people experience the government's interest in their compliance as policing and repression (Scott, 1969, p.1142). Bolivia may offer a less repressive alternative: the government pays attention to poor citizens between election cycles and in some cases works proactively with individuals and groups to achieve compliance. Bolivia's national and local governments increase compliance by materially and politically encourag-

ing self-regulating groups and delegating enforcement to them. Delegation strategies incorporate citizens into communities instead of policing them and improve lives by channeling resources to local organizations while increasing compliance with health, safety, and quality of life regulations.

6.2.5 Concluding Remarks

Poor governments around the world delegate state roles and responsibilities to civil society actors. Delegation incorporates individuals and communities into state projects. Delegation can also bring previously hidden or illegal activities into state regulatory structures. In Nicaragua, the Supreme Court of Justice designated a sex worker collective as a judicial facilitator (Telesur, 2017). The collective's members are licensed community mediators and the stated goal of the program is to reduce the police and judicial system's backlog of minor conflicts while integrating sex workers into a regulatory system. The collective has organized over 2,000 of Nicaragua's estimated 14,000 sex workers and has affiliated with national union organizations (Telesur, 2017). In this example, a government with problems tracking and enforcing community conflicts has enlisted a semi-legal group, designated them as intermediaries between the judicial system and their communities, and increased the reach of the regulatory system without large budget increases. In doing so, the government has encouraged a semi-legal and largely unregulated group of citizens to increasingly organize and become part of the state's regulatory system.

Local governments with shoestring budgets enlist similar tactics in creating new mass transportation, waste disposal, and housing policy. In Kigali, Rwanda, local mass transportation was a hodgepodge of privately-owned vans, trucks, gypsy cabs, and mototaxis, many organized into loose cooperatives or business associations

that would fight over routes (Goodfellow, 2015, p.132). The local government instituted a new mass transportation policy that banned all mototaxis until every taxi driver agreed to join an association. The association enforces local laws and all mototaxists are now licensed, trained, and wear vests marking them as such (Goodfellow, 2015, p.137). Goodfellow (2015, p.137) states that the government approached the policy with the "rationale of 'if you understand something then you will do it better than if someone were to police you.'" In the example of Kigali, a local government without the resources to institute major mass transportation infrastructure opted to reorganize mass transport in the city by requiring informal transportation workers to organize and regulate themselves. The policy professionalized informal transportation, brought the sector in line with local regulations, and, through licenses, gave thousands of citizens a strong stake in the local government's city development project.

Most examples of government delegation to informal workers or other civil society actors come from low capacity contexts and more examples exist in the areas of informal housing and municipal waste management (Holston, 2008; Wilson et al., 2006). I suggest that this is because lower capacity local governments face extreme budgetary pressures as well as pressure from voters who demand improvements in governance by the next election. Higher capacity governments can respond to governance demands by hiring more police, training more bureaucrats, or building new infrastructure and governments retain more control over these initiatives when they choose not to delegate. On the other hand, lower capacity governments have fewer options, and delegation is cheap, making it more attractive to highly constrained local governments.

Local governments with more capacity can use delegation policies to improve

enforcement and community engagement. Delegation policies may increase citizen buy-in with local administrations, and therefore bolster parties' electoral success at the local level. For example, several municipalities in the United States have limited delegation policies to integrate particularly marginalized residents into the community. Los Angeles fast-tracked a plan to license and legalize street vending across the city after concerns that increased immigration enforcement could sweep up street vendors cited for minor public space infractions (Branson-Potts, 2017). In another example, Oakland and Washington D.C. started pilot programs that pay high-risk young people not to commit crimes, and to attend leadership classes (Workman, 2016). Both programs give potential lawbreakers incentives to follow local laws, while integrating them into the cities' regulatory systems. The programs also increase the cities' legitimacy and engagement with the Hispanic and Black communities that the street vendors and young people disproportionately come from. Additionally, higher capacity governments may find it easier to avoid some of the pitfalls from La Paz's and El Alto's delegation policies. Higher capacity governments are less likely to encourage corruption by delegating because they are more likely to have effective anti-corruption monitoring systems in place. Likewise, higher capacity governments run a lower risk of empowering civil society groups that can threaten to create larger governance problems because higher capacity governments can resort to direct enforcement if necessary.

In conclusion, governments can solve governance problems by delegating enforcement to civil society actors. Civil society actors can use delegation policies to grow powerful organizations and gain political influence. Delegation policies present a trade off for governments: they have the potential to increase compliance cheaply and bring new populations into the state regulatory structure, building the state in

the process. Furthermore, where delegation increases participation and services and decreases crime, the administration in power may increase its vote share and take credit for improved governance without committing to expensive and divisive tough on crime policies. However, delegation can reduce accountability and create opportunities for corruption in civil society. Delegation policies can also build organizations that can threaten to shut down a city or create larger problems if the government does not give into its demands. Governments face a trade off when delegating. However, citizens largely stand to gain from increased delegation to civil society.

Appendices

Appendix A

Appendix to Chapter Two

A.1 Game Theoretic Model with Proofs

A.1.1 Set-up, Players, and Moves

In this finite and complete information game, n street vendors decide whether or not to organize and bargain with the state. The vendors move first by playing a public goods game where the moves are organize or defect. The vendors need k organizers to provide the public good, $g > 0$, and all organizers pay a private cost $c_i > 0$. Every vendor that defects generates a negative externality, $-e < 0$, for the state. Any organized vendors move to a bargaining stage, where the state makes some offer x , where $0 \leq x \leq 1$. Finally, the organized vendors accept or reject the offer. If the organized vendors accept the offer and there are at least k of them, each organized vendor receives $g + x - c_i$ and unorganized vendors receive g , while the state receives $g - xm - e(n - m)$, where m is the number of organized vendors. If the vendors do not meet the k threshold but still accept the deal, each organized vendor receives $x - c_i$ and unorganized vendors receive 0, while the state receives $-xm - e(n - m)$. If the vendors reject the deal, all vendors receive a status quo payoff of 0, while the state

Table A.1: Model notation

v_i	a given vendor; vendor i .
s	the state.
x	the state's offer, where $0 \leq x \leq 1$.
n	total number of vendors.
k	the number of vendors needed to provide the public good, where $0 < k \leq n$.
m	the number of vendors that organize.
g	the public good that each organized vendor generates, where $0 \leq g \leq 1$.
e	the state's cost of enforcement where $0 \leq e \leq 1$.
c_i	the cost of organizing to vendor i , where $0 \leq c_i \leq 1$.

receives $-en$.

The vendors face two choices: Organize or defect, and then accept or reject the state's offer. The state makes one choice: how much x to offer.

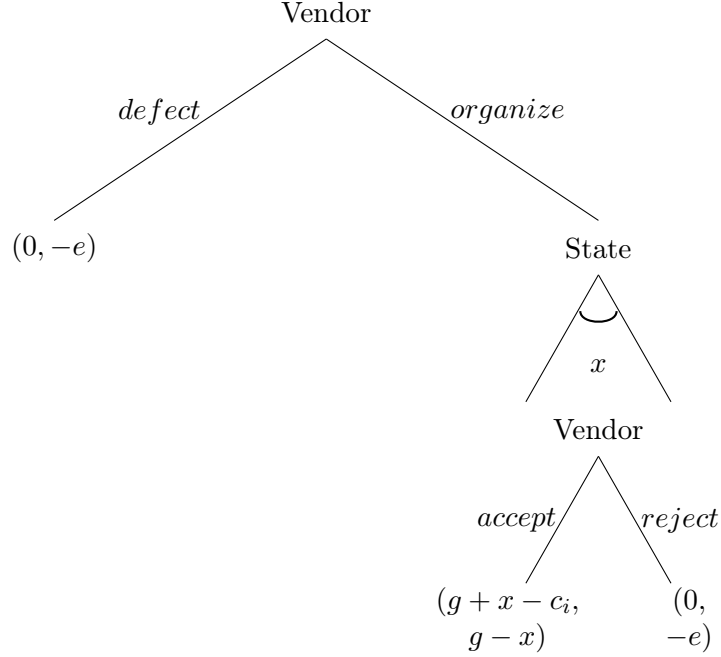
A.1.2 Equilibrium Analysis

The game has a unique pure strategy subgame perfect equilibrium, meaning that for a given set of parameter values, all actors choose the same strategy set in equilibrium.

Proposition 1: The strategy profiles below constitute the subgame perfect equilibrium:

$$\text{Vendor}_i : \begin{cases} \text{organize, accept when } c_i \leq x \text{ and } m \neq k \\ \text{organize, accept when } c_i \leq x + g \text{ and } m = k \\ \text{defect, reject otherwise} \end{cases}$$

Figure A.1: Stylized representation of the game, where $n = 1$.



$$\text{State: } \begin{cases} \text{offer } x^* = c_m \text{ when } e > c_m \text{ and } m \neq k \\ \text{offer } x^* = c_m - g \text{ when } e > c_m - g \text{ and } m = k \\ \text{offer } x^* = 0 \text{ otherwise} \end{cases}$$

A.1.3 Proof

A subgame perfect equilibrium is a set of strategies that represents a Nash equilibrium of every subgame in the model. In other words, a set of strategies constitutes a subgame perfect equilibrium if no player has an incentive to change their strategy at any point in the game. In the final stage of the game, organized vendors decide to accept or reject. In doing so, a given vendor i compares $g + x - c_i > g$ if $m > k$. Solving for c_i , a given vendor i will accept when $c_i \leq x$ and reject otherwise. If $m < k$, a given vendor i compares $x - c_i > 0$ and will accept when $c_i \leq x$ and reject otherwise.

In the special case where $m = k$, a given vendor i compares $g + x - c_i > 0$ will accept when $c_i \leq g + x$ and reject otherwise. No vendor has an incentive to deviate from this strategy: Accepting when costs are higher than the benefit requires the vendor to accept an avoidable loss, and rejecting when benefits are more than costs requires the vendor to forgo a sure gain.

At the second node, the state chooses an offer x^* . In making its choice, the state compares its payoff for an accepted offer to a rejected one, and makes a positive offer if $g - xm > -em$ which can be rewritten as $x < e + \frac{g}{m}$. When making a positive offer, the state sets x at the highest organized vendor's reservation value, which is c_m (and in the special case where $m = k$, $c_m - g$). The state has no incentive to set x higher because the previous step demonstrated that vendor i will accept any offer at $c_i = x$ or above, thus setting x above the highest reservation value lowers the state's payoff (note that the vendor with the highest cost is vendor m , so if the state sets x at her cost, x is above the reservation values for all other vendors). Likewise, the state has no incentive to set x lower than c_m because lowering x even slightly below vendor m 's reservation value triggers vendor m 's rejection, saving the state x but adding $-e$ to the state's payoff.

At the first node, vendors decide to organize or defect. Vendors know the parameter values and payoffs of other players. Therefore, they can anticipate the value of x and base their organizing decisions on it. Vendor i organizes where $x > c_i$ (or in the special case where $m = k$, $x > c_i - g$) and defects otherwise. Vendor i has no incentive to deviate from this strategy: If she organizes where $x < c_i$, she receives a negative payoff when she could choose to lose nothing. If she defects when $x > c_i$ and at least k other vendors organize, she receives g and saves c_i , but forgoes a larger x .

The equilibrium strategies lead to several different equilibrium outcomes, de-

pending on the values of the parameters.

Proposition 1a: Under the conditions $e < c_m$ and $c_k < g$, the strategy profile below constitutes the unique subgame perfect equilibrium:

$$\begin{aligned} \text{Vendor}_i &: \left\{ \begin{array}{l} \text{defect, reject} \\ \text{offer } x^* = 0 \end{array} \right. \\ \text{State} &: \left\{ \begin{array}{l} \text{offer } x^* = 0 \end{array} \right. \end{aligned}$$

Where $e < c_m$ and $c_k < g$, resulting in $m < k$ and $x^* = 0$, no vendors organize and the state does not intervene. A given vendor i in the final node of the game compares $-c_i$ to 0 and opts to reject. The vendor has no reason to deviate because accepting an offer of 0 and no public good incurs a negative payoff instead of rejecting and taking 0. At the second node, the state offers $x^* = 0$. The state has no incentive to make a higher offer because setting x at vendor m 's reservation point costs more than accepting the externality e . At the first node, vendor i chooses not to organize because her participation will not generate g and the state will not offer the $x^* = c_i$ that would change her calculation.

Proposition 1b: Under the conditions $e < c_k$ and $c_k \leq g$, the strategy profile below constitutes the unique subgame perfect equilibrium:

$$\begin{aligned} \text{Vendor}_i &: \left\{ \begin{array}{l} \text{organize, accept when } c_i \leq x + g \text{ and } m = k \\ \text{defect, reject otherwise} \end{array} \right. \\ \text{State} &: \left\{ \begin{array}{l} \text{offer } x^* = 0 \end{array} \right. \end{aligned}$$

Where $e < c_k$ and $c_k \leq g$, resulting in $m = k$ and $x^* = 0$, exactly k vendors organize and the state does not intervene. In this case, we look at vendor k 's decisions because she is the pivotal vendor whose actions decide if the public good is provided

or not. At the final node, vendor k accepts the offer $x^* = 0$ because $g + 0 - c_k > 0$ or $g > 0$. At the second node, the state sets $x^* = 0$ because g provides enough of an incentive to the organized vendors to accept in order to keep g . The state has no incentive to increase x^* above c_k and attract additional vendors because $e < c_k$. At the initial node, vendor k organizes because $g - c_k > 0$; deviating from this strategy would require her to forgo this gain in favor of 0.

Proposition 1c: Under the conditions $e > c_{m < k}$ and $c_k \geq g$, the strategy profile below constitutes the unique subgame perfect equilibrium:

$$\text{Vendor}_i : \begin{cases} \text{organize, accept when } c_i \leq x \\ \text{defect, reject otherwise} \end{cases}$$

$$\text{State: } \begin{cases} \text{offer } x^* = c_m \end{cases}$$

Where $e > c_{m < k}$ and $c_k \geq g$, resulting in $m < k$ and $x^* = c_{m < k}$, less than k vendors organize but only with state intervention. Vendor $i < m$ accepts $x^* = c_{m < k}$ in the final node because $x^* - c_{i < m} > 0$. She has no incentive to reject the offer and take 0 over a positive payoff. In the second node, the state sets $x^* = c_{m < k}$ to incentivize vendors to organize in the absence of a public good, by offsetting their organizing costs. The state has no incentive to set $x^* < c_{m < k}$ because lowering x^* below any vendor $i < m$'s reservation point adds an e to the state's payoff and in this case $e > x^*$. In the initial node, vendor $i < m$ organizes because $x^* - c_{i < m} > 0$, even though vendor $i < m$ anticipates that the public good will not be provided.

Proposition 1d: Under the conditions $e = c_k$ and $c_k \leq g$, the strategy profile below constitutes the unique subgame perfect equilibrium:

$$\text{Vendor}_i : \begin{cases} \text{organize, accept when } c_i \leq x + g \\ \text{defect, reject otherwise} \end{cases}$$

$$\text{State: } \begin{cases} \text{offer } x^* = c_m - g \end{cases}$$

Where $e = c_k$ and $c_k \leq g$, resulting in $m = k$ and $x^* = c_k - g$, exactly k vendors organize and the state subsidizes them. In this case, we look at vendor k 's decisions because she is the pivotal vendor whose actions decide if the public good is provided or not. At the final node, vendor k accepts the offer $x^* = c_k - g$ because it is set at her reservation value (she compares payoffs $g - c_k + c_k - g > 0$). At the second node, the state sets x^* at vendor k 's reservation value: $x^* = c_k - g$. The state has no incentive to increase x^* above $c_k - g$ and attract additional vendors because $e = c_k$. At the initial node, vendor k organizes because $g - c_k + c_k - g = 0$ and we assume that she organizes at her reservation value.

Proposition 1e: Under the condition $e > c_{m=n}$, the strategy profile below constitutes the unique subgame perfect equilibrium:

$$\text{Vendor}_i : \begin{cases} \text{organize, accept when } c_i \leq x \\ \text{defect, reject otherwise} \end{cases}$$

$$\text{State: } \begin{cases} \text{offer } x^* = c_m \end{cases}$$

Where $e > c_{m=n}$, resulting in $x^* = c_{m=n}$ and $m = n$, everyone organizes. At the final node, the vendor with the highest costs (vendor $m = n$) accepts the deal because it is set at her reservation value (she compares payoffs $g - c_{m=n} + c_{m=n} > g$). All other vendors with lower costs accept and have no incentive to deviate and take 0 over a positive payoff. At the second node, the state sets x^* at vendor $m = n$'s

reservation value: $x^* = c_{m=n}$. Because $e > c_{m=n}$, the state has no incentive to lower the offer and substitute x^* with a more expensive e . At the initial node, vendor $m = n$ organizes because $g - c_{m=n} + c_{m=n} > g$, and we assume that she organizes at her reservation value.

A.1.4 Discussion

Overall, equilibrium outcomes depend on the size of g relative to other parameters. If g is large relative to the k th vendor's costs, the state free rides when k people organize. The intuition behind this is that once organized, the vendors will not reject any offer because they do not want to lose g ; as a result the state offers 0. Consequently, the state may want to pay vendors more to always organize, but it cannot commit to changing that offer once vendors pass the k threshold. On the other hand, if g is small relative to the k th vendor's costs, the state makes a positive offer to all vendors and that offer is based on k 's costs. Once vendors organize, the state will make an offer that will keep everyone organized who has organizing costs that are lower than the externality they generate (there is some nonlinearity here if that number passes the k threshold, because then g offsets how much the state needs to offer when $m = k$).

A.1.5 Comparative Statics

The partial derivative of the state's cut point x' with respect to g is $\frac{\partial x'}{\partial g} = \frac{1}{m} > 0$. The partial derivative is positive because negative numbers of participants cannot exist. Therefore, the state's cut point is increasing in g . This means that as g increases, the state's indifference point for making a positive offer also increases; therefore, there is

a larger range of parameter values for which the state will make a positive offer. Note that this is because the state and the vendors enjoy g ; therefore a larger g allows the state to spend more on x . Additionally, where $m = k$, the state can discount its offer by g .

The partial derivative of vendor i 's reservation value x' with respect to c_i is $\frac{\partial x'}{\partial c_i} = 1$. As costs increase, a given vendor requires a higher offer to offset increasing costs and make organizing worth their while.

The partial derivative of the state's cut point x' with respect to e is $\frac{\partial x'}{\partial e} = 1$. Therefore, the state's cut point increases as the externality increases. This means that as the number of organized vendors m increases, the state's indifference point for making a positive offer increases and there is a larger range of parameter values for which the state will make a positive offer. In other words, as e increases, the state is willing to accept more values of x in order to avoid e .

A.2 Robustness Checks and Extensions

How much do the model's results depend on individual modeling choices? The model produces equilibrium strategies and comparative statics that, as with any model, are a function of its assumptions. Many of these assumptions are critical and directly model the strategic interaction that the case illustrates: For example, linking unorganized vendors to the state's payoff with $-e$ captures the negative externality and gives the state an incentive to intervene in the vendors' collective action decisions. Likewise, modeling the initial step as a group decision to contribute or not captures the dynamic that many vendors face when deciding to band together with vendors around them and found a union, as discussed in the case study. While the case study

grounds many of the model's assumptions in empirical evidence, it also suggests a plethora of other factors that the model either simplifies or ignores. In this section, I discuss how relaxing assumptions or extending the model to include new features affects the results.

A.2.1 Robustness

Here we examine two assumptions in more detail: Private versus public costs and the k threshold. For private costs, we will think through the change but not solve a new game, whereas we will walk through the k threshold example in more detail.

The model assumes that organizing costs are public information, meaning that all players know each others' costs. Empirically, this is not strictly the case. Vendors may have an idea of the free time, money, education, contacts, and past organizing experience that other vendors have, but they almost definitely do not have a complete picture of every potential organizer's situation. We can also think of situations or personalities that may want to misrepresent their costs. For example, someone who does not want to contribute may pretend to be busier than they are or pretend that they have less disposable income than they actually do. We can model private organizing costs by giving all vendors beliefs about what others' costs are. In a private information set up, each vendor knows their cost, and knows the distribution of other people's costs but not exactly what every individual has. This is much more realistic: People are generally aware of their resources and have some idea of their colleagues' that allows them to estimate. We will not solve the model with private costs in this appendix because the result for n -person public goods games is well established and used as an example in many game theory textbooks (the example I am working off of

is from McCarty and Meirowitz 2007, pages 140-145). In the complete information game presented above, we see a low contribution equilibrium outcome in which no-one contributes and a high contribution equilibrium outcome in which exactly k people contribute. If we move to private costs, we see a similar low contribution equilibrium in which less than k people contribute and the good is not provided, and a high contribution equilibrium in which at least k people participate and the good is provided.

In the chapter's model, I assume a k threshold, which means that if a certain number of people participate, the good is provided and if that number is not reached, the good is not provided. This assumption has empirical grounding in the case: In Bolivia, a group needs a minimum of 24 members to register as a union. If we conceptualize the union as a public good, then $k = 24$ in this case. However, we can conceptualize the public good in other ways: For example, if the organization provides market security and internal regulation, we might think of the public good as incremental, where every vendor who participates and pays dues incrementally increases the value of the good by contributing to security and following laws.

We can also try a different cost assumption. For example, we can assume that everyone has the same cost. This is realistic if we take a much stricter view of what constitutes a cost and conceptualize costs as dues, which are the same for everyone, or other material costs for founding an organization, which many union founders split between them. I adopt this cost assumption in the example below. The following game has the same set up as the main model, except there is no k threshold and costs are the same for everyone:

Proposition 2: The strategy profiles below constitute the subgame perfect equilibrium:

$$\text{Vendor}_i : \begin{cases} \text{organize, accept when } c \leq g + x \\ \text{defect, reject otherwise} \end{cases}$$

$$\text{State: } \begin{cases} \text{offer } x^* = c - g \text{ when } e > c \\ \text{offer } x^* = 0 \text{ otherwise} \end{cases}$$

Proof

In the final stage of the game, organized vendors decide to accept or reject. In doing so, a given vendor i compares $gm + x - c > gm - g$. Solving for c , a given vendor i will accept when $c \leq g + x$ and reject otherwise. No vendor has an incentive to deviate from this strategy: Accepting when costs are higher than the benefit requires the vendor to accept an avoidable loss, and rejecting when benefits are more than costs requires the vendor to forgo a sure gain.

At the second node, the state chooses an offer x^* . The state sets x at the minimum that all organized vendors will accept, provided that minimum is less than e , which is what the state receives if it offers 0 and a given vendor defects or rejects. To achieve this, the state sets x at the organized vendors' cost minus the public good, $c - g$. The state has no incentive to set x higher because the previous step demonstrated that vendor i will accept any offer at $c = g + x$ or above, thus setting x above the reservation value lowers the state's payoff. Likewise, the state has no incentive to set x lower than c because lowering x even slightly below the vendors' reservation value triggers rejection, saving the state xm but adding $-em$ to the state's payoff.

At the first node, vendors decide to organize or defect. Vendors know the parameter values and payoffs of other players. Therefore, they can anticipate the value of x and base their organizing decisions on it. Vendor i organizes where $c < x + g$ and defects otherwise. Vendor i has no incentive to deviate from this strategy: If she

organizes where $c > x + g$, she receives a negative payoff when she could choose to lose nothing. If she defects when $c < x + g$, she accepts 0 over a positive payoff.

These simplifications in the public good and cost terms lead to similar equilibrium outcomes. Three of the five equilibrium outcomes in the main game remain: These strategy profiles contribute to an outcome in which no one organizes under the conditions that $e < c$ and $g < c$, that all vendors organize without state intervention under the condition that $g > c$, and finally, that all vendors organize with state intervention under the conditions that $e > c$ and $g < c$. Importantly, players reach these outcomes for the same reasons in each model; therefore, the insight does not change but the simplification reduces the explained variation.

Extension: Club goods

Empirically, organizations often provide club goods to their members as an additional selective incentive to recruit members and sustain participation. For example, street vendor unions can offer dispute resolution or legal services for their members. We can introduce a term, h , for association club goods into organized vendors' payoffs and see if and how the overall results change:

Proposition 3: The strategy profiles below constitute the subgame perfect equilibrium: Vendor _{i} :

$$\begin{cases} \text{organize, accept when } c_i \leq x + h \text{ and } m \neq k \\ \text{organize, accept when } c_i \leq x + g + h \text{ and } m = k \\ \text{defect, reject otherwise} \end{cases}$$

State: $\begin{cases} \text{offer } x^* = c_m - h \text{ when } e > c_m - h \text{ and } m \neq k \\ \text{offer } x^* = c_m - g - h \text{ when } e > c_m - g - h \text{ and } m = k \\ \text{offer } x^* = 0 \text{ otherwise} \end{cases}$

Proof

In the final stage of the game, organized vendors decide to accept or reject. In doing so, a given vendor i compares $g + x + h - c_i > g$ if $m > k$. Solving for c_i , a given vendor i will accept when $c_i \leq x + h$ and reject otherwise. If $m < k$, a given vendor i compares $x - c_i > 0$ and will accept when $c_i \leq x$ and reject otherwise. In the special case where $m = k$, a given vendor i compares $g + x + h - c_i > 0$ will accept when $c_i \leq g + x + h$ and reject otherwise. No vendor has an incentive to deviate from this strategy: Accepting when costs are higher than the benefit requires the vendor to accept an avoidable loss, and rejecting when benefits are more than costs requires the vendor to forgo a sure gain.

At the second node, the state chooses an offer x^* . In making its choice, the state compares its payoff for an accepted offer to a rejected one, and makes a positive offer if $g - xm > -em$ which can be rewritten as $x < e + \frac{g}{m}$ (note that the club good only enters the state's payoff through its effect on x^*). When making a positive offer, the state sets x at $c_m - h$ (and in the special case where $m = k$, $c_m - g - h$). The state has no incentive to set x higher because the previous step demonstrated that vendor i will accept any offer at $c_i = x + h$ or above, thus setting x above the highest reservation value lowers the state's payoff (note that the vendor with the highest cost is vendor m , so if the state sets x at her cost, x is above the reservation values for all other vendors). Likewise, the state has no incentive to set x lower than $c_m - h$ because lowering x even slightly below vendor m 's reservation value triggers vendor m 's rejection, saving the state x but adding $-e$ to the state's payoff.

At the first node, vendors decide to organize or defect. Vendors know the parameter values and payoffs of other players. Therefore, they can anticipate the value of x and base their organizing decisions on it. Vendor i organizes where $x + h > c_i$

(or in the special case where $m = k$, $x > c_i - g - h$) and defects otherwise. Vendor i has no incentive to deviate from this strategy: If she organizes where $x + h < c_i$, she receives a negative payoff when she could choose to lose nothing. If she defects when $x + h > c_i$ and at least k other vendors organize, she receives g and saves c_i , but forgoes a larger x and h .

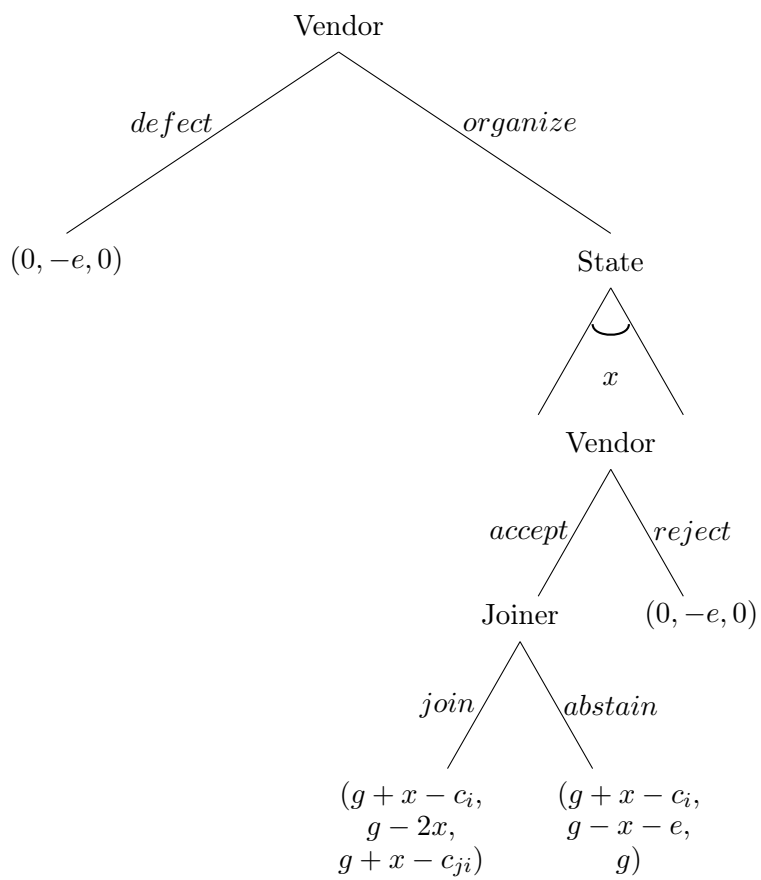
In summary, adding a club good leads to the same equilibrium outcomes as the main model. Importantly, players reach these outcomes for the same reasons in each model. Introducing h to account for club goods adds an additional benefit to organized vendors' payoffs and lowers the state's offer by h , but does not lead to different equilibrium outcomes or explanations.

A.2.2 Extension: Joiners

In this extension, we add a final step to the original model, where a group of j joiners can choose to join the established organization or go it alone. A given joiner receives the public good regardless of their decision, since it has already been provided earlier in the game. If the founders chose not to form an organization in earlier stages, the joiner does not have the choice to join a nonexistent organization and the game ends. If they choose to join, they pay a cost c_{ji} , which we can think of as a due plus any opportunity cost for participating as opposed to abstaining, and receive any state-provided selective incentive x .

Proposition 4: The strategy profiles below constitute the subgame perfect

Figure A.2: Stylized representation of the game where $n = 1$ and $j = 1$



$$\begin{aligned}
\text{equilibrium: Vendor}_i : & \begin{cases} \text{organize, accept when } c_i \leq x \text{ and } m \neq k \\ \text{organize, accept when } c_i \leq x + g \text{ and } m = k \\ \text{defect, reject otherwise} \end{cases} \\
\text{Joiner}_i : & \begin{cases} \text{join when } c_{ji} \leq x \\ \text{abstain otherwise} \end{cases} \\
\text{State:} & \begin{cases} \text{offer } x^* = c_m \text{ when } e > c_m \text{ and } m \neq k \\ \text{offer } x^* = c_m - g \text{ when } e > c_m - g \text{ and } m = k \\ \text{offer } x^* = 0 \text{ otherwise} \end{cases}
\end{aligned}$$

Proof

In the final stage of the game, joiners decide to join or abstain. In doing so, a given joiner i compares $g + x - c_{ji} > g$. Solving for c_{ji} , a given joiner i will accept when $c_{ji} \leq x$ and reject otherwise. No joiner has an incentive to deviate from this strategy: Accepting when costs are higher than the benefit requires the joiner to accept an avoidable loss, and rejecting when benefits are more than costs requires the joiner to forgo a sure gain.

At the third node, organized vendors decide to accept or reject. In doing so, a given vendor i compares $g + x - c_i > g$ if $m > k$. Solving for c_i , a given vendor i will accept when $c_i \leq x$ and reject otherwise. If $m < k$, a given vendor i compares $x - c_i > 0$ and will accept when $c_i \leq x$ and reject otherwise. In the special case where $m = k$, a given vendor i compares $g + x - c_i > 0$ will accept when $c_i \leq g + x$ and reject otherwise. No vendor has an incentive to deviate from this strategy: Accepting when costs are higher than the benefit requires the vendor to accept an avoidable loss, and rejecting when benefits are more than costs requires the vendor to forgo a sure gain.

At the second node, the state chooses an offer x^* . In making its choice, the state compares its payoff for an accepted offer to a rejected one, and makes a positive offer if $g - xm > -em$ which can be rewritten as $x < e + \frac{g}{m}$. When making a positive

offer, the state sets x at the highest organized vendor's cost, c_m (and in the special case where $m = k$, $c_m - g$). The state has no incentive to set x higher because the previous step demonstrated that vendor i will accept any offer at $c_i = x$ or above, thus setting x above the highest reservation value lowers the state's payoff (note that the vendor with the highest cost is vendor m , so if the state sets x at her cost, x is above the reservation values for all other vendors). Likewise, the state has no incentive to set x lower than c_m because lowering x even slightly below vendor m 's reservation value triggers vendor m 's rejection, saving the state x but adding $-e$ to the state's payoff.

At the first node, vendors decide to organize or defect. Vendors know the parameter values and payoffs of other players. Therefore, they can anticipate the value of x and base their organizing decisions on it. Vendor i organizes where $x > c_i$ (or in the special case where $m = k$, $x > c_i - g$) and defects otherwise. Vendor i has no incentive to deviate from this strategy: If she organizes where $x < c_i$, she receives a negative payoff when she could choose to lose nothing. If she defects when $x > c_i$ and at least k other vendors organize, she receives g and saves c_i , but forgoes a larger x .

Appendix B

Appendix to Chapter 3

B.1 Ethnography

I quickly learned during preliminary fieldwork in 2012 that Bolivian street vendors are very distrusting of outsiders, and extremely guarded around foreign researchers. Vendors who I cold-called for interviews either refused to speak to me or refused to answer many of my questions. Researchers like Sian Lazar and Nico Tassi had resolved these issues by building up trust and relationships through ethnographic fieldwork; I took the same approach.

I found the federation offices by asking street vendors on the street where they were. Anthropologists who had worked with street vendors had told me that it is crucial to get permission from organization leaders before starting a research project. Therefore, I approached one of the federation leaders at their office with verbal and written descriptions of the project, letters of support from the university I was affiliated with, and assurances that I would not interfere with anyone's work. I selected the federation with the sophisticated approach of asking the first person I saw at a desk in the office.

I asked to work with the federation for 6-12 months, observe meetings, interview leaders and members at their convenience, and visit vendors at their work sites. The federation leaders agreed and asked me to contribute something in exchange for the time and access I was asking for. We consulted a larger group of vendor leaders, who asked for workshops on street vendor policies and organizations in the Americas, which I gave in October. From Monday to Saturday (Saturday is the busiest work day for most street vendors) from September 2014 to May 2015, I went to the federation offices, the Markets Office, or a market to spend time observing and talking with vendors and bureaucrats. I had a notebook with me at all times but tried not to take notes in it in front of people very often because many people, especially older women, would start to self-censor once they saw me writing. I also learned basic Aymara once I noted that people would switch to Aymara to gossip about me while I was in the room. Basic Aymara is an excellent icebreaker; many people, especially indigenous women, who were extremely wary of me in the first few months became suddenly very talkative after hearing me stumble out a few sentences.

To my surprise, I received several unsolicited job offers from vendors who needed an assistant. I did not plan to work as a street vendor, but figured it was a quick way to get a better understanding of people's work conditions and stressors. It was, and I highly recommend actually doing the activity you study if possible, not just asking people about it. A contact asked me to work their stall while they weren't there one day a week, which I did for three months. This involved arriving at 5:45am every Saturday morning, finding the manager of the warehouse, carrying a 30-50 pound bag of clothes and metal grids to the market space, setting up the stall on the sidewalk in exactly the right place (to the 10th of a centimeter), unpacking and displaying wares, answering customer questions and finding the right items in

stock, haggling, keeping track of change and what types of wares sold, and preventing robberies. I had a notebook with me where I would mark down all sales, types of items, costs, and notes. I typed up all notes that afternoon. I did not make any money doing this in La Paz or São Paulo; I gave the money I made—which was never more than \$50 in profit, and more typically \$20—to the vendors at the end of every day that I worked.

B.2 Original Survey Methods, Instruments, and Results

Over a week in April 2015, I collected 207 survey responses with a team of five administrators. The five survey administrators work for a survey firm started by graduates from the Universidad Mayor de San Andres (UMSA) Sociology Department. All are current or recent sociology students in their 20s, are from La Paz, and have worked with street vendors in prior projects. There were two women and three men, and all identified as either mestizo or white. We conducted all surveys in Spanish; however, we had an Aymara version available and two administrators spoke enough Aymara to administer it.

No viable sampling frame exists for street vendors in La Paz. This is a common stumbling block with research on the informal sector anywhere. The city maintains a database of the 31,906 street vendors with licenses, but this only accounts for 50-70% of street vendors in La Paz, depending on who's estimate one uses. Additionally, the city is extremely resistant to granting database access. Finally, bureaucrats illicitly grant extra licenses for favors and bribes, which results in (allegedly) fake names in the database.

To address this problem, I took a city map with a grid superimposed and numbered the 61 squares that contained city streets. I then randomized the squares by randomizing 1-61 on random.org’s list randomizer. We then went down the list until we had 200 respondents, which was a predetermined sample target. When we went to an area, we would go with a map and walk down every street in the grid’s square, approaching every other vendor (we flipped a coin every morning to determine if we’d start with the first or second vendor we saw). We went through 21 grid squares representing 16 neighborhoods before reaching the target. The neighborhoods are fairly representative of the city, are in all geographic regions, and range from a high density of vendors—100 vendors, 49 approached, mostly on one street—to a low density of three vendors, one approached.

B.2.1 Results

While there is no way to know, given existing data, if the sample is truly representative of street vendors in La Paz, the descriptive statistics from the survey match the estimates that vendor leaders and bureaucrats reported in interviews: the average street vendor has worked at their stall for 23 years, is 45 years old, and attended 8 years of formal schooling. 80% are women and 45% are indigenous, while 75% belong to a street vendor organization and 72% have a license.

The survey had an embedded experiment designed to prime anger about work in the treatment, and mildly positive feelings about work in the control. We used a bottom up prime, where we asked respondents to tell us an experience that they had at work that made them angry or that they liked. Most respondents complied but about 15% of respondents did not answer the question, responded to the control

Table B.1: Survey experiment results

Measure	All Responses (n=207)	Excluding NR and Failure to Treat (n=177)
Pay dues next year	p=.99	p=.52
Ask official for help next year	p=.81	p=.60
Attend protest next year	p=.90	p=.71
Run for office next year	p=.55	p=.53
Donate to fund	p=.78	p=.64
Letter to mayor word count	p=.07	p=.03*

prime with a negative experience, or responded to the treatment with a positive experience. Following the prime, we asked a series of questions about future political participation (for example, will you participate in a protest in the next year?) and included behavioral measures (for example, we are starting a street vendor health fund, would you like to donate?). When we look at the differences in means between treated and control responses, we see null results whether we drop or include that 15%, with one exception, as we can see in the following table:

B.3 Survey Instrument

Below is the survey instrument for the original survey conducted in La Paz, Bolivia, first in English and then in Spanish and Aymara. In the main text, I draw descriptive statistics from the surveys where official statistics are not available.

B.3.1 English Translation

Good morning/afternoon. My name is X and I am conducting a survey. The survey takes 15 minutes and we give you a pound of quinoa for your participation. The survey is part of an academic study to understand why street vendors organize and is by a [redacted for blind review]. The survey has questions about your work, your opinions, and your political participation. We are academic researchers and we are not affiliated with any NGO or political party. The survey is completely anonymous and you can choose not to respond to any question or stop the survey at any time. If a customer comes, I can wait.

Do you want to participate? [If yes, give a bag of quinoa]

The first questions are about your participation in the last 12 months, your participation in the past.

1. In the last 12 months, did you go to a meeting at any association, union, or other organization?
2. In the last 12 months, did you ask for help from a local official?
3. In the last 12 months, did you pay dues to an association, union or other organization?
4. In the last 12 months, did you participate in a protest march?
5. In the last 12 months, did you participate in a campaign?
6. In the last 12 months, did you participate in an organized dance event?
7. In the last 12 months, did you run for election in an association, union or other organization?

Good. Now [ask 1 or 2 at random—flip coin]:

1. Can you tell me about an experience that you've had working here that you liked?
2. Can you tell me about an experience that you've had working here that made you angry?

The next questions are about your participation in the next 12 months, your participation in the future.

1. In the next 12 months, will you go to a meeting at any association, union, or other organization?
2. In the next 12 months, will you ask for help from a local official?
3. In the next 12 months, will you pay dues to an association, union or other organization?
4. In the next 12 months, will you participate in a protest march?
5. In the next 12 months, will you participate in a campaign?
6. In the next 12 months, will you participate in an organized dance event?
7. In the next 12 months, will you run for election in an association, union or other organization?

We are starting a small fund to help with the cost of medication and that any street vendor can use. As part of the survey, we want to see if people want to help out with the fund. To see if people want to help, we are asking if you want to give part of your pound of quinoa to the fund. We will give the money that we would spend on buying more quinoa to the fund. This is a free choice, contributing is not obligatory.

Do you want to give some of the pound of quinoa to the fund?

How much?

Also, at the end of the study we will write a formal letter to the mayor asking for changes for street vendors. Do you want to add something to the letter? We will not put your name in the letter.

The next questions are about imaginary money.

1. To make an application go faster, would you definitely, maybe, or never pay a bribe to an official?
2. Would you prefer to win 1000 bolivianos now or 1500 bolivianos in a year?
3. And now the opposite. Would you prefer to lose 1000 bolivianos now or 1500 bolivianos in a year?

The next questions are demographic.

1. How old are you?
2. How old were you when you started selling?
3. Do you consider yourself mestizo, Aymara, Quechua, white, Afro-Bolivian, or part of another ethnic group?
4. What was the last year of school you completed?
5. Before vending, did you have another job?
 - a. What?
 - b. In this other job, were you part of a union?
6. Currently, do you have a vending license?
7. At this stall, do you work all day, part of the day or only on market days?
8. Have you been a leader in an association, union or other organization?
9. Are you currently affiliated with a street vendor association, union, or federation?
 - a. How long have you been a member?

- b. Are you a leader or a member in the organization?
- 10. Currently, do you like any political party?
 - a. Which?

The next questions are about people you know.

- 1. Do you know anyone who can:
 - a. Organize a protest?
 - i. What is your relationship with this person?
 - b. Resolve bureaucratic problems?
 - i. What is your relationship with this person?
 - c. Start an organization?
 - i. What is your relationship with this person?
- 2. Do you have good friends that you feel close to?
 - a. How many?
- 3. In a normal day, approximately how many people do you have contact with? Include your customers, everyone you greet, and anyone you talk to face to face or over the phone.
- 4. Some people have friends that know each other. Other people have friends that don't know each other. Do you think that all your friends know each other, most know each other, some know each other, or none know each other?

The next questions are about your health.

- 1. Do you have health insurance or free access to a doctor?
- 2. In the last three months, have you had a health problem?

o What?

3. When you have a health problem, do you go to the doctor, a hospital, the pharmacy, an acquaintance, traditional medicine, herbs, or do you do something else?

4. If you belong to a vendor organization, what is your association doing to address the health problems of its members?

1. Finally, to get an idea of the economic situation of Street vendors in general, can you tell me if you own the following things? Cell phone, television, refrigerator, internet at home, more than one stall, a car, your own house.

We are at the end of the survey, thank you for your participation. You can find copies of the results of the survey at the CIDES-UMSA office at the end of May, Av. 14 de Septiembre 4913, Obrajes, next to the Catholic University [give my business card].

Questions for the survey administrator to fill out:

2. Administrator name

3. Survey number

4. Date

5. Street

6. Gender of person surveyed

7. Mobile or fixed post

8. Type of goods sold

B.3.2 Spanish

All but one survey was administered in Spanish. Buenos días/buenas tardes! Soy (nombre) y estoy haciendo una encuesta. La encuesta dura 15 minutos, y le dará una

libra de quinua por su participación. La encuesta es parte de un estudio académico para entender por qué los gremialistas se organizan y fue hecha por [redacted for blind review]. La encuesta tiene preguntas sobre su trabajo, sus opiniones, y su participación gremial y política. Somos investigadores académicos y no estamos afiliados a ninguna ONG o partido político. La encuesta es totalmente anónima y usted puede responder o no a cualquier pregunta o parar la encuesta en cualquier momento. Si llega un cliente puedo esperar.

Usted quiere participar? [Si tiene preguntas, responda.]

Las primeras preguntas son sobre su participación en los últimos 12 meses, participación pasada: 1. En los últimos 12 meses usted asistió a una reunión de alguna asociación, sindicato, u otra organización? [Dar ejemplos: puede ser de una asociación gremialista, una junta vecinal, comité escolar o de la iglesia o cualquier organización.]

[S/N]

2. En los últimos 12 meses, usted pidió ayuda de algún oficial municipal? [S/N]

3. En los últimos 12 meses, usted pagó aportes o cuotas a alguna asociación, sindicato, u otra organización? [S/N]

4. En los últimos 12 meses, usted participó en una marcha? [S/N]

5. En los últimos 12 meses, usted participó en una caminata? [S/N]

6. En los últimos 12 meses, usted bailó en una entrada folclórica? [S/N]

7. En los últimos 12 meses, usted candidateó en alguna asociación, sindicato, u otra organización? [S/N]

Experimento/juego

Bueno. Ahora [pregunta 1 o 2 al azar y nota cual estás preguntando]:

1. Usted puede contarme de una experiencia que ha tenido trabajando aquí que le gustó? [Si necesita clarificación: Una buena experiencia que ha tenido en el puesto]
2. Usted puede contarme de una experiencia que ha tenido trabajando aquí que le molestó? [Si necesita clarificación: Una mala experiencia que ha tenido en el puesto]

Las siguientes preguntas son sobre su participación en los próximos 12 meses, participación futura. Usted puede responder sí, tal vez, o no.

8. Este año, usted va a asistir a una reunión de alguna asociación, sindicato u otra organización? [S/T/N]
9. Este año, usted va a pedir ayuda de algún oficial municipal? [S/T/N]
10. Este año, usted va a pagar aportes o cuotas a alguna asociación, sindicato, u otra organización? [S/T/N]
11. Este año, usted va a participar en una marcha? [S/T/N]
12. Este año, usted va a participar en una caminata? [S/T/N]
13. Este año, usted va a bailar en una entrada folclórica? [S/T/N]
14. Este año, usted va a candidatear en alguna asociación, sindicato, u otra organización? [S/T/N]

Estamos empezando un pequeño fondo para ayudar con el costo de medicamentos que cualquier gremialista o vendedor pueda usar. El fondo sería financiado por aportes voluntarios.

15. Usted aportaría a un fondo así? [S/N]
16. Cuánto por mes?

También, al final del estudio vamos a escribir una nota formal a la alcaldía pidiendo cambios para el sector. Usted quiere adicionar algo a la nota? No pondremos su nombre. [S/N]

Las próximas preguntas son sobre dinero imaginario.

1. Para hacer un trámite más rápido, usted pagaría, tal vez o no una coima a algún oficial? [S/T/N]

2. Esas preguntas son sobre dinero imaginario. Usted preferiría tener 10 bolivianos ahorita o 20 bolivianos en la próxima semana? [Si necesita clarificación: Es imaginario, imagine que usted tendría que escoger entre 10 ahorita o 20 la próxima semana] [10/20/NR]

3. Y ahora lo opuesto: Usted preferiría perder 10 bolivianos ahorita o 20 bolivianos la próxima semana? [Si necesita clarificación: Es imaginario, imagine que usted tendría que escoger entre dos pérdidas: 10 ahorita o 20 la próxima semana. Si todavía necesita: O imagine que usted tendría que pagar un monto y podría escoger entre pagar 10 ahora o pagar 20 en una semana.] [10/20/NR]

Encuesta

Las siguientes preguntas son demográficas:

4. Cuántos años tiene usted?

5. Cuántos años tenía usted cuando empezó a vender?

6. Usted se considera mestizo, Aymara, Quechua, blanco, afro-boliviano o parte de otro grupo étnico?

7.Cuál fue el último curso escolar que usted completó?

8. Antes de vender, usted tenía otro trabajo? [S/N]

- a. Cuál?
- b. En ese trabajo anterior, usted perteneció a algún sindicato? [S/N]
- 9. Actualmente, usted tiene patente? [S/N]
- 10. En este puesto, usted trabaja todo el día todos los días, parte del día, o en días de feria?
- 11. Usted ha sido un dirigente de alguna asociación, sindicato, u otra organización? [Dar ejemplos: puede ser de una asociación gremialista, una junta vecinal, comité escolar o de la iglesia o cualquier organización.] [S/N]
- 12. Usted está afiliado a alguna asociación, sindicato, o federación gremialista actualmente? [S/N]
 - a. Hace cuántos años que usted pertenece a una asociación, sindicato, o federación gremialista? [Estaban afiliados pero ahora no:]
 - b. Usted es dirigente o de base en la asociación o sindicato?
- 13. Actualmente, a usted le gusta algún partido político? [S/N]
 - a. Cuál?

Las próximas preguntas son sobre las personas que usted conoce:

- 14. Usted conoce a alguien que pueda:
 - a. Organizar una marcha? [S/N]
 - i. Cuál es su relación con esa persona? [lee las opciones: familiar, amigo, compañero, conocido]
 - b. Solucionar trámites? [S/N]
 - i. Cuál es su relación con esa persona? [lee las opciones: familiar, amigo, compañero, conocido]
 - c. Formar una asociación? [S/N]

i. Cuál es su relación con esa persona? [lee las opciones: familiar, amigo, compañero, conocido]

15. Usted tiene buenos amigos con quienes usted se siente muy cercano? [S/N]

a. Cuantos?

16. En un día normal, usted con cuantas personas aproximadamente tiene contacto? Incluya todos sus clientes y a todos que usted saluda cara a cara o por teléfono, a todos.

17. Algunas personas tienen amigos que se conocen. Otras tienen amigos que no se conocen. Usted piensa que todos sus amigos se conocen entre ellos, la mayoría se conocen, algunos se conocen, o ninguno se conoce?

Las próximas preguntas son sobre su salud.

18. Tiene usted un seguro o acceso a médico gratuito? [S/N]

19. Usted ha tenido un problema de salud o enfermedad en los últimos tres meses? [S/N]

a. Cual?

20. Cuándo usted tiene un problema de salud, usted: va al médico, a un hospital, a la farmacia, a un conocido, o a la medicina tradicional, se cura con medicamentos caseros, o hace otra cosa?Cuál?

21. [Si es afiliado] Qué se está haciendo desde su asociación para atender los problemas de salud de los afiliados?

22. Finalmente, para tener una idea de la situación económica de los gremialistas en general, usted me puede decir si tiene algunos de las siguientes cosas? Celular, televisor, refrigerador, internet en casa, más de un puesto (contando puestos en ferias), auto, casa propia.

Estamos al final de la encuesta. Muchas gracias por su participación. Usted puede encontrar copias a fines de mayo de un informe con los resultados de la encuesta en la oficina de CIDES-UMSA [dirección: Avenida 14 de Septiembre 4913, Obrajes, a lado de la Universidad Católica]. [Dar mi tarjeta y una bolsa de quinua]

Preguntas que el administrador debe llenar:

23. Nombre del administrador:
24. Número de encuesta:
25. Fecha:
26. Calles:
27. Género del encuestado: M/H/otro
28. Ambulante o puesto fijo
29. Bienes a la venta (circulan todos los que apliquen):
 - a. Comida
 - b. Bebidas
 - c. Electrónicos
 - d. Ropa
 - e. Accesorios (incluye zapatos, cinturones, relojes, joyas, etc)
 - f. Juguetes
 - g. Otros

B.3.3 Aymara

One survey was administered in Aymara. Nayajj X sutinitwa. Mä encuesta luraskta. Aka encuesta,jj tunka pesqan minutotakiwa. Uka layku mä libra quinua churí . Aka encuesta,jj mä estudio académico yatjjatañatakiwa kunalaykutej gremialistanaka sum

wakichasisipki. Aka encuestajj má [redacted for blind review] luratawa. Encuestajj jisk'tawinakaniwa, lurawinakamata ukhamaraki amuyatanakamata ukhamaraki gremialista toquet politicata. Nanakajj investigadores academicópjjtwa. Janiw kuna ONG jan uka partido políÁnticonakanipkti. Encuestajj janiw jumanakajjat jisk'atañ munkiti, jumanakatejj munapjjasmajja jaysapjjasmawa kuntej munapkta uka. Jan ukajj amukatapjjasmawa. Mä aliritej purispajja nayajj suytairistwa.

1. Jumajja iyawsasmati? [Si tiene preguntas, responda. Si acepta, dar una bolsa de quinua] Nayraqat jisk'aäwinaka qhepa tunka payan phajjsinakatawa.

1. Aka qhepa tunka payan phajjsinakan jumajja tantachasiwir saririyätati sindicator jan ukajj yaqha tantachaswiru? Sañäni: gremialista toquenakata, junta vecinalanakaru, comité escuelata, jan ukajj iglesiata. [S/N]

2. Aka qhepa tunka payan phajjsinakan jumajja oficial municipalat yanapawi maytati? [S/N]

3. Aka qhepa tunka payan phajjsinakan jumajja qollque churtati sindicatoru, yaqha asociacionakaru? [S/N]

4. Aka qhepa tunka payan phajjsinakan jumajja marchanakar saririyätati? [S/N]

5. Aka qhepa tunka payan phajjsinakan jumajja sarnaqawinakar saririyätati? [S/N]

6. Aka qhepa tunka payan phajjsinakan jumajja thoqoyätati entradanakana? [S/N]

7. Aka qhepa tunka payan phajjsinakan jumajja candidatjam asociacionan, sindicator, jan ukajj yaqha tantachasiwin candidatjam saririyätati? [S/N]

Waliki, jichhajj: [pregunta 1 o 2 al azar y nota cual estás preguntando]

8. Mayat payakam ukhamak lurañani. Jumajj sitasmati kunjamänsa akan trabajasa, kunas walínwa? [Uka lurawin kunajamäns jumataki puestomana]

9. Jumajj sitasmati kunanakas trabajoman jan walína?

(Pregunta cuando para de hablar: Juk'ampinaka utjiti?)

Jutir jiskt'awinaka jutir tunka payan phajjsinakatakiwa. Jumajj jis sasma, jan ukajj, janiwa. 10. Aka mara jumajj sindicatot, yaqha organizacion tantachasiwir sarätati? Sañäni: gremialista toquenakata, junta vecinalanakaru, comité escuelata, jan ukajj iglesiata] [S/T/N]

11. Aka mara jumajj oficial municipalat yanapt'awi maytati? [S/T/N]

12. Aka mara jumajj sindicator, yaqha organizacionakar qollque churätati? [S/T/N]

13. Aka mara jumajj marchanakar sarätati? [S/T/N]

14. Aka mara jumajj sarnaqawinakar sarätati? [S/T/N]

15. Aka mara jumajj entradanakan thoqtati? [S/T/N]

16. Aka mara jumajj asociacionan, sindicaton, organizacionan candidatjam sarätati? [S/T/N]

Nanakajj ma jisk'a fondo monetario lurañ qallqasipkta qollawinakataki gremialistanakaru jan ukajj aljerinakaru churañataki. Jichha jumanakajj aka encuestar iyawsañ munapjjtati, ukhamaraki jumanakajj mä libra quinua aka fondor churapjjasmati. Nanakajj Confederacionar qollque churapjjë qollanaki alañataki. Take aka lurawinakajja jumanakatawa.

17. Jumajj quinua fondor churañ munasmati? [S/N]

18. Qhawka?

19. Ukhamaraki tukuñataki alcaldiar qellqañani. Jumajja juk'amp saña munasmati? Janiw sutim uskuñaniti. [S/N]

Jutir jiskt'awinaka amuyut qollquetawa.

20. Mä tramite juk'am ratuk lurañatakej jumajj pagasmati, inas, jamasat pagasma?

[S/T/N]

21. Qhawka qollques katokañ munasma, anchispacha waraq boliviano jan ukasti waranq phesqa patakan bolivianonaka mä marana? (Jumatawa ajlliña, jichha waranqa jan ukajj mä maran waranq phesqa patakani) [1000/1500]

22. Jichha mayja jiskt'awiwa. Jumajja waranq boliviano anchispacha chhaqañ munasmati, jan ukajj waranq phesqa patakani bolivianonaka chhaqañ mä marana? (Jumatawa ajlliña jichha chhaqañ waranqa jan ukajj mä maran chhaqañ waranq phesqa patakani) [1000/1500]

Jichha jaqenakjjat jiskt'añani.

23. Qhawka maranitasas?

24. Qhawka maraniyatasa kunapachatej aljan qallktajja?

25. Jumajj mestizótati, jan ukajj aymar jaqe, quechua jaqe, janqäo jaqe, Afro-Boliviano jaqe, yaqhätacha?

26. Escuelan kuna cursokamas yateqta?

27. Janir aljjkhasajj yaqha trabajoniyätati? [S/N]

a. Kunänsa?

b. Uka trabajon jumajj sindicatonkhayätati? [S/N]

28. Jichha jumajj patentenitati? [S/N]

29. Aka pueston, jorarpachat trabajta, sapurut trabajta, horasanakakich trabajta, jan ukajj feria urunakaki?

30. Jumajja asociacionan, sindicaton, jan ukajj yaqha organizacionan dirigentéyatati? Sañäni, gremialista toquen, junta vecinalan, escuel comiten, iglesian, yaqha organizacionanakana. [S/N]

31. Jumajj mä asociaciónanktati, sindicaton tonqtati, federación gremialistanakanktati? [S/N]

- a. Qhawkha maras uka asociación, sindicato, jan ukajj federación gremialistanakankta?
- b. Jumajj basenqtati jan ukajj dirigentétacha?
- 32. Jichhurunaka kuna partidontasa? Qhawkniri?
Jutir jiskt'awinaka khitinakarutej uñt'ätajja ukhatawa.
- 33. Jumajja uñt'äati mä jaqeru mä marcha wakichiri? [S/N]
 - a. Kunas jupajj jumataki? Familiarati, masimati, jan ukajj uñt'äatamacha?
- 34. Jumajja uñt'äati mä jaqeru tramitenak askichiri? [S/N]
 - a. Kunas jupajj jumataki? Familiarati, masimati, jan ukajj uñt'äatamacha?
- 35. Jumajja uñt'äati mä jaqeru mä asociación luriri? [S/N]
 - a. Kunas jupajj jumataki? Familiarati, masimati, jan ukajj uñt'äatamacha?
- 36. Jumajja jaq'äamasinakanitati? [S/N]
 - a. Qhawkha?
- 37. Mä urun jumajj qhawkha jaqenakakampis parlirita? Clientenakata, jupanakar aruntiritati jan ukajj teléfono parlirita?
- 38. Yaqep jaqenaka uñt'äat masinakanipjjewa, yaqepanikasti, jan uñt'äat masinipjjewa. Jumajja masinakaman yaqha jaqenakamp uñt'äasipjjatap amuytati? Waljaniw uñt'äasipjje, yaqhepanakakiw uñt'äajasipjje, jan ukajj janiw khitis uñt'äaskiti?
Jutir jiskt'awinaka qollasinjjatawa.
- 39. Jumajja mä seguronitati jan ukajj inak mä mediconitacha? [S/N]
- 40. Aka qhepa kimsa phajjsinakan, jumajj usutayatati? [S/N]
 - a. Kuna usënsa?
- 41. Kunapachatej jumajja usutätajja, kawkirus sarta, medicor sartati, hospitalar sartati, farmaciari sartati, mä uñt'äatama masimar sartati, jan ukajj kallawayanakar sartati, jumajja ali qollanakampit qollasta, jan ukajj yaqha kollawinakampicha? Qhawkniri?
- 42. Asociacionatamat qollañatakejj kuns lurasipki?

43. Mä suma amuyuniñatakejg gremialistanakan qolque utjatapat, jumajg sitasmati celularaniti, televisoraniti, refrigeradoraniti, utan internetaniti, mayat juk'amp puestoniti, autoniti, utaniti?

Qhepa toque encuestanktanwa. Yuspagarpuni jutatamata. Jumajja jiqjjatasmawa aka informenakat CIDES-UMSA oficinanakan. Ukajg jiqjjatasi Avenida 14 de Septiembre 4913, Obrajes. Universidad Catolica jaqhana. Aka informenaka mayo phasitukusin jiqhatasma. [Dar mi tarjeta]

Preguntas que el administrador debe llenar:

1. Nombre del administrador:
2. Número de encuesta:
3. Fecha:
4. Calles:
5. Género del encuestado: M/H/otro
6. Ambulante o puesto fijo
7. Bienes a la venta (circulan todos los que apliquen):
 - a. Comida
 - b. Bebidas
 - c. Electrónicos
 - d. Ropa
 - e. Accesorios (incluye zapatos, cinturones, relojes, joyas, etc)
 - f. Juguetes
 - g. Otros

Appendix C

Appendix to Chapter 4: Supplementary Information for the Case Studies

This section includes official documents referenced in the main text as well as a summary of how I conducted fieldwork in El Alto, and São Paulo. It also describes interview and original survey protocols and the IRB's confidentiality guidelines. Anonymized field notes and interview transcripts are available on request.

C.1 Interview and Confidentiality Protocols

Example interview script for a bureaucrat:

How did you get this job?

What are the street vending regulations that you deal with?

How do you work with street vendor organizations? Individual street vendors?

There seem to be a lot of street vendor organizations. What are the advantages to having a lot? What are the disadvantages?

How do you manage conflicts between the city and vendors? Between vendors?

What things do you think this office does well? What could be improved?

Example interview script for a street vendor association leader:

How did you start selling?

When and how did you get a license?

How did you become a leader?

(Follow up questions depending on what they say)

What are your interactions with the (Markets Office/city government/mayor) like?

How have they changed?

(Solicit opinions on relevant current events: national elections, municipal elections, threats to revoke licenses)

(Sensitive questions, depending on person: Have you paid a bribe? Why? What are the problems in the federation? How was the federation divided? What happens when someone breaks the rules in your association?)

All interviewees were briefed verbally on informed consent, the project, and the confidentiality procedures. IRB granted verbal instead of written consent because many street vendors are illiterate and wary of official documents (particularly if a foreigner asks them to sign anything). IRB prohibited me from recording interviews because I asked about illegal activity, though the regulations that the people I worked with break are typically minor local ordinances. I took notes in a notebook during interviews and typed them up within 24 hours. I have made up pseudonyms for all interviewees and removed identifying information.

C.2 Survey Administration

We divided each district included in the survey into areas that could be covered in a day, randomized the order in which we would visit these areas, and then randomized which researcher would take which streets within these areas (Torangeau and Smith 1996). Once in the designated area, each researcher approached vendors with the same script, and if the vendor consented to participate, proceeded to read out the survey questions and recorded answers on a tablet. We interviewed one person at each stall and we did not inquire whether the respondent was the license holder or the owner of the stall so long as she worked as a vendor.

Basic demographic data such as gender, approximate age, and race, as well as merchandise on offer, were filled out directly by the survey administrator. We opted for this method because it shortened the number of questions for each respondent and because questions on some topics, such as gender or age, could lead to bias or negative reactions on the part of respondents. Perhaps the most sensitive item is the attribution of respondents' race by the survey administrator. For the purposes of our study, other people's perceptions are as or more important than self-identification because others' perceptions should significantly affect their decisions to buy from, license, extort from, or harass, the vendor. Additionally, race statistics in Brazil are extremely complex, subjective, and there is no best practice or established protocol (Telles and Lim 1998).

C.2.1 Unforeseen Issues

Three versions of the questionnaire (extended, main, and short) were used in the administration of the survey. The main version is reproduced in English at the end of this document followed by the original questionnaire in Portuguese. Prior to starting the survey, we decided to administer the short version to vendors on the city's busiest commercial street, 25 de Março, and its immediate surroundings. This decision was based on information gathered during preliminary fieldwork regarding the intensity of trade in this area, which diminished the availability of respondents, as well as the sensitivity of some questions on associative membership. In retrospect, the relatively high response rate obtained in this area suggests a slightly longer version of the survey would have been desirable. The questions used in the short version are indicated in the questionnaire below. Two days after beginning the survey in mid-July, we had covered one third of the first district. The response rate was 15% and many vendors told us that they would not take the 20-30 minute survey because they felt it was too long. Consequently, we cut out follow-up questions but we did not change the order or wording of the remaining questions. Most of the questions eliminated were toward the end of the survey.

C.3 Survey Instrument

Items used or recorded in the short version are marked with a (*).

Introductory script

Hello, my name is X and I'm [name and university]. A colleague and I are doing a survey of street vendors in Sao Paulo. The survey asks questions about your work and your experiences during the World Cup. It takes about 15-25 minutes. The survey is

anonymous. We are independent researchers and we are not associated with any part of the government or any NGO. You can choose not to answer any question and you can stop the survey at any time. Would you like to take the survey? (If yes) Here is my card. Do you have any questions before we begin?

1. Did you work as a street vendor during the World Cup

Yes (1)

No (2)

NR (3)

Answer if No is selected for Q1:

2. Why did you not work as street vendor during the World Cup? (Do not read the options)

There was too much police surveillance (1)

Took vacations (2)

Other (3)

NR (4)

Answer if No is selected for Q1:

3. How did you do to make ends meet during the World Cup?

Savings (1)

Family help (2)

Another job (3)

Other (4)

NR (5)

Skip to Q18.

4. During the month of the World Cup, did you sell World Cup merchandise?

Yes (1)

No (2)

NR (3)

5. During the month of the Cup, did you make:

More money (1)

Less money (2)

Or the same as before the Cup? (3)

NR (4)

Answer if "More money than" is selected for Q5:

6. By how much did your income increase during the World Cup?*

10% (1)

A quarter (2)

Half (3)

More than half (4)

NR (5)

Answer if "Less money than" is selected for Q5:

7. By how much did your income decrease during the World Cup?*

10% (1)

A quarter (2)

Half (3)

More than half (4)

NR (5)

8. During the World Cup, do you believe that police repression against street vendors:*

Increased (1)

Decreased (2)

Or remained the same? (3)

NR (4)

9. Have the police ever confiscated your merchandise?

Yes (1)

No (2)

NR (3)

Answer if "Yes" is selected for Q9:

10. When was the last time that happened?

11. Have you ever received a fine for working as a street vendor or paid a fee to recover merchandise?

Yes (1)

No (2)

NR (3)

Answer if "Yes" is selected for Q11:

12. When was the last time that happened?

13. For how long have you worked as a street vendor?

14. Before being a street vendor, did you have another job?

Yes (1)

No (2)

NR (3)

Answer if "Yes" is selected for Q14:

15. What was your job?

Answer if "Yes" is selected for Q14:

16. In this previous job, did you have a formal contract?

Yes (1)

No (2)

NR (3)

Answer if "Yes" is selected for Q14:

17. In this previous job, were you part of a union?

Yes (1)

No (2)

NR (3)

18. What is the highest level of education that you completed?

Did not complete elementary school (1)

Elementary school (2)

High school (4)

University (5)

NR (6)

19. Do you think the government cares about improving the situation of street vendors?

Yes (1)

No (2)

NR (3)

20. What are the two most important things that the city did for street vendors in the past year?

(1)

(2)

3. NR, cannot think of anything (3)

4. Nothing (4)

21. Can you tell me if you are affiliated with any of the following groups?

Yes (1) No (2) NR (3)

Neighborhood association

Club or sports association

Church

NGO

Other

22. Are you affiliated with any street vendor association or union?

Yes (1)

No (2)

NR (3)

Answer if "Yes" is selected for Q22:

23. In what year did you enter this association or union?

24. Have you ever held a leadership position in any organization?

Yes (1)

No (2)

NR (3)

25. In the last twelve months, did you participate in any demonstration or public protest?

Yes (1)

No (2)

NR (3)

26. In the last twelve months, did you request help or send a request to any politician, official or city government?*

Yes (1)

No (2)

NR (3)

27. In the last twelve months did you participate in any meeting or public hearing with the city or with some politician?

Yes (1)

No (2)

NR (3)

28. Finally, to get an idea of the economic status of street vendors in general, could you tell me if you have/own any of the following items?

Yes (1) No (2) NR (3)

1. Cellphone
2. T.V.
3. More than one bathroom at home
4. Personal computer
5. Internet at home
6. Car
7. House

29. We have reached the end of the survey. Thank you for your participation. You can finish the survey now, or answer one last question. [If the subject agrees] If we were to write a letter to the city council about the problems that street vendors face, what demands or suggestions would you like us to put in the letter?

30. Enumerator*

1 (1)

2 (2)

31. Gender*

Woman (1)

Man (2)

Other (3)

32. Age (NR: estimated 20, 40, 60)*

Less Than 20 (1)

Between 21 and 30 (2)

Between 31 and 40 (3)

Between 41 and 50 (4)

Between 51 and 60 (5)

Over 60 (6)

NR (7)

33. Race/ethnicity*

White (1)

Afro-Brazilian (2)

Mestiço (3)

Indigenous (4)

Asian (5)

Other (6)

34. Nationality*

Brazilian (1)

South American (not Brazilian) (2)

African (not Brazilian) (3)

Other (4)

35. Any visible physical disability?*

Yes (1)

No (2)

36. Merchandise sold at the stall: *

Fresh / homemade food (1)

Packaged Food (2)

Cigarettes / drinks (3)

Electronic and accessories (4)

Clothing (including bags) (5)

Clothing accessories (including shoes, watches, jewelry, belts, wallets) (6)

Tools (7)

Toys / gadgets (8)

Other (9)

Brazil / World Cup-branded items (10)

C.3.1 Original Survey in Portuguese

Oi. Meu nome é X. Sou [name and university]. Junto a um colega, estamos fazendo uma pesquisa sobre o que aconteceu com os ambulantes durante a Copa. Demora 5 minutos. A pesquisa é totalmente anônima. Não pedimos seu nome nem nenhuma informação sobre sua identidade. Somos pesquisadores independentes. Não trabalhamos para nenhuma ONG, órgão do governo, sindicato ou associação. Todas as perguntas são voluntárias. Você pode interromper a entrevista em qualquer momento. Também pode não responder qualquer pergunta que não quiser responder. Nosso objetivo é avaliar os problemas que os ambulantes tiveram durante a Copa. Aceitaria participar? Obrigado/a

1. O/a senhor/a trabalhou como ambulante durante a Copa?

Sim (1)

Não (2)

NR (3)

Answer If O/a senhor/a trabalhou como ambulante durante a Copa? Não Is Selected 2. Por que não trabalhou como ambulante durante a Copa? (Não leia as opções) Tinha muita fiscalização (1)

Tomou férias (2)

Outro (3)

NR (4)

Answer If O/a senhor/a trabalhou como ambulante durante a Copa? Não Is Se-

lected

3. Como fez o/a senhor/a para pagar as contas durante a Copa?

Poupança (1)

Ajuda de familiares (2)

Outro serviço/Qual (3)

Outro (4)

NR (5)

If Poupança Is Displayed, Then Skip To Durante a Copa, o/a senhor/a acredita

4. Durante o mes da Copa, o/a senhor/a vendeu mercadoria da Copa?

Sim (1)

Não (2)

NR (3)

5. Durante o mes da Copa, o/a senhor/a ganhou:

Mais dinheiro (1)

Menos dinheiro (2)

Ou igual que antes da Copa (3)

NR (4)

Answer If Durante o mes da Copa, o/a senhor/a ganhou: Mais dinheiro Is Selected

6. Quanto aumentou sua renda durante a Copa? (If not understood: Quanto dinheiro a mais ganhou durante a Copa?)

10% (1)

um quarto (2)

a metade (3)

mais da metade (4)

NR (5)

Answer If Durante o mes da Copa, o/a senhor/a ganhou: Menos dinheiro Is Selected

7. Quanto diminuiu sua renda durante a Copa? (If not understood: Quanto dinheiro a menos ganhou durante a Copa?)

10% (1)

um quarto (2)

a metade (3)

mais da metade (4)

NR (5)

8. Durante a Copa, o/a senhor/a acredita que a repressão contra os ambulantes:

Aumentou (1)

Diminuiu (2)

Ou ficou igual? (3)

NR (4)

9. Alguma vez na sua vida, algum policial aprendeu sua mercadoria? (If asked for clarification: autoridade)

Sim (1)

Não (2)

NR (3)

10. Quando foi a ultima vez que isso aconteceu?

11. O/a senhor/a ja recebeu alguma multa por trabalhar como ambulante ou pagou alguma taxa para recuperar mercadoria?

Sim (1)

Não (2)

NR (3)

12. Quando foi a ultima vez que isso aconteceu?

13. Quantos anos faz que o/a senhor/a trabalha como ambulante?

14. Antes de ser ambulante, o/a senhor/a teve outro trabalho?

Sim/Qual (1)

Não (2)

NR (3)

If Sim/Qual Is Not Selected, Then Skip To Qual foi o Último ciclo de ensino que

15. Nesse emprego anterior, o/a senhor/a tinha carteira assinada?

Sim (1)

Não (2)

NR (3)

16. Nesse emprego anterior, o/a senhor/a era sindicalizado?

Sim (1)

Não (2)

NR (3)

17. Qual foi o último ciclo de ensino que o/a senhor/a completou?

Básico incompleto (1)

Básico (2)

Médio (4)

Universitário (5)

NR (6)

18. O/a senhor/a acredita que o governo se preocupa em melhorar a situação dos ambulantes?

Sim (1)

Não (2)

NR (3)

19. Quais são as duas coisas mais importantes que a prefeitura fez pelos ambulantes no último ano?

1. (1)

2. (2)

Se mais de 5 segundos 5s, NR otherwise (3)

Nada "n" (4)

20. O/a senhor/a pode me dizer se esta afiliado com algum dos seguintes grupos?

Sim (1) Não (2) NR (3)

Associação de moradores (1)

Clube ou associação desportivo (2)

Igreja (3)

ONG (4)

Outro (5)

21. O/a senhor/a esta afiliado a alguma associação ou sindicato de ambulantes?

Sim (1)

Não (2)

NR (3)

Answer If O/a senhor/a esta afiliado a alguma associação ou sindicato de ambulantes? Sim Is Selected

22. Em que ano o/a senhor/a entrou nessa associação/sindicato?

23. O/a senhor/a já ocupou uma posição de liderança em alguma organização?

Sim (1)

Não (2)

NR (3)

24. Nos últimos doze meses, o/a senhor/a participou de alguma manifestação ou protesto público?

Sim (1)

Não (2)

NR (3)

25. Nos últimos doze meses, o/a senhor/a solicitou ajuda ou enviou um pedido a algum político, funcionário ou órgão da Prefeitura?

Sim (1)

Não (2)

NR (3)

26. Nos últimos doze meses o/a senhor/a participou de alguma reunião ou audiência pública com a prefeitura ou com algum político?

Sim (1)

Não (2)

NR (3)

27. Finalmente, para ter uma ideia da situação econômica dos ambulantes em geral, o/a senhor/a poderia me dizer se o/a senhor/a possui algum dos seguintes itens?

Sim (1) Não (2) NR (3)

Celular (1)

Televisão (2)

Mais que um banheiro (3)

Computador (4)

Internet em casa (5)

Carro (6)

Casa própria (7)

28. Chegamos ao final da pesquisa. Obrigado por sua participação. O/a senhor/a pode terminar a pesquisa agora, ou responder a uma última pergunta. [If the subject agrees] Se a gente for escrever uma carta para a prefeitura sobre os problemas que os ambulantes enfrentam, quais são as demandas ou sugestões que o/a senhor/a gostaria de colocar?

29. Enumerator

1 (1)

2 (2)

30. Genero

Mulher (1)

Homem (2)

31. Que idade o/a senhor/a tem? (NR: estima 20, 40, 60)

menos de 20 (1)

entre 21 e 30 (2)

entre 31 e 40 (3)

entre 41 e 50 (4)

entre 51 e 60 (5)

mais de 60 (6)

NR (7)

32. Cor/étnia

Branco (1)

Afro-Brasileiro (2)

Mestiço (3)

Indigena (4)

Asiatico (5)

Outro (6)

33. Nacionalidade

Brasileiro (1)

Sudamericano não brasileiro (2)

Africano não brasileiro (3)

Outro (4)

34. O ambulante tem uma deficiência física visível?

Sim (1)

Não (2)

35. Mercadoria

Fresh/homemade food (1)

Packaged food (2)

Cigarettes/drinks (3)

Electronics/accessories (4)

Clothing (including bags) (5)

Clothing accessories (including shoes, watches, jewelry, belts, wallets) (6)

Tools (7)

Toys/gadgets (8)

Other (9)

Brazil/World Cup-branded items (10)

Appendix D

Appendix to Chapter 5

The Appendix includes supplemental coding, descriptive, and procedural information for the data and analyses presented in the main text. It also includes robustness checks for the regressions

D.1 Robustness and Coding for Quantitative Analyses

D.1.1 Data

The data comes from the 44,184 respondents that responded as self-employed to the "ocup1a" question in the merged dataset publicly available from LAPOP. Note that as of May 2016, the merged LAPOP data did not include data for all years from Bolivia, Argentina, Chile and Venezuela; I merged those into the LAPOP file to make a full dataset. For the state capacity measure, I used the publicly available OECD tax percentage data for Latin America and per capita indicator data from the World Bank's World Development Indicators.

D.1.2 Coding

I recoded ordinal participation variables cp6, cp7, cp8, cp9, cp10—attended once in the last 12 months, attended once a month, attended once a week, didn't attend—into binary participant (1 for attended at all) or nonparticipant (0) variables. Binary variables are denoted with a "b" in the dataset—e.g., cp9b. I recoded interest in politics, poll1, from a four category binary variable into expressed any interest (1) or not (0). All other LAPOP variables follow LAPOP coding.

For the tax measures, the OECD has data on the percentage of overall tax revenue and social security contributions as a percentage of GDP. I used World Bank population and GDP data to get overall revenue and contributions in constant dollars and then divide by population to get a yearly per capita measure. I also included a World Bank GDP per capita measure as a robustness check, which I did not modify.

D.1.3 Country and Year Estimates

The coefficients below are from the full controls model reported in Table 3 in the main text. For year, 2006 is the reference category, while Mexico is the reference category for country; these are the LAPOP reference categories, not mine.

D.1.4 Robustness Checks

In this section, I report several alternative models, including specifications with two alternative measures for state capacity, GDP per capita and social security contributions per capita, as well as ethnicity controls and mixed effects models with random

Table D.1: Year and country fixed effects on professional association participation.

	Fixed Effects Logit (Full Controls)
2007	-.13
2008	.15*
2009	.28
2010	.17*
2012	.02
2014	.09
Guatemala	-.85*
El Salvador	-.42*
Honduras	-.41*
Nicaragua	-.17
Costa Rica	-.09
Panama	-.46*
Colombia	-.21
Ecuador	-.06
Bolivia	.17
Peru	.35*
Paraguay	-.76*
Chile	.25
Uruguay	.41*
Brazil	.53*
Venezuela	-.65*
Argentina	.08
Dominican Republic	-.14
	N = 26,304

All tests are two-tailed.

* $p \leq .05$

Table D.2: Individual and state-level effects on professional association participation, with ethnicity in the specification.

	Fixed Effects Logit (Full Controls)
Tax revenue per capita	-.0003*
Education	.06*
Female	-.38*
Age	.01*
Rural	.46*
Political Interest	.21*
Children	.01
Religious Meeting	.36*
School Meeting	.30*
Community Meeting	.98*
Political Meeting	.75*
Non-voter	-.01
TV	-.09
Fridge	-.12*
Landline	.01
Vehicles	.29*

N = 24,906

Ethnicity, year and country fixed effects suppressed.

All tests are two-tailed.

* $p \leq .05$

effects for countries. The estimates are generally consistent across specifications and estimators and for the most part stay significant. Tax revenue per capita is insignificant in one model; all other results discussed in the main text stay significant and do not change direction in any of the robustness checks.

The following tables report the full control fixed effects model in the main text but with LAPOP's ethnicity variable added. The first table reports all other variable coefficients while the second table reports the ethnicity categories.

The following table presents the coefficients for the ethnicity categories when

Table D.3: Coefficients on ethnicity categories.

	Fixed Effects Logit (Full Controls)
Mestizo	.01
Indigenous	.29***
Black	-.15
Mulatto	.31**
Other	.16
Oriental	-.11
Yellow	-.81
Moreno	-.39
Indo-Guyanese	.44**
Chinese	-.11
Portuguese	-.11

N = 26,273
 All other variables suppressed.
 All tests are two-tailed.
 * $p \leq .05$ ** $p \leq .01$ *** $p \leq .001$

LAPOP's ethnicity variable ("etid") is included in the full control fixed effects model. The etid variable is a 27-category one; however, most of those categories have fewer than 100 people (9 have less than 10) and the logistic analysis ends up dropping most of those categories due to missing data. White is the omitted reference category; again, this is LAPOP's designated reference, not mine. All category names are as listed in LAPOP's codebook. Please note that LAPOP uses the most prevalent term in a given country, even if it is perceived as offensive in another.

The following tables report the two specifications presented in the main text but with random effects for countries instead of fixed effects.

The following section presents results with the data subset on different variables. First, results appear stronger for rural populations than urban populations.

Table D.4: Individual and state-level effects on professional association participation.

	Mixed Effects Logit	Mixed Effects Logit (Full Controls)
Tax revenue per capita	-.22*	-.07
Education	.13*	.25*
Female		-.38*
Age		.07*
Rural		.47*
Political Interest		.21*
Children		.01
Religious Meeting		.36*
School Meeting		.31*
Community Meeting		.98*
Political Meeting		.75*
Non-voter		-.02
TV		-.12
Fridge		-.14*
Landline		-.01
Vehicles		.30*

N = 26,304

Year fixed effects and country random effects suppressed.

All tests are two-tailed.

* $p \leq .05$

Table D.5: Intercepts for countries from the mixed effects model with full controls

Country Intercepts	
Mexico	.07
Guatemala	-.54
El Salvador	-.16
Honduras	-.13
Nicaragua	.11
Costa Rica	.01
Panama	-.30
Colombia	-.04
Ecuador	.15
Bolivia	.43
Peru	.53
Paraguay	-.48
Chile	.18
Uruguay	.29
Brazil	.34
Venezuela	-.50
Argentina	-.03
Dominican Republic	.09

Second, results are stronger for men than for women. Finally, results are robust to excluding Bolivia and Brazil separately or together. I suspect that a large part of the mixed results comes from reducing the sample.

Table D.6: Individual and state-level effects on professional association participation in rural Latin America, 2006-2014

	Fixed Effects Logit	Fixed Effects Logit (Full Controls)
Education	.02* (.01)	.02* (.01)
Tax revenue per capita	-.0001 (.00)	-.0001* (.00)
Female		-.47* (.06)
Age		.01 (.00)
Political Interest		.19* (.06)
Children		.01 (.01)
Religious Meeting		.41* (.05)
School Meeting		.24* (.05)
Community Meeting		1.13* (.05)
Political Meeting		.64* (.06)
Non-voter		.01 (.05)
TV		.02 (.07)
Fridge		-.16* (.06)
Landline		-.02 (.07)
Vehicles		.28* (.05)
	N = 11,014	N = 10,273

Year and country fixed effects suppressed; reported in appendix.

Standard errors in parentheses below coefficients. All tests are two-tailed.

* $p \leq .05$

Table D.7: Individual and state-level effects on professional association participation in urban Latin America, 2006-2014

	Fixed Effects Logit	Fixed Effects Logit (Full Controls)
Education	.08* (.01)	.08* (.01)
Tax revenue per capita	-.0001 (.00)	-.0001 (.00)
Female		-.31* (.05)
Age		.01 (.00)
Political Interest		.23* (.05)
Children		.01 (.01)
Religious Meeting		.32* (.05)
School Meeting		.34* (.05)
Community Meeting		.88* (.05)
Political Meeting		.88* (.06)
Non-voter		.04 (.07)
TV		.39* (.13)
Fridge		-.10 (.07)
Landline		-.01 (.05)
Vehicles		.32* (.04)
	N = 16,570	N = 16,031

Year and country fixed effects suppressed; reported in appendix.

Standard errors in parentheses below coefficients. All tests are two-tailed.

* $p \leq .05$

Table D.8: Individual and state-level effects on male professional association participation in Latin America, 2006-2014

	Fixed Effects Logit	Fixed Effects Logit (Full Controls)
Education	.02* (.00)	.05* (.00)
Tax revenue per capita	-.0001* (.00)	-.0001* (.00)
Age		.01* (.00)
Rural		.49* (.05)
Political Interest		.21* (.04)
Children		.01 (.01)
Religious Meeting		.33* (.04)
School Meeting		.33* (.04)
Community Meeting		1.01* (.04)
Political Meeting		.70* (.05)
Non-voter		-.05 (.05)
TV		-.16* (.06)
Fridge		-.10 (.05)
Landline		-.03 (.05)
Vehicles		.30* (.03)
	N = 19,080	N = 17,809

Year and country fixed effects suppressed; reported in appendix.

Standard errors in parentheses below coefficients. All tests are two-tailed.

* $p \leq .05$

Table D.9: Individual and state-level effects on female professional association participation in Latin America, 2006-2014

	Fixed Effects Logit	Fixed Effects Logit (Full Controls)
Education	.01* (.00)	.01* (.00)
Tax revenue per capita	-.00 (.00)	-.00 (.00)
Age		.00 (.00)
Rural		.04* (.01)
Political Interest		.02* (.01)
Children		.01 (.01)
Religious Meeting		.04* (.01)
School Meeting		.03* (.01)
Community Meeting		.09* (.01)
Political Meeting		.09* (.01)
Non-voter		-.26 (.05)
TV		.01 (.01)
Fridge		-.02* (.01)
Landline		-.01 (.03)
Vehicles		.03* (.01)
	N = 9,104	N = 8,495

Year and country fixed effects suppressed; reported in appendix.

Standard errors in parentheses below coefficients. All tests are two-tailed.

* $p \leq .05$

Table D.10: Individual and state-level effects on professional association participation in Latin America excluding Bolivia, 2006-2014

	Fixed Effects Logit	Fixed Effects Logit (Full Controls)
Education	.03* (.00)	.06* (.00)
Tax revenue per capita	-.0001* (.00)	-.0002* (.00)
Female		-.46* (.04)
Age		.01* (.00)
Rural		.51* (.04)
Political Interest		.23* (.04)
Children		.01 (.01)
Religious Meeting		.38* (.04)
School Meeting		.28* (.04)
Community Meeting		.99* (.04)
Political Meeting		.75* (.04)
Non-voter		-.01 (.05)
TV		-.21* (.06)
Fridge		-.13* (.05)
Landline		.01 (.04)
Vehicles		.31* (.03)
	N = 24,884	N = 23,196

Year and country fixed effects suppressed; reported in appendix.

Standard errors in parentheses below coefficients. All tests are two-tailed.

* $p \leq .05$

Table D.11: Individual and state-level effects on professional association participation in Latin America excluding Brazil, 2006-2014

	Fixed Effects Logit	Fixed Effects Logit (Full Controls)
Education	.03* (.00)	.06* (.00)
Tax revenue per capita	-.0002* (.00)	-.0002* (.00)
Female		-.36* (.04)
Age		.01* (.00)
Rural		.42* (.04)
Political Interest		.21* (.04)
Children		.01 (.01)
Religious Meeting		.35* (.04)
School Meeting		.28* (.04)
Community Meeting		.99* (.04)
Political Meeting		.75* (.04)
Non-voter		-.02 (.05)
TV		-.13* (.06)
Fridge		-.14* (.05)
Landline		-.01 (.04)
Vehicles		.33* (.04)
	N = 26,976	N = 25,171

Year and country fixed effects suppressed; reported in appendix.

Standard errors in parentheses below coefficients. All tests are two-tailed.

* $p \leq .05$

Appendix E

Bibliography

Rina Agarwala. *Informal Labor, Formal Politics, and Dignified Discontent in India*. Cambridge University Press, 2013.

Xavier Albó. *Movimientos y poder indígena en Bolivia, Ecuador y Perú*, volume 71. Cipca, 2008.

Matthew Amengual. Pollution in the garden of the argentine republic: Building state capacity to escape from chaotic regulation. *Politics & Society*, 41(4):527–560, 2013.

Peter Andreas. *Smuggler Nation: How illicit trade made America*. Oxford University Press, 2013.

Lucía Aramayo Cañedo. Transformations and tensions: the new lanza market in la paz. *Tinkazos*, 18(38):53–69, 2015.

Juan M Arbona and Benjamin Kohl. La paz–el alto. *Cities*, 21(3):255–265, 2004.

Javier Auyero. *Poor People’s Politics: Peronist Survival Networks and the Legacy of Evita*. Duke University Press, 2001.

- Javier Auyero. *Patients of the State: The Politics of Waiting in Argentina*. Duke University Press, 2012.
- Robert Axelrod. *The Evolution of Cooperation*. Basic Books, 1984.
- Al Baker, J David Goodman, and Benjamin Mueller. Beyond the chokehold: The path to eric garner's death. *The New York Times*, June 2015.
- Rossana Barragán. Maestras mayores en los mercados de la ciudad de la paz: espacios organizativos y constitución de territorialidades. *Mujeres y sociedad en la historia de América Latina, siglos XVIII-XXI*, 2005.
- Curtis Bell and Scott Wolford. Oil discoveries, shifting power, and civil conflict. *International Studies Quarterly*, 59(3):517–530, 2015.
- Timothy Besley and Maitreesh Ghatak. Government versus private ownership of public goods. *The Quarterly Journal of Economics*, 116(4):1343–1372, 2001.
- Timothy Besley and Torsten Persson. State capacity, conflict, and development. *Econometrica*, 78(1):1–34, 2010.
- Sharit Bhowmik. *Street Vendors in the Global Urban Economy*. Taylor & Francis, 2012.
- Merike Blofield. *Care Work and Class: Domestic Workers' Struggle for Equal Rights in Latin America*. Penn State Press, 2012.
- Cristina Bodea and Adrienne LeBas. The origins of voluntary compliance: attitudes toward taxation in urban nigeria. *British Journal of Political Science*, 46(01):215–238, 2016.

- Carew E Boulding and Clark C Gibson. Supporters or challengers? the effects of nongovernmental organizations on local politics in bolivia. *Comparative Political Studies*, 42(4):479–500, 2009.
- Henry E Brady, Sidney Verba, and Kay Lehman Schlozman. Beyond ses: A resource model of political participation. *American Political Science Review*, 89(02):271–294, 1995.
- Hailey Branson-Potts. L.a. city council votes unanimously to decriminalize street vending. *The Los Angeles Times*, February 2017.
- Leo Breiman. Random forests. *Machine learning*, 45(1):5–32, 2001a.
- Leo Breiman. Statistical modeling: The two cultures (with comments and a rejoinder by the author). *Statistical Science*, 16(3):199–231, 2001b.
- Miriam Bruhn and David McKenzie. Entry regulation and the formalization of microenterprises in developing countries. *The World Bank Research Observer*, 29(2):186–201, 2014.
- Manuel Castells and Alejandro Portes. The world underneath: The origins, dynamics, and effects of the informal economy. *The Informal Economy: Studies in Advanced and Less Developed Countries*, 1989.
- Kevin A Clarke and David M Primo. *A Model Discipline: Political Science and the Logic of Representations*. Oxford University Press, 2012.
- Jose Luis Columba. Se abre una pugna entre 2 sectores de gremiales alteños. *La Razón*, April 2015.

- Randol Contreras. *The Stickup Kids: Race, Drugs, Violence, and the American Dream*. University of California Press, 2012.
- Maria Lorena Cook. *Labor*, pages 262–271. Routledge, 2012.
- Michael Cooper. Officers in bronx fire 41 shots, and an unarmed man is killed. *The New York Times*, 5, Feb 1999.
- John Christopher Cross. *Informal Politics: Street Vendors and the State in Mexico City*. Stanford University Press, 1998.
- Jacinto Cuvi. The politics of field destruction and the survival of são paulo’s street vendors. *Social Problems*, 63(3):395–412, 2016.
- Benjamin Dangl. *The price of fire: resource wars and social movements in Bolivia*. AK Press, 2007.
- Christian Davenport. State repression and political order. *Annual Review of Political Science*, 10(1):1–23, 2007.
- Estado Plurinacional de Bolivia. El gobierno acuerda con los gremiales la modificación de límites del régimen tributario simplificado, 2013. URL http://www.economiayfinanzas.gob.bo/index.php?opcion=com_prensa&ver=prensa&id=2995&categoria=5&seccion=306.
- Gobierno Autonomo Municipal de La Paz. Comerciantes en vías públicas, 2015.
- Hernando de Soto. *The Other Path: The Invisible Revolution in the Third World*. Harper & Row, 1989.

- Donatella Della Porta and Mario Diani. *Social Movements: An Introduction*. John Wiley & Sons, 2009.
- Jorge Derpic and Alex Ayala Ugarte. Bolivia: Los linchados de el alto. *Revista Anfibia*, 2013.
- Matthew Desmond. Eviction and the reproduction of urban poverty. *American Journal of Sociology*, 118(1):88–133, 2012.
- Matthew Desmond. *Evicted: Poverty and Profit in the American City*. Crown, 2016.
- Ineke Dibbits, Elizabeth Peredo Beltrán, and Ruth Volgger. *Polleras Libertarias: Federación Obrera Femenina, 1927–1964*, volume 9. Taller de Historia y Participación de la Mujer, 1986.
- DOJ. *Investigation of the Ferguson Police Department*. United States Department of Justice, 2015.
- Mitchell Duneier and Ovie Carter. *Sidewalk*. Macmillan, 1999.
- Jennifer Earl, Andrew Martin, John D McCarthy, and Sarah A Soule. The use of newspaper data in the study of collective action. *Annual Review of Sociology*, pages 65–80, 2004.
- Erika Summers Effler. *Laughing Saints and Righteous Heroes: Emotional Rhythms in Social Movement Groups*. University of Chicago Press, 2010.
- Julia Elyachar. *Markets of dispossession: NGOs, economic development, and the state in Cairo*. Duke University Press, 2005.

Linda C Farthing and Benjamin H Kohl. *Evo's Bolivia: Continuity and change*. University of Texas Press, 2014.

Richard Fausset, Richard Pérez-Peña, and Campbell Robertson. Alton sterling shooting in baton rouge prompts justice dept. investigation. *The New York Times*, July 2016.

Patricia Fernández-Kelly and Jon Shefner. *Out of the Shadows: Political Action and the Informal Economy in Latin America*. Penn State Press, 2006.

Norbert M Fiess, Marco Fugazza, and William F Maloney. Informal self-employment and macroeconomic fluctuations. *Journal of Development Economics*, 91(2):211–226, 2010.

Elisabeth Fischer and Matin Qaim. Linking smallholders to markets: determinants and impacts of farmer collective action in Kenya. *World Development*, 40(6):1255–1268, 2012.

Patrick Flavin and Michael T Hartney. When government subsidizes its own: Collective bargaining laws as agents of political mobilization. *American Journal of Political Science*, 59(4):896–911, 2015.

Gaspar Garcia Center for Human Rights. *Street Vendors and the Right to the City*. Gaspar Garcia Center for Human Rights, 2014.

Clifford Geertz. *The Interpretation of Cultures: Selected Essays*. Basic Books, 1973.

Rede Globo. Vídeo mostra pm atirando contra cabeça de ambulante em sp. *G1*, 09 September 2014. URL <http://g1.globo.com/sao-paulo/noticia/2014/09/video-mostra-pm-atirando-contra-cabeca-de-ambulante-em-sp.html>.

- Alice Goffman. *On the Run: Fugitive Life in an American City*. University of Chicago Press, 2015.
- Daniel M Goldstein. Flexible justice neoliberal violence and "self-help" security in bolivia. *Critique of Anthropology*, 25(4):389–411, 2005.
- Daniel M Goldstein. *Owners of the Sidewalk: Security and Survival in the Informal City*. Duke University Press, 2016.
- Tom Goodfellow. Taming the "rogue" sector: Studying state effectiveness in africa through informal transport politics. *Comparative Politics*, 47(2):127–147, 2015.
- Jeff Goodwin. *No Other Way Out: State and Revolutionary Movements, 1945-1991*. Cambridge University Press, Cambridge, 2001.
- Teresa Gowan. *Hobos, Hustlers, and Backsliders: Homeless in San Francisco*. University of Minnesota Press, 2010.
- Merilee S Grindle. Divergent cultures? when public organizations perform well in developing countries. *World Development*, 25(4):481–495, 1997.
- Guy Grossman and Delia Baldassarri. The impact of elections on cooperation: Evidence from a lab-in-the-field experiment in uganda. *American Journal of Political Science*, 56(4):964–985, 2012.
- Shelby Grossman. The politics of order in informal markets: Evidence from lagos. *working paper*, 2017.
- Basudeb Guha-Khasnobis, Ravi Kanbur, and Elinor Ostrom. *Linking the Formal and Informal Economy: Concepts and Policies*. Oxford University Press, 2007.

- Ted Robert Gurr. *Why Men Rebel*. Princeton University Press, Princeton, 1970.
- Russell Hardin. *Collective Action*. John Hopkins University Press, 1982.
- Keith Hart. Informal income opportunities and urban employment in Ghana. *The Journal of Modern African Studies*, 11(01):61–89, 1973.
- Cullen S Hendrix. Measuring state capacity: Theoretical and empirical implications for the study of civil conflict. *Journal of Peace Research*, 47(3):273–285, 2010.
- Joseph Patrick Henrich. *Foundations of Human Sociality: Economic experiments and ethnographic evidence from fifteen small-scale societies*. Oxford University Press on Demand, 2004.
- Katheryn Hochstetler. *Social Movements in Latin America*, pages 237–246. Routledge, 2012.
- Alisha Holland. *Forbearance as Redistribution: Enforcement Politics in Urban Latin America*. PhD thesis, Harvard University, 2014.
- Alisha Holland. The distributive politics of enforcement. *American Journal of Political Science*, 59(2):357–371, 2015.
- Alisha Holland. Forbearance. *American Political Science Review*, 2016.
- Alisha C Holland and Brian Palmer-Rubin. Beyond the machine: clientelist brokers and interest organizations in Latin America. *Comparative Political Studies*, 48(9): 1186–1223, 2015.
- James Holston. *Insurgent citizenship: Disjunctions of democracy and modernity in Brazil*. Princeton University Press, 2008.

- Pierrette Hondagneu-Sotelo. *Domestica: Immigrant Workers Cleaning and Caring in the Shadows of Affluence*. University of California Press, 2001.
- Calla Hummel. Vendedores populares y políticas de representación de género. *Umbrales*, 29:331–359, 2016.
- Samuel P Huntington. *Political order in changing societies*. Yale University Press, 1968.
- Ralf Hussmanns. Defining and measuring informal employment. *Bureau of Statistics Paper, ILO, Geneva, February* (<http://www.ilo.org/public/english/bureau/stat/download/papers/meas.pdf>), 2004.
- Luciana Itikawa. Vulnerabilidades do trabalho informal de rua. *São Paulo em Perspectiva*, 20(1):136–147, 2006.
- Luciana Itikawa. *Trabalho Informal nos Espaços Públicos no Centro de São Paulo*. PhD thesis, Universidade de São Paulo, 2010.
- Torben Iversen and David Soskice. Distribution and redistribution: The shadow of the nineteenth century. *World Politics*, 61(03):438–486, 2009.
- Nathan M Jensen and Aminur Rahman. *The silence of corruption: Identifying underreporting of business corruption through randomized response techniques*, pages 154–170. Routledge, 2015.
- Nathan M Jensen, Quan Li, and Aminur Rahman. Understanding corruption and firm responses in cross-national firm-level surveys. *Journal of International Business Studies*, 41(9):1481–1504, 2010.

- Colin Jerolmack and Shamus Khan. Talk is cheap: Ethnography and the attitudinal fallacy. *Sociological Methods & Research*, pages 1–32, 2014.
- Sebastian Karcher and Ben Ross Schneider. *Business Politics in Latin America*, pages 273–283. Routledge, 2012.
- Jack Katz. Ethnography’s warrants. *Sociological Methods & Research*, 25(4):391–423, 1997.
- Desmond King and David Rueda. Cheap labor: The new politics of bread and roses in industrial democracies. *Perspectives on Politics*, 6(02):279–297, 2008.
- Herbert P Kitschelt. Political opportunity structures and political protest: Anti-nuclear movements in four democracies. *British Journal of Political Science*, 16(01):57–85, 1986.
- Robert E Klitgaard, Ronald MacLean Abaroa, and H Lindsey Parris. *Corrupt cities: a practical guide to cure and prevention*. World Bank Publications, 2000.
- Benjamin Kohl and Linda C Farthing. *Impasse in Bolivia: Neoliberal hegemony and popular resistance*. Zed Books, 2006.
- Marcus J Kurtz. The dilemmas of democracy in the open economy: Lessons from latin america. *World Politics*, 56(02):262–302, 2004.
- Sian Lazar. *El Alto, Rebel City: Self and Citizenship in Andean Bolivia*. Duke University Press, 2007a.
- Sian Lazar. ‘in-betweenness?’ on the margins: Collective organisation, ethnicity and political agency among bolivian street traders. *Livelihoods at the margins: Surviving the city*, pages 237–56, 2007b.

- Lehm Ardaya Lehm, Silvia Rivera Cusicanqui, and Victor Hugo Ricaldi. *Los Artesanos Libertarios y la Ética del Trabajo*. Ediciones del THOA, 1988.
- Steven Levitsky and Lucan A Way. *Competitive authoritarianism: Hybrid regimes after the Cold War*. Cambridge University Press, 2010.
- Johannes Lindvall and David Rueda. The insider-outsider dilemma. *British Journal of Political Science*, 44(02):460–475, 2014.
- Steven Henry Lopez. Efficiency and the fix revisited: Informal relations and mock routinization in a nonprofit nursing home. *Qualitative Sociology*, 30(3):225–247, 2007.
- A MacCarthy and M Zald. The trend of social movements in america, 1973.
- Janet MacGaffey and Rémy Bazenguissa-Ganga. *Congo-Paris: Transnational Traders on the Margins of the Law*. Indiana University Press, 2000.
- Raúl Madrid. *The Rise of Ethnic Politics in Latin America*. Cambridge University Press, 2012.
- Edmund Malesky. Participation in regulatory drafting and downstream compliance, 2015.
- Gerald Marwell and Pamela Oliver. *The Critical Mass in Collective Action*. Cambridge University Press, 1993.
- Doug McAdam. *Political Process and the Development of Black Insurgency, 1930-1970*. University of Chicago Press, 1982.

- Doug McAdam, Sidney Tarrow, and Charles Tilly. Dynamics of contention. *Social Movement Studies*, 2(1):99–102, 2003.
- John D McCarthy and Mayer N Zald. Resource mobilization and social movements. *Social Movements in an Organizational Society*, Transaction Books, New Brunswick, New Jersey, pages 15–47, 1987.
- Ruth Meinzen-Dick, K Vengamma Raju, and Ashok Gulati. What affects organization and collective action for managing resources? evidence from canal irrigation systems in India. *World Development*, 30(4):649–666, 2002.
- David S Meyer and Sidney G Tarrow. *The social movement society: Contentious politics for a new century*. Rowman & Littlefield, 1998.
- Joel S Migdal. *Strong societies and weak states: state-society relations and state capabilities in the Third World*. Princeton University Press, 1988.
- David Muchlinski, David Siroky, Jingrui He, and Matthew Kocher. Comparing random forest with logistic regression for predicting class-imbalanced civil war onset data. *Political Analysis*, 24(1):87–103, 2016.
- Paula Muñoz. An informational theory of campaign clientelism: The case of peru. *Comparative Politics*, 47(1):79–98, 2014.
- Maria Victoria Murillo. *Labor unions, partisan coalitions, and market reforms in Latin America*. Cambridge University Press, 2001.
- Robin Thomas Naylor. *Wages of crime: Black markets, illegal finance, and the underworld economy*. Cornell University Press, 2004.

- Robert Neuwirth. *Stealth of Nations: The global rise of the informal economy*. Anchor, 2012.
- Carolyn Nordstrom. *Global Outlaws: Crime, Money, and Power in the Contemporary World*. University of California Press, 2007.
- Pamela Oliver. Rewards and punishments as selective incentives for collective action: Theoretical investigations. *American Journal of Sociology*, pages 1356–1375, 1980.
- Benjamin A Olken. Corruption perceptions versus corruption reality. *Journal of Public Economics*, 93(7):950–964, 2009.
- Benjamin A Olken. Direct democracy and local public goods: Evidence from a field experiment in indonesia. *American Political Science Review*, 104(02):243–267, 2010.
- Benjamin A Olken and Rohini Pande. Corruption in developing countries. *Annual Review of Economics*, 4, 2012.
- Mancur Olson. *The logic of collective action*, volume 124. Harvard University Press, 1965.
- Elinor Ostrom. *Governing the commons*. Cambridge university press, 1990.
- Elinor Ostrom. A behavioral approach to the rational choice theory of collective action: Presidential address, american political science association, 1997. *American political science review*, 92(01):1–22, 1998.
- Elinor Ostrom. Collective action theory. *The Oxford Handbook of Comparative Politics*, pages 186–208, 2007.

- Elinor Ostrom. *Understanding Institutional Diversity*. Princeton University Press, 2009.
- Elinor Ostrom. *Governing the Commons*. Cambridge University Press, 2015.
- Brian Palmer-Rubin. Interest organizations and distributive politics: Small-business subsidies in Mexico. *World Development*, 84(8):97–117, 2016.
- João Batista Pamplona. Mercado de trabalho, informalidade e comércio ambulante em São Paulo. *Revista Brasileira de Estudos de População*, pages 225–249, 2013.
- Elizabeth Peredo Beltrán. *Recuperas de los Andes: La Identidad de la Chola del Mercado*. La Paz: TAHIPAMU, 1992.
- René Pereira Morató. Para escuchar las voces de la calle: Las contradicciones entre el derecho al empleo y el derecho a la ciudad. *Tinkazos*, 11(25):49–58, 2008.
- Guillermo Perry. *Informality: Exit and Exclusion*. World Bank Publications, 2007.
- Rosana Pinheiro-Machado. *Made in China: (in)formalidades, pirataria e redes sociais na rota China-Paraguai-Brasil*. São Paulo: Anpocs, 2011.
- Latin American Public Opinion Project. *Cultura política de la democracia en Bolivia, 2014: Hacia una democracia de ciudadanos*. LAPOP and Vanderbilt University, 2014.
- Robert D Putnam. *Bowling alone: The collapse and revival of American community*. Simon and Schuster, 2001.
- Robert D Putnam, Robert Leonardi, and Raffaella Y Nanetti. *Making Democracy Work: Civic Traditions in Modern Italy*. Princeton University Press, 1994.

- Stephen Quackenbush. The rationality of rational choice theory. *International Interactions*, 30(2):87–107, 2004.
- Emily Hencken Ritter and Courtenay R Conrad. Preventing and responding to dissent: The observational challenges of explaining strategic repression. *American Political Science Review*, 110(1):85–99, 2016.
- Miguel Rivas. Desde 2014, el alto tuvo 16 intentos de linchamiento y 3 ajusticiamientos. *La Razón*, April 2016.
- Silvia Rivera Cusicanqui. *Bircholas: Trabajo de mujeres, explotación capitalista y opresión colonial entre las migrantes aymaras de La Paz y El Alto*. Editorial Mama Huaco La Paz, 2004.
- Kenneth M Roberts. Social inequalities without class cleavages in latin america—neoliberal era. *Studies in Comparative international development*, 36(4):3–33, 2002.
- Sally Christine Roeber. *Negotiating Formality: Informal Sector, Market, and State in Peru*. PhD thesis, University of California, Berkeley, 2005.
- Bruno Rojas. *Minoristas en los Procesos Democráticos*. CEDLA, 1992.
- Sady Rojas. Policías afirman que el sueldo que reciben es insuficiente. *Página Siete*, 05 July 2014.
- Lucas Ronconi. Enforcement and compliance with labor regulations in argentina. *Industrial & Labor Relations Review*, 63(4):719–736, 2010.
- David Rueda. *Social Democracy Inside Out: Partisanship and Labor Market Policy in Advanced Industrialized Democracies*. Oxford University Press, 2007.

- Robert J Sampson, Stephen W Raudenbush, and Felton Earls. Neighborhoods and violent crime: A multilevel study of collective efficacy. *Science*, 277(5328):918–924, 1997.
- Thomas C Schelling. *Micromotives and macrobehavior*. WW Norton & Company, 1978.
- Samantha Schmidt. New york city may double number of food vendor permits. *The New York Times*, Oct 2016.
- Philippe C Schmitter. Neo-corporatism and the state. In *The Political Economy of Corporatism*, pages 32–62. 1985.
- Friedrich Schneider, Andreas Buehn, and Claudio E Montenegro. New estimates for the shadow economies all over the world. *International Economic Journal*, 24(4): 443–461, 2010.
- James C Scott. Corruption, machine politics, and political change. *American political science review*, 63(04):1142–1158, 1969.
- James C Scott. *Weapons of the weak: Everyday forms of peasant resistance*. Yale University Press, 1987.
- Jason Seawright. *Party-System Collapse: The Roots of Crisis in Peru and Venezuela*. Stanford University Press, 2012.
- Jason Seawright. *Multi-method social science: Combining qualitative and quantitative tools*. Cambridge University Press, 2016.

- Jason Seawright and John Gerring. Case selection techniques in case study research: A menu of qualitative and quantitative options. *Political Research Quarterly*, 61(2):294–308, 2008.
- Curtis S Signorino. Structure and uncertainty in discrete choice models. *Political Analysis*, 11(4):316–344, 2003.
- Duncan Snidal. Coordination versus prisoners' dilemma: Implications for international cooperation and regimes. *American Political Science Review*, 79(04):923–942, 1985.
- Hernando de Soto. *The mystery of capital: Why capitalism triumphs in the West and fails everywhere else*. Basic Books, 2000.
- Wolfgang Streeck and Lane Kenworthy. *Theories and Practices of Neocorporatism*, pages 441–460. Routledge, 2005.
- Sidney Tarrow. *Power in Movement: Social Movements, Collective Action and Politics*. Cambridge University Press, 2011.
- Nico Tassi, Carmen Medeiros, Antonio Rodriguez Carmona, and Giovana Ferrufino. *"Hacer Plata sin Plata:" El Desborde de los Comerciantes Populares en Bolivia*. PIEB, 2013.
- Nico Tassi, Alfonso Hinojosa, and Richard Carnaviri. *La Economía Popular de Bolivia: Tres Miradas*. Fondo Editorial de la Vicepresidencia, 2015.
- Telesur. Meet the sex workers replacing cops in sandinista-run nicaragua. *Telesur*, March 2017.

- Charles Tilly. *From Mobilization to Revolution*. Addison-Wesley, 1978.
- Charles Tilly. *The contentious French*. Belknap Press, Cambridge, Mass., 1986. ISBN 0674166957 9780674166950 0674166965 9780674166967.
- Daniel Treisman. The causes of corruption: A cross-national study. *Journal of Public Economics*, 76(3):399–457, 2000.
- Joann Vanek, Martha Chen, Ralf Hussmanns, James Heintz, and Françoise Carré. *Women and men in the informal economy: A statistical picture*. ILO and WIEGO, 2014.
- Ashutosh Varshney. Ethnic conflict and civil society: India and beyond. *World Politics*, 53(03):362–398, 2001.
- Ryan Villareal. Bolivian police end strike with pay raise deal. *International Business Times*, 27 June 2012. Accessed: 2016-05-12.
- R. Harrison Wagner. *War and the State: The Theory of International Politics*. University of Michigan Press, 2010.
- Vesla M Weaver and Amy E Lerman. Political consequences of the carceral state. *American Political Science Review*, 104(04):817–833, 2010.
- WIEGO. Wiego organization and representation database. <http://wiego.org/wiegodatabase>, 2016. Accessed: 2016-04-12.
- David C Wilson, Costas Velis, and Chris Cheeseman. Role of informal sector recycling in waste management in developing countries. *Habitat international*, 30(4):797–808, 2006.

Karen Workman. D.c. crime bill would pay people to avoid committing crimes. *The New York Times*, February 2016.

Deborah J Yashar. *Contesting citizenship in Latin America: The rise of indigenous movements and the postliberal challenge*. Cambridge University Press, 2005.

Nieves Zúñiga and Paul Heywood. Cleaning up la paz: How bolivia's biggest city freed itself from a ubiquitous culture of corruption. *Foreign Policy*, September 2015.