THE POLITICAL ECONOMY OF PROPERTY RIGHTS DISCRIMINATION

by

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A dissertation submitted in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy
(Political Science)
in The University of Michigan
2008

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To Ernesto Javier and Lillian Belle Flores
My parents and teachers

ACKNOWLEDGEMENTS

I have been extraordinarily lucky to write this dissertation under the direction of Rob Franzese, Jim Morrow, and Bill Clark. Their counsel and example has shaped me as a researcher, and I can only hope this dissertation begins to reflect the wisdom they have imparted. Rob has been an ideal dissertation chair. He was responsible for teaching me the two subjects that comprise a large chunk of this dissertation —

political economy and statistics. He showed the utmost patience as I nearly imploded post-candidacy, ripping up my first dissertation proposal after more than a year of working on it. He carefully commented on every part of this dissertation, forcing me to think through every hidden assumption and mis-specified empirical test. After eight years of knowing Rob, I am amazed at the precision with which he thinks. Jim also played a role in my development from the very first day of graduate school. His influence has been weighty ever since, as I assisted him in his research, enrolled in his classes, and marveled at the breadth of his intellect. Though Bill didn't arrive in Ann Arbor until my fourth year, he immediately became a key advisor. As I worked for him as an RA in 2005-6, Bill became a sounding board for ideas and an excellent counselor on matters academic and personal. Bill's careful thinking on foundational questions of how political scientists should do research and why it matters have greatly affected my approach to this dissertation. Finally, I would be remiss if I did not mention Katherine Terrell, who met with me in Washington and asked a number of insightful questions during the defense. She played a larger role than most cognate members because of her expertise in firm creation.

In addition to my dissertation committee, I received helpful advice from innumerable professors while at Michigan. In job talks, classes, seminars, lunches, professional development days, and just short conversations with people in the Department's mailroom, I tried my best to be a sponge, learning from each of them. In particular, I'd like to thank Doug Lemke and John Jackson. During my first three years at Michigan, Doug provided invaluable support. He helped me write my first conference paper, supervised me as a GSI, taught a seminar on research methods that rocked my world, served on my first preliminary exam committee, and generally looked out for me. Doug also wrote several reference letters, even after he had

left Ann Arbor. He is greatly missed. John (or J^2, as we like to call him) taught me statistics and helped me develop this dissertation at many key points. He also remained an excellent source of advice on key methodological issues, not to mention being a happy hour stalwart. I will miss sitting in the rocking chair by his desk while meeting with him.

While I was doing research in Bogotá, a number of people assisted me as I intensified my research into land reforms. Absalón Machado, Mauricio Rengifo, and Elsy Marulanda made time to meet with me, giving advice on how to do research in Colombia. Dilia Lozano helped make the meeting with Rengifo possible. Ann Mason and Rob Karl provided feedback on an embryonic presentation of Chapter 5. Patricia Abbott allowed me to travel to Urabá, a region of Colombia discussed in Chapter 5 and still a focus of land issues, as part of a Fellowship of Reconciliation delegation. The trip allowed me to observe first-hand the effects of Colombia's civil war and the difficulties faced by displaced rural families, an impression I will never forget. Finally, Mauricio Velásquez was instrumental in this research. A lawyer and a budding scholar, Mauricio guided me as I slowly narrowed my focus and pursued research into land reforms in Colombia. He quickly became a co-researcher and trusted friend. Mauricio plans to enroll in graduate school in the United States and I am excited to see the contributions he will make to the study of Colombian politics.

Outside of my committee, a number of people have commented on parts of this work and improved it in the process. Meredith Jung-En Woo, John Jackson, Joel Simmons, and Kharis Templeman made valuable comments during meetings of the Comparative Research Group in the Department of Political Science at Michigan. Dan Corstange helped me build my Fulbright project statement. At a key juncture, Elizabeth Saunders forced me to re-visit the question and narrow my focus. Mary

co-authored with Irfan). Through it all, he has been a constant friend and mentor. I look forward to continuing to watch Dan, Sarah, Karen, Irfan, and Joel make their mark on our discipline, all while we e-mail each other everyday on subjects ranging from survey design to Michigan football.

My family has been a constant source of joy and support. Richard and Kristie Flores, my brother and sister-in-law, have always been supportive, though I'm pretty sure they wondered what I was still doing "in college." My brother — a music teacher and band director — has set a high standard as a teacher for over sixteen years now, so I hope his talent for teaching is genetic. My nephews, Andrew and Jonathan Flores, have made me laugh and watch in wonderment for the last several years. Their presence in this world reminds me of what really matters in life. I also was bolstered by the faith and guidance of my grandparents, Lorenzo and María Moran, who reminded me constantly of the value of pursuing my education. I miss my grandmother more than I can say. My grandfather has eloquently demonstrated the value of perseverance in the face of hardship. He is one of my heroes. My new family — Sherrill, Mitch, Elly, Claire, and Doris — has also been a great support. My sister-in-law Elly, who recently received her doctorate in history, and I constantly commiserated over the last year or so. My mother-in-law Sherrill Redmon, a doctor of history and archivist at Smith College, has also offered encouragement and a reminder that at least I'm not writing this on a typewriter.

But my greatest debt is to my parents, Ernesto Javier and Lillian Belle Flores. It is impossible to express the enormity of the gratitude I feel towards them. My dad is still one of the smartest people I know. A math whiz, he drilled me in math throughout high school and always reminded me of the need for precision. My mom, an elementary school teacher, taught me the value of staying organized and paying

attention to presentation. Both my parents instilled values — work hard, arrive early, be honest, always do your very best, don't expect anyone else to do your job for you — that remain the core of who I am and who I want to be. Mom and Dad always put my education first, regardless of the sacrifices, even when that meant sending their baby boy off to frigid, godless Harvard. Even when it meant my staying far away from Texas for graduate school. After four years of college and eight years of graduate school, I can say with confidence that they are still the best teachers and advisors I have ever had. I dedicate this dissertation to them.

Porter McConnell and I met a year before I conceived of this project, as I wrestled with research on military spending that was never meant to be. And in a real way, she inspired this dissertation's very subject. Porter's dedication to international development, foreign aid, and poverty inspired me to focus on inequality, a theme at the core of my work. Her passion for Latin America and experience there influenced my decision to do fieldwork. Along the way, she has helped me think through every idea in this dissertation. She has suffered through my moodiness and frustration. A fantastic writer, she has edited cover letters, dissertation abstracts, journal articles, and chapters. Through it, she has retained an unshakeable faith in me, even when I had little faith in myself. She is my best friend, my inspiration, my partner in crime, my spouse, and the love of my life. SR, I did it!

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CHAPTER I

Introduction

A seemingly unassailable consensus in political economy states that secure and private property rights are *the* institutional guarantor of economic growth. Governments that protect investors' rights to their returns, guarantee contracts as a third-party, and abstain from expropriating or over-regulating property rights accelerate long-term economic growth. Dani Rodrik and his co-authors state the consensus plainly: "Institutions rule." (Rodrik et al 2004) . Moreover, this institutional consensus has moved beyond the academy, influencing approaches to foreign aid, regulatory reform, and public policy. Nevertheless, the hegemony of this approach to economic institutions masks both conceptual and empirical weaknesses. Critically, it assumes that the protection of *private* property is a *public* good. The public good assumption presumes that governments cannot discriminate the protection of private property, favoring certain groups' rights and not others. Within a country, the security of private property is uniform across citizens and can be measured as such.

In this dissertation, I dispute this conventional institutional account and propose a new understanding of property rights institutions, their effect on economic activity, and their political origins. The linchpin of my approach is simple. I assume

that economic agents demand — and politicians can provide — *property rights discrimination*, protecting certain groups' rights while willfully ignoring or even deliberately violating other groups' rights. Property rights discrimination creates parallel economies within the same country — one consisting of protected rights and dynamism and the other consisting of unprotected rights and stagnation. The shape of property rights discrimination in turn shapes economic inequality and threatens per capita economic growth.

I therefore predicts that an as yet hidden important institutional phenomenon exists, varies meaningfully across countries, has critical implications for economic performance, and is the outcome of a discoverable process. In short, I ask: *Why do politicians discriminate the protection of private property rights more in certain countries than others?* I argue that the shape of property rights discrimination — the size of the "out" group and the severity of discrimination against it — depends on how political institutions structure bargaining between political leaders and citizens. The remainder of this chapter discusses the extant literature on property rights, summarizes a conceptual and empirical puzzle that challenges the current consensus, and summarizes my approach to property rights discrimination.

1.1 Institutions Rule

Over the last fifteen years, economists' research agenda on long-term economic growth has increasingly turned to "institutions" — the rules that govern economic activity — as the critical determinant of cross-national differences in levels of wealth and economic growth. In particular, they have focused on rules that protect private property rights. Rodrik (2004: 10) states that "There is now widespread agreement among economists studying economic growth that institutional quality holds the key

to prevailing patterns of prosperity around the world."[1]

This confidence in the power of property rights institutions originates in simple yet powerful microeconomic theory. A risk-averse economic agent contemplating investment will refrain from doing so when she fears her future returns will be expropriated (Kydland and Prescott 1977: 486) . Ronald Coase (1960) extends this logic to argue that when transaction costs are negligible, the creation and enforcement of private property rights is sufficient for economic efficiency, regardless of who is allocated those rights initially. Institutional economics has transformed this logic into a narrative on long-term macroeconomic performance. Alchian and Demsetz (1973) emphasize the conflictual nature of economic competition and the need for a mechanism that can regulate and pacify that competition by defining and enforcing private property rights. Douglass North (1981 , 1990) towers over this literature. North cites several channels through which the protection of private property rights underlies subsequent economic performance. He argues that advances in technology depend on the gap between private and social returns to innovation, which in turn depends on the design of economic institutions that govern returns to inventions (1981: 16) . Since the rate of technological change in large part determines the rate of economic growth, economic institutions are integral to economic change. Apart from their effect on the rate of technological change, economic institutions (i.e., the rules that structure property rights) affect economic performance through their influence on the level of transaction costs in an economy (1990). They provide the "structure for exchange that determines the cost of transacting and the cost of transformation" (1990, 34). Transactions among economic actors, he explains, have become increasingly complex over time. Rather than restricting their transactions to

[1]Not all economists subscribe to such strong statements of the institutionalist literature. For example, see Sachs (2003) and Rodrik's own even-handed review of the empirical literature on property rights and macroeconomic performance (2004) .

people with whom they already have close bonds, economic actors increasingly have relied on more complex transactions with strangers, which they enforce with third-parties (1990, 35). When institutions produce high transaction costs and insecure property rights, the results are dire: the use of obsolete technologies, low investment in fixed capital, the avoidance of long-term agreements, overly small firms, and an overall inefficient organization of production (North, 1990, 65). At worst, economic actors eschew economic exchange altogether or perhaps move their transactions into the informal market (North, 1990, 67).

Subsequent institutionalists working in development economics echo North's claims. Acemoglu and his co-authors (2004:9) define economic institutions as those that "provide security of property rights and relatively equal access to economic resources to a broad cross-section of society." They follow North in forcefully arguing that economic institutions are the fundamental causes of economic performance (Acemoglu, et al, 2004, 2-3). In their version of the Northian story, without good property rights institutions, technological advances will slow and investment in human and physical capital will collapse (1-2). Echoing Coase (1960) and Alchian and Demsetz (1973), they argue that economic institutions, when properly designed, allocate property rights to the most efficient users guaranteeing that a society makes the best use of its resources.

Empirically, political economists have set out to rigorously test the proposition that private property rights underlie long-term economic performance. In dozens of studies, they have found support for this narrative, inspiring Rodrik and his co-authors' statement that "Institutions rule." Steven Knack and Philip Keefer (1995) show that indexes of property rights are highly correlated with subsequent long-term economic growth. Separately, Knack (1996) finds that convergence of poor

countries to richer countries' standards of living is conditional on the quality of economic institutions. Keefer and Knack (1997) corroborate this finding, showing that countries with poor economic institutions tend to fall further behind richer countries. Olson, Jr. and his co-authors (2000) find that economic institutions are a significant predictor of productivity growth. Christopher Clague and his co-authors (1999) find that their measure of property rights also correlates strongly with economic growth and investment. Similarly, Timothy Besley (1995) finds evidence in Ghana that secure land rights matter greatly for investments in land. Svensson (1998) finds that the effect of political instability on investment rates depends entirely on its negative effect on the security of private property rights. Acemoglu and Robinson (2001) and Hall and Jones (1999) find that economic institutions are important for subsequent economic growth, even when they use two-stage least squares regression and instrument for economic institutions to account for possible endogeneity between institutions and economic growth.

Moreover, empirical studies consistently have supported the idea that economic institutions are better guarantors of economic performance than democratic political institutions. Using sophisticated empirical methods, Robert Barro finds a statistically and substantively significant positive effect of the rule of law on economic growth. Meanwhile, democracy has a weak and curvilinear effect on growth (Barro, 1997, 2000). Leblang (1996) also directly compares the effects of democracy and sound economic institutions on economic growth and finds that economic institutions support economic growth, whereas democratic political institutions have little effect. In head-to-head tests, Yi Feng (2003) finds that policy uncertainty outweighs political freedom as a risk factor fro economic growth. Aron (2000) finds that measures of democracy mean very little for economic growth, whereas measures of the

quality of economic institutions matter a great deal, though she cautions that results remain unstable (125). David Leblang seems to summarize several studies when he states, "To put it bluntly, in attempting to isolate political prerequisites for economic growth we have focused on the wrong institutions [i.e., political democracy]" (1996; 6).

Political economists' focus on property rights coincides with a long-standing discussion in comparative politics of state formation and state capacity. In the first sentence of *Political Order in Changing Societies*, Samuel Huntington famously pronounced that, "The most important political distinction among countries concerns not their form of government but their degree of government" (Huntington 1968: 1). Charles Tilly (1975) contends that bargaining between owners of capital and owners of coercion resulted in the state capacity to tax the populace and provide services (e.g., law and order). Herbst (2000) echoes these approaches in his work on state-building in Africa. Though these studies do not explicitly study macroeconomic growth, they echo economists' focus on property rights in their prioritization of the state's capacity to promote law and order through judicial institutions, and the enforcement of rules.

The current consensus on the power of private property rights is no mere academic debate. Economists have translated research into policy, beginning with their discourse on development. Hernando de Soto's research on property rights (2000) and policy work at the Institute for Liberty and Democracy ILD in Peru has engendered wide interest in both academia and public policy. In a book designed to foster public debate, Paul Collier, former head of development research at the World Bank, identified "bad governance" as one of four traps in which poor countries become enmeshed (2007). Furthermore, new measurement efforts designed to assess the

quality of the environment for development have focused on concepts closely related to property rights security. Two indexes of "economic freedom" assess the degree to which economic actors in country freely transact, with sub-measures dedicated to the security of their property rights from other citizens and the state itself.[2] The World Bank's *Doing Business* dataset changes the focus of more academic debates on property rights to their implications for business regulations, measuring, for example, the difficulty of obtaining government enforcement of contracts and registration of new businesses. Robert Barro, whose research is cited above, encapsulated this public discourse in a 1997 article in the *Hoover Digest,* the public policy journal of Stanford's Hoover Institute. In it, he dismissed both the possibility and the desirability of democratization in post-Mobuto Democratic Republic of Congo. He proposed that Laurent Kabila eschew instituting free elections and the sharing of political power and instead "concentrate on property rights and free markets ... With respect to a quick move to Western-style democracy, perhaps the best advice would be for Kabila to consult more with Singapore's Lee and less with America's Clinton."

Apart from public discourse, reform of institutions that protect private property has assumed a high priority for government agencies and multilateral institutions charged with aiding developing countries. The Millennium Challenge Corporation (MCC), an arm of the United States government dedicated to development policy, has created selection criteria for potential aid recipients, including a subset of the *Doing Business'* indicators. Another broad set of criteria is "ruling justly," which includes measures of the rule of law that economists often have used to code the security of private property rights. In essence, the MCC makes reform of institutions that protect private property a precursor for aid programs. Similarly, the World Bank

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[2]There are two major data projects in this regard: the Heritage Foundation's *Index of Economic Freedom* and the Fraser Institute's *Economic Freedom of the World.*

has placed governance — a concept that includes the core concerns of the property rights consensus — at the center of its reform agenda, leveraging research projects such as the *Doing Business* indicators and the *Worldwide Governance Indicators* (which measure the quality of institutions that promote the rule of law and regulate economic activity). Within the Bank, the Public Sector and Governance Group has focused the Bank's attention on reforming the state itself, rather than implementing specific policies. As part of that effort, the Governance and Anti-Corruption (GAC) group aims to "help develop capable and accountable states and institutions that can devise and implement sound policies, provide public services, set the rules governing markets, and combat corruption, thereby helping to reduce poverty" (World Bank 2007). Improving the institutions that protect private property, those institutions that "set the rules governing markets," has thus taken precedence in promoting economic development in poor countries.

1.2 Cracks in the Foundation

The hegemonic view from institutional economics, therefore, states that countries that more vigorously protect private property rights accelerate economic growth. That consensus increasingly has shaped public policy in the field of international development, including within powerful government agencies and multilateral organizations. Indeed, most public discourse on development at least references the consensus on protecting private property, at least as a component in a wider strategy on improving governance.

Nevertheless, a small, but growing group of scholars has begun to criticize the current consensus regarding private property rights. Take together, these critiques question the conceptual underpinnings of the consensus on property rights. Most

begin by questioning the conceptual clarity of the agenda. Rodrik (2004:12) admits that the economic institutional quality "remains a nebulous concept." Though investor confidence clearly underpins investment and growth, he reasons, the literature has failed to identify the specific organs of the state that underlie that confidence. Multiple paths — including paths generally considered heterodox within economics — might lead to investor confidence, including state ownership of firms. Until economists identify such roads and their effects on economic performance, the consensus on property rights will not yield more useful policy advice. Kurtz and Schrank (2007a, 2007b) echo Rodrik's (2004) critique, arguing that concept formation remains surprisingly weak in the literature on governance. In particular, extant measures confuse policy and structure; concepts scholars have tended to regard as institutions (e.g., expropriation) in reality are policies determined by the interaction of various structures, such as bureaucracies. Policies depend on the transitory wishes of political leaders, with more ephemeral effects on economic activity. In contrast, institutions effect more enduring change on economic activity.

Kurtz and Schrank (2007a, 2007b) then proceed to raise the issue of the distributional issues at stake in protecting private property, a point that reverberates in other theoretical inquiries into property rights. One function of property rights institutions remains resolving conflicts over rights, a function emphasized by Alchian and Demsetz (1973). In such cases, they reason, economists tend to overstate the "transparency and intelligibility" of adversaries' claims (2007b: 564). In the absence of a plainly justified winner of the dispute, it remains unclear how "good" institutions will resolve the dispute, since the main question at stake likely concerns distribution rather than efficiency. Kurtz and Schrank (2007b) thus raise a point analyzed intensively by Knight (1992), who treats the creation of social institutions more generally

and rules that protect private property more specifically. Whereas the distributional implications of property rights institutions merit only passing reference in previous accounts, Knight (1992) places them at the center of his theory. Social outcomes — macroeconomic efficiency in the case of property rights institutions — are the by-product of battles among self-interested agents to control each others' actions, all in the quest of maximizing individual payouts. He emphasizes that any attempt to explain the creation and evolution of social institutions must originate in an analysis of competing interests.

Haber, Razo, and Maurer (2003) deepen Knight's (1992) logic and point the way to a different understanding of property rights institutions. Haber, Razo, and Maurer (2003) seek to explain how economic growth often continues during periods of extreme political instability and even civil war. Politicians buffeted by threats to their rule, they reason, immediately should expropriate rights. They cannot commit credibly to the protection of private property. How, then, does growth continue? The answer, they claim, depends on politicians' ability to differentiate across citizens the protection of private property rights:

> Governments have strong incentives to *specify* property rights as private goods . . . When it comes to the *enforcement* of property rights, however, the strategy of the government is less clear. Governments can enforce property rights as a public good by protecting the rights of asset holders indiscriminately, without consideration of the identity of the particular asset holder. They can also choose to enforce property rights selectively, enforcing the rights of only some special group of asset holders. In this case, property rights is a private, not a public good. (Haber, Razo, and Maurer 2003: 21-22, emphasis in original)

Rights should be private, but political institutional economists implicitly assume the protection of those private rights to be public in nature. Yet a rational economic agent does not require that other agents' rights be protected in order for her to maximize her returns (22). In fact, they may demand selective enforcement, particularly during periods of political instability.

Acemoglu and his co-authors (2004), whose research has contributed greatly to the empirical consensus discussed in Section 5.1, advance a similar narrative. Though institutional economics has quantified the importance of property rights institutions, they argue, the field continues to lack an adequate explanation of their origins and divergence across countries. Their answer to this question mirrors Knight's (1992) approach to social institutions and Haber, Razo and Maurer's (2003) approach to growth through instability. They argue that economic institutions are chosen for their distributional consequences, particularly because the distribution of economic resources can be transformed into political power (59). Politicians can bargain with elites to create economic institutions that discriminate against the interests of non-elites. This adds a new dimension to the definition of "good" property rights institutions, which they define as follows:

> ... those that provide security of property rights and relatively equal access to economic resources to a broad cross-section of society. Although this definition is far from requiring equality of opportunity in society, it implies that societies where only a very small fraction of the population have well-enforced property rights do not have good economic institutions (Acemoglu, et al, 2004, 9).

Importantly, Acemoglu and his co-authors (2004) supplement their account of the potential differentiation of property rights security by recognizing that bargaining over

those institutions occurs in the shadow of political institutions. Libecap's (1989) bargaining model of property rights institutions evokes this language, characterizing property rights allocation as a bargaining between economic agents focused on distributional gains and political agents. Sened (1997) explicitly recognizes this point by describing private property as fundamentally a political institution. And in no way is the distributional critique absent from foundational accounts of property rights institutions. North (1981: 22) recognizes that political actors may expropriate the rights of certain classes of citizens in order to re-distribute those rights to other classes.

We may crystallize two broad critiques of the hegemonic approach from this short review. First, property rights institutions likely affect the distribution of economic payoffs and thus prompt self-interested economic agents to pursue advantageous institutions. The strong version of this critique states that the collective benefits of private property rights so closely studied by economists are entirely incidental. In concentrating on these collective benefits, institutional economists have committed a kind of ecological inference, aggregating a micro-institutional story (i.e., in which institutions affect private gains to economic activity) into a macro-institutional analysis. Second, self-interested politicians are intimately involved in the design of such institutions, usually in collaboration with economic agents. Spurred by demands for institutional changes that institutionalize agents' private benefits, they can supply *property rights discrimination*, strategically differentiating the protection of private property so that certain groups' rights are protected and others' are not.

1.3 An Empirical Puzzle

Empirically speaking, the foregoing critique envisions an empirical regularity unforeseen by the dominant research program in institutional economics. In that pro-

gram, scholars assume implicitly that institutions that protect private property do so uniformly. Regardless of institutional quality, property rights confidence does not vary meaningfully within countries. In contrast, seriously considering the distributional implications of private property suggests that economic agents demand — and politicians can provide — property rights discrimination. If so, we should observe that individuals' confidence in the security of their property rights varies both within and across countries. Unsurprisingly, extant research affords little opportunity to quantify property rights discrimination, since scholars have not admitted that the phenomenon existss.

Fortunately, new data from the World Bank enable exactly this kind of evaluation. The Bank's *Enterprise Surveys* (*ES*) project has conducted 135 random surveys of firm managers in 98 countries since 2000. Within countries, firms are chosen for inclusion using a simple random sampling methodology, sampling from the population of registered businesses with over five employees. At the country-level, the *ES* tend to concentrate on larger economies within regions, with a slight regional bias towards Eastern Europe. The *ES* ask firm managers a wide range of questions, including a battery of questions regarding the firm manager's confidence in the country's institutional environment. Question 46 asks the firm manager the following question: "'I am confident that the judicial system will enforce my contractual and property rights in business disputes.' To what degree do you agree with this statement?" Firm managers respond on a six-point scale ranging from 1 ("fully disagree") to 6 ("fully agree"), with higher values corresponding to greater confidence in their property rights. In Chapter 3, I will attend more carefully to a more broad coding of firm managers' property rights confidence, utilizing coding rules and statistical methods to sharpen the comparison of firm managers' responses across countries. However, a

simple comparison of responses to this key question equips us to gauge the extent of property rights discrimination within and across countries.

I begin this simple analysis by surveying the range of responses for a country we may safely assume strongly protects private property rights for all citizens, largely refraining from property rights discrimination — Germany. Figure 1.1 depicts the set of responses of German firm managers to Question 46, with the mean response marked with an asterisk.
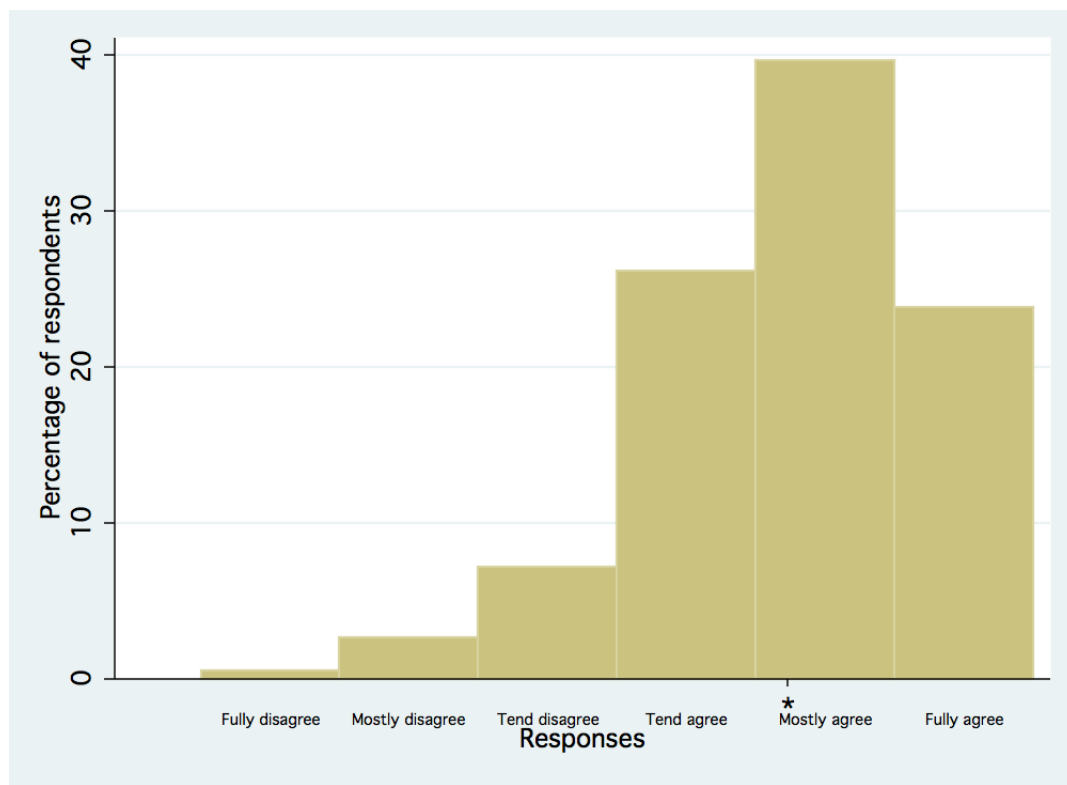
Figure 1.1: Property rights discrimination in Germany

Figure 1.1 depicts a left-skewed distribution; the majority of respondents reply that they feel great confidence in the judicial system's protection of private property rights. The mean response of approximately 4.7 places the mean response between the "tend to agree" and "mostly agree" categories. The distribution of responses clusters tightly at the high end of the scale. The standard deviation is approximately

one category. Nearly 90% of respondents respond within one standard deviation of the modal response of "mostly agree." Though the remaining 10% of respondents evince a lack of confidence in their private property rights, we can conclude without doing undue injury to the data that firm managers in Germany are generally confident in the protection of their private property rights.

Germany's firm managers evince precisely the kind of pattern the dominant view of property rights might expect — high mean confidence with very little variation about the mean. Figure 1.1 portrays a country with little property rights discrimination. Do other countries evince a similar pattern? Figure 1.2 graphs the standard deviation against the mean for each country surveyed in the *ES*, along with the bivariate regression line linking mean to standard deviation. The horizontal axis of the graph demonstrates that countries vary in mean property rights confidence, as institutional economists might expect. Conversely, the hegemonic view of property rights as a macro-institution cannot account for variation along the vertical axis, which describes the pattern of inter-country variation in intra-country variation in property rights confidence. Germany, located in the bottom right-hand corner of the graph exemplifies countries with high mean protection and low variation about the mean — these might be described as having "good" institutions. Countries tending towards the bottom left-hand corner of the graph (e.g., Bangladesh 2002, Moldova 2002, Cambodia 2003) also have relatively low variation, but a far lower mean. These countries tend to reflect economists' implicit assumption of "bad" institutions — firms are pessimistic regarding the legal protection of their property rights, but they are uniformly pessimistic.

In contrast, two areas of the graph indicate a more intense degree of property rights discrimination. Countries tending towards the upper right-hand corner (e.g.,
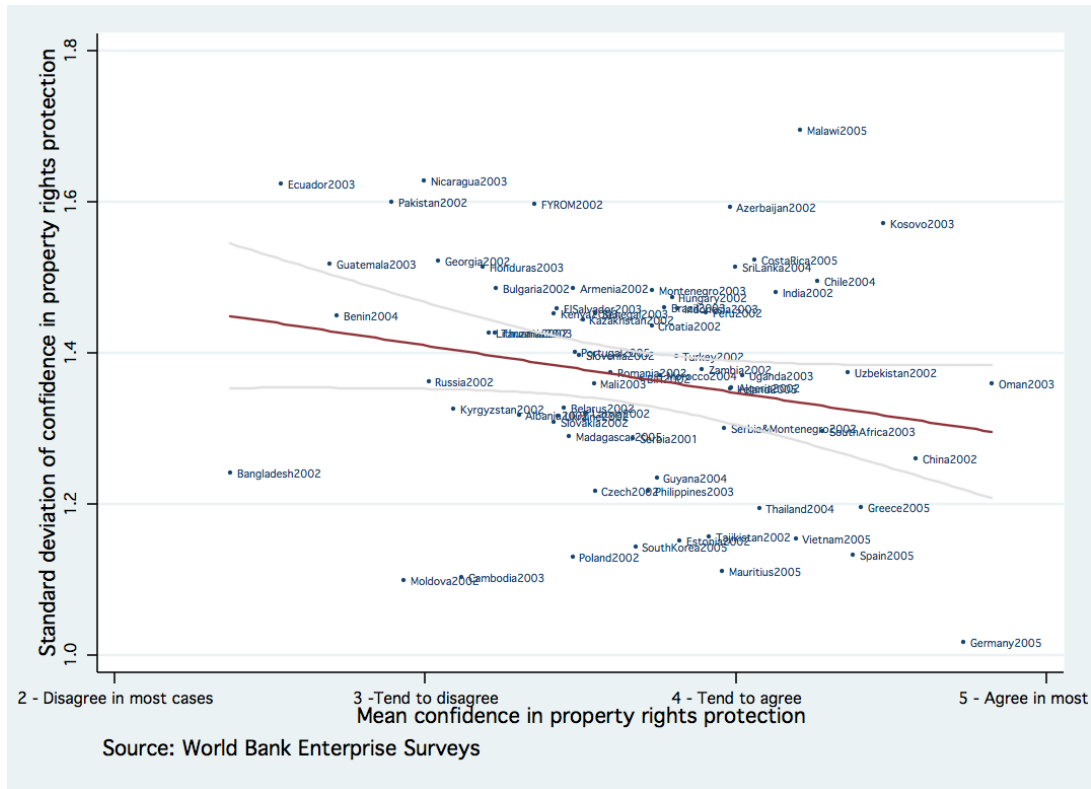
Figure 1.2: Comparing the distribution of property rights confidence in a variety of countries

Malawi 2005, Kosovo 2003, Chile 2004) are characterized by distributions with both a high mean and high variance, indicating that some set of firm managers deviates from the mean assessment. Finally, countries in the upper left-hand corner of the graph (e.g., Ecuador, Nicaragua, Pakistan) indicate a different pattern of property rights discrimination. Though property rights confidence is generally low, high variation in the distribution suggests that, while the protection of private property rights is on average poor, a relatively large minority enjoys relatively secure private property rights.[3]

Figure 1.2 summarizes how countries diverge in the distribution of their private

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[3]Note in Figure 1.2 that Latin American countries tend to be located above the regression line that shows the bivariate relationship between the mean and standard deviation. In short, Latin American countries tend to have higher variation in property rights discrimination than their mean confidence would predict (e.g., Chile, Ecuador, Nicaragua, Guatemala, Honduras, Costa Rica, El Salvador). Also note that OECD countries tend to be located below the regression line, demonstrating that they tend to have lower variation in property rights protection than their (high) mean would predict (e.g., Germany, Spain, Greece).
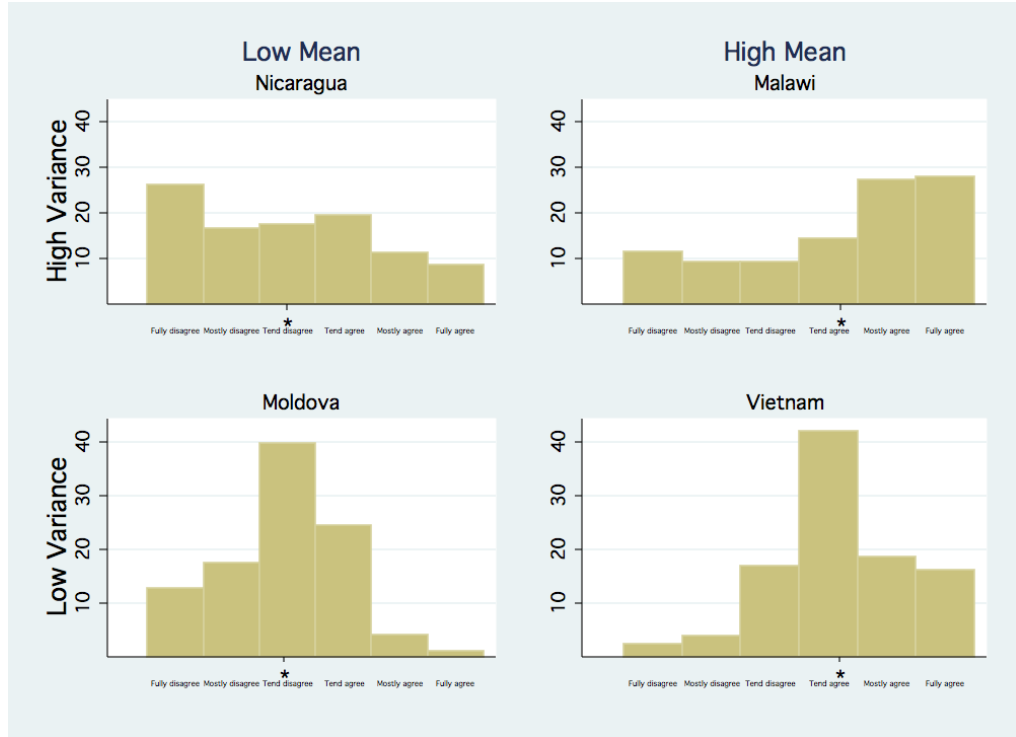
Figure 1.3: Comparing the distribution of property rights confidence in four countries

property rights. However, it does so only superficially; the impact of a particular standard deviation on the distribution of property rights confidence remains unclear. Figure 1.3 clarifies the empirical picture by reproducing Figure 1.1 for four countries depicted in Figure 1.2, chosen so as to compare their mean confidence level. Malawi and Vietnam each exhibit high and nearly identical mean property rights confidence, whereas Nicaragua and Moldovoa exhibit low and nearly identical mean property rights confidence. However, the countries exhibit very different distributions. Firm managers in Nicaragua and Malawi report high variance in their property rights confidence, in contrast to Moldova's and Vietnam's low variance. Figure 1.3 provides evidence in favor of the notion that the distribution of property rights confidence varies meaningfully across countries. Malawi and Vietnam, which share a similar mean, have very different patterns of property rights discrimination. Vietnam's dis-

tribution of property rights confidence resembles Germany's to some degree, with a distribution tightly clustered around the modal response and only 5-6% of respondents reporting very low confidence in their property rights. In contrast, fully 20% of firms in Malawi report very low confidence in the judiciary's protection of their private property; similarly, a much larger percentage of firms report very high confidence than in Vietnam (approximately 55% in Malawi versus about 35% in Vietnam). In turn, Moldova's distribution seems the mirror image of Vietnam's, with a relatively tight distribution around a lower mean. Meanwhile, Nicaraguan firm managers report a far wider distribution of property rights confidence, with a far higher percentage of firms at both the bottom and the top of the scale.

This analysis suggests that property rights confidence varies *within* countries and that that variation itself varies *across* countries. In combination with the conceptual critique detailed in Section 1.2, it suggests that economists' focus on the "quality" of property rights institutions is misplaced, since it misinterprets both conceptually and empirically the phenomenon it describes. The general quality of property rights institutions, however measured, is a mathematic fiction, since property rights institutions can differentiate which citizens they protect and how securely they protect them.

We may summarize the end point of this theoretical and empirical critique in Huntingtonian terms. Whereas Huntington (1968) declares that the *degree* of government is the most important distinction among countries, I claim that it is the *distribution* of government that truly distinguishes countries. At present, we lack a theory of why property rights discrimination varies across countries, an empirical description of that variation, and an analysis of its effect on microeconomic and macroeconomic performance.

1.4   Property Rights Discrimination: A New Approach

This dissertation remedies these weaknesses in our understanding of the politics of private property by answering the following question: *Why do politicians discriminate the protection of private property rights more in certain countries than others?* Answering this question demands a novel approach to describing the distribution of property rights confidence; quantifying its microeconomic and macroeconomic effects; and explaining its origins. Below, I describe my approach and outline the remainder of the dissertation.

1.4.1   A Theory of Property Rights Discrimination

Chapter 2 contains a theory of property rights discrimination, beginning by carefully defining two concepts that at times remain dangerously nebulous in research in this field — property rights and property rights institutions. First, I diverge from conventional assumptions regarding property rights institutions by theorizing how self-interested economic agents' payouts from economic activity depend on how institutions allocate rights, adjudicate disputes, and enforce agents' claims. An economic agent undoubtedly benefits indirectly from the protection of others' rights. However, her economic choices respond more strongly to the protection of her own rights. At minimum, she lobbies politicians more readily for the protection of her own rights. More likely, she profits when other actors' rights are neglected, particularly when this neglect allows her to violate those rights for her own gain. Rather than united by common interests in "efficient" property rights institutions, economic actors preferences for institutional design diverge dramatically. Under certain circumstances, politicians will respond to pressure to engage in property rights discrimination, building institutions that more strongly protect certain actors' or classes of

actors' rights.

Second, Chapter 2 then turns to an analysis of the economic repercussions of property rights discrimination. In doing so, it retains the core microeconomic logic that an economic agent will delay or cancel investment when she fears her future returns will be expropriated (Kydland and Prescott 1977), but disaggregates it to understand how property rights discrimination affects both microeconomic and macroeconomic payoffs. Property rights discrimination creates two parallel economies — an "in" group of protected rights and an "out" group of unprotected rights. This institutional division has two critical economic effects. First, it depresses economic activity within the "out" group. Second, it dampens aggregate economic activity by failing to allow rights to accrue to the most efficient economic agents.

Recognizing the existence and repercussions of property rights discrimination offers a far more complete definition of institutional failure and one that allows a more incisive account of the origins of the failure to protect private property rights. Chapter 2 offers such an explanation. I argue that sudden changes in the relative value of economic resources create demand for the modification of existing property rights institutions. Economic agents seek to create new rules that will privilege their particular claims. They thus bargain with self-interested politicians over the changes. However, economic agents are not equally able to pressure politicians; the logic of collective action dictates that certain actors will more effectively organize around their preferred institutions. Smaller, more homogenous interests — and in particular those dominated by rich actors — more likely will overcome the collective action problem and lobby political actors. Thus, they more likely benefit from property rights discrimination.

Finally, Chapter 2 expands upon this account by considering explicitly how politi-

cians' incentives to retain power shape their willingness to collude with certain sets of citizens to discriminate the protection of private property. The benefit of a political institutional approach to property rights discrimination lies in its ability not only to predict the distribution of citizens' confidence in their private property rights, but also the identification of which citizens more likely fall in the "in" group. I consider two political institutional theories of property rights discrimination. The first blends disparate claims regarding the effect of democratic governance on property rights protections. By constraining executive power, democratic political institutions likely reduce the severity of property rights discrimination generally. However, the expansion of the politically relevant strata of society shift the pattern of discrimination. Whereas autocratic regimes likely discriminate in favor of richer actors, democratic regimes will discriminate against them. Chapter 2 also harnesses the selectorate theory of Bruce Bueno de Mesquita and his co-authors (2003) to the question of property rights discrimination. This rigorous approach to political institutions strongly suggests that the pattern of property rights discrimination varies not only between democracies and non-democracies, but among different kinds of non-democracy. A leader's willingness to discriminate against citizens outside the winning coalition depends on the size of the winning coalition and the selectorate (i.e., those citizens empowered to choose the leader).

1.4.2 An Empirical Approach to Property Rights Discrimination

Chapter 2 concludes with three empirically verifiable predictions. First, property rights discrimination exists and varies meaningfully across countries. Second, it skews the distribution of economic activity and depresses aggregate production. Finally, an individual's property rights confidence is dependent on the intersection of the political constellation and her place within that constellation. Chapters 3 and 4 are dedicated

to testing these three predictions. Chapter 3 begins by advocating the use of firm-level data from the World Bank's *Enterprise Surveys*, described briefly above, as a means for quantifying property rights discrimination and its consequences. Whereas extant measures of property rights security tends to make strong and often hidden distributional assumptions, firm-level surveys allow economic agents themselves to describe the distribution of property rights confidence in a country. Though certainly imperfect, the careful use of the data helps to paint an empirical portrait of property rights discrimination. As predicted in Chapter 2 and briefly described here in Section 1.3, the property rights confidence varies *within* countries and that variation itself varies meaningfully *across* countries.

Chapter 3 also investigates statistically whether firm-level and/or aggregate economic performance depends on the distribution of property rights confidence. Beginning at the firm-level, I find tentative evidence that firm managers with less confidence in their private property rights invest less, operate at lower capacity, and hide a greater percentage of their revenues from the State, all else equal. Concentrating on firm informality, the results also indicate that a firm manager reacts more strongly to the protection of her private property rights than the mean level of property rights confidence in the economy. Finally, the distribution of property rights confidence also affects national-level informality; in countries with severe property rights discrimination, increases in the mean level of property rights security does not reduce informality.

Chapter 4 turns to the most important prediction of my theoretical framework, which concerns the political institutional bases of property rights discrimination. Statistical analysis supports my intuition that particular kinds of firms will enjoy better property rights protections due to their ability to overcome the collective ac-

tion problem. Larger, state-owned, and exporting firms all enjoy more secure private property rights. The hypothesized role of democracy described above receives qualified support. Evidence tentatively suggests that democratic governance does reduce the amount of variation in property rights confidence. However, stronger evidence suggests that that effect partially depends on democracy's negative correlation with property rights managers' property rights confidence. It would seem that democratic countries more likely inhabit the lower left-land corner of Figure 1.2. However, it does not appear that the pattern of property rights discrimination according to citizens' wealth materializes in the data. Democratic leaders seem no more prone to expropriating the property rights of large firms than smaller ones. While mixed regimes do tend to discriminate against smaller firms, there is little evidence that this effect is shared by autocratic regimes. Further analysis uncovers a particularly interesting pattern — autocratic regimes more likely discriminate in favor of politically influential firms than democratic or even mixed regimes. Finally, Chapter 4 estimates a series of preliminary tests of the selectorate theory. That testing reveals intriguing differences among regimes, if not entirely as predicted by the selectorate theory.

Chapters 3 and 4's statistical analysis accomplishes several goals, depicting empirically the existence of property rights discrimination among firms and uncovering tentative evidence of its origins and consequences. However a number of factors — the embryonic nature of research into property rights discrimination, relatively weak statistical results in Chapters 3 and 4, and continuing confusion over defining clearly the institutions that protect private property — suggest the utility of marrying small-n case analysis to this research agenda. Moreover, case analysis promises to highlight whether reform of property rights institutions resembles, even superficially,

Chapter 2's depiction of bargaining.

Chapter 5, therefore, shifts focus, carefully elaborating bargaining over reform of rules governing land rights in Colombia in the late 19th and 20th centuries. Fifty years after its independence, nearly 75% of Colombia remained untouched, the product of the country's arduous geography. Colonization offered little in terms of financial reward and legal rights to un-colonized land remained entire unclearly. However, Colombia's insertion into the world economy through exports of coffee increased the value of fertile land and rendered inadequate the jumble of legal rules and titles governing land rights. Colombians flocked to uncultivated areas to claim land, creating a series of conflicts over land rights. I show how large landowners and peasants competed over land rights, with each side lobbying for rules that would privilege its claims. That competition occurred over two stages and occurred in the shadow of political institutions. I show how peasants' inability to create enduring forms of collective action, estate owners' economic power, and the rigidly bipartisan nature of Colombian politics combined to create new institutions that privileged large landowners, with serious implications for inequality and agricultural production in Colombia.

1.5   Contributions

This dissertation begins with a central insight from institutional economics — namely, that long-term macroeconomic growth hinges on the vigorous protection of private property rights. I dispute this ascendant view and leverage that criticism into a theory of how office-seeking politicians and profit-maximizing economic agents collude to design property rights institutions that skew the protection of private property rights in favor of certain groups. By doing so, this research illuminates two

related fields of study in political economy — the study of property rights and and the relationship between political institutions and economic growth.

First, this dissertation fundamentally redefines how economic agents' confidence in their private property varies, with far-ranging implications for the scholars and practitioners. Economists had long recognized that institutions of private property (e.g., courts and legal codes, bureaucracies, regulations) affected economic actors' confidence in their private property, but had presumed those institutions to be public goods. Certainly, theorists have allowed that property rights confidence might vary within countries, but have not succeeded in building a comprehensive theoretical account of that variation or describing it empirically. Chapter 4 furnishes the first robust evidence of property rights discrimination's existence and economic consequences. Chapter 5's sojourn into historical institutionalism in the Colombian coffee industry deepens this account by illustrating how politicians may regulate private property to the advantage of particular groups. Taken together, this dissertation conceptually and empirically re-defines the meaning of property rights confidence, demanding that scholars attend to the distributional implications of institutions when explaining their origins and consequences. It also widens the set of institutional arrangements for instilling confidence in economic agents. As recognized by Haber, Razo, and Maurer (2003), politicians may create a number of institutional arrangements to secure agents' property rights, arrangements which may vary across industry, locality, or ethnic group.

Second, this research clarifies how political institutions affect the aggregate size and distribution of economic activity. Przeworski and Limongi (1993) enjoin researchers to clarify the channels through which political democracy affects economic growth. This dissertation describes one such channel through its focus on what Ace-

moglu, Johnson, and Robinson (2004) term a "hierarchy of institutions." In this hierarchy, political institutions dictate the rules by which economic institutions are created and modified. If particular constellations of political institutions make property rights discrimination more likely, then they should correlate with patterns of economic inequality and aggregate growth. As before, the linchpin of this clearer delineation of political institutions' effect on economic performance is thinking of the protection of property rights as a differentiable good. Broadly speaking, marrying theories of political and economic institutions in this manner affords us a unique opportunity to translate the distribution of political power into the distribution of material benefits, all through the filter of property rights institutions.

CHAPTER II

A Theory of Property Rights Discrimination

2.1 Introduction

Chapter 1 summarized an ambitious research agenda in institutional economics that places the protection of private property rights squarely in the center of the process of macroeconomic growth. Countries that curb citizens' ability to violate each other's rights and foil politicians' ambitions to expropriate private property will, in the long run, grow faster. This institutional consensus has re-directed growth economists' focus from more proximate causes to studies of how sound institutions accelerate technological change, investment, and firm creation. Furthermore, this consensus has furnished the intellectual foundations of new approaches to foreign aid that premise aid on improvements in governance, broadly conceived. Chapter 1, however, also questioned a core and often obscured premise of institutional economics — that the protection of private property constitutes a public good. The hegemonic approach to property rights and macroeconomic performance conceives of institutional failure in rather vague terms. On one hand, politicians may fail to provide the public good of property rights protection, allowing threats to private property rights to materialize. Alternatively, political economists focus on the tendency of politicians to expropriate private property rights, threatening the security of

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private property rights. In contrast, Chapter 1 emphasized that institutional failures are distributional in nature, as politicians fail to protect certain groups' rights while securing others'. I termed this phenomenon *property rights discrimination.* When a police force fails to protect certain businesses, or judicial institutions erect barriers for citizens of a certain race, or women are prohibited from inheriting property, property rights discrimination exists, creating parallel economies of protected and unprotected rights.

In this chapter, I expand upon Chapter 1's critique and build a theory of property rights discrimination. Whereas more traditional accounts or property rights are rooted in the assumption of large and undifferentiated benefits to private property rights, I premise my account on how institutions of private property rights affect the distribution of gains from economic activity, beginning in Section 2.2. Although an economic actor benefits indirectly from the protection of others' rights, her economic choices are influenced more strongly by the protection of her own rights. Under certain circumstances, she profits when another actor's rights are neglected, particularly when this neglect allows her to violate others' rights for her own gain. Accordingly, economic actors' preferences for the design of property rights institutions diverge dramatically, in contrast to the more conventional property rights narrative in which economic actors are united in their economic institutional preferences. Property rights discrimination, therefore, occurs when institutions privilege the protection of certain actors' rights while ignoring or violating the rights of others. The resulting economic institutional division of an economy into "in" and "out" groups has two important economic effects. First, it depresses economic activity within the "out" group. Second, it dampens aggregate economic activity.

Recognizing the existence and repercussions of property rights discrimination of-

fers a far more complete definition of institutional failure, one that preserves the spirit of North's (1981) account of the predatory state. Most importantly, thinking of the protection of property rights as a distributed good allows a more incisive account of the origins of the failure to protect private property right. In Sections 2.3 and 2.4, I offer such a theory. I argue that sudden changes in the relative value of different resources create demand for the modification of extant property rights institutions. Different groups of economic actors, united by their common economic interests, hope to create new rules that will privilege their claims both in the present and future, at the expense of other groups' claims. Economic actors thus bargain with self-interested politicians over the content of these new rules and modifications of old ones. However, parties to the bargaining for new property rights institutions will diverge in their ability to unite around their interests and bargain effectively, as predicted by the collective action problem.

This logic makes clear that, in general, we should expect that particular economic actors will more likely comprise the "in" group of protected private property rights. In Section 2.4, I expand upon this account by considering explicitly how politicians' incentives shape their approach to bargaining over property rights institutions. First, I blend disparate claims regarding the relationship between democracy and property rights institutions to build an account of how property rights discrimination shifts under democratic rule. Next, Section 2.4 considers the predictions of the selectorate theory of Bruce Bueno de Mesquita and his co-authors (2003). I show how the theory — which characterizes regimes by the relative size of the winning coalition and selectorate — has specific implications not only for the general level of property rights, but for the specific segments of the population whose rights will be violated.

2.2 Property Rights Discrimination

Though known primarily for its contribution to the study of long-term macroeconomic growth, the consensus on property rights institutions is based on a microeconomic principle — that a self-interested economic actor more likely engages in economically productive activities (e.g., investment in physical capital and technology) when she is sure she will reap the benefits of those activities. Without the protection of her property rights, the ripple effects of such activities fail to materialize and the economy as a whole suffers. Thus, the protection of private property could be thought of as the visible manifestation of Adam Smith's invisible hand. I do not dispute this microeconomic logic. However, I do dispute its implications for economic actors' incentives and the design of property rights institutions. I begin that account here, first by defining what we mean by the terms "property rights" and "property rights institutions" and defining property rights discrimination and its effect on economic activity.

2.2.1 Property Rights and Institutions

Far too often, the concepts of property rights and property rights institutions are introduced with little in the way of conceptual clarity. I thus pause to define each of these terms carefully, emphasizing important aspects of the definitions that will guide this theoretical account.[1] I define *property rights* as *the bundle of rights an economic actor possesses to use various pieces of property.* By defining the degree of access economic actors have to resources, property rights enable all economic activity. I call attention to several implications of this definition, following previous authors in this research program. First, I conceptualize property rights as exactly that - a bundle

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[1] I use the terms "property rights" and "economic rights" interchangeably throughout this discussion, as well as the terms "property rights institutions" and "economic institutions."

of *rights* comparable to political rights in that they are enumerable. This conception shifts the focus of the definition from the property itself to the rights that economic actors possess *in relation to the property*. In doing so, this definition parallels Sen's (1999) characterization of development as a set of freedoms. In Sen's framework, property rights are a form of "economic facilities" in that they ease economic actors' access to transactions with other actors (Sen 1999: 38-39, 60-61, 112-116). Put less abstractly, examples of property rights include the rights of sale and/or transfer, use for production, use as collateral, use as a physical address, and destruction.[2] Coase also gives voice to this conception of property when he writes that "This [property] is usually thought of as a physical entity which the businessman acquires and uses . . . instead of as a right to perform certain (physical) actions . . . What the land-owner in fact possesses is the right to carry out a circumscribed list of actions" (1960, 44).

The second critical aspect of the definition lies in the term "bundle." Scholars define property rights as a "bundle of sticks," allowing that each property is associated with a number of rights (Barzel, 1997, 4-7; Anderson and McChesney, 2003, 1). This conception allows that multiple individuals can share these rights. The possibility of partitioning of rights to property either transforms "ownership" from a dichotomous to a multi-dimensional concept or eliminates its conceptual usefulness altogether. Ownership implies that an individual controls all rights to some property, but this is rarely the case in practice. In most cases, individuals share rights to property. Emphasizing the "bundle of sticks" metaphor also allows, at least logically, that certain rights in relation to some piece of property can be withheld from some individual(s). Coase (1960) explicitly refers to "circumscribed uses" of property (44).

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[2]De Soto (2000) emphasizes the analysis of physical property, in particular its use as a physical address to facilitate communication and as a collateral for loans.

Put more abstractly, the set of possible economic uses of a property can be curtailed due to legal, social, and/or political concerns. If I rent a car, I possess the rights to drive the car and use it for whatever purposes not prohibited by the contract for the duration of the contract. I may use it to haul boxes, sleep in, or drive to Chicago. However, I may not sell the car, paint it, or lend it to someone else to drive. Those rights, of course, remain with the rental car company. We can see by this example that bundles of rights are often shared.

The "bundle of sticks" metaphor has galvanized theorists to create a taxonomy of economic rights. Schlager and Ostrom (1992) define five sets of rights: access (the right to enter); withdrawal (the right to appropriate returns from the asset); management (the right to regulate the use of the asset and make changes to it); exclusion (the right exclude other individuals from any of the other rights); and alienation (the right to transfer all or parts of the rights to others). Libecap (1989) emphasizes an analogous set of rights — use, appropriation of returns, and modifying the property. The appropriation of returns is a critical feature of both typologies — obviously, whosoever possesses that right reaps the gains and losses from the use of the asset. Therefore, owning rights to a property also infers their inverse - *responsibilities* for any economic losses incurred in the use of the property.

This conceptualization suggests a rather complex view of rights, which begs the question of how rights areadministered. The answer lies in economic institutions. *Property rights institutions are the set of rules and procedures by which property rights are specified, allocated, and enforced.* Put differently, economic institutions define how economic actors compete for property rights. Alchian and Demsetz (1973) emphasize the conflictual nature of property rights competition and the need for a property rights system to regularize and pacify that competition:

> It is more useful and nearer to the truth to view a social system as relying on techniques, rules, or customs to resolve conflicts that arise in the use of scarce resources rather than imagining that societies specify the particular uses to which resources will be put . . . . Since the same resources cannot simultaneously be used to satisfy competing demands, conflicts of interest will be resolved one way or the other. The arrangements for doing this run the full gamut of human experience . . . (Alchian and Demsetz, 1973; 16)

For Alchian and Demsetz, conflicts over the use of resources (i.e., property rights) must be resolved in some manner. An economic institution accomplishes that resolution using some set of mechanisms. Those mechanisms vary among several axes and may be centralized or decentralized, formal or informal. Regardless of the form the economic institution takes, it executes three functions: specification, allocation, and enforcement. I will attend to each of those functions in turn. *Specification* refers to the process by which the institution defines the rights that exist to some property. We may also think of this tasks as defining, in a basic sense, how rights to various resources will be defined.

Allocation is the process by which those rights are divided among economic actors. Coase's (1960) analysis of property rights and economic efficiency explicitly treats the assignment of property rights when multiple parties possess conflicting claims. Copyright law, one form of an economic institution, allocates rights among actors. The purchaser of a book may read the book, but not copy it and sell the copies to other individuals. De Soto, in another example, discusses the set of legal arrangements that nineteenth century California gold miners used to govern their claims (De Soto, 2000, 140-148). Riker and Sened (1991) raise another such case in their study of airport slotting at major US airports.

Finally, *enforcement* refers to the process by which the economic institution ensures that, once rights are specified and allocated, they are respected. Violations of property rights, whether intentional or not, will inevitably occur from time to time. And disputes over property rights are to be expected. Property rights cease to exist without proper enforcement. Bates (1991) discusses how the Nuer people of Africa used institutions such as feuds, compensation, and arbitration to preserve families' property rights in cattle. Firmin-Sellers (1995), in her analysis of property rights in colonial Ghana, also emphasizes the role of enforcement of property rights.

Economists usually define three types of economic institutions: open access, communal ownership, and private property. Economic institutions vary most importantly in how they specify economic rights (i.e., patterns of ownership). In open access, any economic actor may extract from the resource in question, but lacks the rights of alienation or exclusion. In open access, no centralized authority governs the specification, allocation, and enforcement of property rights. Economic actors must bear the full costs of these tasks themselves. Therefore, property rights are allocated and enforced almost entirely through self-help mechanisms. These may include "racing" (i.e., using as much of the resource as possible before other actors can do so). There is a strong consensus that open access leads to sub-optimal outcomes. As previewed in previous discussion, open access concentrates the benefits of extraction in an individual economic actor, but distributes the costs of that extraction across all actors. The result is the over-use and eventual depletion of the resource in question.

In communal ownership, a group of economic actors can exclude non-owners from using the resource in question. However, they cannot exclude each other. Furthermore, the owners of a commons can sell or otherwise transfer the commons, but only through some joint decision making process. Economic actors can specify, allo-

cate, and resolve disputes concerning property rights through self-help mechanisms. However, they may also use norms-based mechanisms to form tacit agreements. Alternatively, they can create a central authority to design rules, exclude non-members, and enforce rules. The question of the efficiency of communal ownership is less clear. Economic actors must pay startup costs to exclude others and must bargain amongst themselves to manage the commons and enforce the exclusion. Both the initial and continuing costs to management and enforcement imply a collective action problem, as detailed by Hardin (1968). Eggertsson (2003) argues that social norms and legal statutes work to lower the internal bargaining costs. De Alessi (2003) notes that "Communal ownership . . . provides a clear improvement over open access and over government regulation" (109). However, that success is "situation-specific." Ostrom (1991) investigates the conditions under which collective action pays off.

2.2.2   Private Property Rights and the Motivations of Economic Actors

If open access generally depletes economic resources, while the benefits of communal ownership are tenuous, then what form of economic institutions do actors prefer? The answer lies in private property. Pure private property rights divide the rights to a particular resource and divide those rights among economic actors. Pure private property rights concentrate all rights and responsibilities in one actor. Only that actor can use and manage that property and only she captures the gains or losses from those decisions. Like communal ownership, however, private property requires institutions that govern the allocation of rights, disputes over rights, and the enforcement of allocation and dispute resolution. Those institutions may consist of the anarchic, self-help mechanisms described above. Actors may engage in racing and/or violence to delineate private property rights to some resource, for example. Once rights are allocated, economic actors might also bear the costs of enforcing

rights in the self-help system, defending their claims against other economic actors who may wish to appropriate those rights. Though anarchic, this economic state of nature clearly defines a set of rules, however violent, for allocation, dispute resolution, and enforcement. Alternatively, economic actors may rely on norms-based mechanisms. Robert Ellickson (1991) surveys such strategies in his survey of the cattle industry in Shasta County, California. He finds that ranchers often rely on a well-defined and complex set of social penalties and rewards to enforce property rights rules. As in a self-help system, the responsibility of dispute resolution and enforcement is decentralized, with economic actors themselves responsible for the maintenance of the system.

However, as the complexity of economic activity and the size and diversity of the group of actors grow, a more centralized property rights authority becomes more desirable. Disaggregating the functions of the property rights system among all actors is likely sub-optimal, leading to foregone production. A centralized authority can be established to record and preserve the specification of private property rights. It arbitrates disputes over rights when two or more economic actors both claim the same set of rights to a resource or when one actor claims another has violated a contract.[3] The centralized property rights manager therefore concentrates on executing such functions efficiently and gains special skills, lowering the overall level of transaction costs incurred by economic actors (McChesney 2003).

Though self-help and norms-based institutions of private property continue to interest institutional economists, most analysis of private property rights assumes a centralized authority and particularly the presence of the State as that centralized authority (Barzel 1997; North 1981, 1990; Libecap 1989). The centralized protec-

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[3]In this sense, a contract represents an agreement among actors to share the rights to a resource, in return for compensation or a service. The violation of contractual rights thus falls under the rubric of property rights institutions.

tion of private property rights by the State offers a stream of potential benefits to economic actors (i.e., citizens of that country) and introduces two main tasks for the State, as recognized by Madison in No. 51 of *The Federalist Papers* (Rossiter 1961: 322) and later under different guise by North (1981, 1990). As Madison writes:

> If men were angels, no government would be necessary. If angels were to govern men, neither external nor internal controls on government would be necessary. In framing a government which is to be administered by men over men, the great difficulty lies in this: you must first enable the government to control the governed; and in the next place oblige it to control itself. (Rossiter, 1961; 322).

Though Madison primarily concentrated on the infringement of political rights in No. 51, his logic applies equally as well to the violation of private property rights. The first aim of institutions of private property is to "control the governed," or to stop economic actors from violating each others' rights for their own gain. North (1981: 20-27) refers to this challenge as a "contractual theory," in that the State serves as a third-party enforcer of all contracts in the economy, using its monopoly on force. We may broaden this conceptualization to include the violation of an actor's private property rights through theft or encroachment. As the chief property rights authority, the State is responsible for protecting citizens from violating each others' rights.

However, as Madison recognized, granting exclusive powers of enforcement and coercion to the State creates another set of challenges — the violation of rights by the State itself. In effect, the government must learn to "control itself." North (1981: 20-27) extends this discussion further in his discussion of a "predatory theory" of the State.

> This view considers the state to be the agency of a group or class; its
> function, to extract income from the rest of the constituents in the interest
> of that group or class. The predatory state would specify a set of property
> rights that maximized the revenue of the group in power, regardless of its
> impact on the wealth of the society as a whole. (North 1981: 22)

North (1981) extends the Madisonian dilemma by considering the motivations of agents of the State. If this centralized property rights authority associates itself strongly with the interests of some subset of constituents, it will expropriate the rights of actors outside that group in order to re-distribute them to the favored group.[4] Extending this logic still further, recall that, as the centralized property rights authority, the State holds the power to circumscribe the uses of private property for various reasons (e.g., in the case of externalities, cultural norms). Given previous discussion that emphasizes property rights as a "bundle of sticks," property rights only rarely are so perfectly private. Thus, the State might use its power to prohibit certain uses in the "out" group, cheapening their rights and facilitating their transfer to the "in" group.

The outlines of a theory of property rights discrimination are clear in North's (1981) conceptualization of the two-dimensional threat to private property rights — violation by other citizens or by the State itself (i.e., the centralized administrator of property rights institutions). But why do citizens allow property rights discrimination? The answer depends on the value an economic actor places on the security of others' rights. Haber, Razo, and Maurer (2003) provide one answer to this question. The authors admit that a rational economic actor is interested in the protection of other actors' claims to property rights. When other actors' rights are protected, her

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[4]It also seems reasonable to assume that, as the agent of the favored group, representatives of the State will keep some portion of these rights for themselves.

own rights are more liquid — and hence more valuable. However, they claim that the direct benefits of having her own economic rights privileged over others' outweigh the liquidity advantages from an inclusive recognition and protection of property rights. Thus, economic actors are willing to trade the efficiency-maximizing benefits of an inclusive recognition and protection of others' property rights for economic institutions that more directly increase their future income streams through privileging their own property rights claims.

It seems reasonable that an economic actor benefits at least indirectly when others' contract and property rights are secure. The presence of the State as an unbiased third-party guarantor lends credibility to contracts with other economic actors. Without such protection, potentially profitable contracts with other economic actors are impossible. Furthermore, the security of other actors' rights augments the opportunities available to any one individual. When other actors are free to contract and invest without fear of expropriation, they engage in new economic activities that present opportunities to any one actor. However, the security of her own rights more directly affects her economic opportunities. The value of the State's contractual guarantees to one actor declines in the probability with which she will transact with another citizen. If, for example, an economic actor regularly transacts with some set of actors, she will value their contract rights more highly than if she does not. If the other set of actors is geographically distant, economically powerless, or from a different cultural or ethnic group, the economic actor may not value the protection of their rights. In a formal model, Weingast (1995) concludes that large divisions among economic actors encourages acquiescence in the expropriation of property rights.

This logic implies that citizens might create private property rights institutions

through log-rolling. Each citizen will support another's rights — which are mostly indifferent to her — in exchange for support for the protection of her own rights. However, if an economic actor benefits from the violation of another's rights, as North (1981) suggests, then she more likely will support the violation of others' rights. As previously considered, the State might expropriate some group's private property rights in order to transfer them to another group. Likewise, the threat of outright expropriation and the use of restrictions on private property rights might so cheapen some actor's rights that she will sell them far more cheaply than otherwise. Again, an "in" group member profits.

Thus, an economic actor does balance enlightened and narrow self-interest in her preference for property rights institutions, but narrow self-interests will often be weighed more heavily. A complex set of rules regarding the recording of private property rights and their enforcement yields the State and citizens a number of opportunities to engage in *property rights discrimination,* which I define as the violation of the property rights of some one group of citizens, usually for the benefit of some other group. Property rights discrimination creates two classes of economic actors. The "in" group enjoys the ability to transact with the State as a third-party guarantor and is confident that the State will not expropriate its rights. In contrast, the "out" group's rights are under siege both in terms of expropriation by the State and heavier restrictions on its rights. "Out" group members also lack an unbiased guarantor of contracts with members of the "in" group, since the State will favor the "in" group actor's rights in any dispute. Furthermore, "out" group members likely find it difficult to transact among themselves, due to the absence of a third-party guarantor. Thus, property rights discrimination damages both dimensions of an actor's property rights confidence. First, other actors may violate contracts, steal

her rights, or encroach upon them. Second, the State might expropriate or severely circumscribe her rights in order to force their transfer to a politically favored group.[5]

This conceptualization of the protection of private property rights challenges the implicit assumption of nearly the entirety of previous research in institutional economics — namely, that the protection of private property rights is a public good, an inexhaustible and non-excludable service to economic actors provided through economic institutions administered centrally by political actors. Instead, I assume that economic actors' basic incentives allow, even theoretically, the differentiation of property rights protection, with certain actors protected and others threatened. Such an assumption complicates the description of the security of private property rights. A focus on protection as a public good involves merely assessing its quality, as one might assess the quality of a road. Alternatively, assessing the quality of property rights institutions that are allowed, if only theoretically, to be discriminatory involves a more multi-dimensional effort. One might begin by measuring the central tendency of property rights security, asking how confident economic actors are in their private property rights, on average. However, the logic of property rights discrimination suggests that two different economies may evince very different patterns of property rights security but the same central tendency, as preliminary evidence shows in Chapter 1. Thus, a more complete evaluation will focus on the distribution of security. We might begin by measuring the variation in the protection of private property. In countries with little property rights discrimination, we might expect little variation about the central tendency. We might also describe the size of the "in" and "out" groups and the difference in their confidence level. Theoretically speaking, in countries with less property rights discrimination, we may expect a smaller "out"

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[5]In the remainder of this discussion, I refer to these two dimensions of property rights security as contract rights and property rights, respectively.

group whose loss of confidence is small relative to the "in" group.

2.2.3   Property Rights Discrimination: Effects on Economic Activity

The foregoing proposes that an economic actor will acquiesce to property rights discrimination when it benefits her self-interest. In Sections 2.3 and 2.4, I consider the *supply* side of this equation, discussing when self-interested politicians will offer property rights discrimination as recompense for political support. Here, I consider the economic effects, both microeconomic and macroeconomic, of property rights discrimination.

For institutional economists, The Coase Theorem (1960) remains an elegant exposition of the ability of private property rights institutions' ability to guarantee socially optimal arguments. Here, I render the Coase Theorem abstractly. Imagine a situation in which two economic actors claim the same property right, whether because a new resource has been discovered or due to a dispute over rights to an extant resource. The actors gain x and y from the property right, respectively. Also assume that x and y are denominated in dollars, and thus the payoffs to A and B can be combined in order to evaluate the social benefit. Some set of rules assigns the property right to either A or B; this set of rules, in combination with the designation of private property as the primary mode of ownership, comprises the economic institution at work here. For the purposes of this discussion, I leave the content of this assigning mechanism undefined. Table 2.1 displays the payoffs to A, B, and society, varying the payoffs according to the relative sizes of x and y and the recipient of the property right. If $x > y$, then assignment of the property right to A yields the social optimum (i.e., x); A gains x and B gains 0. Assignment of the property right to B in this circumstance causes A and B to bargain costlessly; A offers B y and keeps $x - y$, and the social optimum again obtains. The $x < y$ payoffs parallel this discussion.

Table 2.1: The Coase Theorem with zero transaction costs

	$x > y$	$x < y$
Property right assigned to A	$x, 0, x$	$x, y - x, y$
Property right assigned to B	$x - y, y, x$	$0, y, y$

This conventional view of the Coase Theorem states that, when transaction costs are negligible, the resolution of property rights disputes does not matter for economic efficiency, since economic actors will trade rights until they are in the most productive hands. Most accounts of the effect of economic institutions on economic performance end here. If economic actors discover a new resource, they maximize their aggregate gains by implementing an institution of private property over the resource. Within that institution, the initial allocation of private property rights matters little; even if, say, the institution tends to discriminate in favor of one actor or another, the social optimum is achieved. However, the resolution of the dispute does affect the *distribution* of payoffs. Returning to Table 2.1, we can see that the assignment of property rights affects the distribution of economic gains.[6] In short, the recipient of the property right improves his or her payoff. If $x > y$, then B's share of x increases from 0% to $\frac{y}{x}$% if he wins the property right. A's share decreases from 100% to $1 - \frac{y}{x}$ in that case. The winner of the property right gains more than she would if she did not win the property right.

Therefore, this conventional view of property rights institutions states that, even when property rights discrimination tilts the dispute mechanism (and thus payoffs from the rights in question) in one actor's favor, the social optimum is preserved. However, the presence of property rights discrimination complicates the Coase Theorem further since it likely raises transaction costs. As discussed previously, property rights discrimination makes transactions between the "in" and "out" groups and

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[6]See Polinsky, 1989, pp. 7-14 for a useful discussion that parallels this one.

Table 2.2: The Coase Theorem with surmountable transaction costs

	$x > y$	$x < y$
Property right assigned to A	$x, 0, x$	$x, y - x - 2t, y - 2t$
Property right assigned to B	$x - y - 2t, y, x - 2t$	$0, y, y$

within the "out" group difficult, since "out" group actors cannot be certain that their contract rights will be respected. Therefore, if a property right is assigned to one actor, property rights discrimination raises the cost of trading rights and thus threatens the benign conclusions of the Coase Theorem.[7] In the presence of positive transaction costs, Coase argues, "the initial delimitation of legal rights does have an effect on the efficiency with which the economic system operates. One arrangement of rights may bring about a greater value of production than any other" (Coase, 1960, 16). I now expand the illustration described in Table 2.1 to include positive transaction costs. Imagine the same situation, but with transaction costs $t > 0$, which the actors incur if they bargain over the property rights. In this case, t represents the difficulty of transacting due to property rights discrimination in the ruling institutions

Table 2.2 shows the payoffs to A and B when $0 < t < \frac{|x-y|}{2}$, which I term surmountable transaction costs. If the actor with the higher value for the property right receives the property right, the economically efficient result obtains, as before (top left and bottom right quadrants). However, if the actor with the lower value for the property receives the right, the actors incur transaction costs. For example, if B receives the property right and $x > y$, then A must offer y to B to gain the property right. However, an offer of y leaves B with only $y - t$ and thus A must offer B $y + t$, which leaves A with a payoff of $x - y - 2t$, since A must pay both her and B's transaction costs. Therefore, the bargain will happen only if $x - y - 2t > 0$, since

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[7]Coase himself admitted that the assumption of negligible transaction costs is "very unrealistic" (Coase 1960: 15).

Table 2.3: The Coase Theorem with insurmountable transaction costs

	$x > y$	$x < y$
Property right assigned to A	$x, 0, x$	$x, 0, x$
Property right assigned to B	$0, y, y$	$0, y, y$

0 is A's payoff if no bargain is struck. Therefore, for a deal to be struck t must be less than $\frac{x-y}{2}$.

In the presence of non-zero, but surmountable transaction costs, economic efficiency depends on the initial allocation of property rights. Crucially, *economic efficiency only obtains when the economic actor who will make more productive use of the right receives it.* If the property rights institution inhibits the ability of productive actors to obtain rights to valuable resources, economic efficiency likely suffers. For example, if $x > y$, x is the social payoff only if A receives the property right. Otherwise, the social result is $x - 2t$. Obviously, the inefficiency depends on the size of the transaction costs. Meanwhile, distribution depends on the allocation of property rights more so than before. If A is allocated the property right and $x > y$, then she receives x; if she does not, she obtains only $x - y - 2t$. The cost of not receiving property rights rises in the presence of transaction costs. However, if $t > \frac{|x-y|}{2}$, then no mutually acceptable bargain between A and B exists, as Table 2.3 shows. Transaction costs are insurmountable. Again, economic efficiency depends on the initial allocation of property rights, as does distribution, because sufficiently large transaction costs nullify the possibility of productive bargains.

This discussion suggests two effects of property rights discrimination on economic performance. First, property rights discrimination — modeled above as a tendency to tilt dispute resolution towards a particular actor, regardless of rights or public interest — likely re-distributes income from "out" group towards "in" group, just as North (1981) assumed. Regardless of the level of transaction costs imposed by prop-

erty rights discrimination, it re-distributes payouts. That effect is likely magnified from this static conceptualization of the problem, since the "in" group actor will put the property rights in question to use (whether or not the "in" group actor is more efficient), gaining benefits from that right that allow the acquisition of other rights, etc. Thus, we might expect the "in" group winner of the dispute to expand upon her advantage from this dispute over time. Furthermore, this explication has emphasized that "out" group economic actors, in addition to losing disputes over property rights, will be more prone to expropriation by the State and be constricted in their contracting behavior. Following the logic of institutional economics, such actors will invest little, transact only narrowly, depressing their economic performance. This leads to the following hypothesis:

Economic Performance Hypothesis 1: Property rights discrimination augments the economic performance of the "in" group while depressing economic performance in the "out" group.

Our analysis of the Coase Theorem also suggests a further drag on efficiency. In a less discriminatory property rights institution, the most productive actor eventually will transact for the rights to some resource. In a discriminatory institution, economic rights inexorably accrue to the members of the "in" group, however defined, regardless of whether that group will use the rights more efficient. Property rights discrimination thus limits the ability of the market to place resources in the most efficient hands, a critical foundation of claims of the superiority of institutions of private property. This logic suggests that:

Economic Performance Hypothesis 2: Property rights discrimination depresses macroeconomic performance.

2.3 Bargaining for Property Rights Institutions

Section 2.2 explored both the existence and repercussions of property rights discrimination. In doing so, it provides a more precise definition of the failure of property rights institutions, one that depends on thinking of private property rights institutions as differentiable goods that can be offered to only certain citizens and denied to others. This conceptualization enables a more incisive theory of why politicians fail to protect private property rights. Here, I argue that a change in the relative prices of resources initiates a round of bargaining over property rights institutions, in which economic actors wish to obtain institutional advantages, whereas politicians wish to extend their hold on political power. The results of bargaining over economic institutions will tend to favor actors who find it easier to build coalitions around their economic interests, as might be expected by the collective action problem.

2.3.1 Process

Bargaining over property rights is preceded by what could be termed "normal" economic activity. During this pre-bargaining period, extant property rights institutions govern allocation, dispute resolution, and enforcement. These institutions may be discriminatory or not, but I assume that they exist and function. In this sense, we may think of property rights institutions as a stock and bargaining over changes to those institutions as a flow. The set of property rights institutions thus shifts slowly as existing rules are modified and new rules added through bargaining.

Some exogenous change in the relative prices of resources initiates the bargaining period. Anderson and Hill (2003) argue that the process of changing property rights institutions usually begins with sharp changes in relative prices, the technology of protecting property rights, or the nature of collective action necessary to enforce

rights (125-138). Libecap (1989) also concentrates on the evolution of the market, including shifts in relative prices, the technology of enforcing property rights, and preferences (16). Constituents may discover a new resource important to economic activity, such as oil, gold, or land. Alternatively actors may find a new use for a well-known resource, such as discovering that a particular crop might grow well in land previously thought infertile. Whatever the specific instigator, economic actors' relative demands for resources changes in response.

Changes in relative demand and prices often will strain existing economic institutions and create demand among economic actors for institutional changes. For example, a technological change may make possible a particular form of economic activity that had not been imagined by property rights institutions, eliciting new questions regarding the rights of actors to use their property rights for certain ends. The discovery of a new resource or sudden re-valuation of an existing one might call into question the rights to the resource if they had been unclear due to a lack of interest in it. Thus, changes in demand for rights to resources will render existing economic institutions obsolete and create demand for changes. For past theorists, economic actors' demands primarily concern economic efficiency, which galvanizes economic actors to lobby for changes to property rights institutions that will restore economic efficiency For example, Anderson and Hill (2003) argue that economic changes renders current property rights institutions "inefficient." They place their narrative in an explicitly apolitical setting, emphasizing the efforts of private economic actors, rather than an interaction between economic and political actors. They argue that "Like any goods, property rights must be produced by entrepreneurs who recognize the potential gains from defining and enforcing them and are willing to devote resources to their formation" (122). They argue that in the face of inefficient

property rights, individual economic entrepreneurs recognize the ability to generate gains for themselves. Under such circumstances, property rights entrepreneurs will limit access to common pool resources, re-design contracts, etc. to build more efficient property rights institutions. Even in this account, with its emphasis on economic efficiency, the specter of property rights discrimination and its negative effects lurk. The authors admit that private entrepreneurialism does not always result in net gains, since actors may redistribute rights without actually increasing wealth (124-125). However, they do not explore the consequences of such redistribution.

In contrast, I place concerns over distribution and private gains at the center of bargaining over changes to property rights institutions. As discussed in Section 2.2 in a more static context, an economic actor places value primarily on property rights institutions' ability to protect her own private property rights. The same holds for changes to those institutions. I assume that the exogenous change in relative prices affects the interest of some subset of constituents. Each constituent prefers rules that will advantage her claims, which places her in conflict with other constituents who pursue the same goal. In many cases, they will be contesting the same rules, with each constituent preferring an institutional change that places her at odds with the others. For example, oil or some other valuable resource might be discovered beneath land whose property rights were unclear due to the fact that it was previously deemed worthless. Resolving those differences involves changes to rules concerning land ownership that will determine whose rights to the land are formally recognized. Each claimant will prefer rules that advantage her own claims. Alternatively, technological changes in the late 1990s (e.g., faster connection times to the Internet, larger hard drives) made it possible for people who had purchased music on compact discs to share it across the Internet, raising the at that point un-discussed question of

whether sharing digital music on such a scale violated record companies' property rights. The resolution of this dispute and the creation of new rules would curtail one group either consumers' or record companies' private property rights to digital music. In each of these examples, a key component is that the institutional changes made as a result of bargaining not only will assign the property rights in question, but also determine how that assignment will be enforced and how future disputes of a similar kind will be resolved. Thus, a stream of benefits hangs in the balance, with each disputant hoping to secure the stream through new institutions that advance her claims. In essence, each contestant in the bargaining seeks property rights discrimination that will block other individuals' claims while advantaging her own.

Libecap's (1989) account of bargaining for property rights institutions supports such a vision. His definition of contracting includes processes as informal as group bargaining over changes to a common resource (e.g., a neighborhood association bargaining over changes to the schedule for a park) to formal shifts in laws involving lobbying groups and professional government bureaucracies (4). In Libecap's formulation, demands for efficiency instigate shifts in property rights, but economic actors' concerns with their individual payoffs determines the institutional outcome. The modification of existing property rights institutions, therefore, mainly consists of resolving distributional conflicts among various economic actors:

> In bargaining over changes in property rights, disagreements can occur over the nature of either the aggregate benefits or the shares, but the heart of the contracting problem is devising political acceptable allocation mechanisms to assign the gains from institutional change while maintaining its production advantages ... *Accordingly, examination of the preferences of the individual bargaining parties and consideration of the details*

*of the political bargaining underlying property rights institutions are nec-
essary for understanding why particular property rights are developed and
maintained, despite imaginable alternatives that would appear to be more
rational.* (Libecap 1989; 5; emphasis added)

Economic actors thus hold strong preferences for the shape of changes to prop-
erty rights institutions. Knight (1992) strengthens this point further still, arguing
that distributional consequences drive changes to institutions. We can therefore as-
sume that an economic agent's main preference is that political leaders — whom we
assume administer property rights institutions centrally — modify economic institu-
tions in such a way that will advantage her particular interests. Sened (1997) also
argues that changes to property rights institutions are political in nature, involving
a complex bargaining process between politicians and economic actors. Politicians
thus face the demands of some subset of actors, each of whom prefers discriminatory
changes to property rights institutions. The outcome of bargaining depends on two
issues. First, will certain types or groups of economic actors lobby the politician
more effectively? Second, how do political institutions shift how politicians respond
to citizens' lobbying?

2.3.2 Collective Action and Property Rights Discrimination

Bargaining, initiated by an exogenous change in relative prices, involves a subset
of economic actors, who hold conflicting preferences over changes to property rights
institutions. Alternatively, we may conceive of bargaining as affecting two or more
broad classes of actors, each of which has a common interest in the bargaining.
In the digital music example described above, each set of competing interests was
comprised of a number of individual actors, pitting a group of record companies

and recording artists against a group of consumers and the companies profiting from the sharing. Each interest is linked by the common effect that changes to property rights institutions will have on their future economic gains, particularly because institutional change sets a precedent for future disputes in that area.

Thus, we might conclude the bargaining story by asserting that these interests each will lobby politicians for protection of their property rights claims. In contrast, Olson's (1965, 1982) research into collective action strongly implies that not all such groupings will be equally likely to lobby for their preferred changes to property rights institutions. Lobbying for rights incurs costs to the members of the group, whereas the common interest they pursue is essentially a public good. A self-interested actor will tend to shirk the effort needed to pursue the common interest, since she shares the fruits of her bargaining with the other members of the group, but does not share the costs. Furthermore, if the group successfully lobbies, she will not be excluded from the gains from lobbying. Given that each member of the group possesses the same incentive to free-ride, the group's ability to pressure politicians suffers. Rather than be surprised by certain groups' inability to lobby politicians, we should be surprised that any group successfully lobbies at all.

A key to Olson's (1965, 1982) narrative of collective action is understanding the characteristics of the group in question. First, Olson (1982) proposes that smaller groups will more readily overcome the collective action problem. Members of such groups, according to Olson, interact more frequently and more easily reach consensus.[8] Similarly, shirking is easier to detect in smaller groups. Smaller groups also more likely use selective incentives to solve the collective action problem, using positive side payments to reward those who contribute to the effort and negative ones

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[8]This logic follows the conclusions of Axelrod (1984), in which defection in the prisoner's dilemma game decreases when the two players believe they will play the game indefinitely.

to punish those who do not (Olson 1982: 23). These may be material or social.[9] For similar reasons, socially homogenous groups will find it easier to overcome the collective action problem and pressure politicians for mutually beneficial institutional changes. Homogeneous groups will more efficiently use selective incentives to corral wavering members (Olson 1982: 24) and find it easier to reach consensus on effort level and strategies for pressuring politicians for a favorable pattern of property rights discrimination. The effect of group size and social heterogeneity suggests a special case where constituents will more easily overcome the collective action problem. If a group is anchored by one constituent that stands to gain a great deal from victory in bargaining with politicians, that individual may willingly bear the group's costs of bargaining and allow free-riding.

The logic of collective action therefore supplies a first glimpse into why certain citizens will enter the "in" group that benefits from property rights discrimination, whereas others comprise the "out" group of unprotected rights and economic depression. When standing property rights institutions are rendered obsolete by economic and technological change, certain groups of economic actors will more readily overcome the collective action problem and demand beneficial institutional changes (i.e., inclusion in the "in" group on this particular matter). Other groups will not be able to do so. Thus, politicians are not presented with an accurate presentation of citizens' demands for institutional change; instead they view only the claims of groups that overcome the collective action problem.

Collective Action Hypothesis 1: Bargaining over property rights institutions favors interests that are smaller and more homogeneous, all else

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[9]As mentioned previously, Ellickson's (1991) study of cattle ranching in Shasta County, California focuses on the ability of ranchers to use negative social incentives (e.g., gossiping about bad neighbors to damage their reputations) to enforce cooperation.

equal.

Collective Action Hypothesis 2: Bargaining over property rights institutions favors interests that are dominated by one or a small group of actors, all else equal.

2.4   Political Institutions and Property Rights Discrimination

To this point, I have focused on how an economic shock places stress on property rights institutions, creating an opportunity for economic actors to pressure political leaders for changes to institutions that will favor their claims. During bargaining, an economic actor has an opportunity to bargain for property rights discrimination that will favor her interests. Furthermore, the collective action problem suggests that certain types of economic interests more forcefully lobby for property rights discrimination. That logic suggests that, regardless of national-level attributes, certain types of economic interests — more homogeneous, smaller, and represented by a dominant actor — will more likely overcome barriers to collective action and secure well-protected private property rights, often to the detriment of other actors' claims. Therefore, merging a bargaining approach to property rights institutions with a focus on collective action yields valuable insights into the membership of "in" and "out" groups.

Nevertheless, Section 2.2's focus on property rights discrimination established a higher standard for theories of the origins of property rights protection. This dissertation revolves around the question of how property rights security varies *within* countries and how that variation itself varies *across* countries, a question that a focus on collective action alone does not answer. In this sense, we might sub-divide this inquiry into two questions. First, how does property rights discrimination vary across

countries, generally speaking? Why does the distance between "in" and "out" groups vary across countries? Answering such questions allows an investigation into the causes of patterns of property rights discrimination across countries. However, a more specific knowledge of property rights discrimination would involve understanding not only how the distribution of property rights security varies across countries, but also identifying *which* citizens will tend to occupy the "in" and "out" groups. In other words, the highest standard for theories of property rights discrimination involves being able to predict *ex ante* the characteristics of a citizen that should predict their property rights confidence — and whether and how those characteristics vary across countries.

Here, I argue that a focus on political institutions — the rules by which politicians win and maintain political power — offers an answer to these questions. Political institutions structure the relationship between rulers and ruled and with it the nature of bargaining over property rights institutions. The promise of a theory based on political institutions is its ability to predict how a citizen's political characteristics affect her bargaining power over her property rights and how that relationship might differ across types of political institutions. It allows a theory not only of the general degree of property rights discrimination in some country, but also a more in-depth prediction of economic actors who should be expected to gain from property rights discrimination. I focus on two theories of political institutions. The first focuses on the role of democracy in changing politicians' receptivity to demands for property rights discrimination. The second, the selectorate theory of Bruce Bueno de Mesquita and his co-authors (2003) proposes a different pattern of property rights discrimination, based on the size of key political groupings.

2.4.1 Democracy

For many theorists, an understanding of the relationship between political institutions and the protection of private property rights is rooted in a consideration of how democratic political institutions alter politicians' motivations to protect private property. Two perspectives tend to dominate this effort, diverging in their assessment of democracy's effect on property rights security. The first relies on the median voter theorem (Black 1948; Downs 1957) and previous work into fiscal redistribution in democracies (Meltzer and Richard 1978) to claim that democracy threatens private property. The second focuses instead on institutional constraints on the executive to claim that democratic politicians pose less of a threat to private property (Olson 1993; Haber, Razo, and Maurer 2003). Here, I blend these two approaches to describe how property rights discrimination differs across regimes.

Many nineteenth century political economists, including Marx, assumed that universal suffrage would undermine the protection of private property rights, particularly because extending the vote would allow the propertyless to vote for the expropriation of the propertied (Przeworski and Limongi 1993: 52). A generalized version of this argument parallels Meltzer and Richard's (1978) influential model of fiscal redistribution, which has been translated into a model of property redistribution by Przeworski and Limongi (1993). In such a model, political democracy's effect on the center of political influence creates new incentives for property rights discrimination. When suffrage is restricted to the propertied classes, the median voter will prefer property rights institutions that protect private property, assuming that property ownership is right-skewed (i.e., that most citizens own very little property and a very few citizens own a large amount of property). Extending the vote to all adult citizens shifts the median voter and with her the collective preference for property

redistribution. The median voter now owns less property than the average and will support the redistribution of property, from rich to poor. In this formulation, democratization threatens the institution of private property through the ballot box, as voters pressure self-interested politicians to expropriate the rights of the rich and redistribute them to the poor.

My bargaining approach to property rights discrimination recasts this argument. Both democratic and non-democratic leaders maximize their probability of retaining power. In non-democracies, in which only rich landowners participate in the political process, bargaining over property rights institutions focuses on protecting and extending the rights of this narrow subset of the population. Past theorists characterized such outcomes as protective of private property. However, a focus on property rights discrimination suggests that any bargaining in non-democracies that pits the claims of small landholders against large landowners will likely favor the latter. Property rights institutions will impede property ownership for the poor while facilitating the expropriation of their rights by the rich. Thinking in terms of the collective action problem discussed previously, non-democracy exacerbates the problem by promoting the rights of a smaller, homogenous group of landowners that already more likely lobbies for property rights protection. This argument implies the following:

Democracy Hypothesis 1: *Ceteris paribus*, non-democratic regimes will discriminate the protection of private property against the poor and in favor of the wealthy.

Democratization shifts the pattern of property rights discrimination by changing the identity and preferences of the median voter. When modifying property rights institutions in response to demands by citizens, political leaders seeking reelection

will seek to erode the rights of large landowners and redistribute those rights to those with little or no property.[10] Thus, the mean quality of property rights institutions may not shift, but the distribution of property rights confidence will. A different pattern of property rights discrimination will emerge, one that counteracts the effects of collective action, as a larger group of actors finds its rights more duly represented by the State.

> **Democracy Hypothesis 2:** *Ceteris paribus*, democratic regimes will discriminate the protection of private property against the rich and in favor of the poor.

The foregoing logic states that the expansion of political participation in democratic countries reshapes politicians' preferences and with them the pattern of property rights discrimination. However, it does not question whether politicians' freedom to act on those preferences might vary systematically across regimes. A focus on executive constraints answers that question and thus helps to complete a portrait of democracy and property rights discrimination. Kydland and Prescott (1977) explore the time-inconsistency problem in investment. A politician can always promise protection of a citizen's private property rights, but after a citizen invests, the politician can expropriate the fruits of that investment. Politicians find it difficult, therefore, to commit credibly to protecting private property. Olson (1993) contends that an autocrat is a kind of "stationary bandit," who will protect citizens from any threats to their private property rights. However, an autocrat faces few constraints on her power and retains the power to expropriate private property herself. In contrast, stably democratic countries develop limits on the executive's power — a powerful

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[10]Beginning with Meltzer and Richard's (1978) central insight, Franzese (2002) argues that redistribution in democracies increases in the voter participation rate and the skew of the underlying income distribution. That argument, which receives ample empirical support, suggests strongly that the threat to property rights in democracies depends on the intersection of the underlying distribution of property and voter participation.

legislature, independent judiciary, etc. — that restrict her freedom to expropriate property (Olson 1993: 572). Haber, Razo, and Maurer (2003: 5) agree that limited government prevents expropriation and reduces economic actors' fear of expropriation.

This logic suggests strongly that, taking a politician's motivations as given, a democratic leader expropriates private property less easily than a non-democratic leader.[11] Combined with a focus on electoral institutions, this reasoning suggests that while autocrats and democrats both prefer to discriminate the protection of private property, autocrats more easily discriminate against the poor than democrats discriminate against the rich:

> **Democracy Hypothesis 3:** *Ceteris paribus*, democratic regimes discriminate the protection of private property less severely than non-democratic regimes.

This discussion predicts different patterns of property rights discrimination in democratic and non-democratic regimes. However, it leaves unexplored the question of whether, on average, property rights institutions function better in democratic regimes. Answering that question depends on several factors, including the underlying distribution of property, political participation in democracies, and the effect of constraints on the executive. I leave this question open for empirical exploration in Chapter 4.

2.4.2 The Selectorate Theory

Theorists interested in the relationship between political institutions and the protection of private property rights often begin by considering the role of democracy.

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[11]Clague and his co-authors (1996) argue that democratic regimes require a period of time to develop the institutional mechanisms to limit predation. Thus, the institutions restraining a new democrat may prove as weak as those restraining an autocrat.

Scholars vary widely in their conclusions to these questions, depending on whether they focus on electoral pressures or institutional constraints on the executive. My adaptation of democratic theory to the question of property rights discrimination attempts to bridge these gaps, by blending together these long-standing theories into a cohesive account of bargaining over property rights institutions in democracies. However, that account leaves certain issues outstanding. In particular, theorists focusing on democracy often do not consider how different forms of non-democracy diverge in terms of their protection of private property. Bruce Bueno de Mesquita and his co-authors (2003) (hereafter referred to as BDM^2S^2) construct a formal model of political institutions that differentiates different forms of regimes and has strong implications for the pattern of property rights discrimination.

The theory begins with the assumption that politicians maximize their probability of winning and holding office. A country's selectorate, of size S chooses among competing candidates for office. A political captures political power by winning the support of a winning coalition of citizens of size W.[12] Political systems vary in two major ways, according to the theory. First, they vary in the sizes of W and S. In certain political systems, such as mass democracies, nearly all adult citizens comprise the selectorate, making it large. In other systems, such as military juntas, the selectorate is far smaller, since only a small group of privileged citizens participate in politics. Similarly, the size of W varies across regimes, holding S constant. For example, in a mass democracy, we would expect W to be roughly half the size of S, since democratic leaders must win a majority of citizens to win and retain office.[13] In contrast, in one-party democracies, we might expect a similarly large selectorate, but

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[12]By necessity, $S \geqslant W$.

[13]Democratic politics are more complicated than this conceptualization, of course. However, since the focus of the theory is to compare political survival in a wide range of regimes, including non-democracies, the generalization suffices.

a smaller winning coalition, since political leaders rely mainly on the support of the party hierarchy than on a majority of all selectors. Similarly, we might differentiate small-S regimes by the size of the winning coalition. In certain regimes, the winning coalition may consist of one ruling family, whereas in other regimes, it may consist of the entire military.

Second, regimes vary in the proportion of W to S. One can interpret the ratio W/S as the probability that a member of the winning coalition will be a part of the next winning coalition if a new leader takes power. If W/S is low, then members of the winning coalition are not likely to retain their status in future governments. If W/S is high, members of the winning coalition are very likely to retain their status in future governments. This probability drives what the authors term the "loyalty norm," since a winning coalition member's probability of retaining her status in future governments depends on the ratio. When the ratio is low, members of the winning coalition will possess great loyalty to the leader in power, since that leader's expulsion will threaten her status. Conversely, a high ratio decreases the winning coalition member's loyalty to the leader, since she is relatively confident future governments will require her support.

The theory therefore classifies regimes by placing them on a two-dimensional space, as demonstrated in Figure 2.1, where regimes vary continuously in the size of the winning coalition and selectorate.[14] Large-W, large-S regimes, located in the upper right-hand portion of the graph have a relatively weak loyalty norm; because W/S is relatively high, winning coalition members are reasonably certain they will be included in future winning coalitions and thus possess little loyalty to the leader. These likely include competitive democracies in which a larger percentage of the

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[14]The 45-degree line in the figure reflects the restriction, discussed above, that the size of the winning coalition cannot exceed the size of the selectorate.
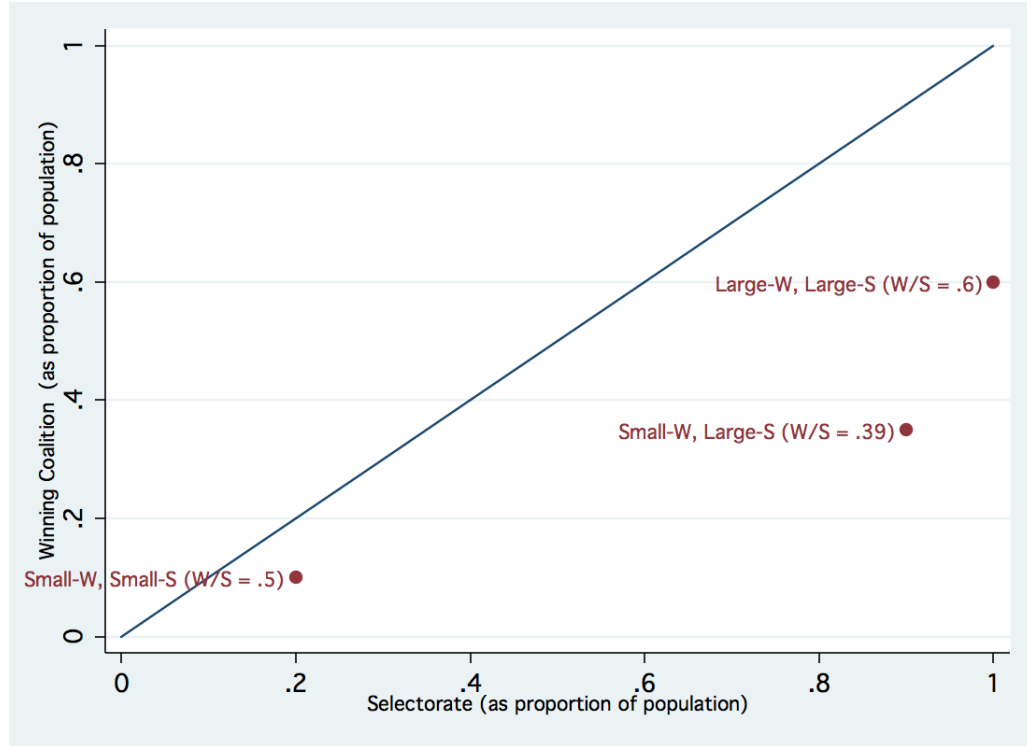
Figure 2.1: Regimes according to the selectorate theory

population is free to vote and political leaders must retain at least half of voters to retain political power. The theory, however, also differentiates non-democratic regimes, according to the size of the selectorate. Regimes with a small selectorate and small winning coalition members (e.g., monarchies), located in the bottom left-hand corner of the graph restrict political participation to a small group of citizens. The combination of a small winning coalition and restricted political participation, however, implies a relatively high value of W/S, or a relatively weak loyalty norm. In other non-democracies, such as in one-party democracies, political participation is expanded, since all citizens can vote. However, leaders can retain political power with a far smaller winning coalition than in democracies, since the support of the hierarchy of the ruling party is key to political power. The value of W/S is smaller than in democracies and other non-democracies, though not dramatically so, implying that

winning coalition members are, all else equal, more insecure in their position.

A leader maintains loyalty from her winning coalition by providing it a mixture of goods that she pays for out of tax revenues. The basket of goods is comprised of private goods provided only to the winning coalition and public goods enjoyed by the entire polity (including non-selectors). Public goods improve the lives of all citizens because they are non-excludable and therefore improve economic performance. In contrast, private goods benefit only the winning coalition. BDM^2S^2 argue that the size of the winning coalition and selectorate critically affect the provision of public and private goods. Holding the size of the selectorate constant, an increase in the size of the winning coalition entails two related but analytically separate effects on the mixture of goods the leader offers to retain the support of the winning coalition. First, it raises the ratio W/S, weakening the loyalty norm. As a result, each member of the winning coalition requires a higher level of goods to remain loyal to the leader, since she is confident future winning coalitions will include her.

Second, an increase in W (again, holding S constant) increases the number of people who must be provided goods. Therefore, the two effects are reinforcing in that each increases the cost of retaining the support of the winning coalition. The result is that the leader must provide more goods for more people. She may respond to this pressure by taxing more efficiently and providing more private goods to the winning coalition. However, the increase in W causes the leader to switch from private to public good provision in her quest to remain in office. With a small W, the leader can use her income from taxation to provide private goods to the winning coalition, thus purchasing political support relatively cheaply. Public goods that require large investments do not represent the optimal manner to purchase support. However, as W increases, the cost of private good provision increases, such that public good

provision becomes the optimal strategy for purchasing support. Providing public goods also assists in increasing the per-member payoff for the winning coalition. Instead of more efficient extraction, leaders increase the size of the pie from which to extract.

The selectorate theory's focus on private goods offered only to the winning coalition and public goods that benefit the entire population translates readily to a focus on property rights discrimination. A political leader bargains with citizens over the shape of institutions that protect private property. Those institutions can be designed so as to only protect the property rights of the winning coalition or to protect the rights of all citizens, regardless of political grouping. The former involves converting the protection of private property into a private or club good accruing only to the politically influential. For example, we might imagine a leader deploying the military and/or police to protect particular citizens' private property rights from violations, while making no effort to protect other citizens' rights. Similarly, a political leader might create a small, politically dependent court system that she can control easily, in order to ensure that winning coalition members win any disputes over private property rights. Conversely, a political leader may create institutions that protect all citizens' rights and adjudicate disputes among citizens fairly or on the basis of efficiency. In short, the leader can choose to protect private property as a public good. Examples may include a judiciary that is independent of her influence or a police force equipped to respond to all citizens' needs.

As in the general case, the logic of the selectorate theory implies two mutually reinforcing effects of an increase in the size of the winning coalition. First, the cost of protecting the winning coalition's private property rights increases. Taking an example from above, it becomes far more expensive to station troops and police to

protect winning coalition members' property when that group increases in size. Similarly, the bureaucratic costs of administering the rights of the winning coalition also increase. Second, the concomitant rise in W/S weakens the loyalty norm, meaning that each member of the winning coalition requires more goods to remain loyal to the leader. In response, the leader will re-focus on providing public goods that increase economic performance and allow a higher level of benefits to the winning coalition. That change in her incentives will motivate her to protect the private property of a larger group of citizens to increase economic activity. Together, these two effects will therefore shift her focus from protecting only the winning coalition's rights to protecting private property rights as a public good. The result will be public institutions protecting private property.
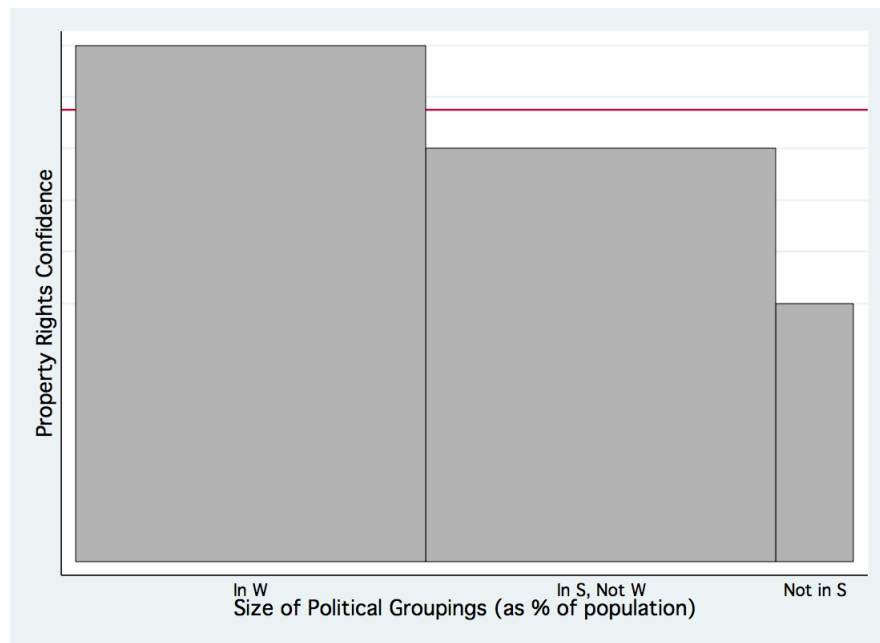
Figure 2.2: Property rights discrimination in large-W regimes

As before, we may state the argument in terms of regime types described above and in Figure 2.1. Figures 2.2, 2.3, and 2.4 illustrate property rights discrimination in these ideal type regimes. Each political grouping — winning coalition, selectors not

in the winning coalition, and citizens outside the winning coalition — are depicted along the horizontal axis. For each grouping, the width of the column represents the size of that political grouping as a proportion of the total population and the height of the column represents the group's property rights confidence. For example, in Figure 2.2, the selectorate is 90% of the population and the winning coalition is half the size of the selectorate, or 45% of the total population. 10% of citizens are outside the selectorate. In such a regime, winning coalition members are more secure in their private property rights than selectors outside the winning coalition, but not excessively so. In turn, non-selectors also will have access to public property rights institutions, though we may expect that they do suffer slightly relative to selectors.[15] We may expect that political leaders will tilt property rights institutions slightly in favor of the winning coalition and against non-selectors, but the extent to which they do so is limited. Altogether, mean confidence in the polity will equal a weighted average of the three groups, with that average depicted by the horizontal line; for a large-W regime, that mean confidence is quite high because no one political group suffers severely due to property rights confidence; the gap between winning coalition members and non-selectors is relatively small.

In regimes characterized by a small winning coalition and a small selectorate, non-selectors comprise a far larger percentage of the population, as evidenced by the width of that column.[16] In such a regime, political leaders likely discriminate in favor of the winning coalition, building property rights institutions that favor the protection of their rights. However, the weak loyalty norm of the winning coalition constrains political leaders' ability to discriminate property rights protection, since they must

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[15]I assume that on a one-point scale, confidence ranks 1 (the maximum) for wining coalition members, 0.8 for selectors outside the winning coalition and 0.6 for non-selectors.

[16]For the purposes of Figure 2.3, the selectorate is assumed to comprise only 20% of the population and the winning coalition half the size of the selectorate. Non-selectors thus comprise 80% of the population.
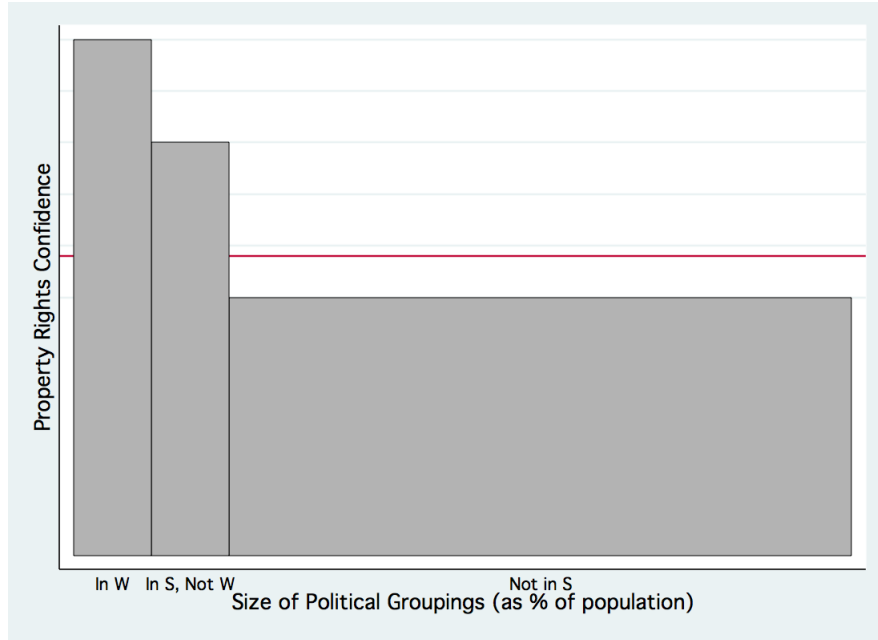
Figure 2.3: Property rights discrimination in small-W, small-S regimes

promote economic performance sufficiently enough to afford to pay off the winning coalition. In order to do so, they must at least partially protect the private property rights of the other political groupings. Non-selectors suffer relative to members of the winning coalition — more so than in democracies — but not so severely that growth collapses.[17] However, property rights discrimination in favor of the winning coalition does decrease mean property rights confidence in such countries, as evidenced by the position of the horizontal line. In contrast with large-W regimes, the distribution of property rights confidence is more skewed and the mean level of that confidence is lower.

The distribution of property rights confidence shifts once more in non-democracies with a large selectorate, as depicted in Figure 2.4.[18] As discussed earlier, in such regimes, the selectorate is nearly as large as that in a democracy, differentiating

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[17]For the purposes of Figure 2.3, I assume that on a one-point scale, confidence ranks 1 for wining coalition members, 0.8 for selectors outside the winning coalition and 0.5 for non-selectors.

[18]For the purposes of Figure 2.4, the selectorate is assumed to comprise 90% of the population, as in Figure 2.2. However, the winning coalition comprises only 30% of the winning coalition or 27% of the population. 10% of the population is outside the selectorate.
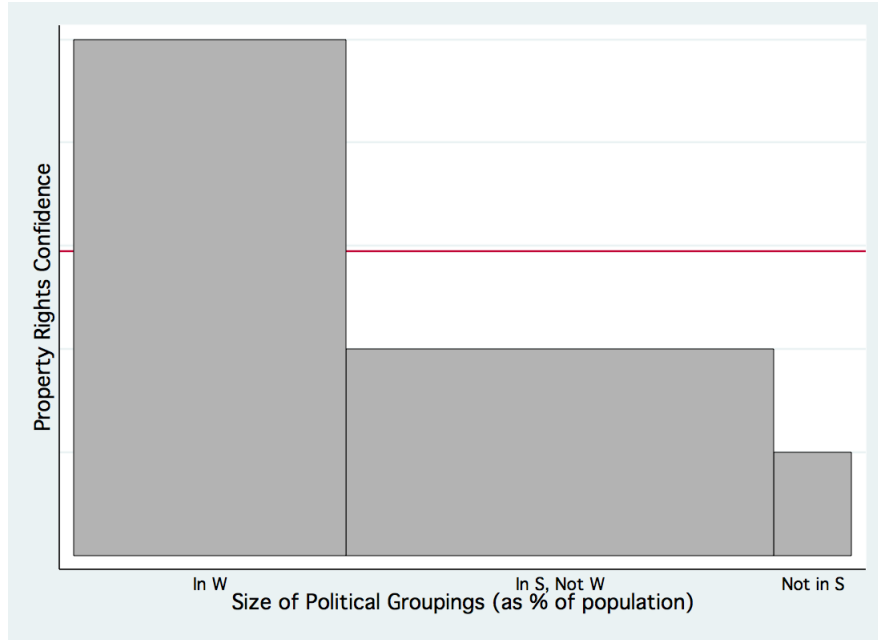
Figure 2.4: Property rights discrimination in small-W, large-S regimes

these regimes from other non-democracies. The winning coalition, in turn, is larger than in a small-W, small-S regime, though smaller than in a large-W regime. The leaders of such regimes will advantage the protection of the winning coalition's property rights, since the smaller loyalty norm is more constraining for members of the winning coalition. However, the larger winning coalition implies that leaders will find it difficult to protect the winning coalition's private property rights as a club good. Therefore, such regimes will build some public institutions to protect private property, implying that selectors not in the winning coalition and non-selectors will not suffer as extensively as they would have if the winning coalition had been very small [19]

This analysis suggests a mean level of property rights confidence that is similar to that of the small-W, small-S regimes depicted in Figure 2.3. In terms of national measures, therefore, we might expect a very similar level of property rights confidence

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[19] Jim Morrow, one of the selectorate theory's co-creators, has much improved this discussion by emphasizing the presence of relatively large winning coalitions in these kinds of regimes.

in these two non-democratic regimes. However, their *distribution* of property rights confidence is quite different. In small-W, small-S regimes, we should observe an advantaged elite and large majority with middling confidence, as shown in Figure 2.3. In contrast, the regimes represented in Figure 2.4 will have a larger grouping with high property rights confidence, and a smaller majority with lower property rights confidence.

2.5 Conclusions

This chapter expands upon ideas summarized in Chapter 1 to build a political institutional theory of property rights discrimination. As such, it builds upon existing theories from institutional economics, while making three simple yet fundamental changes to how scholars traditionally have thought about property rights. First, I reconsider how property rights institutions fail. As discussed in Chapter 1, most accounts of the effect of private property rights institutions on economic performance assume implicitly that politicians cannot differentiate the provision of property rights protections. Economic institutional failure thus consists of politicians' expropriation of private property or their failure to protect private actors' rights from each other. In either case, scholars generally have assumed such institutional failures to be public in nature, a decline in the quality of a public good that in turn decreases macroeconomic growth. The primary theoretical contribution of this dissertation is thus quite simple — I assume that politicians can decide strategically *whose* rights to violate or allow to be violated. Doing so is consistent with North's (1981) vision of a predatory state in which politicians use redistribute property rights to confer benefits on favored constituents. Section 2.2 carefully develops this conceptualization of property rights discrimination. It recasts the empirical puzzle discussed in Chapter 1 — which

portrayed shifting distributions of property rights confidence among firm managers across countries — in a new light.

Second, this chapter revamps current understandings of the impact of protecting private property rights. As discussed in Chapter 1, the intuition linking property rights protection to long-term macroeconomic performance relies on microeconomic logic — specifically, that an economic agent who fears the violation of her economic rights will refrain from investment, innovation, etc. Subsequent empirical research has committed a kind of ecological inference, justified in part by the assumption that the protection of private property rights represents a public good. By thinking the protection of private property rights as a distributed good, I disaggregate the link between property rights protection and economic growth. Property rights discrimination creates parallel economies of protected and unprotected rights. In turn, we should expect the "in" group to thrive economically, while the "out" group stagnates. Property rights discrimination thus helps to create patterns of economic inequality. Thinking at the macroeconomic level, property rights discrimination also depresses growth.

Finally, this chapter builds on existing bargaining models to offer a political institutional explanation of property rights discrimination. If property rights discrimination exists, then an explanation of its origins must account for how the protection of private property rights varies within countries and how that within country variation itself varies across countries. The bargaining model I develop in Sections 2.3 and 2.4 offers such an explanation. In that model, self-interested economic agents, responding to exogenous changes in relative prices, demand changes to existing property rights institutions. Agents will vary in their ability to overcome the collective action problem and lobby politicians for changes beneficial to their interests, imply-

ing that smaller, more homogenous groups of agents will more likely inhabit the "in" group of protected rights. These dynamics likely present themselves across countries. However, bargaining over property rights institutions also depends on the interests of politicians. Differences in political institutions predict not only the the general pattern of property rights discrimination, but also *whose* rights likely suffer.

This chapter thus yields three sets of empirically verifiable predictions. First, property rights discrimination exists and varies meaningfully across countries. We should expect a relatively uniform distribution of confidence in certain countries and a more discriminatory distribution in others. Second, property rights discrimination exerts a substantively significant effect on economic activity. Citizens with less confidence in their private property rights will suffer economically relative to their more confident counterparts. Third, property rights discrimination will depend on the nature of political institutions. In the next two chapters, I test these predictions using firm-level data from the World Bank.

CHAPTER III

Property Rights Discrimination: Measurement and Economic Repercussions

3.1 Introduction

In Chapter 2, I make three related empirical claims. First, I contend that self-interested politicians discriminate the protection of private property rights, using their power over the design of institutions to protect certain citizens' rights, but not others'. Second, I propose that certain sets of economic actors — richer and more politically connected — will in general more adeptly bargain for State sanction and protection of their rights. Furthermore, political institutions affect the shape of property rights discrimination. Finally, property rights discrimination tilts economic activity towards an "in" group of protected property rights and away from the "out" group of insecure rights, in the process also depressing aggregate performance. In this chapter and the next, I conduct careful statistical tests of these core propositions. Here, I concentrate on the first and last of these. I use firm-level surveys to design new measures of property rights discrimination that attest to its existence in a wide range of its countries and to the meaningful variation in its shape across countries. I then leverage those measure to estimate the effect of property rights discrimination on both micro and macroeconomic behavior, particularly informality. As we shall see, this analysis tentatively supports the core narrative of Chapter 2.

This is no small task, particularly in terms of measurement. As I discuss in Section 3.2, extant efforts to measure the quality of economic institutions neglect the possibility that the protection of private property is distributed unevenly within a country. Instead, they must make strong and often implicit assumptions regarding that justify their measures as accurate representations of an entire population's property rights security. In place of these efforts, I contend that firm-level data from the World Bank allow us to answer these questions with a new and exciting degree of precision. As part of its *Enterprise Surveys* (*ES*), the Bank has surveyed over 75,000 firms in 105 countries between 2002 and 2006. The surveys contain an impressive array of data on each firm, including its basic characteristics and recent performance.

Most importantly for the purposes of this study, each firm manager also answers a battery of questions regarding the security of her firm's private property rights, including her confidence in the ability of the judicial system to fairly resolve disputes over rights and in the tendency of the State to encroach on private property through excessive regulation. These data are certainly imperfect — they likely understate the degree and consequences of property rights discrimination and the perceptual basis of the data may contaminate the comparison of firms within and across countries. Nevertheless, the careful analysis of these data paints an empirical portrait of property rights discrimination. As predicted in Chapter 2, the protection of private property rights does vary *within* countries. Moreover, variation in property rights confidence itself varies meaningfully *across* countries. Countries with a similar mean level of property rights confidence often divergent distributions of that confidence.

In addition to varying meaningfully across countries, property rights discrimination has important repercussions for firm behavior. Firm managers with less confidence in their private property rights — i.e., those in the "out" group — invest less,

operate at lower capacity, and hide a greater percentage of their revenues from the State, all else equal. Concentrating on the question of firm informality, I find that a firm manager's individual decision to hide revenues from the State depends far more strongly on the security of her own private property rights than on the mean level of property rights security in her country. Finally, this trend reverberates at the macroeconomic level. Total informality responds strongly to variation in property rights confidence; in countries with a high degree of property rights discrimination, increases in the mean level of property rights confidence will not reduce informality.

The remainder of this chapter proceeds as follows. Section 3.2 describes previous attempts to measure the security of private property rights, highlighting their distributional assumptions regarding government protection of individual rights. Section 3.3 describes the *Enterprise Surveys* in detail, particularly the questions related to property rights. In it, I also explain the new variables I create as summary measures of firm managers' property rights confidence. With these in hand, I describe the major patterns of property rights discrimination across the countries surveyed by the World Bank. Section 3.4 endeavors to demonstrate the effects of property rights discrimination by testing the effect of property rights confidence on key components of firm performance, including capacity utilization, transactional behavior, informality, and investment. Section 3.5 discusses these results and looks ahead to Chapter 4.

3.2 A Primer on Measuring Property Rights

Chapter 2 predicts an empirical regularity — property rights discrimination — unexpected by extant research in institutional economics. Consequently, a central goal for this chapter is to search for measures that allow us to differentiate this

been constrained by data availability (Knack and Keefer 1995: 207-208). Previous studies relying on measures of political freedoms and/or political instability had only indirectly captured the relationship North (1981, 1990) and others had proposed.[3]

Identifying an opportunity to improve empirical testing, they propose that analysts create "more direct measures of the institutional environment" (Knack and Keefer 1995: 208). Their discussion strongly suggests the ambition in their measurement strategy; unlike previous attempts, they propose that data can be used to more directly measure the underlying construct of the institutional environment, rather than corollaries of it. To build those indicators, they rely on data from two private firms offering advice on international investment risk: the PRS Group and the Business Environment Risk Intelligence (BERI). Each of these firms publishes multiple risk guides for businesses contemplating investments in foreign countries. Knack and Keefer (1995) use the PRS Group's *International Country Risk Guide (ICRG)* as the basis for their measures. In particular, they leverage the *ICRG's* index of political risk, which involves 12 component variables and as many as three sub-components per component, with each assigned a particular number of points. BERI offers several products, each of which include political variables. Each firm relies on its staff and/or surveys of outside experts to create these risk guides, which blend both quantitative and qualitative data.

With these data in hand, they cite North's (1981) delineation of contract and property rights as their guide. To measure a particular country's security of contractual rights, they rely on the "rule of law" and "repudiation of contracts by gov-

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[3]For an example of research identifying political instability as a threat to private property — and in particular, the probability of expropriation by political leaders with short time horizons — see Barro (1997). For a dissenting view, see Haber, Razo and Maurer (2005). For an example regarding political and civil rights, see Kormendi and McGuire (1985). In a review of the effect of democracy on economic growth, Przeworski and Limongi (1993) also discuss the link between political and civil rights and the protection of private property.

ernment" measures from the *ICRG* and "contract enforceability" from the BERI.[4] For measures of property rights, they use the "expropriation risk" measure from the *ICRG* and "nationalization potential" from the BERI. In each case, the variables seem to correspond reasonably closely to the security of contractual and property rights. However, rather than using these measures as predictors of economic growth, either combined into a one-dimensional index of private property rights or as separate indicators of contractual and property rights, they add more variables from the ICRG and BERI and create two measures, one based on each source. They add measures of corruption and bureaucratic quality from the *ICRG* and measures of bureaucratic delays and infrastructure quality from BERI. They justify the inclusion of these measures because they represent measures of "government credibility" and "proxies for the general efficiency with which government services are provided and for the extent and damage of rent-seeking behavior" (Knack and Keefer 1995: 211). In short, they create two measures of general "institutional quality."

These coding decisions raise the question of concept development, particularly the question of the breadth of the measures of the underlying construct. Knack and Keefer explicitly justify their study as a test of "the impact of property rights on economic growth" (1995: 207). However, both their description of the basic problem and their measures of it begin to conflate a number of different issues under the rubric of property rights.[5] For example, in the first sentence of the article, they propose the following:

> Few would dispute that the security of property and contractual rights
> and the efficiency with which governments manage the provision of public

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[4]The "rule of law component from the *ICRG* has since been re-named the "law and order" component.

[5]Knack and Keefer's (1995) inclusion of other aspects of what might be termed "good governance" in a measure of the security of property rights reverberates in the World Bank's *World Governance Indicators* and attempts by the Fraser Institute and Heritage Foundation to measure "economic freedom."

goods and the creation of government policies are significant determinants
of the speed with which countries grow. (207)

The provision of public goods (e.g., roads, communications, electric power) and implementation of sound macroeconomic policies represent important focuses for the study of economic performance. Yet the authors never pause to justify exactly how these important factors affect the underlying construct they purport to measure — the security of citizens' private property rights. High taxation and crumbling roads indeed may restrict an actor's ability to use her resources productively, but a higher burden of proof is needed to characterize those barriers as *inherently* concerning property rights. The "concept creep" present in their measurement strategy risks debasing the relationship between private property rights and economic growth into a tautology — *i.e.,* that countries with a high-quality environment for economic growth tend to grow faster.

These more conceptual difficulties are exacerbated by their use of the *ICRG* and BERI indicators. As discussed above, both the PRS Group and BERI publish risk guides for potential international investors. According to the PRS Group, its guides are designed to help "institutional investors, banks, multinational corporations, importers, exporters, foreign exchange traders, shipping concerns, and a multitude of others" (Coplin, O'Leary, and Sealy 1996: 27). Advertisements of the BERI measures speak of imparting a strategic advantage to companies who use the ratings. The inherent purpose of their data collection efforts is to assist foreign businesses contemplating economic relationships with the country in question. Keefer and Knack's (1995) use of such data as a measure of a country's institutional quality thus makes one of two somewhat unpalatable assumptions about the *distribution* or property rights confidence. First, they might assume that a government's treatment of foreign

businesses (as measured by the severity of restrictions on the repatriation of capital) represents an excellent proxy for the government's protection of citizens' private property rights. Second, they might assume that its treatment of foreign businesses itself is the key to macroeconomic performance. The authors seemingly gravitate to the former assumption, given their emphasis on North's (1981, 1990) discussion of private property. This tendency reflects a particular conception of the distribution of the security of private property rights. In short, the authors assume that the protection of private property rights is fixed in an economy across its citizens (*i.e.*, is a public good) and that that fixed level of protection can be described well by a government's friendliness towards large foreign businesses.

Knack and Keefer's (1995) ambitious measurement strategy provides a convenient point of departure for the remainder of this discussion. Within institutional economics, their approach has remained hegemonic. Knack and Keefer's (1995) measures have been used in a number of influential studies of macroeconomic performance (Acemoglu, Johnson, and Robinson 2001, 2002; Hall and Jones 1999). However, two nagging issues — conceptual breadth and the conceptualization of property rights security as being distributed — remain, issues that remain with us as we continue this review.

3.2.2 The *Doing Business* Project

The World Bank's *Doing Business* project, seemingly as a counter to the concerns with Knack and Keefer's (1995) measurement efforts, has sought to create *objective* measures of property rights security, as opposed to Knack and Keefer's (1995) reliance on subjective assessments provided by outside experts. Specifically, the *Doing Business* project team concentrates on the costs of executing a narrow set of critical business activities. According to its 2008 report, it investigates "the regulations

that enhance business activity and those that constrain it" (World Bank 2008: i). Institutional economics' concerns comprise the core of the underlying construct the project wishes to measure. In its initial report, the World Bank argues that "no indicators assess specific laws and regulations regarding business activity or the public institutions that enforce them" (World Bank 2004: viii).

For the most part, the project focuses on the roadblocks governments create for entrepreneurs (i.e., firm owners and those seeking to start new firms), particularly by raising the cost of legally starting a business, transferring ownership of property, etc. In this sense, they argue, a critical challenge for many under-developed countries remains removing burdensome regulations that destroy entrepreneurial activity (World Bank 2004: xiv). Their claim regarding the negative effects of regulation is rooted in the logic of institutional economics; regulation as they define it results in the expropriation of private property rights. Rather than ban private property rights as such, governments effectively accomplish the same goal when they use regulations to limit the ability of individuals to use their private resources at key points of their business' lives.

However, the project implicitly recognizes the first dimension of private property rights — the government's protection of citizens' private property rights from violations by other citizens. In its first report, the *Doing Business* project team states that: "Good regulation does not mean zero regulation . . . . Governments are better off defining the property rights of their citizens and protecting them against injury from other citizens and from the state" (World Bank 2004: xv-xvi). The research team suggests that, properly conceived, regulation plays a normatively positive role in supporting private economic activity, particularly by defining citizens' rights and protecting them from encroachment by other citizen.

The *Doing Business* project then implements a novel strategy to measure the underlying constructs just described.[6] First, the project defines ten important entrepreneurial activities: starting a business; obtaining licenses for construction; hiring and firing workers; registering property; obtaining credit; investing in local businesses; paying taxes; trading internationally; enforcing contracts that have been violated; and closing the business. For each of these activities, it carefully describes a case study that may be compared across countries. Put differently, the creators of the dataset wish to measure an underlying construct — the ease of private entrepreneurial activities.

I concentrate on starting a business as one example of this method. In that area, the project team assumes that a group of five citizens create a 100% domestically owned limited liability company operating in the country's most populous city. The case also assumes that the company has between 10 and 50 employees (all of whom are nationals), start-up capital of 10 times per capita GDP, and turnover of 100 times per capita GDP. Finally, the case assumes that the company does not own property and engages in generic industrial and commercial activities that do not involve a special tax regime or regulatory scheme. This detailed description is meant to ensure comparability of regulations across countries. In order to measure the costs of starting a business, the project team describes the case study in a survey, which is forwarded to experts — academics, government officials, accountants, businesspeople, and lawyers — within each of the countries sampled.[7] Local experts complete the survey, describing the number of procedures, the time and cost to complete them,

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[6]This strategy plainly finds its inspiration in Hernando de Soto's (1989, 2000) work on the informal economy of Peru and other developing countries. De Soto (1989) famously enumerated the number of regulations required to legally register property in Peru and later repeated the study in Egypt and several other countries (2000).

[7]For *Doing Business 2008*, the most recent version of the report, the project team consulted with 970 experts in 178 economies for roughly 5.4 advisers per country for the starting a business measure and roughly 5,000 advisers overall, for about 28 advisers per country (World Bank 2008: 67)

and the paid-in minimum capital necessary to begin a business.[8] The final measures, therefore, entail the number of procedures, time to completion and cost of completion for a number of important business activities. To take a different example, *Doing Business* also records the difficulty for a business of using the judicial system to adjudicate a dispute with a buyer who has not paid a contract worth 200% of per capita GDP (World Bank 2008: 80-81).

The *Doing Business* project represents one of the most sophisticated attempt to measure the environment for business in a wide range of countries and one that maps onto the set of issues at stake in this dissertation. In doing so, the indicators measure costs to domestic actors of asserting contractual and property rights. By standardizing the business case measured, the project allows cross-country comparisons. Nevertheless, this standardization does assume implicitly that these costs do not vary meaningfully with a country; put differently, the protection of private property rights is *not* distributed. The *Doing Business* project team takes pains to consider these issues, arguing that inefficient regulations differentially affect businesses, placing particularly strenuous burdens on smaller businesses and on businesses owned by women (World Bank 2004: xv). These claims are certainly plausible. However, the implicit distributional assumption remains the same; the costs of obtaining property rights protections do not vary, though their effects may. Therefore, there is little effort to describe any variation in costs or their effects. A hypothetical firm compared by legal and business experts does not by necessity suffer from gender, ethnic, religious, or political discrimination.

Even if we think of the protection of private property rights as being distributed,

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[8]The project team and local experts make several assumptions regarding the procedures. For example, they do not include the time necessary to gather information in their calculations, nor do they include bribes, preferring to code only official costs of regulations. Importantly, they assume that "the entrepreneur does not waste time and commits to completing each remaining procedure without delay" (World Bank 2008: 70).

we might claim that the *Doing Business* project as measuring the median of that distribution. Such a measure might represent an improvement over Knack and Keefer's (1995) measures, which measure the property rights security of a specific class of actors whose experience likely does not parallel that of a domestic businessperson. Yet, however accurately measured, describing this central tendency does little to describe the shape of the distribution of property rights confidence. Furthermore, we might also ask whether the indicators actually measure the median experience of businesspeople. Thinking once again of the costs of starting a business, the standard case assumes the firm exists in the country's most populous city.[9] The case also assumes that the start-up capital for the potential business is 10 times per capita GDP. For example, the standard case assumes that the experience of five businesspeople in Washington, DC starting a factory with $400,000 of start-up capital is representative of businesses enterprises in the United States. In a country with little property rights discrimination, that assertion may be true. However, in a country that discriminates against small businesses, it almost certainly will not be. The standard cases reflects a particular assumption about the distribution of the costs of doing business, particularly the centrality of medium-sized, urban, manufacturing businesses.[10] In countries with little property rights discrimination, that assumption may be justified, as the ease of starting a business will not depend on location, sector, or size. In countries with a great deal of property rights discrimination, however, the standard case may tell us little about the experience of most entrepreneurs.

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[9]The *Doing Business* Project has begun to adopt sub-national measures for particular countries and regions, though they concentrate on the ease of entrepreneurship in different cities, rather than across different groups of people or types of businesses. Countries and regions included are: Colombia, Egypt, Morocco, Mexico, and South Asia.

[10]A recent report by the World Bank's Independent Evaluation Group (2008) goes one step farther, arguing that the *Doing Business* project represents an anti-regulatory bias harnessed to large business interests.

3.2.3   Contract-Intensive Money

In contrast to other measures of the security of private property rights reviewed here, Clague and his co-authors (1999) offer a proxy for contractual and property rights based on easily available objective data. In terms of conceptual development, the authors begin with a schematic quite similar to North's. The authors begin by focusing on the role of "government-provided third-party enforcement" of contracts, the first of North's two dimensions of property rights and key to Chapter 2's discussion (Clague et al, 1999: 187). They argue that, although actors' concerns over reputation and private mechanisms at times may suffice to enforce contracts, the market generally cannot be relied upon to fulfill this function (*ibid*). Therefore, governments must play the role of third-party enforcer of contracts, in addition to two other roles: providing a general level of security (i.e., a monopoly on violence) and refraining from expropriating rights itself (*ibid*).

The question remains how best to build a measure of the security of contractual and property rights, as defined by North (1981) and reiterated by Clague and his co-authors. Their answer to this question is creative: "we take advantage of a fortuitous circumstance that enforcement problems underlying the use of different forms of money and credit mirror enforcement problems underlying trade in goods and services in much the way a negative resembles a print" (*ibid*). In short, when private actors fear the violation of contracts and/or the expropriation of their private property rights, they will tend to hold currency instead of bank deposits, fearing that banking institutions may violate their contractual rights without censure by the government. Likewise, if the risk of public expropriation of private property is high, the resulting black markets also will favor the use of currency instead of other monetary instruments. In contrast, a secure institutional environment will favor the use of

non-currency financial instruments that offer a rate of return and more convenience (Clague et al 1999: 188).

Based on widely available data from the International Monetary Fund's (IMF) *International Financial Statistics* (*IFS*), defining "contract-intensive money" (CIM) as the ratio of non-currency money to the total amount of money.[11] The measure ranges from 0 to 1, with smaller values representing a greater reliance on currency and hence worse protection of contractual and property rights. The authors defend CIM against suggestions that it proxies more strongly for financial sector development, showing that it correlates strongly with Knack and Keefer's (1995) measures, as well as economic growth and investment.

CIM is an intriguing measure that stands up to a great deal of empirical security and appears based on sound logic. The measure is based on publicly available objective data that offers a reasonably long time series for a surprisingly broad array of countries. However, as with previous measures, Clague and his co-authors (1999) make a particular set of claims regarding the *distribution* of the security of contract and property rights in an economy. If we think of M_2 and C, as the sum of each citizen's money holdings, then we could hypothetically define each citizen's CIM. Thinking of the aggregates in this manner and combining that line of thinking with Clague et al (1999), then their measure is actually a proxy for the average confidence in contractual and property rights, weighted by each citizen's total monetary holdings. If a large percentage of the money in an economy is held in only a few hands, then CIM doesn't tell us very much regarding the average citizen's property rights confidence; rather, it tells us much more about the property rights confidence of richer citizens. More generally, the more unequal an economy, the more skewed

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[11]More specifically, $CIM = (M_2 - C)/M_2$, where M_2 is a broad definition of money and C is a measure of currency. For more on the definition and coding of these concepts, see Clague et al (1999: 188), particularly footnote 3.

the measure. As with the *Doing Business* indicators and Knack and Keefer's (1995) measures, CIM seems to steer the measure of the security of private property rights towards the security of a particular group of citizen, based on an implicit distributional assumption.

3.3   Measuring Property Rights Discrimination with Firm Surveys

The foregoing review has served an important purpose in this chapter's mission to develop measures of property rights discrimination, raising a number of important issues regarding any attempt to measure the security of private property rights. Therefore, I pause to consider those lessons and their implications for my efforts. First, difficulties in concept development — and particularly fidelity to an explicitly and carefully defined definition of property rights security — remains a common theme in the various measures reviewed in Section 3.2. In short, we must still carefully attend to *what* we hope to measure. An important aspect of the question of conceptual development is the issue of *breadth*. Whereas Knack and Keefer (1995) proposed a broad set of indicators, the *Doing Business* project chooses a narrow set of important entrepreneurial activities, many of which clearly map onto the two dimensions of institutions cited by North (1981). The question of *what* we measure also suggests a series of questions regarding *how* we measure it. One dimension of this question is the use of subjective versus objective measures. Measurement strategies making use of data from commercial risk rating agencies, for example, rely on the subjective ratings of outside "experts" regarding the institutional environment of the countries they study. In contrast, more objective measures (e.g., *Doing Business* and Clague et al's (1999) measure of CIM) rely on analysis of commercial codes or publicly available data on the money supply. Finally, the choice of method often relates

to the question — critical for this research — of *distribution*. Each of the projects described above faces a tension over this question. Each assumes implicitly that the protection of private property is uniform within a country, but chooses a particular set of actors as being the focus of its measurement strategy (e.g., foreign businesses in Knack and Keefer (1995); medium-sized, urban firms in *Doing Business*).

In the final analysis, none of these measurement strategies investigate the simple question of how confidence in private property varies within countries and whether or not that variation itself varies across countries. We are therefore left with the question that initiated this chapter: *how would we know that property rights discrimination exists?* The remainder of this section answers this question and provides an empirical portrait of property rights discrimination.

3.3.1 The World Bank *Enterprise Surveys*

The World Bank *Enterprise Surveys* (*ES*) are a project initiated in 2002 to ask detailed questions of a representative sample of firm managers in a large number of countries. As of its 2006 surveys, the World Bank has surveyed approximately 75,000 firms in 105 countries.[12] The project team publishes a comprehensive dataset of firm managers' responses online.[13] Among other things, the data offer glimpses into firm managers' confidence in the legal system's protection of their private property rights and recent firm efforts to invest in hiring new employees, offering new products, and investing in new technologies.

The Bank implements the surveys as follows.[14] The Bank chooses the countries to survey, focusing mostly on larger countries every three years, citing the difficulty and

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[12]Please note the difference between the *World Business Environment Survey* (*WBES*) and the World Bank *Enterprise Surveys* (*ES*), which I use here. The *WBES* was a forerunner of the *ES* conducted by the World Bank in 2000-2001. Because of the identical acronyms, the two datasets are easily mistaken. I use the latter and refer to them as the *ES*.

[13]To download the comprehensive dataset, see http://www.enterprisesurveys.org.

[14]This discussion follows the *ES'* website and implementation notes (World Bank 2007).

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high costs necessary to conduct the surveys. In each country, the Bank hires private contractors to administer the survey; though it usually cooperates with governments, it avoids having government or quasi-government agencies conduct the surveys for the purposes of confidentiality. The implementing agency constructs a sample frame based on field research conducted through cooperation with government statistical agencies, business associations, or other organizations (World Bank 2007: 4). The sample frame is establishments in either manufacturing or services (either retail or wholesale) located in major urban centers and with at least five employees(World Bank 2007: 3-4).[15] The private contractor then creates either a simple random or stratified sample of establishments [16]

Potential respondents are administered a screening questionnaire. Assuming an establishment fits the survey requirements, the core questionnaire is comprised of two parts, with several sections in each. The first part is comprised of several sub-sections, including: control information (e.g., industry, location); general information on the firm (e.g., ownership); infrastructure and services (e.g., communications, roads, electricity); sales and supplies (e.g., supply and demand conditions); competitive conditions (e.g., number of competitors, degree of price competition); land access and ownership issues; crime; business-government relations; and constraints on the establishment. The second part is more oriented towards accounting, asking the respondent to answer questions related to its financing, labor, and productivity.[17]

The *ES* offer us an opportunity to measure with some statistical confidence the degree to which confidence in property rights varies across firms within a country, as well as compare how that variation itself varies across countries. Though the sur-

[15]The size requirement is designed intentionally to rule out informal establishments, with a set of special surveys of micro-enterprises designed to study informal businesses. I return to this point presently.
[16]Stratified random sampling was implemented in the 2006 surveys; However, for the surveys I use, simple random sampling was used.
[17]The comprehensive questionnaire is available for download at http://www.enterprisesurveys.org/

veys over-sample larger economies, democracies, and Eastern European countries, a number of small economies enter the sample, as do a number of non-democracies (e.g., Egypt, Vietnam). Within countries, we can be more confident that a country's responses will include the voices of a wider range of firms than in previous measurement efforts. Rather than making an implicit distributional assumption regarding property rights security, we can allow firm managers' responses to guide us.

3.3.2 Measuring Property Rights Discrimination

Using the *ES*, how would we know that a particular firm's private property rights are protected? Given its emphasis on comparing the investment climates of different countries, the ES contain measures that correspond closely to both dimensions of private property rights protections. As discussed above, the surveys contain sections titled "investment climate constraints," "business-government relations," and "conflict resolution/legal environment." These sections allow respondents to forward both a subjective and an objective assessment of their institutional environment, evoking Section 3.2's comparison of these different measures. Subjective questions ask managers to generally assess their institutional environments. For example, Chapter 1 discussed summarized responses to Question 46, which asks respondents to rate their confidence in the judicial system's protection of their contractual rights. In contrast, objective measures ask the firm manager to assess her experience in dealings with the State. For example, one question asks firm managers to assess how many weeks courts generally take to resolve cases over overdue payments.[18]

Political economists continue to debate the relative merits of subjective and objective measures in the *ES* (Hallward-Driemeier and Aterido 2007; Aterido, Hallward-Driemeier, and Pagés 2007). [10] [50] As discussed in Chapter 1, though the central

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[18]This is question c247g in the ES.

logic underlying the consensus on property rights is inherently perceptual, scholars have tended to focus on the "quality" of specific institutions (e..g, regulations in *Doing Business*). We might therefore measure the perceptions directly through general, subjective assessments of property rights confidence. Alternatively, we may measure specific institutions' performance by measuring respondents' experience with them. Subjective measures have the value of being direct, but contain several potential pitfalls, most notably the "optimism or kvetch" factor (Hallward-Driemeier and Aterido 2007). If particular firm managers are more optimistic than others, then they will tend to rate their institutional environment far more generously than it deserves. And if this propensity towards optimism or pessimism systematically varies across countries, then the *ES* may over-estimate the institutional environment of certain countries while under-estimating that of others.

Nevertheless, it remains unclear whether objective measures offer a clear improvement. Aterido, Hallward-Driemeier, and Pagés (2007: 12) highlight the endogeneity concerns in the use of raw objective assessments. Burgeoning firms are more likely to interact with State agencies as they obtain permits and licenses, construct new facilities, etc. Therefore, they will more likely understand the obstacles posed by State institutions. Conversely, successful firms may tend towards a more sanguine assessment of their experience with the State more generally.[19]

In reality, the division between the two types is likely narrower than conceived. The latter strongly involve a very similar subjective components, as when a firm manager must judge how much time she spends with regulators in a typical week. A pessimistic firm manager likely is prone to over-estimating that time, relative to a counterpart with a sunnier outlook. Moreover, these questions often ask firm man-

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[19]Analysis using data from ratings agencies such as Political Risk Services' (PRS) International Country Risk Guide (ICRG) have tackled this latter issue, referring to it as a "halo effect." For a more in-depth discussion of these issues, see Kurtz and Schrank (2007a and 2007b).

agers to rely on their memory over a longer time period, magnifying the subjective nature of the answer. For example, questions 47f and 47g ask entrepreneurs to assess the percentage of payments disputes resolved by court and the average time needed to resolve such cases, *over the last two years.* Other questions ask firm managers to assess their objective experience in a "typical week," as in questions asking firm owners to assess how much time they spend with government regulators. Responses to such questions likely involve a subjective component similar to that of "subjective" measures; pessimistic firm managers will complain of the intrusiveness of such experiences, where the more optimistic will rate such experiences as generally favorable.[20]

I resolve this challenge by relying on subjective measures, creating two types of measures. First, I create "simple" measures that rely on the raw scores from firm managers. Second, I create a de-meaned score by subtracting the mean of a firm manager's subjective assessments of other aspects of the institutional environment from her subjective assessment of the security of her private property rights. Thus, $p^*_{ij} = p_{ij} - \bar{z}_{ij}$, where p^*_{ij} is the de-meaned measure, p_{ij} is the raw subjective measure and $\bar{z}_{ij}$ is the mean of the respondent's answers to other aspects of the investment climate (e.g., access to finance, reliability of telecommunications, etc.). By explicitly setting a baseline for comparison, the de-meaned measure improves the comparison of optimistic and pessimistic firm managers. A generally pessimistic firm manager (i.e., one who tends to rate the institutional environment as unfavorable, regardless of her objective experience) will only garner a low de-meaned measure if her property rights confidence is *worse* than her rating of other aspects of the institutional environment.[21] The same logic suggests that this de-meaning process also assists in

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[20]Furthermore, objective and subjective measures of the same construct (e.g., the fairness of the judiciary) tend to be strongly correlated empirically (Aterido, Hallward-Driemeier, and Pagés 2007).

[21]The de-meaned measure presents a different problem. Imagine a firm manager who has assessed her entire

comparing firms across countries. If a particular country has a cultural predilection towards either optimism or pessimism, we should expect its distribution to generally shift down or up the scale, respectively.[22]

Before describing the actual measures from the *ES* used, I pause to discuss data availability. The WBES cover a wide range of types of firms in a number of different countries. Therefore, certain questions will almost certainly mean something different across respondents. In particular, some questions may mean something different to smaller/simpler businesses. For example, certain questions seeking to ascertain the experience of firms with regulators have a very low response rate (about 10% at times), suggesting that many firm managers felt they lacked the experience to answer the question. Therefore, I tend to concentrate my attention on measures that would make sense to a broad array of firms. Since a primary purpose of the dissertation is to study the width of the protection of private property rights (i.e., its variability within countries), I place a premium on generalizable measures.

I begin with subjective measures of the first dimension of property rights institutions: citizen-citizen interactions. I take three measures from the *ES*. The first asks firm managers to assess on a six-point scale (from "fully agree" to "fully disagree") the degree to which they agree with the following statement: "I am confident that the judicial system will enforce my contractual and property rights in business disputes." The second asks the firm manager to assess on a five point scale (from "no obstacle" to "very severe obstacle") the degree to which crime represents a constraint on

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investment climate, including the protection of her private property rights, as being poor. The firm manager may truly suffer from a consistently limiting business environment, in which case her raw subjective assessment is correct. Second, the firm manager may be overly pessimistic, in which case the raw subjective assessment should be corrected. The de-meaning strategy fails to distinguish between these two cases.

[22]I also implement a strategy in which I compare each firm manager's de-meaned measure to that of "like" firms, where firm similarity is defined by location, size, sector, and line of business. This measure indicates when a firm's de-meaned assessment of its private property rights is worse than firms very much like it by subtracting the mean score for "like" firms from its score. The measure is "doubly de-meaned" in that the firm manager's raw score has been compared to its other scores and the relative scores for other firms like it. This measure is highly correlated with the de-meaned measure and does not produce a meaningful change in estimates of the effect of property rights confidence on firm behavior.

business. The third asks the same question with regard to the legal system and insti-
tutions of conflict resolution. Each of these questions has a relatively high response
rate. Taken together, these measures provide a measure of each firm's assessment
of the security of its private property rights from threats from other citizens (crime)
and from weak policing of contract violations (courts). I create an index from the
measures equal to the sum of the three measures divided by 16, the total number
of points possible.[23] The resulting measure ranges from 0 to 1. As discussed above,
I demean the measure, subtracting the the mean score for all other measures of
business constraints from the mean score for these three measures. The de-meaned
variable also ranges from 0 to 1.

For the subjective measure of the second dimension of property rights institutions
(i.e., expropriation), I take five measures from the *ES*. The first asks respondents to
assess on a six-point scale the degree to which they agree with the following state-
ment: "In general, government officials' interpretations of regulations affecting my
establishment are consistent." The remaining questions ask firm managers to assess
whether the following place constraints on their businesses: business licensing and op-
erational permits; regulatory uncertainty; corruption; and anti-competitive policies.
Consistent with the argument forwarded above, each of these variables helps us un-
derstand the severity of State restrictions on a firm's private property rights. Business
licensing and operational permits are cited prominently in the World Bank's *Doing
Businesses* dataset. Corruption places extra-legal restrictions on private property
by forcing firms to devote a greater share of their resources to obtain such permits.
Two of the measures provide a glimpse into the *consistency* of regulations, as well.
As before, I create an index from the measures equal to their sum divided by 26, the

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[23]In cases where fewer than three of the measures was available, I calculate the index with the remaining available
variable(s).

total number of points possible. The measure ranges from 0 to 1.

3.3.3 An Empirical Portrait of Property Rights Discrimination

Having defined data and measures that would manifest the presence of property rights discrimination if it does exist, I now turn to two questions of great importance to this dissertation. Does property rights discrimination exist? And does it vary across countries? To answer those questions, I paint an empirical portrait of property rights discrimination. If the protection of private property rights — which I propose is the result of political bargaining — resembles a public good, then firm managers within a country will tend to agree on the security of their private property rights. Alternatively, if property rights discrimination exists, then we should see marked differences among firm managers in their assessments of the security of their property rights. Furthermore, if property rights discrimination exists *and* varies meaningfully across countries, then we will observe clear cross-national differences in the distribution of property rights confidence.

The *Enterprise Surveys* likely pose a difficult test for the existence of property rights discrimination, for a number of reasons. First, the *ES* do not record how the State treats private citizens' property rights (e.g., registering property, obtaining protection from thieves, etc.). Instead, the *ES* concentrate on discrimination in the business community. In that sense, the firm-level surveys can describe variation in property rights confidence among firms that exist. However, property rights discrimination likely slows firm creation among citizens in the "out" group and accelerates the death of their businesses when they successfully incorporate them. Thus, the population of existing firms that the World Bank samples is biased, comprised only of firms that the State allows to exist. The need to rely on official lists of firms — as well as the *ES's* reliance on urban firms employing at least five people — exacerbate

this problem.[24] A number of very small, rural firms do not enter the population that the World Bank samples randomly, along with firms that, for a variety of reasons, do not find themselves on official registries of businesses. We may reasonably expect such firms to suffer from property rights discrimination.

This logic suggests that the *ES* likely constitute a hard test of the existence of property rights discrimination in any given country. It also implies that the extent of the downward bias increases in the degree of property rights discrimination. Imagine two countries, one of which strongly discriminates the protection of private property and the other of which does not. The latter country's population of firms will not suffer from very much bias, since any citizen that wishes to start a firm can do so. The former country's population of firms will be much more biased, comprised only of firms that are free enough to be incorporated and continue to exist. The *ES* not only understate the degree of property rights discrimination within any given country; they also depress variation in the severity of property rights discrimination across countries. The foregoing logic suggests that the *ES* likely constitute a difficult test of the propositions that property rights discrimination exists and varies meaningfully across countries. Still, they represent an opportunity to describe the phenomenon, and in the remainder of this section, I do so.

To conduct a simple empirical test of these expectations, I create a measure of overall property rights security for each firm manager. This combined property rights measure equals the measure of the first dimension of property rights security (i.e., security from other firms and individuals) minus the measure of the second dimension (i.e., security from public expropriation of private property rights).[25] The measure

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[24] A cursory examination of the surveys shows that firms with five or fewer employees are included, whether by accident or some change in policy.

[25] Technically, the measure is equal to $combined = d1_{ij} - (1 - d2_{ij})$, where $d1_{ij}$ and $d2_{ij}$ are the simple subjective measures of the first and second dimensions of private property rights, respectively. By reversing the scale of $d2_{ij}$ and then subtracting that quantity from the measure of $d1_{ij}$, I conceptualize the combined score as the *value* of the

effectively summarizes the *benefits* to an individual actor minus the *costs* in terms of government expropriation of her private rights; a summary measure less than 0 indicates that restrictions on the firm's private property rights placed by the state outweigh the benefits offered through protection of firm's rights from others.[26] For each country, I summarize the combined measured by deciles. In other words, I rank firm managers within each country in descending order of their combined measure; create groups for the top 10% of respondents, the next 10%, through to the bottom 10%; and calculate the average response for each decile.
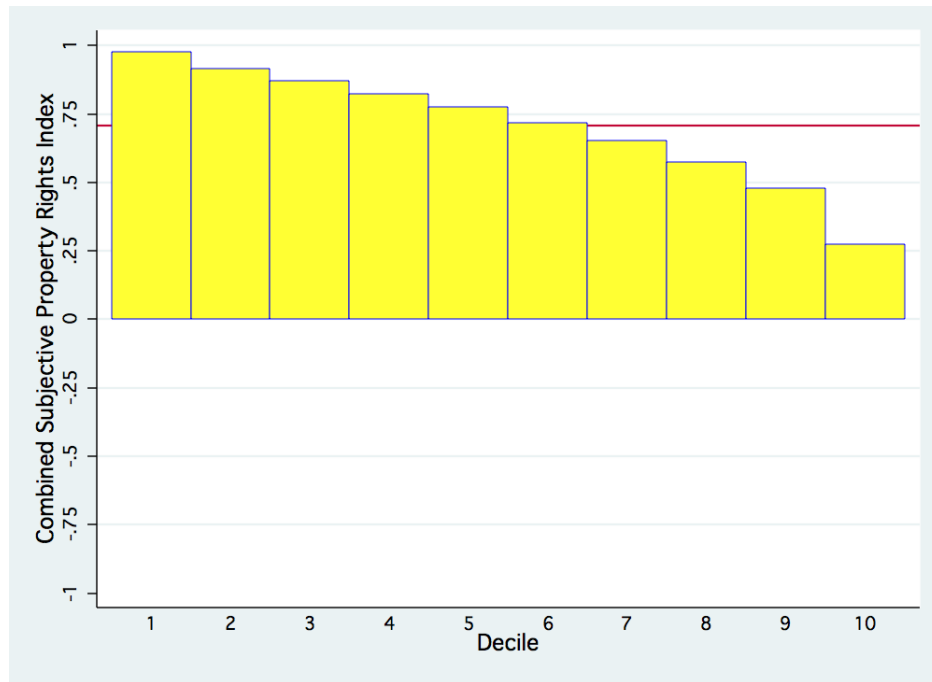
Figure 3.1: Property Rights Confidence in Germany (2005)

I use this method to describe property rights protection in Germany in Figure 3.1 Figure 3.1 shows the distribution of confidence in private property rights. At first glance, Germany's distribution favors a more conventional approach to private prop-

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property rights system (i.e., its protection of private actors) versus its costs in the interference in an actor's use of her private property.

[26]In this discussion, I use the simple measures, as discussed above. These measures allow for a more intuitive interpretation of the measures, which aids in the explication. However, the discussion does not shift substantively if the de-meaned measures are used.

erty rights, one that conceptualizes the protection of private property as a public goods. German firm managers rank the overall security of their private property rights relatively highly, with the horizontal line at $y = 0.71$ marking the mean response for all firms surveyed. The highest decile of firm managers rank their confidence especially highly, nearing the maximum of 1 for the measure. The next six deciles, while declining slightly in their assessments, remain above the mean assessment or just below it. However, German institutions fail to protect all firm managers adequately; the lowest decile of respondents' average score is approximately 0.27. However, these respondents still judge the protection of their property rights as positive, since their assessment of the state's protection of their contractual rights outweighs their assessment of government expropriation. The German state, one might conclude, has created rules that instill robust property rights confidence in a clear majority of respondents, but even this stable, rich, and democratic country does not protect all firms equally; some respondents report more anemic confidence in their property rights.

Figure 3.1 provides some evidence for the proposition that firm managers' confidence in their private property rights is not uniform, even in a rich, historically capitalist, and stably democratic country. Next, I examine the protection of private property in two less-advantaged countries, Peru and Nigeria. Peru and Nigeria represent an ideal comparison, since each has a combined summary measure of about 0.065. Their distributions follow similar patterns, in contrast to the German example depicted in Figure 3.1. Each shows a larger differences across deciles than in Germany; overall, there is far more variation about the mean in each of these countries than in the German example. Furthermore, four deciles in each country report negative property rights confidence, according to the summary score introduced
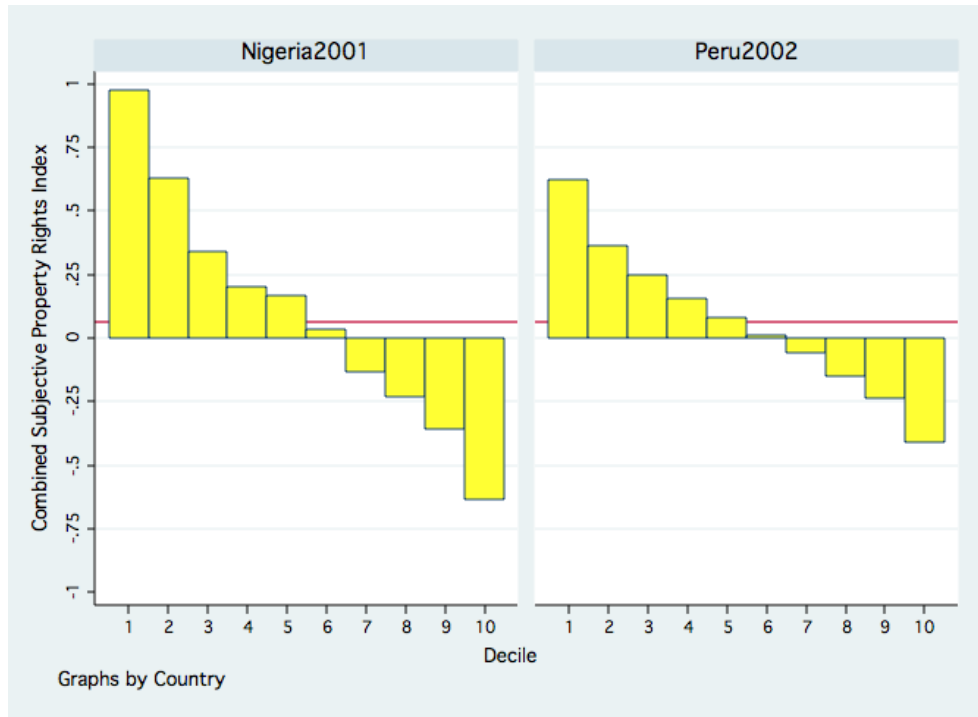
Figure 3.2: Property Rights Confidence in Nigeria (2001) and Peru (2002)

above; a large minority in each country indicate that the state protection of private property rights bestows more harm than good. These graphs present preliminary evidence that institutional failures in these countries follow the contours of Chapter 2; each country protects certain groups' private property rights quite well, but fail a far larger segment of the population.

A closer examination of Figure 3.2 yields further insights into how the two countries differ. In short, firm managers' confidence in their private property rights varies far more dramatically in Nigeria than in Peru. Comparing the top two quintiles in each country reveals a far more secure top echelon in the former than in the latter. Nigeria's top two deciles' average property rights confidence is 0.98 and 0.63; in Peru, the corresponding deciles' averages are 0.62 and 0.37. This pattern is mirrored for the bottom two deciles; Nigeria's bottom two deciles suffer from a far more dire crisis of confidence than Peru's bottom two. In the language of Chapter 2, Nigeria evinces

a more stark pattern of property rights discrimination; its "in" group is far better protected, whereas its "out" group is far more insecure.
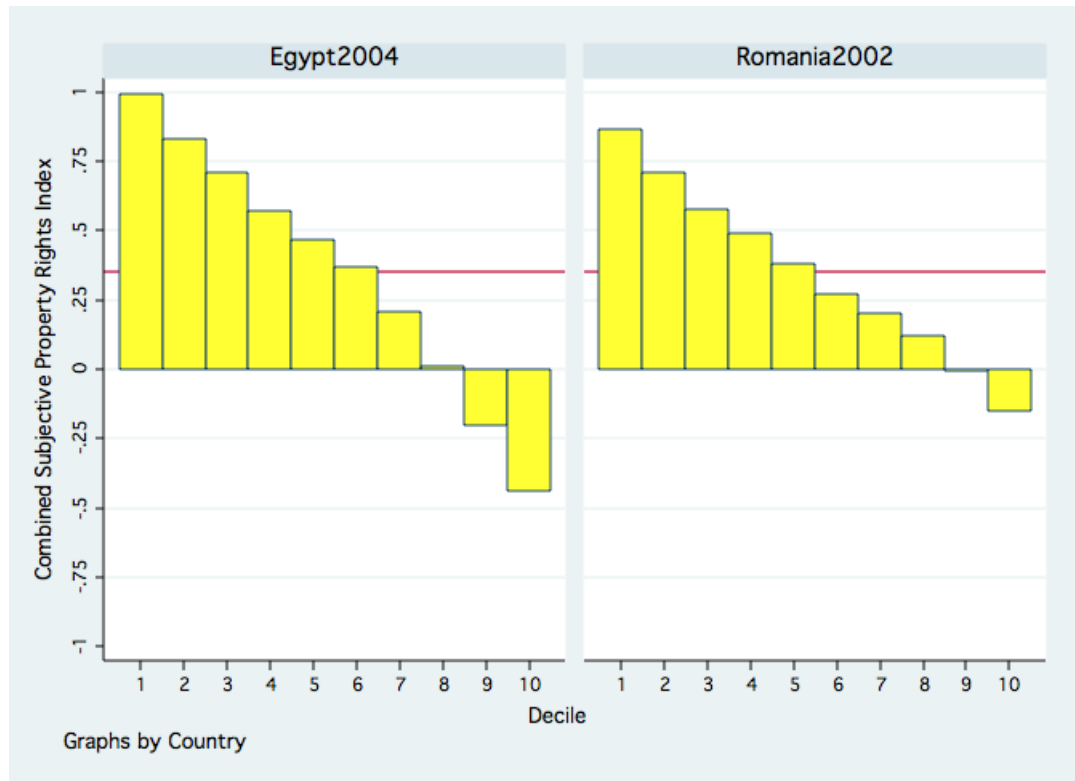
Figure 3.3: Property Rights Confidence in Egypt (2004) and Romania (2002)

What of countries that have an intermediate level of property rights protection? Figure 3.3 depicts two such countries, Egypt and Romania. Each country's average combined property rights score is about 0.35. As in Figure 3.2, firm managers' responses form a similar pattern in the two countries, though with a more severe skew in Egypt. In Romania, the bottom 20% of firm managers find themselves below the zero line, with average scores of -.0.005 and -0.15. However, Egypt's bottom 20% of firm managers find themselves in a far more dire institutional environment, with the bottom two deciles averaging summary scores of -0.20 and -0.44. Meanwhile, the top deciles in Egypt rank the institutional environment far more highly than their counterparts in Romania, with Egyptian firm managers in the highest decile

ranking their institutional environment as nearly perfect and its second decile ranking about as highly as Romania's first. Put differently, the gap between the highest and lowest decile in Romania 1.02 points on the two-point scale. In Egypt, the figure is 1.43 points. In short, the protection of private property in Egypt is far more discriminatory than in Romania.

This analysis provides preliminary evidence for the proposition that property rights discrimination exists and that its shape varies across countries. Figures 3.1, 3.2, and 3.3 show that, even in countries with on average weak property rights protection, governments carefully can protect the private property rights of an upper echelon of firm managers, such that the top tiers of firm managers in Egypt are as well- protected as their counterparts in Germany. The key difference between countries with sound protection of private property and those without is not the ability to protect certain groups' rights well, but their ability to extend those protections to a broader set of firms.

3.4   Does Property Rights Discrimination Matter?

We have shown that property rights discrimination *exists* and *varies meaningfully*, but does it *matter?* In particular, Chapter 2 makes three predictions that bear empirical testing with these data. First, a firm's business decisions should respond strongly to its confidence in its private property rights. Second, firms should respond more strongly to their own confidence in their private property than the general level of confidence in private property in the economy. If property rights discrimination exists and matters for economic performance, then we should observe "out group" firms struggling while "in" groups succeed, all else equal. Finally, variation in the protection of private property should affect macroeconomic indicators

of firm performance.

Before presenting empirical tests of those intuitions, I expand upon a point from Section 3.3 regarding the representativeness of the *Enterprise Surveys.* There, I argued that the *ES* likely under-represents firms suffering from property rights discrimination, with the side effect of under-stating property rights discrimination within countries and its variation across countries. If "out" group firms' performance does suffer, then this argument implies that the *ES* under-samples a set of firms with both lower property rights confidence and poor performance. This exclusion should attenuate our estimates of the positive impact of property rights confidence on firm performance, making these estimates a difficult test of Chapter 2's argument.

3.4.1 Modeling Multi-Level Data

Recall that the *ES* is structured hierarchically in two levels, with firms (i.e., level-1 units) nested within countries (i.e., level-2 units). Fortunately, methodologists in economics and political science have devoted special attention to just this data structure and I pause to consider the implications of these advances for the models specified here and in Chapter 4.[27]

Chapter 2, in line with previous theory in economics, suggests that a firm's performance depends on the protection of its private property rights. We therefore might specify a model of firm performance as follows:

$$y_{ij} = \beta_{0j} + \beta_{1j} * p_{ij} + \epsilon_{ij}$$

$$(3.1) \qquad \beta_{0j} = \gamma_{00} + \delta_{0j}$$

$$\beta_{1j} = \gamma_{10} + \delta_{1j}$$

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[27]This discussion relies heavily on articles from *Political Analysis'* 2005 special issue on multi-level models, particularly Bowers and Drake (2005) and Franzese (2005).

In 3.1, y_{ij} denotes the performance of firm i in country j and p_{ij} denotes the security of private property rights for firm i in country j. We assume that β_{0j} is drawn from a normal probability distribution with mean γ_{00}; δ_{0j} is a mean-zero error term. In other words, holding firm-level values of p_{ij} constant, we assume that countries' mean performance will vary randomly. The same holds for β_{1j}. We assume that a firms' reaction to property rights protection will vary randomly across countries. Substituting yields the following equation for estimation:

$$(3.2) \qquad y_{ij} = \gamma_{00} + \gamma_{10} * p_{ij} + (\epsilon_{ij} + \delta_{0j} + \delta_{1j} * p_{ij})$$

We may estimate Equation 3.2 in at least two ways. First, we may use simple OLS, ignoring the hierarchical (i.e., two-level) structure of the data. Doing so, however, assumes that all observations are drawn from a common normal probability distribution (Bowers and Drake 2005: 306). However, as we have already seen, firms in one country are not exchangeable for firms in another; they cannot be treated as arising from a common normal probability distribution. By extension, we cannot regard each country's sample as being drawn from an identical distribution and therefore y_{ij} is not independent of the country it inhabits (*ibid*). Rather than being drawn from a single probability distribution, they are drawn from J national-level probability distributions. The true error term, $(\epsilon_{ij} + \delta_{0j} + \delta_{1j} * p_{ij})$, is heteroskedastic, violating the OLS assumption of homoskedasticity (i.e., that $V(e_{ij}) = \sigma^2$) (*ibid*). OLS over-estimtes the degrees of freedom available for estimation and the statistical significance of γ_{10} is over-stated. In summary, using OLS on this hierarchical data produces coefficient estimates that are unbiased, but inefficient and standard errors that are biased downwards, inconsistent, and inefficient (Franzese 2005: 435).

Alternatively, we could introduce fixed effects by inserting a series of indicator

variables for $J-1$ countries, which decreases the number degrees of freedom available for estimation of γ_{10}. However, doing so "fixes" the intercept for each country, rather than considering each country's intercept as a draw from a normal probability distribution (*ibid*). Similarly, fixed effects estimation treats β_{1j}, the reaction of firms to property rights protections, as constant across countries, rather than drawn from a normal probability distribution with mean γ_{01}.

This difficulty intensifies if we hypothesize that some national-level factor z_j affects firm performance and shifts the effect of firm-level property rights confidence on firm performance. Now, we might specify the equation as follows:

$$y_{ij} = \beta_{0j} + \beta_{1j} * p_{ij} + \epsilon_{ij}$$

(3.3)
$$\beta_{0j} = \gamma_{00} + \gamma_{01} * z_j + \delta_{0j}$$

$$\beta_{1j} = \gamma_{10} + \gamma_{11} * z_j + \delta_{1j}$$

In this fully interactive specification, firm-level and national-level factors interact to affect firm performance. We characterize β_{0j} and β_{1j} as being drawn from a multi-variate normal probability distributions, the shape of which depend on z_j (Bowers and Drake 2005: 305). Substitution yields the following equation for estimation:

(3.4)
$$y_{ij} = \gamma_{00} + \gamma_{01} * P_j + \gamma_{10} * p_{ij} + \gamma_{11} * p_{ij} * z_j + (\epsilon_{ij} + \delta_{0j} + \delta_{1j} * p_{ij})$$

As before, neither OLS or fixed effects estimation adequately model the multi-level structure of the data. As discussed fully in Franzese (2005), two statistical techniques suffice to capture this structure and model the interactive properties of Equation 3.4. The first approach, a "two-step" method, estimates the firm-level relationship for each separate sub-sample (i.e., country) and then, in the second step,

models the country-level estimates of β_{0j} and β_{1j} as functions of z_j. The second approach recognizes the similarity of Equation 3.4 to any other linear-interactive model, with the added difficulty of correcting for heteroskedasticity (Franzese 2005: 433). That approach therefore pools the J national-level sub-samples and uses maximum likelihood estimation (MLE) to specify the probability distribution for the coefficient and estimate the mean and variance of the distributions. Either approach respects the structure of the data and the interactive nature (if present) of the hypotheses being tested. The choice of two-step or one-step techniques depends on the substantive interest of the researcher and the structure of the data (Franzese 2005). I opt for the latter technique. As we shall see in Chapter 4, this technique is useful for specifying the inherently interactive nature of the political hypotheses in Chapter 2; namely, that political institutions (a level-2 characteristic) affect a citizen's property rights protection, but that that effect depends on a citizen's place in the political institutional universe.

3.4.2 Measuring Performance

The institutional economics literature makes a number of claims regarding the effect of property rights institutions on individual economic actors. The first set of claims involves investment. According to this logic, when economic actors fear expropriation by the State (i.e., the second dimension of property rights), they will invest less in physical capital, technology, and (presumably) human capital, because they suspect that they will not enjoy the gains from those investments. This line of reasoning suggests that it is the second dimension of private property rights protection (i.e., safety from expropriation by the State) that is the key to firm investment.

I code several measures of investment. First, I code two variables for investments in physical capital. The first is based on Question 50 in the ES, which asks the firm

manager to assess the firm's capacity utilization over the last year. The variable ranges from 0 to 100. Question 52 asks the firm manager the share of net profits re-invested in the firm in the last year, which again ranges from 0 to 100. These variables should correspond to investments in physical capital, though the re-investment variable more closely corresponds to the kinds of long-term investment decisions that institutional economists have in mind. Second, I code one variable for investments in technology. Question 58 asks the firm whether it has "introduced new technology that has substantially changed the way that the main product is produced." The variable is dichotomous. Third, I code a variable that capture investments in human capital, a dichotomous measure of whether the firm formally trains its employees (Question 67a).

Such measures closely approximate a major argument of the institutional economics literature. However, firm performance should also respond to the property rights protections in more subtle ways. I begin by discussing informality. De Soto's (1989, 2000) research into informality in Peru and elsewhere in the developing world focused public attention on a problem that has long interested economists. Why does the size of the informal (also referred to as the "shadow" or "black" economy) vary in size across countries? The ES give us an opportunity to shed more empirical light on the subject by providing a firm-level measure of the size of the informal economy. Question 41 asks the entrepreneur the following: "Recognizing the difficulties many enterprises face in fully complying with taxes and regulations, what percentage of total sales would you estimate the typical establishment in your area of activity reports for tax purposes?" I subtract a firm manager's response from 100 to capture the percentage of total sales that each firm hides from the government. However, the question remains whether a firm's propensity to move into the informal economy

is a result of the first or second dimension of property rights protection, or both. I leave this as an open empirical question.

The question of informality suggests that firms will hide revenues from the State, but in order to do so firms often make other changes to their behavior. One visible manifestation of this range of behaviors is a firm's reliance on methods of payment that require trust, as proposed by the Clague and his co-authors (1999) in their argument regarding CIM. Many forms of transactions require delayed payment or payment by credit. All else equal, a firm insecure in the ability and/or willingness of the State to protect its contractual rights will likely demand that its sales be pre-paid with cash, in order to protect itself from being cheated by consumers and/or other firms. I create three variables in order to capture this potential relationship. The first, corresponding to Question 47a in the ES, asks the firm what percentage of its sales are pre-paid. The second, corresponding to Question 47b, asks the percentage of the establishment's sales sold on credit.

3.4.3 Results

I estimate each of the models suggested above using the *ES*. For each country, the sample includes all firms sampled by the *ES*. The country-level sample is all countries surveyed by the *ES*. Certain countries are surveyed more than once, as discussed in Section 3.3. This repeated sampling of particular countries infers a model of y_{ijt}, or of firm i in country j at time t. However, several factors recommend a reliance on a cross-sectional model. First, in countries with multiple surveys over time, firms have not been indexed so that we can identify changes in firms over time. Second, most countries surveyed repeatedly have only been surveyed twice; there is no real time series of data to make inferences across time possible. Therefore, I use only the first survey for each country surveyed by the *Enterprise Surveys.* I list those countries in

Table 3.1.[28]

The Impact of Property Rights Discrimination

I begin the presentation of statistical results by estimating Equation 3.2 for each of the dependent variables described above. Rather than reporting the full set of estimates for each dependent variable, I concentrate on the key relationships at stake in this testing — the effect of property rights protections on firm behavior and performance. Table 3.2 summarizes the coefficient estimates for γ_{10} in Equation 3.2. The dependent variables are measures of investment, informality, and payments. As discussed above, I focus on either the security of contractual or property rights for each of the dependent variables. The one exception is informality, where either or both of the dimensions of the institutional environment may prove relevant. Each of the estimates controls for firm size (using dummy variables), foreign origin, age, sector (a dummy for manufacturing firms) and a constant.[29] In all cells other than for informality, a positively signed coefficient supports the hypothesis that firms perform better when the State protects their private property rights. In the case of the informality, the opposite is true.

The results present a mixed portrait of the effect of property rights confidence on firm performance. I begin with the models of investment. Firms' reinvestment percentage is negatively correlated, all else equal, with the simple measure of property rights security, but positively correlated with the de-emeaned mesure. This pattern repeats itself for measures of the security of contractual rights, which is positively correlated with re-investment for the de-meaned measure. In contrast, capacity utilization is correlated strongly and positively with safety from expropriation, regard-

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[28]Results are generally robust to whether the set of first or last surveys are included in the models.
[29]Even though the technology investment and employee training variables are dichotomous, the estimates do not use logistic regression.

Country	Year	Firms	Country	Year	Firms
Albania	2002	170	Latvia	2002	176
Algeria	2002	557	Lithuania	2002	200
Armenia	2002	171	Madagascar	2005	293
Azerbaijan	2002	170	Malawi	2005	160
Bangladesh	2002	1001	Mali	2003	155
Belarus	2002	250	Mauritius	2005	212
Benin	2004	197	Moldova	2002	174
Bhutan	2001	98	Montenegro	2003	100
Bosnia	2002	182	Morocco	2000	859
Bolivia	2000	671	Mozambique	2001	194
Brazil	2003	1642	Nepal	2000	223
Bulgaria	2002	250	Nicaragua	2003	452
Cambodia	2003	503	Nigeria	2001	232
Chile	2004	948	Oman	2003	337
China	2002	1548	Pakistan	2002	965
Costa Rica	2005	343	Peru	2002	576
Croatia	2002	187	Philippines	2003	716
Czech	2002	268	Poland	2002	500
Ecuador	2003	453	Portugal	2005	505
Egypt	2004	977	Romania	2002	255
El Salvador	2003	465	Russia	2002	506
Eritrea	2002	79	Senegal	2003	262
Estonia	2002	170	Serbia	2001	402
Ethiopia	2002	427	Slovakia	2002	170
Macedonia	2002	170	Slovenia	2002	188
Georgia	2002	174	South Africa	2003	603
Germany	2005	1196	South Korea	2005	598
Greece	2005	546	Spain	2005	606
Guatemala	2003	455	Sri Lanka	2004	452
Guyana	2004	163	Syria	2003	560
Honduras	2003	450	Tajikistan	2002	176
Hungary	2002	250	Tanzania	2003	276
India	2000	895	Thailand	2004	1385
Indonesia	2003	713	Turkey	2002	514
Ireland	2005	501	Uganda	2003	300
Kazakhstan	2002	250	Ukraine	2002	463
Kenya	2003	284	Uzbekistan	2002	260
Kosovo	2003	329	Vietnam	2005	1150
Kyrgyzstan	2002	173	Zambia	2002	207
Total	**78 countries, 34,638 firms**				

Table 3.1: List of Surveyed Countries

Table 3.2: Summary of Results

| Dependent Variable | Independent Variable | | | |
| | D1: Contract Rights | | D2: Property Rights | |
	Simple	Demeaned	Simple	Demeaned
Investment (D2)				
Reinvestment	$-3.86^{.20}$	$8.81^{.03}$	$-4.58^{.16}$	$12.56^{.01}$
Capacity utilization	$3.89^{.00}$	$-2.23^{.10}$	$7.77^{.00}$	$3.88^{.04}$
Technology	$-0.11^{.00}$	$0.06^{.07}$	$-0.17^{.00}$	$-0.06^{.13}$
Employee training	$-0.08^{.00}$	$0.07^{.05}$	$-0.12^{.00}$	$0.02^{.56}$
Informality (D2)				
Informality	$-8.27^{.00}$	$-6.88^{.00}$	$-8.55^{.00}$	$-6.28^{.01}$
Payments Behavior (D1)				
Post-paid txns.	$-0.39^{.72}$	$-0.85^{.72}$	$-0.51^{.66}$	$-0.63^{.69}$
Sales paid on credit	$-6.86^{.00}$	$4.70^{.10}$	$-15.29^{.00}$	$-13.76^{.00}$

Cell contents are coefficients with p-values^{superscripted}.

less of the measure chosen.[30] For investments in technology and employee training, the estimates provide only weak support. The coefficients on the simple measures are negative and statistically significant, indicating that firms with greater confidence in their private property rights *less* likely invest. For each form of investment, the negative effect dissipates at least partially when the de-meaned measure replaces the simple measure. Instead, firm managers appear to respond to improvements in the security of their contractual rights in a manner more in line with expectations; our coefficients are negative for the simple measures, but positive for the de-meaned measure.

In contrast, the results for informality strongly support the theoretical story discussed in Chapter 2; firm managers' decisions to abandon the formal economy respond to both contractual and property rights protections. The greater a firm manager's confidence, the less of its income it hides from the government.

Finally, transacting and payments behavior does not respond as expected to safer

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[30]This finding suggests that removing the threat of expropriation has short-term as well as long-term effects. Decreasing the burden of expropriation will boost firms' capacity utilization while increasing re-investment. While the effects of the latter likely are delayed somewhat, the effects of the former will manifest themselves quickly, as firms hire more employees and produce more.

contractual security. The safety of contractual rights does not exert a statistically significant effect on the percentage of a firm's transactions that is post-paid. In contrast, contractual rights have a strong relationship with the percentage of sales paid on credit, though the direction of the effect depends on the measure used. The simple measure of contractual security is negatively correlated with credit transactions, whereas the de-meaned measure more closely reflects our theoretical expectation of a positive effect. Though the latter evidence is encouraging, the relationship between second-dimension property rights security and sales paid on credit suggests that firm managers react to a more expropriating institutional environment by selling more on credit.

This discussion raises an intriguing point regarding the results contained in Table 3.2. In general, estimates of the effect of the institutional environment on firm behavior are more supportive when de-meaned measure is used. This pattern is apparent in models of reinvestment, technology, employee training, and sales paid on credit (though only for contractual rights). However, the pattern reverses itself for contractual security measures in models of capacity utilization.

In addition to observing the sign and statistical significance of these equations, I also attend to the substantive impact of property rights discrimination. Figure 3.4 depicts the distribution of firm-level confidence in private property rights in Brazil in 2003 and its predicted effect on informality. The histogram shows the distribution of firm managers' confidence and the line the predicted level of informality in the economy for that level of confidence.[31] Firm managers with little confidence in their security from government expropriation tend to under-report their income greatly, hiding roughly 30% of their income when their score is 0.1. Over 60% of Brazilian

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[31]For comparison's sake, the predicted values are for a domestic, small, manufacturing firm that has been in business for ten years. The slope of the line equals the estimate of γ_{10} in Table 3.2.
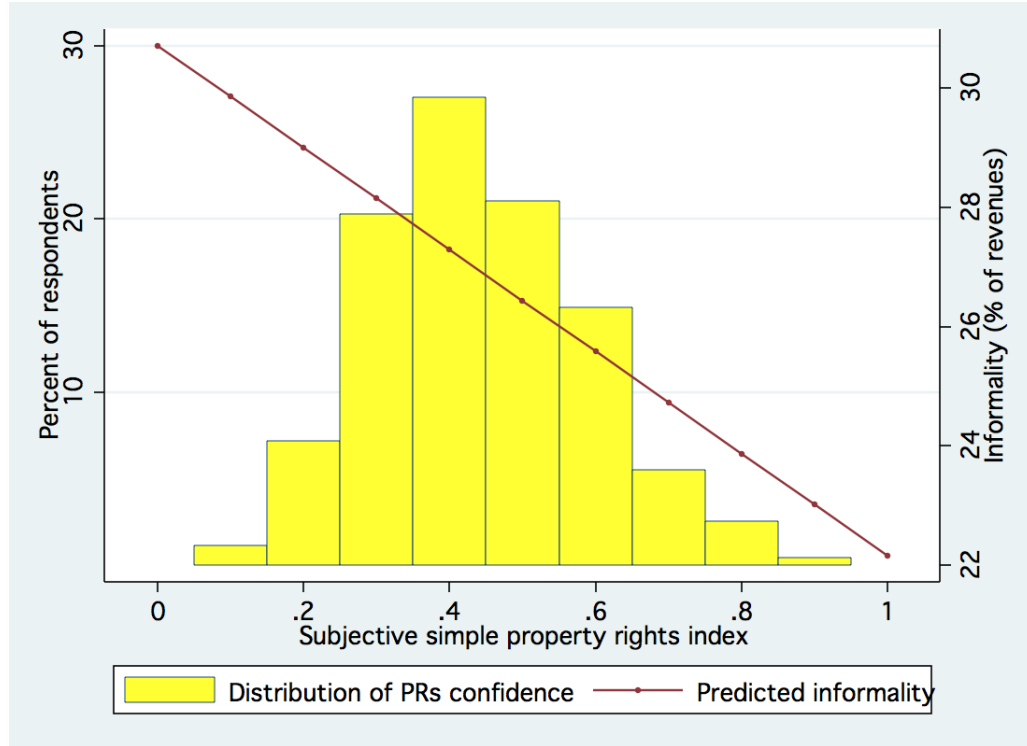
Figure 3.4: Substantive Impact of Property Rights Discrimination on Informality

firm managers report property rights confidence between 0.3 and 0.6, with their predicted informality lying between 28% and 25%. For the fortunate few firms with strong confidence in their institutional environment, informality remains a less viable response, with just over 22% of their revenues hidden from the government.

The substantive effect of property rights discrimination is perhaps smaller than we might expect, given the strong claims of the literature in institutional economics, as well as Chapter 2. For instance, the estimate of γ_{10} evaluated in Figure 3.4 implies that, all else equal, an increase in a firm manager's confidence in her private property rights from the bottom of the scale to the top will increase her reporting of income by only 8.55 percentage points. The relatively small substantive effect may well derive from the under-estimation of property rights discrimination and its impact on firm behavior, as discussed above. Furthermore, small shifts in informality may

reverberate far beyond the estimates recorded here. A firm that hides its income from the State decreases tax revenues and forces the firm into the informal economy, in which it may find itself limited in the kinds of investments it undertakes and with whom it transacts.

Firm-Level vs. National-Level Confidence

These results provide tentative evidence in support of the proposition that firm managers condition their behavior on their confidence in the protection of their private property. However, does firm-level property rights confidence matter more than national-level confidence for a firm's performance? We can answer this question preliminarily by estimating an equation of Equation 3.4's form, substituting a measure of national-level property rights security for z_j. Doing so allows us to analyze whether the positive impact of improving an individual firm's property rights protection changes on the basis of the national environment. For example, if we could examine two firms alike in all respects, including their low property rights confidence, we might expect better performance of one if it was located in a country with generally robust property rights protection. Alternatively, the general environment might matter little for firm performance so that, regardless of national property rights confidence, low-confidence firms will suffer. [32]

I estimate that equation using our firm-level measure of informality as the dependent variable and the second-dimension de-meaned measure of private property rights confidence (i.e., safety from expropriation). For a measure of P_j, I calculate the country-level mean of the second-dimension de-meaned measure, thus creating

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[32] Admittedly, this logic is somewhat speculative and infers a specific interpretation of Chapter 2's argument that an individual's economic decisions depend more strongly on the protection of *her* rights than on the general protection of other citizens' rights. Nothing in Chapter 2's logic necessarily implies an interaction effect. Therefore, we might estimate these models by removing the interaction, assuming that the effect of improving a firm manager's property rights confidence will not vary according to the national environment. Unfortunately, Chapter 2's argument offers little guidance as to whether an interactive or non-interactive specification is preferable. In that light, I prefer the fully interactive specification to allow the data to suggest the functional form of the relationship.

a proxy for country-level confidence in the protection of private property.[33] Recall from Chapter 2 that there is some reason to expect P_j to exert a positive effect on firm performance; the protection of *other* citizens' private property rights assists in an individual's ability to trade her rights easily. Nevertheless, Chapter 2 concludes that individuals value their own private property rights more strongly than others'.

Table 3.3 describes the results of the estimation of Equation 3.4, with controls for size of the business, foreign ownership, age, and sector. The results generally support the role of property rights institutions in decisions to hide revenues for tax purposes. A test of the joint significance of the three variables rejects the null hypothesis of insignificance at $p = 0.007$. The effect of increasing national-level confidence when firm-level confidence is non-existent (i.e, when $p_{ij} = 0$) is to decrease informality, which supports the notion that the national-level institutional environment matters for firm-level decisions. That effect is only marginally distinguishable from 0, but is larger than the effect of firm-level property rights confidence ($p = 0.02$). This runs counter to intuition, but the effect of national level property rights confidence only dissipates as firm-level confidence increases, as evidenced by the positive estimate of the coefficient on the interaction term. The same could be said of the effect of firm-level confidence, whose effect is to reduce informality when the national-level is at its worst (which never occurs in reality) and dissipates as the national environment improves.[34]

In order to compare the effect of both firm and national-level property rights confidence, I graph the effect of each against values of the other. Figure 3.5 graphs the effect of firm-level property rights confidence against the entire range of values of P_j,

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[33]The description of results that follows is robust to using measures of the median of the distribution, as well.

[34]When P_j is entered alone, its coefficient is negative and insignificant. When it is entered alongside p_{ij} in a non-interactive specification, the coefficient on p_{ij} is negative and statistically significant, as expected. The coefficient on P_j, in contrast, is negative, but statistically insignificant.

Variable	Parameter	Estimate	St.Error$^{\text{P-value}}$
Firm-level property rights confidence (p_{ij})	γ_{10}	-66.1	$27.6^{.02}$
National-level property rights confidence (P_j)	γ_{01}	-82.9	$46.3^{.07}$
Interaction ($p_{ij} * P_j$)	γ_{11}	127.0	58.3^{03}
Constant (γ_{00})	γ_{00}	62.5	$21.8^{.004}$

Table 3.3: Comparing the effect of firm-level and national-level property rights confidence on firm-level informality

as well as the upper and lower 95% confidence interval of the effect.[35] Figure 3.5 demonstrates that the effect of firm-level confidence is to reduce informality in a broad range of national-level institutional environments. However, when that environment is sufficiently supportive of private property rights (i.e., when $P_j > 0.48$), the effect becomes statistically insignificant. Figure 3.5 suggests that firm managers respond to improvements in their private property rights, but that response attenuates in the general quality of the institutional environment; in sufficiently confident economies, firms no longer reduce informality when their individual private property rights confidence increases.

In contrast, increases in national-level confidence never reduce informality with statistical significance, as shown in Figure 3.6. The effect of national-level institutions is strongest when $p_{ij} = 0$, as discussed above, but the effect is marginally insignificant. As a firm's confidence in its private property rights increases, the effect of increases in national-level institutions further dissipates. Figure 3.6 implies that when firms lack confidence in their private property rights, increasing the mean level of protection by protecting other citizens' rights while leaving the firm manager in question unprotected, has a marginally significant effect on informality. A firm manager may reduce informality when it observes that other firms are better protected,

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[35]The range of P_j is 0.30 to 0.62, as reflected in Figure 3.5. The effect line is $\gamma_{10} + 127.0 * P_j = -66.1 + 127.0 * P_j$. For a useful discussion of the proper interpretation of interaction effects, see Brambor, Clark and Golder (2006).

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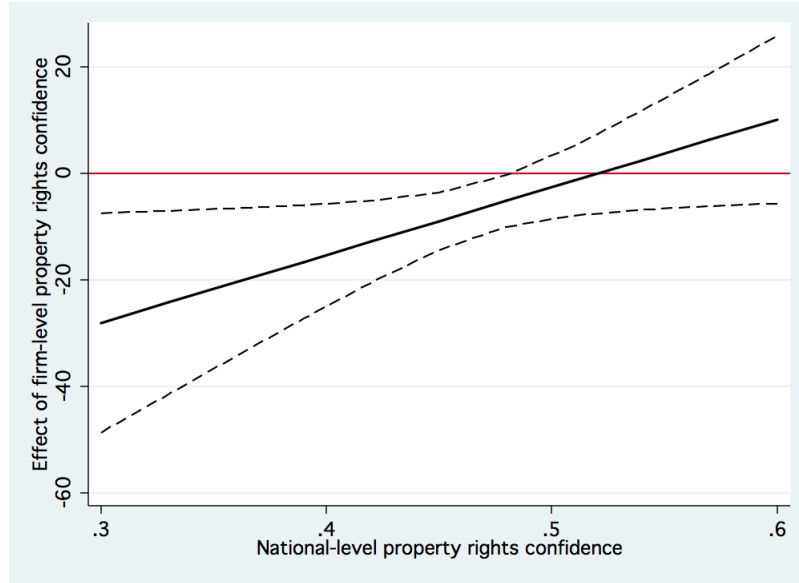
Figure 3.5: Impact of Firm-Level Property Rights Confidence on Informality

opening opportunities for legitimate transactions with other firms that are better protected. However, this effect is quite limited; even if a firm is only marginally confident in its rights, securing other firms' confidence has no statistically significant effect on its decision to "go informal" by hiding revenues from the State for tax purposes.

National Models of Informality

Thus far, we have shown that property rights discrimination affects firm-level decisions. Firms with security in their private property rights more likely invest and operate in the formal economy. Furthermore, this analysis showed tentatively that a firm manager's decision whether or not to "go informal" depends more heavily on her own property rights confidence than on the national environment for property rights protection. Chapter 2 argues that, by affecting such individual-level decisions, property rights discrimination ultimately affects macroeconomic performance. However, as before, it does not provide specific guidance as to precisely how it does
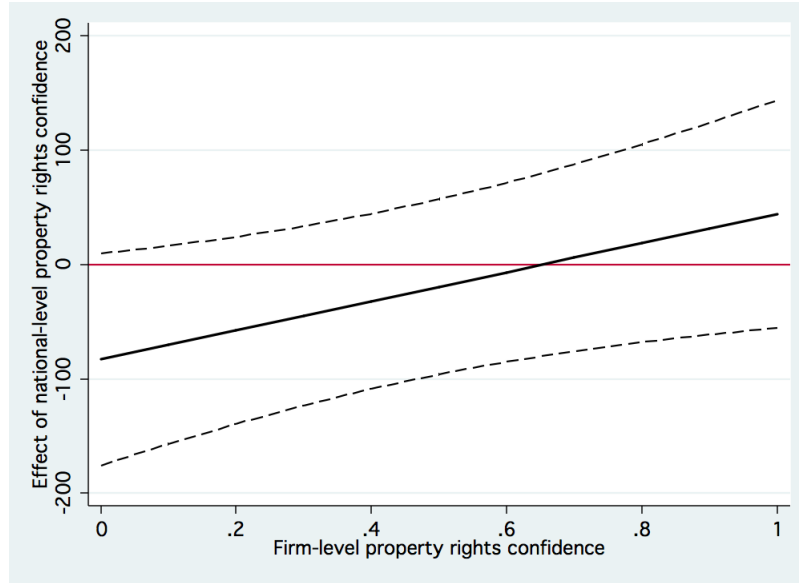
Figure 3.6: Impact of National-Level Property Rights Confidence on Informality

so. Will any variation in property rights confidence debilitate macroeconomic per-
formance? Imagine an economy in which all economic agents have no confidence
in the protection of their private property rights. If the government were to sud-
denly protect only a small percentage of the population's private property rights,
it likely would improve macroeconomic performance, despite the fact that the ma-
jority of citizens would continue to lack property rights protection. The question is
when the continued improvement of only that small group's rights would cease to
improve macroeconomic performance. For example, referring to Figures 3.2 and 3.3,
we might expect that firm performance will suffer more in the countries (i.e., Nigeria
and Egypt) that exhibit deeper and larger "out" groups.

However, given the lack of explicit theoretical guidance, only the most rudimen-
tary estimates of the effect of property rights confidence on macroeconomic perfor-
mance are possible. I estimate the following equation:

$$(3.5) \ Y_j = \beta_0 + \beta_1 * P_j + \beta_2 * STDEV_j(p_{ij}) + \beta_3 * P_j * STDEV_j(p_{ij}) + \alpha * Z_j + \epsilon_j$$

Equation 3.5 captures these effects, if imperfectly. In it, some measure of macroeconomic performance is a function of the national-level mean of property rights confidence (P_j), the standard deviation of property rights confidence ($STDEV_j(p_{ij})$), and their interaction. The effect of a higher mean should be to improve macroeconomic performance (as evidenced by a larger literature in institutional economics), but variation about that mean will negatively affect macroeconomic performance and *decrease* the effect of increasing the mean.

I estimate Equation 3.5 using simple ordinary least-squares regression (OLS), including regional dummies for control variables. For the dependent variable, I use the *Doing Business* project's estimate of the size of a country's informal economy as a percentage of the formal economy.[36] As before, I use the de-meaned second-dimensional measure of property rights to create country-level measures of the mean and standard deviation of firm managers' confidence in their private property rights.

Table 3.4 records the results of these estimates, concentrating on the main variables of interest. The negative sign on the mean measure indicates that, when the protection of private property rights is perfectly uniform (i.e., $SD_j[p_{ij}] = 0$), increasing the mean level of property rights confidence decreases informality in the economy; that effect is statistically significant at $p = 0.002$. Similarly, the negative sign for our coefficient on variation in property rights confidence suggests that, when the country-level mean of property rights confidence is 0 (i.e., perfectly absent), in-

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[36]I also estimate Equation 3.5 using the country-level mean of firm managers' assessment of the percentage of their sales revenues that are hidden from the State, both in an unweighted ($\frac{\sum informal_{ij}}{n_j}$) and a weighted form ($\sum_{i=1}^{n_j}(informal_{ij} * \frac{y_{ij}}{\sum_{i=1}^{n_j} y_{ij}})$). The results generally follow those reported in the text. However, I prefer the *Doing Business* measure, since it represents a broader measure of informal behavior.

Variable	Estimate	St.Error$^{\text{P}-\text{value}}$
Mean property rights confidence (P_j)	-344.7	$104.7^{.002}$
Variation in property rights confidence $(SD_j[p_{ij}])$	-1067.6	$421.8^{.01}$
Interaction $(P_j * SD_j[p_{ij}])$	2322.6	$870.2^{.01}$
Constant	204.1	$53.7^{.000}$

Table 3.4: Comparing the effect of mean property rights confidence with variation

creasing variation in property rights confidence also reduces informality. Though counter-intuitive, this result suggests that in countries where the protection of private property rights is uniformly poor across citizens, increasing one sub-population's property rights confidence, which increases variation in citizens' confidence, also reduces informality; put differently, property rights discrimination might result in less informality than uniformly poor property rights protection.

In order to evaluate these effects more carefully, I once again graph the effects of each variable against values of the other in Figures 3.7 and 3.8. Figure 3.7 depicts the effect of the mean level of property rights confidence. As already discussed, augmenting the protection of firm managers' private property rights reduces informality, but that effect is statistically distinguishable from zero only when protection is relatively uniform. These effects support the idea that, if property rights discrimination is severe enough, continuing to increase the mean level of confidence in private property has no effect on macroeconomic performance. Similarly, Figure 3.8 depicts the effect of the standard deviation in property rights confidence on informality. As indicated in Table 3.4, for low levels of mean confidence, increasing variation in firm managers' confidence reduces informality; this effect suggests that in certain countries with incredibly low confidence (which are likely to be low-variation countries), increasing variation in the protection of private property likely increases the mean

as well, resulting in a net reduction of informality. This negative effect becomes insignificant at about $P_j = 0.34$. At about $P_j = 0.46$, the effect becomes positive and that positive effect is significant at when $P_j > 0.53$. Therefore, in countries with a relatively high mean protection of private property, increasing variation in protection of private property increases the size of the informal sector.
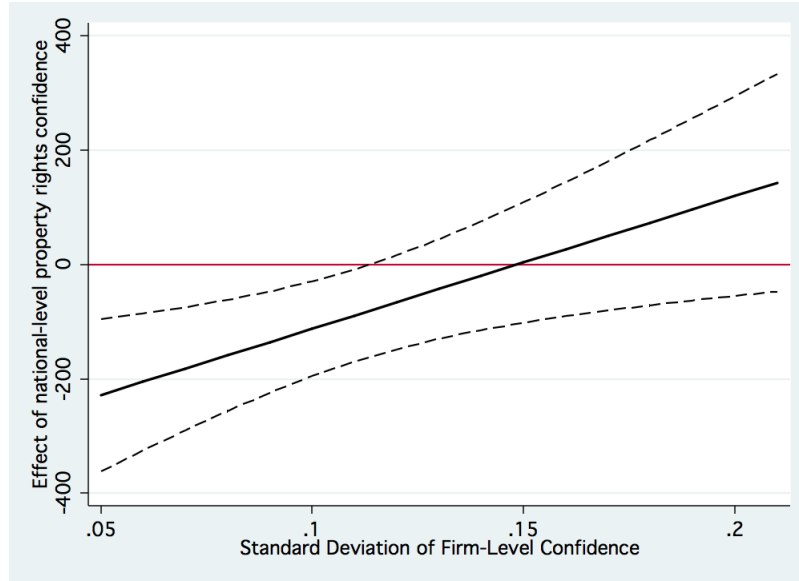
Figure 3.7: Impact of National-Level Property Rights Confidence on Informality

Together, these results suggest that, in countries with very low average confidence in private property rights, policy makers can reduce informality by protecting only certain actors' rights. Doing so creates property rights discrimination, but also allows the newly formed "in" group to reduce their informality and thus reduces the total level of informality in the economy. However, in economies with a greater general confidence in private property rights protection, it is eliminating property rights discrimination that more effectively reduces informality. Table 3.5 conveys this sense by comparing the statistical model's predictions of informality for four types of property rights systems, varying according to the mean and standard deviation of property
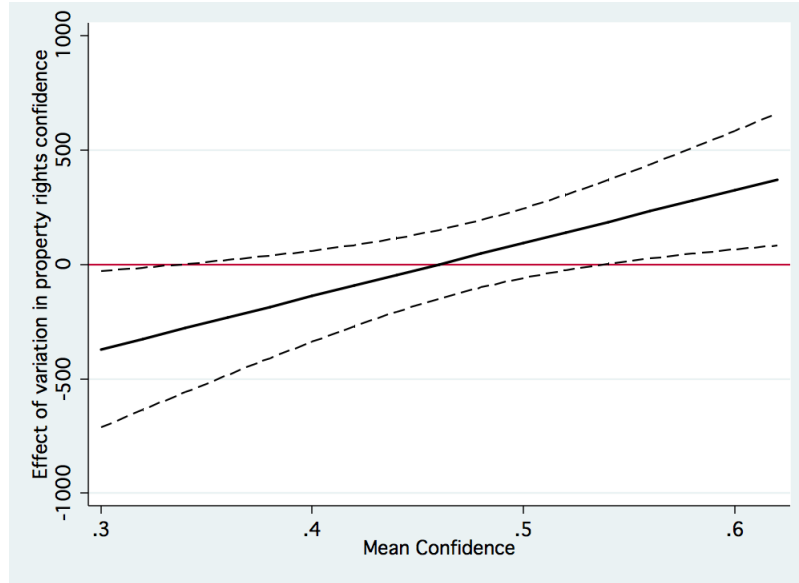
Figure 3.8: Impact of Variation in Property Rights Confidence on Informality

rights confidence. Comparing the two low-mean countries, we find that countries with higher variation in their property rights confidence have less informality as a percentage of the economy. However, once an economy has created a high amount of variation in property rights confidence, its best hope to reduce informality is to reduce property rights discrimination. Though these predictions derive from a cross-section, they suggest two time-paths for improving the protection of private property rights, assuming an economy beginning from the "low mean, low variation" category in Table 3.5. First, policy makers can protect only a specific portion of the economy first, creating "in" and "out" groups before reducing property rights discrimination by opening economic opportunities to the "out" group. Second, policy makers can slowly improve all citizens' rights while keeping property rights discrimination low.

Non-Random Selection

Throughout this chapter, I have contended that the nature of firm-level surveys in general and the design of the *Enterprise Surveys* create a bias against finding

Scenario	Mean	St. Dev.	Prediction
Low Mean, Low Variation	0.35	0.07	**69.6**
Low Mean, High Variation	0.35	0.17	**44.1**
High Mean, High Variation	0.55	0.17	**54.2**
High Mean, Low Variation	0.55	0.07	**33.2**

Table 3.5: Predictions for Informality

evidence of property rights discrimination, as well as its effects on economic activity. How would we know whether this argument holds up to empirical scrutiny? The logic of non-random selection states that countries with more severe property rights discrimination will erect higher barriers to entry to entrepreneurs in the "out" group and harass those "out" group firms that do exist into extinction. One empirically verifiable implication of that argument is that countries with high barriers to entry will exhibit higher property rights confidence among firm managers, because the sample of firms allowed to exist by the State will tend to be better-protected members of the "in" group. If the selection logic is mistaken or weak, it would stand to reason that countries with lower barriers to entry will also exhibit higher property rights confidence among firm managers. To investigate this relationship, I graph the mean combined de-meaned property rights confidence measure for each country listed in Table 3.1 against the *Doing Business* measure of the cost of starting a business in that country, including the bivariate regression line, in Figure 3.9

Figure 3.9 shows some tentative evidence in favor of the idea that property rights discrimination — in the form of high barriers to entry for new entrepreneurs — affects the distribution of property rights confidence in existing firms. In countries with higher barriers to entry, firm managers actually report higher confidence in their private property rights.[37] A closer examination of specific countries' relative location

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[37]The same graph using the simple combined measure of property rights confidence produces a negative correlation. However, the positions of individual countries relative to the bivariate regression line do not change significantly.

Figure 3.9: Property rights discrimination: barriers to entry versus existing firms

shines further light on the nature of the selection problem. In countries located above the regression line, firms report more confidence in the protection of their private property rights than the *Doing Business* indicator would predict. Conversely, firms in countries located below the regression line tend to evince less confidence than *Doing Business* would predict. The closer the country is to the regression line, the more closely the mean of its distribution of property rights confidence reflects the *Doing Business* indicator. Interpreted in this way, the *ES* greatly over-state property rights confidence in Eritrea (2002), located in the upper-right quadrant of the figure. In contrast, the *ES* may under-state property rights confidence in Bulgaria (2002), located in the bottom-left quadrant.

Figure 3.9 thus presents tentative evidence that the general relationship between barriers to entry for entrepreneurs and firms' property rights confidence correlate as the selection story would predict. We also found that the direction and degree of

the distortion of the *ES* sample varies. In some countries, property rights confidence seems generally over-stated, whereas in others it is generally under-stated. However, I also claimed that this distortion affects our estimates of the relationship between firm performance and property rights discrimination. I test this intuition as follows. First, I estimate the simple regression depicted in Figure 3.9 for each dimension of property rights confidence:

$$(3.6) \qquad\qquad P_j = \alpha_0 + \alpha_1 * (SB_j) + \varphi_j,$$

where φ_j is the residual for country j (i.e., the vertical distance between a country's location and the bivariate regression line). The estimate of the residual φ_j is positive for countries, like Eritrea (2002), where property rights confidence is higher than the *Doing Business* project would indicate and vice versa. If my intuition regarding selection is correct, then the effect of firm-level property rights confidence on informality will depend on the value of φ_j. More specifically, the effect of firm-level property rights confidence on firm performance should dissipate in the size of φ_j. I thus estimate the following equations, which adapt Equation 3.4 and substitute φ_j or z_j:

$$
\begin{aligned}
y_{ij} &= \beta_{0j} + \beta_{1j} * p_{ij} + \alpha * Z_{ij} + \epsilon_{ij} \\
\beta_{0j} &= \gamma_{00} + \gamma_{01} * \varphi_j + \delta_{0j} \\
\beta_{1j} &= \gamma_{10} + \gamma_{11} * \varphi_j + \delta_{1j}
\end{aligned}
$$

(3.7)

Substitution yields the following equation for estimation:

$$(3.8) \quad y_{ij} = \gamma_{00} + \gamma_{01} * \varphi_j + \gamma_{10} * p_{ij} + \gamma_{11} * p_{ij} * \varphi_j + \alpha * Z_{ij} + (\epsilon_{ij} + \delta_{0j} + \delta_{1j} * p_{ij})$$

I therefore expect that $\gamma_{11} < 0$ and that for sufficiently high values of φ_j the effect of p_{ij} $(\gamma_{10} + \gamma_{11} * \varphi_j)$ will be negative and insignificant. I estimate Equation 3.8 using firm-level informality as the measure of y_{ij} and the second-dimension de-meaned measure of property rights confidence as p_{ij}. I report the key regressions results in Table 3.6, leaving out the usual controls, whose substantive interpretation does not change.[38]

Variable	Estimate	St.Error$^{\text{P}-\text{value}}$
Firm-level property rights confidence (p_{ij})	-6.11	2.41$^{.011}$
Selection distortion (φ_j)	-90.58	46.01$^{.049}$
Interaction $(p_{ij} * \varphi_j)$	101.12	57.82$^{.080}$
Constant	23.30	1.94$^{.000}$

Table 3.6: The effect of selection on estimates of p_{ij}

As expected, the coefficient on firm-level property rights confidence is negative and statistically significant, inferring that when the selection distortion is effectively nil, increased property rights confidence reduces informality. Meanwhile, the negative coefficient on selection distortion indicates that, countries with greater selection distortion, firms tend to have report lower informal revenues, all else equal. Finally, the positively signed interaction term indicates that as the degree of the selection distortion increases, the beneficial effect of firm-level property rights confidence attenuates, as expected.

Figure 3.10 depicts the effect of firm-level property rights confidence and its 95% confidence interval for different values of selection distortion. As the coefficient on p_{ij} attests, the effect of firm-level property rights confidence is negative and significant when there is no selection distortion. When $\varphi_j < 0$, the effect is substantively larger. As selection distortion increases, the effect of firm-level property rights confidence

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[38]Recall that, because higher values of informality are normatively undesirable, a negatively signed coefficient is beneficial.
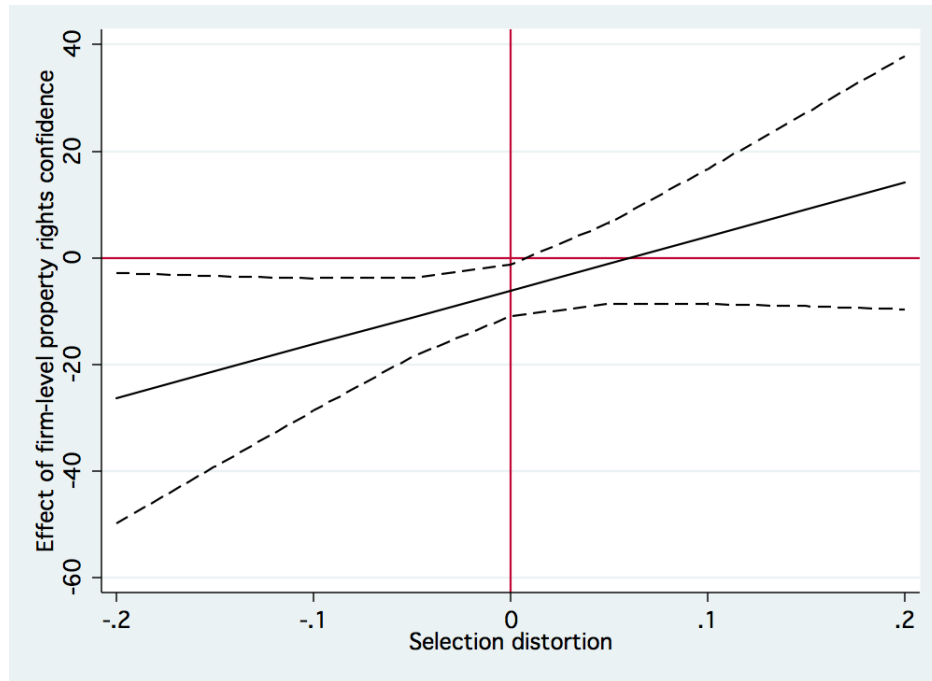
Figure 3.10: Impact of selection on the effect of property rights discrimination

dissipates. Interestingly, the effect of informality becomes statistically insignificant for virtually any positive value of selection distortion (i.e., in countries whose sample of firms report higher property rights confidence than expected by the *Doing Business* indicator). This evidence supports the notion that the effect of firm-level property rights confidence in some country depends on the representativeness of its sample.

3.5 Conclusions

This chapter set out to test three key claims from Chapter 2 — that property rights discrimination exists, varies meaningfully across countries, and has important effects on microeconomic and macroeconomic performance. I began by reviewing various attempts to measure the security of private property rights. Each of these efforts depended on implicit assumptions regarding the distribution of property rights protection, generally assuming a uniform level of protection that could be accurately

proxied by the study of a particular class of actors. In contrast, the World Bank's *Enterprise Surveys* provide an exciting new opportunity to allow actual economic agents to describe their property rights confidence. Thus, with little need for stringent assumptions, we can describe the distribution of property rights confidence in an economy. Using those measures, I demonstrate that, even in advanced economies, firm managers' confidence in their private property rights does vary. Furthermore, the distribution of their responses itself varies across countries. Even in countries with similar mean levels of confidence in private property, the size and distress of the "out" group of firm managers could vary meaningfully.

Using these data, I tackle the question of whether property rights discrimination affects microeconomic and macroeconomic performance. The estimates reported in in Section 3.4 generally support the notion that firm managers shift their behavior in response to their confidence in their property rights. In any given country, firms receiving more vigorous protection by the State report more of their income for tax purposes and invest more. Furthermore, I presented evidence that, in terms of informality, firm managers respond more strongly to their own property rights confidence than national-level property rights security. These findings also translated to the macroeconomic level. Informality in the economy does respond to the mean property rights confidence, but that effect depends on the degree of property rights discrimination.

In many of these statistical tests, the effect of property rights discrimination is less dramatic than Chapter 2 proposes. In response, I suggest that the *Enterprise Surveys* under-state the severity and consequences of property rights discrimination, since they by their nature do not report the effect of property rights discrimination on firm creation and destruction. Furthermore, the *ES'* reliance on property registries

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and only urban firms likely dampen the appearance of property rights discrimination further. In Section 3.4, I test the validity of this logic, finding evidence that the reported distribution of property rights confidence is overly sanguine in many countries. Moreover, the estimated effect of firm-level property rights confidence on firm behavior strongly depends on the degree of that distortion.

With this empirical portrait of property rights discrimination in place, I now turn to the testing of Chapter 2's discussion of the *causes* of property rights discrimination In Chapter 4, I use many of these measures to test whether and how political institutions affect individual firm managers' confidence in their private property rights.

CHAPTER IV

Statistical Models of Property Rights Discrimination

4.1 Introduction

In Chapter 2, I proposed that politicians discriminate the protection of private property across citizens as part of their efforts to retain political power. In turn, property rights discrimination will depress economic activity in the "out" group and slow general macroeconomic performance. Chapter 3 offered statistical support for an important segment of this theory of property rights. It tentatively showed that property rights discrimination does exist, varies across countries, and affects firm behavior.

This chapter tests Chapter 2's predictions regarding the political institutional origins of property rights discrimination. That chapter made three sets of predictions. The first follows from the logic of collective action. Specifically, groups of citizens that are smaller, homogenous, and richer will enjoy greater confidence in the protection of their private property rights. The second set of hypotheses concerns the relationship of democracy to property rights confidence. Democracies will tend to discriminate the protection of private property against richer citizens while non-democracies will tend to discriminate in *favor* of richer citizens. Overall, however, democracies will engage in less property rights discrimination than non-democracies. Finally, the third set

of predictions regards the selectorate theory. My adaptation of that theory predicts that winning coalition members will tend to enjoy greater property rights confidence, but that their political advantage declines in large-W regimes. Furthermore, regimes with smaller winning coalitions will differ in how they discriminate the protection of private property rights, depending on the size of the selectorate.

Thinking in terms of the firm-level data described in Chapter 3, this thinking suggests that a firm manager's property rights confidence depends on the interaction of the design of political institutions and her firm's position in that constellation. When political institutions galvanize politicians to protect all citizens' rights equally, then the firm's political position (however defined) will have little effect on its confidence in its property rights. Conversely, when political institutions motivate political leaders to engage in property rights discrimination, the firm's political position will make the difference in whether it finds itself in the "in" group of protected rights or the "out" group of unprotected rights, with the attendant economic consequences. This inherently interactive set of hypotheses lend themselves well to the multi-level statistical models described in Chapter 3.

As I observe in Chapter 3, marshaling empirical support for these propositions is no easy task. Testing Chapter 2's political institutional theory of property rights discrimination demands firm-level indicators that describe a particular firm's political grouping. Furthermore, these measures must be comparable across countries, so that we can compare the property rights confidence of two firms with the same political characteristics in different political regimes. In practice, the process of identifying exactly *who* populates different political groupings is quite difficult. For example, in one country, the selectorate and winning coalition may be defined ethnically, with an ethnic minority prohibited from political participation, whereas another may deny

membership in the selectorate to women. In practice, the shape of property rights discrimination will differ in these regimes. Thus, it is difficult to identify a single set of rules that define membership in these political groupings that remains constant across regimes, even within the ideal types of regimes described in Chapter 2 (i.e., democracies versus non-democracies, large winning coalition versus small winning coalition regimes).

The nature of the data used here — cross-country firm-level surveys — compounds this issue further because we must define rules that describe a *firm's* position in its political universe in a manner that as precisely as possible reflects the underlying constructs suggested in Chapter 2. For instance, if non-democratic regimes more likely engage in property rights discrimination, which firms will it discriminate against? Which firms are members of the selectorate and/or winning coalition? In general, the measurement strategy requires the World Bank *Enterprise Surveys* to tell us something meaningful about a firm's *politics*, deciphering the degree to which it possesses a voice in politics and how it wields its political influence. Firms do not vote in elections and in most cases, they do not formally occupy a constitutionally-mandated place in government. At the extreme, one might argue that firms are not constitutionally members of the polity in the sense that citizens are. However, firms are political as well economic actors, theoretically free to lobby for policy, contest private property rights in courts, and lobby politicians for changes to economic rules that govern their use of private property.

Furthermore, Chapter 3's analysis unveiled the existence of selection bias in the *Enterprise Surveys*. The very nature of the surveys, in combination with their tendency to over-sample certain types of firms, likely weakens their ability to demonstrate the existence of property rights discrimination and its effect on firm behavior.

This potential bias may also exacerbate the testing of Chapter 2's political institutional theory of property rights discrimination. Let us imagine two countries, one that discriminates the protection of private property and one that does not. Imagine also that a particular theory of political institutions predicts this difference well; the first country's political institutions create an incentive to protect all firms, whereas the second country's lead to a bias against certain firms. In this example, it is likely that the latter country's "out" group will be under-sampled, under-stating the extent of property rights discrimination. Even if the "in" and "out" groups can be identified with some confidence, the relationship between the firm-level characteristics and property rights will be attenuated in the country where it is strongest. This logic suggests that the upcoming analysis will represent a difficult test for Chapter 2's political institutional theory of property rights discrimination.

Nevertheless, these empirical tests still unveil a number of intriguing relationships. First, there is strong support for the proposition that collective action dynamics characterize firms' struggle to force the State to protect their private property rights. Larger, state-owned, and exporting firms all tend to enjoy stronger property rights protection, all else equal. Second, tentative evidence suggests that democracies do engage in less property rights discrimination, but that, in general, firms in democratic countries report less property rights confidence. However, it does not appear that richer (i.e., larger) firms suffer more in democracies than in non-democracies and vice versa. Instead, analysis suggests that the autocratic advantage derives from their discrimination in favor of politically connected firms. Finally, this chapter finds tentative evidence that countries with large winning coalitions tend towards an equilibrium of lower mean property rights confidence with less variation about that mean. This chapter fails, however, to test the core interactive predictions of

Chapter 2, which predicts that a firm manager's property rights confidence depends on whether or not she inhabits the selectorate and winning coalition and the size of those groupings.

The remainder of this chapter proceeds as follows. Section 4.2 carefully describes the empirical design of the statistical analysis, in particular issues of measurement and specification. Section 4.3 describes models of property rights discrimination in democracy and non-democracy. Section 4.4 summarizes results of statistical testing of the selectorate theory.

4.2   Empirical Design

Before proceeding to the empirical testing of the political institutional explanations, I return to the general approach of the statistical models contained herein, first discussed in Chapter 3. I begin by describing the measurement of property rights confidence and the various control variables used in the models. I then discuss the methods used to estimate the effect of firm and national-level variables on firm-level property rights confidence.

4.2.1   Measurement

As discussed previously, the empirical tests contained in this chapter require carefully constructed measures at both the firm and country levels. In particular, the statistical tests resurrect our discussion — first broached in Chapter 3 — of strategies for measuring firm-level property rights confidence. Then the independent variable in models of firm performance, these measures now take pride of place in these models. Next, this analysis necessitates a set of independent variables that adequately describe a firm's pertinent political characteristics, depending on the contours of the theory in question. Finally, the analysis requires a set of control variables that pos-

sess a plausible effect on the dependent variable. I discuss each of these questions in turn.

Chapter 3 described carefully a strategy to measure property rights discrimination, notably by creating firm-level measures of property rights confidence. Notably, I compared *simple* and *de-meaned* measures of firm managers' confidence. Whereas simple measures of property rights relied on a simple average of available assessments of property rights-relevant issues, de-meaned measures compared that average to each respondent's general level of satisfaction with the investment climate, yielding a measure of each respondent's relative concern for her property rights. Here, I rely on the de-meaned measures, for two reasons. First, as discussed in Chapter 3, the de-meaned measures account a firm manager's general tendency towards optimism or pessimism. Furthermore, de-meaning property rights assessments helps to account for cultural differences in responses to subjective differences, which endanger cross-country comparisons of property rights confidence. Second, the de-meaned measures generally more strongly correlate with measures of firm behavior, as discussed in Chapter 3. I use the combined de-meaned measure, taken by subtracting the inverse of the second dimension of property rights confidence (safety from expropriation) from the first dimension (protection from violations by other citizens). The measure ranges from -1 to 1, with higher values representing higher property rights confidence.

Chapter 2 emphasizes that, though all citizens wish to win State protection of their private property rights, they will find it difficult to do so due to the logic of the collective action problem, even when a group of citizens' interests coalesce. However, certain groups will find it easier to overcome the collective action problem. First, smaller groups in which each member possesses a larger individual vested interest will more likely organize around their interests. This implies that larger firms will

more likely report confidence in their private property rights. Regardless of political system, larger firms have a greater stake in the design of property rights institutions and may afford better representation of their interests. I code the size of a firm by its number of employees, according to the "employment" variable in the *ES*; given the presence of particularly larger outliers, I take the natural log of the firm's reported number of employees. I also rely on the *ES'* coding of firm size into three categories — small (20 employees and below), medium (between 20 and 100 employees), and large (over 100) — in place of the continuous logged measure. In most cases, I rely on the continuous measure based on the natural log of total employment.

Furthermore, the nature of a firm's ownership may buttress its ability to organize around its property rights institutional. State-owned enterprises (SOEs) will likely possess more encompassing interests and find their costs to organizing lowered by their access to the center of political power. For example, SOEs may prove exempt from restrictions on property rights imposed on private firms. We might also expect them to be relatively safe from expropriation by other actors (i.e., the first dimension of private property rights). I create an indicator variable set to 1 when the firm is state-owned, using the *ES'* measures of ownership shares of various entities — foreign citizens, the State, the domestic private sector, and other forms of ownership (i.e., co-operatives).[1] Roughly 7% of firms in the dataset are state-owned.

The nature of collective action may also confer special advantages on older firms. Olson (1982) argues that within a stable country, special interests will accumulate over time. This logic implies that older firms may better organize for beneficial changes to property rights institutions. Additionally, if property rights discrimination forces "out" group firms to fail, then older firms became so due to benefiting

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[1]These variables (c203a-d in the dataset) suggest a more continuous depiction of ownership. However, nearly 95% of respondents report that their firm is either wholly publicly or wholly privately owned. Creating indicator variables, therefore, doesn't appear to over-simplify an underlying ownership pattern.

from property rights discrimination. I create a measure of the age of a firm equal to the natural log of the year of the survey minus the year the firm reported beginning operations in that country.

I also insert several control variables, starting with an indicator variable for foreign ownership. My theoretical framework relies on a depiction of the relationship between politicians and citizens and hence does not provide much guidance as to how and why politicians protect foreign firms' rights. However, an energetic literature in political economy concentrates on the question of when politicians expropriate foreign direct investment (FDI), whether through outright expropriation or policy changes that restrict their economic rights (Aizenman and Marion 1999; Jensen 2003; Stasavage 2002). I therefore code an indicator variable for foreign ownership as a control variable; roughly 12.5% of firms in the *ES* are foreign-owned.[2]

I also control for whether or not a firm exports its goods and/or services. We might expect politicians to discriminate the protection of private property rights in favor of firms that generate foreign exchange, loosening the kinds of restrictions that comprise the second dimension of property rights — safety from expropriation. Furthermore, we might expect this relationship to vary across different regime types. The *ES* record whether or not a particular firm exports on the basis of a series of questions on the destination of its sales. Of the firms in the sample, roughly 21.2% report the export of goods abroad.[3]

Finally, I create a control variable for each firm's sector. Firms in the *ES* are divided into three sectors: manufacturing (65% of the sample), services (27%), and a residual category comprised of agro-industry, construction, and other activities (8%

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[2]The same logic regarding SOEs holds for foreign firms — firms tend to be either wholly domestically or wholly foreign owned. Thus, an indicator variable does not throw out information unnecessarily.

[3]As with state ownership, this variable could be measured continuously, but the distribution of data — dominated by responses of 0% and 100% — suggests that a dichotomous indicator does not mis-specify the relationship.

of the sample). I create a dummy variable equal to 1 for manufacturing firms and 0 for all others, testing whether manufacturing firms enjoy fuller protection of their private property rights than other firms.

4.2.2 Specification and Sample

With these measures in hand, I turn now to the specification of models of firm-level property rights confidence. As discussed in Chapter 3, the data are hierarchical; firms are nested in countries, which are sometimes surveyed repeatedly. Furthermore, Chapter 2 suggests that a firm manager's property rights confidence is a product of national political institutions and the firm's place within those institutions. Our specification must account for the structure of the data and the premise that the effect of national-level political institutions on a particular firm's property rights confidence depends on that firm's political characteristics.

For each of the theories tested here, I specify and estimate a series of models that help us understand the role of political institutions in perpetuating property rights discrimination. First, I define, at the country-level, a measure of the standard deviation of firm managers' confidence in their private property rights, as defined by the combined de-meaned measure described in Chapter 3 and above. Greater variation in the protection of private property rights should be reflected in a larger standard deviation in property rights confidence. I then regress that measure of property rights discrimination on measures of national-level political institutions discussed in Chapter 2, as follows:

$$(4.1) \qquad\qquad SD_j(p_{ij}) = \beta_0 + \beta_1 * Z_j + \alpha * R_j + \epsilon_j,$$

where $SD_j(p_{ij})$ is a measure of the standard deviation of the combined de-meaned

measure of property rights confidence for country j; Z_j is a measure of the pertinent political institutions; and R_j is a matrix of control variables measured at the country-level. As discussed previously, this estimate allows an initial check of the explanatory power of the theory. For example, if democratic politicians, all else equal, engage in less property rights discrimination then we should expect that $\beta_1 < 0$, since we should expect a smaller standard deviation of property rights discrimination. These empirical tests allow an initial test of each theory without requiring that we identify the exact firms that populate the "out" group.

However, each of the political institutional theories discussed in Chapter 2 makes more specific predictions regarding property rights discrimination; namely, that specific types of firms will find themselves in the "out" group, depending on their place in the political institutional constellation. As discussed briefly in Chapter 3, the increasing prevalence of cross-national survey data and hierarchically structured data more generally has driven the development of methods to test such hypotheses.[4] Imagine that we think some characteristic of firm i in country j affects its property rights confidence. We might model that relationship as follows:

$$(4.2) \qquad p_{ij} = \beta_{0j} + \beta_{1j} * x_{ij} + \epsilon_{ij}$$

In Equation 4.2, a firm's property rights confidence is a function of some firm-level characteristic x_{ij}. Now let us assume that we have theoretical reason to believe that the effect of x_{ij} depends on some country-level political variable z_j, which also may affect the confidence of firm manager's directly. This implies that:

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[4]For useful introductions to analysis of these data, see Steenbergen and Jones (2002) and the special issue of *Political Analysis* (2005). The remainder of this discussion follows the latter, particularly Bowers and Drake (2005) and Franzese (2005).

$$(4.3) \qquad\qquad\qquad \beta_{0j} = \gamma_{00} + \gamma_{01} * z_j + \delta_{0j}$$

$$(4.4) \qquad\qquad\qquad \beta_{1j} = \gamma_{10} + \gamma_{11} * z_j + \delta_{1j}$$

According to Equations 4.3 and 4.4, β_{0j}, the country-level conditional mean property rights confidence, is characterized by a multivariate normal probability distribution with mean γ_{00}. A country's conditional mean depends on its value of z_j, while δ_{0j} is a mean-zero country-level disturbance. Similarly, the effect of x_{ij} on p_{ij} varies across countries depending on z_j, with mean of γ_{11} and a mean-zero country-level disturbance of δ_{1j}. Substituting Equations 4.3 and 4.4 into Equation 4.2 yields the following:

$$(4.5) \qquad p_{ij} = \gamma_{00} + \gamma_{01} * Z_j + \gamma_{10} * x_{ij} + \gamma_{11} * Z_j * x_{ij} + (\epsilon_{ij} + \delta_{0j} + \delta_{1j} * x_{ij})$$

Equation 4.5 models firm-level property rights confidence as a function of both firm-level and national-level attributes — and their interaction. The effect of national-level political institutions depends on firm-level attributes, just as the effect of firm-level attributes depends on national-level political institutions. As discussed in Chapter 3, simple OLS and fixed effects estimates fail to capture the hierarchical structure of the data. I estimate Equation 4.5 using a pooled-sample, one-step strategy that uses MLE to specify the probability distribution for the coefficients, estimating the mean and variance of the distributions (Franzese 2005).

In terms of the spatial and temporal sample, I rely on the *ES* for its list of countries surveyed and the firms surveyed within each country.[5] As discussed in Chapter 3,

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[5]The *ES's* sampling frame for each country and its choice of countries to survey are both discussed in Chapter 3. Also see Chapter 3 for the list of countries included in the analysis.

several of the countries in the *ES* are surveyed more than twice or even three times. Given the paucity of level-three (i.e., across time) units, making such comparisons would prove quite difficult. Therefore, I use all surveys for countries only surveyed one time and the first surveys for countries surveyed more than once.

4.3 Democracy and Property Rights

According to Chapter 2's discussion of the effect of democracy on property rights confidence, richer citizens suffer from property rights discrimination in democracies, whereas they benefit from property rights discrimination in non-democracies. However, property rights discrimination should be less severe in democracies, all else equal. Here, I test those intuitions.

4.3.1 Measurement

In this set of models, the country-level variable Z_j in Equations 4.3 to 4.5 is democracy. It risks understatement to argue that measuring the presence and extent of democratic political institutions has been a major focus of comparative politics. That effort has yielded two primary approaches to the measurement of democratic political institutions. The first, most often identified with the Freedom House's *Freedom in the World* dataset, focuses on the extent to which citizens securely hold political and civil freedoms. The second, most often identified with the Polity IV Project and the World Bank's *Database on Political Institutions*, focuses on measuring the nature of political institutions, such as the openness and competitiveness of executive recruitment. In Chapter 2's discussion of the role of democracy, I concentrate on the role of democratic political institutions in shaping leaders' incentives to protect private property rights and, most importantly, discriminate that protection.

I therefore rely on the Polity IV Project's coding of political characteristics.[6]

Polity IV generates three summary measures of the degree of democracy in a particular country, with sample extending to all sovereign countries from 1816 until 2006. The first two variables, each measured on a ten-point scale, measure the institutionalization of democracy and authoritarianism, respectively. Each of these scores is based on six component measures that describe the nature of executive recruitment, constraints on the executive's authority, and political competition. Finally, a summary measure is calculated by subtracting the autocracy score from the democracy score, yielding a 21-point scale ranging from -10 (a hereditary monarchy) to 10 (fully consolidated democracy), with higher scores denoting more democratic regimes.[7] The Polity IV Project also recommends a trichotomous categorization of regime type, based on this scale. Regimes with a summary score of -6 or lower (inclusive) are categorized as autocratic and regimes with scores higher than +6 (inclusive) are categorized as democratic. Countries with intermediate regimes are termed "mixed" or "anocratic," as they contain aspects of both democratic and autocratic governance.

Testing the interaction of regime type and a firm's wealth requires a measure of the latter. I use the measure of firm size described in Section 4.2.

However, I also code a measure of a firms' political influence as an alternative test of the effect of democracy on property rights discrimination. I rely on a series of questions asked of firm managers regarding their political behavior. The *ES* ask firm managers whether their firms have sought to "lobby government or otherwise influence the content of laws or regulations affecting it." Additionally, firm managers are asked to assess their degree of influence on "national laws and regulations." Finally,

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[6]For important critical evaluations of the Polity Indexs utility, see Treier and Jackman (2008) and Vreeland (forthcoming).

[7]For ease of interpretation, I convert this scale to range from 0 to 21 by adding 10 to the each point on the scale.

the *ES* also ask firm managers whether or not they belong to a business association or chamber of commerce, as well as the value such business associations bestow, from the effect on lobbying government to information on government regulations. I use factor analysis to create a new measure of political importance, basing the measure on these nine variables.[8] After re-scaling for ease of interpretation, this measure of political importance varies from 0 to 1. This measure of political connectedness possesses a distinct advantage for the purposes of this chapter. As discussed earlier, a major obstacle to building a cross-national statistical model of property rights discrimination is identifying which groups of citizens will populate the "in" and "out" groups. Though non-democratic regimes more likely may protect politically connected firms, it remains difficult to define *ex ante* politically well-connected citizens. This challenge is compounded by the use of firm-level data, since the nature of firms' political behavior is less readily defined. However, the index of political connectedness more directly identifies firms with political influence by their own assessment of their lobbying activities and their involvement in business associations.

4.3.2 Preliminary Evidence

Before estimating statistical models of property rights discrimination, I estimate a set of models that test whether democratic governance, all else equal, generally affects firm managers' property rights confidence. I begin with models of variation in the protection of private property and then proceed to firm-level models of property rights confidence in which democratic governance informs a country's mean property rights confidence. I then pause to report on a preliminary test of whether the selection bias discussed above and in Chapter 3 is more pronounced in non-democracies.

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[8]The scale reliability coefficient of 0.8758 suggests that the measures do capture the same underlying construct.

Table 4.1: Regressions of Variation in Property Rights Confidence

Variable	Simple		De-Meaned	
Polity	$-0.0007^{0.53}$	$-0.0017^{0.07}$	$-0.0011^{0.09}$	$-0.0008^{0.25}$
Mean		$-0.1493^{0.00}$		$0.0585^{\ 0.18}$
Constant	$0.3027^{0.00}$	$0.3752^{0.00}$	$0.1675^{0.00}$	$0.1648^{\ 0.00}$
N	69	69	69	69
R^2	0.0059	0.2957	0.0436	0.0689

Cell entries are coeffcients with p-values$^{super-scripted}$.

Models of Variation in Property Rights Confidence

Table 4.1 records the estimates of regressions of the standard deviation of property rights confidence for both the simple and de-meaned measures. We can observe two patterns in the data. For the simple measures, the bivariate regression suggests a statistically insignificant relationship between democracy and variation in firm managers' confidence. However, when the mean of the distribution is inserted as a control, the effect of democracy increases absolutely and becomes marginally significant ($p = 0.07$). For the de-meaned results, the bivariate results indicate a negative relationship between the Polity indicator of democracy and property rights discrimination. However, when controlling for the mean of the distribution reduces the absolute size and the statistical significance of this finding. Neither does the mean of a country's distribution of property rights confidence correlate strongly with variation in the distribution.

The differences between the sets of models derives from the pairwise correlations among the three variables. For the simple measures, the three variables are negatively correlated with each other. In contrast, for the de-meaned variables, political democracy exhibits a negative correlation with both the standard deviation of the distribution and the mean, whereas the latter two variables are positively correlated. This difference in the direction and size of the correlation between the mean and

standard deviation of a survey country's distribution of property rights confidence differentiates the two sets of results. When de-meaning the property rights confidence measure, the relationship between the mean and standard deviation of a country's distribution is altered, becoming weaker absolutely and positive in sign.[9] Including the mean of the distribution in a regression of the standard deviation on political democracy thus has different effects on our estimate of the effect of democracy on the standard deviation.

Democracy and Firm-Level Property Rights Confidence

The foregoing analysis suggests tentatively that democratic countries generally exhibit less severe property rights discrimination. I turn now to a multi-level model of property rights confidence that allows measures of democracy to inform the country-level conditional mean of property rights confidence, but does not yet test whether the effect of firm-level characteristics on property rights confidence depends on the political regime. That model takes the following form:

$$p_{ij} = \beta_{0j} + \alpha * Z_{ij} + \epsilon_{ij}$$

(4.6) $$\beta_{0j} = \gamma_{00} + \gamma_{01} * AUTO_j + \gamma_{02} * DEMO_j + \delta_{0j}$$

$$p_{ij} = \gamma_{00} + \gamma_{01} * AUTO_{ij} + \gamma_{02} * DEMO_j + \alpha * Z_{ij} + (\epsilon_{ij} + \delta_{0j})$$

Table 4.2 displays two models of firm-level property rights confidence. The first column displays the results of a model in which the country-level mean (β_{0j}) is allowed to vary randomly across countries, whereas the second allows β_{0j} to vary according to the country's political regime (autocratic, democratic, or mixed), as

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[9]This change likely emanates from the fact that de-meaning the measures reduces mean and the total variance of property rights confidence, both across firms and across countries.

Table 4.2: Democracy and Property Rights

Variable	Microlevel	Country-level intercept effects
Intercept (γ_{00})	$-0.06^{0.00}$	$-0.04^{0.08}$
Firm-Level		
Size	$0.004^{0.00}$	$0.004^{0.00}$
State ownership	$0.01^{0.00}$	$0.01^{0.00}$
Manufacturing	$0.019^{0.00}$	$0.019^{0.00}$
Age	$-0.004^{0.00}$	$-0.004^{0.00}$
Exporter	$0.010^{0.00}$	$0.010^{0.00}$
Foreign	$0.0009^{0.74}$	$0.0009^{0.76}$
Country-Level Intercept Effects		
Autocracy (γ_{01})		$0.06^{0.08}$
Democracy (γ_{02})		$-0.04^{0.11}$
Variance Component		
Intercept (δ_{0j})	$0.09^{0.00}$	$0.08^{0.00}$
N	28,788	28,660
Countries	72	70

Cell entries are coeffcients with p-values$^{super-scripted}$.

shown below, where p_{ij} is the de-meaned firm-level measure of private property rights confidence and Z_{ij} is a matrix of firm-level independent variables:

I attend first to firm-level variables pertaining to ability of firms to lobby effectively for beneficial property rights institutions. Larger firms benefit from stronger property rights protections, as evidenced by the positive and statistically significant coefficient on the size variable. An increase in employment of one standard deviation (the natural log of 1.7, or about 5.5 employees) yields an increase in property rights confidence of only 0.007 in our dependent variable, less than half of one standard deviation.[10] The coefficient on the state-owned enterprises (SOE) indicator is also signed positively, as expected, though its effect is also quite small.[11] Surprisingly,

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[10]Substituting size categories for the continuous measure of firm size yields an interesting pattern. Using the World Bank's trichotomous coding of firm size and leaving medium-sized firms as the base category, small firms do not suffer worse property rights protections (the sign on the small firm dummy variable is negative, but statistically insignificant). However, large firms do benefit from stronger property rights confidence. Using a five-category coding of size, small firms do not suffer relative to medium-sized firms, but micro-enterprises clearly do (negative and statistically significant). Large firms are, statistically speaking, more confident, but very large firms do the best of all. This suggests that the effects of size are felt most strongly at the very small and very large end of the scale, with firms in the middle tending to not vary in terms of confidence as much.

[11]Further analysis indicates that SOEs' greater confidence depends on their property versus contractual rights. While their confidence in their contractual rights is not statistically different from private firms, their confidence in freedom from expropriation is far higher.

older firms report lower confidence in their private property.[12]

In terms of other firm-levle controls, manufacturing firms tend to enjoy greater property rights confidence, as do exporting firms. Foreign ownership has no statistically significant effect on property rights confidence.

What of political regimes? Column 2 reports estimates of Equation 4.6, with mixed regimes set as the base category. This model provides tentative evidence that national political institutions, all else equal, do affect firm managers' property rights confidence. The two indicator variables are jointly significant at $p = 0.003$. Furthermore, we can compare the estimate of δ_{0j}, the country-level disturbance, in the two equations; if national-level political institutions play an important role in firm managers' property rights confidence, then we should observe a serious decline in the size of δ_{0j} from Column 1 to 2. Indeed, the figure declines by 5.5% in the second equation.[13] Though the individual coefficients are only weakly significant, Column 2 supports our discussion of the covariance of national-level mean property rights confidence and political institutions. All else equal, firms in democratic regimes declare less confidence in their private property rights than firms in mixed regimes. Similarly, firms in autocratic regimes declare higher confidence. Furthermore, the difference in firm confidence in private property rights is substantively large and statistically significant. All else equal, the difference between the indicator variables for autocratic and democratic countries $(\gamma_{01} - \gamma_{02})$ is 0.10, a difference that is statistically significant at $p = 0.001$.

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[12]One quite speculative explanation for this result, based on Chapter 2's bargaining approach to economic institutions, states that sudden shifts in technology or relative prices that yield challenges to current property rights institutions more strongly challenge the property rights confidence of older firms. One comparison that supports this conjecture is that the effect of firm age is smaller and less statistically significant in the expropriation equation than the contractual rights equation; this suggests that they respond more strongly to the fear of infringement by other companies than the State.

[13]I arrive at this figure by dividing the difference in the two country-level disturbances by the same in Column 1 (i.e., $\frac{.0856 - .0809}{0.0856} = 0.055$).

Democracy and Selection

In Chapter 3, I contend that the *Enterprise Surveys* likely under-state the degree and effect of property rights discrimination. Earlier in this chapter, I have argued that the *ES* might also distort our estimates of the effect of political institutions on property rights discrimination. If a certain set of political institutions increase the severity of property rights discrimination, we might expect higher barriers to entry in countries with those institutions, which might reasonably be expected to depress property rights discrimination. In a preliminary test of that intuition, I again regress the mean property rights confidence (de-meaned) for each country analyzed in Chapter 3 on the natural log of the *Doing Business* measure of the cost of starting a business. I do so for both the combined, first-dimensional (i.e., contractual rights), and second-dimensional (i.e., property rights) measures of property rights security. For each regression, I save the residuals. I then regress the residuals on a country's regime type, using indicator varibles for democratic and autocratic governance, leaving mixed regimes as the base category.

I report those results in Table 4.3 In each regression, the effect of autocratic governance is to increase the size of selection bias in the firm-level sample. Democratic governance, on the other hand, is signed negatively but is statistically insignificant. In each equation the effect of autocracy is statistically distinguishable from democracy at at least $p = 0.004$. Altogether, the effect or regime type on the selection problem is strongest in the model of contractual rights. These results suggest strongly that the *Enterprise Surveys'* sampling issues are more serious in autocratic regimes.[14]

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[14]Given these results, we might be tempted to doubt Table 4.2's finding that that firms in autocratic regimes generally report greater property rights confidence, particularly given that the effect of autocratic regimes is strongest in a model of contractual rights, as in Table 4.3. However, accounting for these effects by entering the residuals to the models reported in Tabe 4.2 only intensify the negative coefficient on the democracy indicator variable.

Table 4.3: Selection bias in democracies and non-democracies

Variable	Combined	D1: contractual	D2: property
Autocracy	$0.0657^{.06}$	$0.0386^{.05}$	$0.0306^{.10}$
Democracy	$-0.0301^{.22}$	$-0.0187^{.17}$	$-0.0162^{.25}$
Constant	$0.0115^{.59}$	$0.00750^{.52}$	$0.00582^{.631}$
N	73	70	73
R^2	0.12	0.16	0.12

Cell entries are coeffcients with p-values$^{super-scripted}$.

4.3.3 Property Rights Discrimination in Democracies and Non-Democracies

The foregoing evidence tentatively shows that firms in democratic countries, all else equal, suffer from lower property rights confidence. However, some evidence also suggests that democratic governance lowers the overall variation in property rights confidence, discussed earlier. Here, I test the hypothesis that that democracy's effect on property rights confidence depends on firm size.

Large Firms, Small Firms, and Democracy

Table 4.2 provides evidence that larger firms generally solve the collective action problem more successfully; all else equal, they report greater confidence in the protection of their private property rights. But does this effect depend on the presence of political democracy? I answer this question by estimating a model of firm-level property rights confidence that allows the effect of size — as coded into three categories of small, medium, and large by the ES — to vary across types of political regime. Equations 4.7 and 4.8 specify that relationship. In the model, a firm's size affects the protection of its private property rights, but that effect depends on the kind of political regime governing the firm.

$$p_{ij} = \beta_{0j} + \beta_{1j} * SMALL_{ij} + \beta_{2j} * LARGE_{ij} + \alpha * Z_{ij}\epsilon_{ij}$$

$$\beta_{0j} = \gamma_{00} + \gamma_{01} * DEMO_j + \gamma_{02} * AUTO_j + \delta_{0j}$$

$$(4.7) \qquad \beta_{1j} = \gamma_{10} + \gamma_{11} * DEMO_j + \gamma_{12} * AUTO_j + \delta_{1j}$$

$$\beta_{2j} = \gamma_{20} + \gamma_{21} * DEMO_j + \gamma_{22} * AUTO_j + \delta_{2j}$$

Substituting yields the following:

$$p_{ij} = \gamma_{00} + \gamma_{01} * DEMO_j + \gamma_{02} * AUTO_j + \gamma_{10} * SMALL_{ij} + \gamma_{20} * LARGE_{ij} + \alpha * Z_{ij} +$$

$$(4.8) \qquad \gamma_{11} * DEMO_j * SMALL_{ij} + \gamma_{12} * AUTO_j * SMALL_{ij} +$$

$$\gamma_{21} * DEMO_j * LARGE_{ij} + \gamma_{22} * AUTO_j * LARGE_{ij} +$$

$$(\epsilon_{ij} + \delta_{0j} + \delta_{1j} * SMALL_{ij} + \delta_{2j} * LARGE_{ij})$$

Since mixed regimes and medium-sized firms are left as the base categories, the effect of being a small firm is $\frac{\partial p_{ij}}{\partial SMALL_{ij}} = \beta_{1j} = \gamma_{10} + \gamma_{11} * DEMO_j + \gamma_{12} * AUTO_j + \delta_{0j}$. If democracies discriminate in favor of larger firms, then we should expect not only that $\gamma_{11} > 0$ (i.e., that democracies discriminate against small firms less than mixed regimes), but that $\gamma_{11} > \gamma_{12}$ (i.e., that democracies discriminate against small firms less than autocracies). We should expect the converse to be true for the effect of being a large firm, equal to $\frac{\partial p_{ij}}{\partial LARGE_{ij}} = \beta_{2j} = \gamma_{20} + \gamma_{21} * DEMO_j + \gamma_{22} * AUTO_j + \delta_{2j}$. If democracies discriminate in favor of larger firms less often, then we should expect that $\gamma_{21} < 0$ and that $\gamma_{21} < \gamma_{22}$.

Table 4.4 presents two sets of estimates. Column 1 presents the estimates of an equation that allows the effect of firm size to vary randomly across countries, but not according to political institutions Column 2 presents the estimates of Equation 4.9.

Table 4.4: Firm Size and Property Rights Discrimination

	Country-level Intercept Effects	Fully Interactive
Intercept	$0.049^{0.02}$	$-0.0455^{0.03}$
Firm-Level		
Size:small (γ_{10})	$-0.0042^{0.22}$	$-0.0161^{0.04}$
Size:large (γ_{20})	$0.0076^{0.03}$	$0.0048^{0.56}$
State ownership	$0.0126^{0.00}$	$0.0126^{0.00}$
Manufacturing	$0.0175^{0.00}$	$0.0175^{0.00}$
Age	$-0.0036^{0.00}$	$-0.0037^{0.00}$
Exporter	$0.0127^{0.08}$	$0.0127^{0.00}$
Foreign	$0.0013^{0.65}$	$0.0013^{0.66}$
Country-Level Intercept Effects		
Democracy (γ_{01})	$-0.0420^{0.19}$	$-0.0461^{0.06}$
Autocracy (γ_{02})	$0.0556^{0.11}$	$-0.0498^{0.15}$
Country-Firm Interactions		
Small*Democracy (γ_{11})		$0.0130^{0.14}$
Small*Autocracy (γ_{12})		$0.0227^{0.06}$
Large*Democracy (γ_{21})		$0.0032^{0.73}$
Large*Autocracy (γ_{22})		$0.0028^{0.82}$
Variance Components		
Size: small (δ_{1j})	$0.0186^{0.00}$	$0.0177^{0.00}$
Size: large (δ_{2j})	$0.0164^{0.00}$	$0.0171^{0.00}$
Intercept (δ_{0j})	$0.0807^{0.00}$	$0.0807^{0.00}$
N	28,660	28,660
Countries	70	70

Cell entries are coeffcients with p-values$^{super-scripted}$.

Column 1 provides continued support for two trends observed in earlier analysis. First, larger firms tend to enjoy more confidence in the protection of their private property rights an effect that is statistically significant. Smaller firms, in contrast, do not differ statistically from medium-sized firms. However, the difference between small and large firms is substantial and statistically significant at $p = 0.007$. Second, firms in democracies tend to declare less confidence in the protection of their private property rights than firms in mixed regimes, all else equal. The opposite is true of firms in autocratic regimes, though with less statistical confidence. However, firms in democratic and autocratic regimes are statistically different at $p = .001$).

Does regime type influence property rights discrimination by firm size? Column 2 suggests that it does, but not how discussed in Chapter 2. The effect of being a

| | | Firm Size | |
		Small	Large
	Autocratic	$+0.0066^{.48}$	$+0.0076^{.41}$
Regime Type	**Mixed**	$-0.0161^{.04}$	$+0.0048^{.56}$
	Democratic	$-0.0031^{.45}$	$+0.0080^{.07}$

Table 4.5: Effect of Firm Size on Property Rights Security

small firm is negative and statistically significant in mixed regimes, but the positive coefficients on the interactions with autocratic and democratic regime type suggest that this effect dissipates in those regimes. In particular, the interaction with autocratic regimes is positive and significant at $p = 0.06$. The effect of being a large firm, in contrast, is positive and statistically significant in mixed regimes, an effect that doesn't appear to increase or decrease in autocratic and democratic regimes; though the interactions of the large firm dummy variable with those regime types are positively signed, they are statistically insignificant.

In order to investigate these differences more carefully, I calculate the effect of being a small or large firm for each regime type, including the variance of the effect and its statistical confidence. Table 4.5 displays the effects, as well as the statistical significance of the effect, for each regime type. As suggested by the regression results, mixed regimes tend to discriminate against small firms, with the effect negative and statistically significant. However, that effect dissipates in both autocratic and democratic regimes; for each of those regime types, the effect of being a small firm is statistically significant and in autocratic regimes, the sign changes. The pattern diverges for large firms. In mixed and autocratic regimes, being a large firm does not translate into greater property rights confidence. However, in democratic regimes, the effect of being a large firm is positive and statistically significant at $p = 0.07$. Contrary to theoretical expectations, the effect of being a large firm is positive and marginally significant in democratic regimes. In short, democracies tend to sup-

plement the advantage large firms naturally possess in organizing around beneficial changes to property rights institutions.[15]
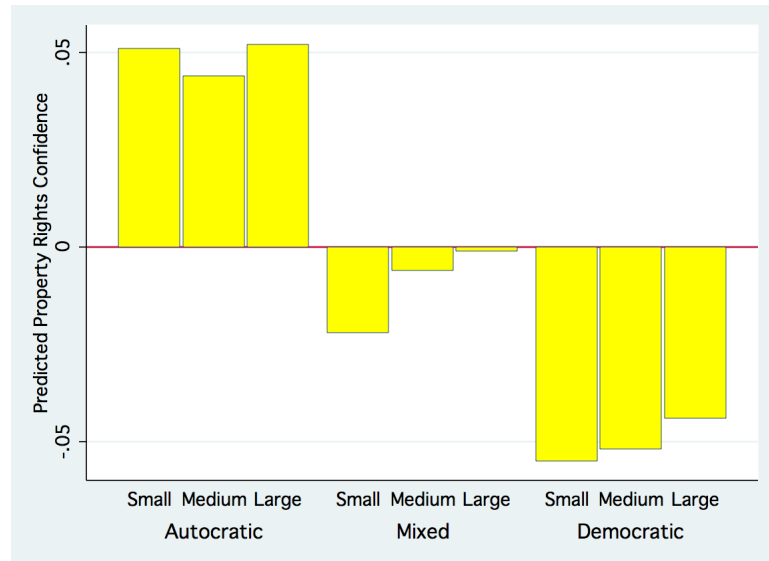
Figure 4.1: Comparing Predicted Property Rights Confidence Across Size and Regime

I conclude this analysis by examining Figure 4.1, which compares a five-year old domestic, privately owned, non-exporting, manufacturing firm's predicted property rights security across types of political regime and size. Three results discussed previously are once again visible here. Regardless of firm size, democratic governments fail to protect private property rights as vigorously as other regime types. For each size category, autocratic regimes tend to protect private property rights more vigorously. Second, neither autocracies nor democracies appear to discriminate against smaller firms; for these regime types smaller firms do not suffer relative to medium-sized firms. However mixed regimes more regularly discriminate against smaller firms, as evidenced by the gap between small and medium-sized firms. Finally, democracies

[15]One reason for this finding may be the relative abundance of observations in democratic countries; democracies account for roughly two-thirds of countries surveyed and total observations. The larger number of observations allows a more precise estimate of the democratic-large firm interaction. Though the coefficient for the interaction term of the large firm and democratic indicator variables is statistically insignificant, the effect of being a large firm in a democratic firm $(\gamma_{20} + \gamma_{21})$ is measured with a smaller standard error, which drives the statistical significance of the effect of being a large firm in a democracy.

seem to discriminate in favor of large firms rather than against smaller ones, per se; larger firms do better, but small firms do not necessarily do worse.

Political Influence in Democracies and Non-Democracies

There is little support for the hypothesized relationship between size and property rights confidence, as mediated by political democracy. However, I pause to consider whether political influence generally affects property rights confidence. As suggested earlier, the drivers of property rights discrimination may shift from country to country; in one country, a regime may discriminate based on race, in another based on gender, and in still another based on religion. If the focus on firm size does not hold water empirically, it may be because democracies and non-democracies discriminate on different axes. A focus on political influence is therefore helpful because it is agnostic as to the origins of political influence. The measure of political influence described above may in one country depend on firm size and in another on some currently unobservable trait. As such, I expect that property rights confidence increases in a firm's political power.

Therefore, I test whether a firm's political influence increases its property rights confidence and whether that relationship shifts across regimes. To test this hypothesis, I estimate the following models, where PI_{ij} is a firm's degree of political influence and and Z_j is a matrix of firm-level control variables:

$$p_{ij} = \beta_{0j} + \beta_{1j} * PI_{ij} + \alpha * Z_{ij} + \epsilon_{ij}$$

(4.9)
$$\beta_{0j} = \gamma_{00} + \gamma_{01} * DEMO_j + \gamma_{02} * AUTO_j + \delta_{0j}$$

$$\beta_{1j} = \gamma_{10} + \gamma_{11} * DEMO_j + \gamma_{12} * AUTO_j + \delta_{1j}$$

Substituting yields the following:

$$p_{ij} = \gamma_{00} + \gamma_{01} * DEMO_j + \gamma_{02} * AUTO_j + \gamma_{10} * PI_{ij} +$$

$$(4.10) \qquad \gamma_{11} * DEMO_j * PI_{ij} + \gamma_{12} * AUTO_j * PI_{ij} + \alpha * Z_{ij} +$$

$$(\epsilon_{ij} + \delta_{0j} + \delta_{1j} * PI_{ij})$$

Column 1 displays the estimates of an equation lacking the interaction of political influence of regime type, allowing the effect of political influence vary randomly across countries. In this specification, a firm's political influence has a positive and marginally significant effect on property rights confidence. More political influential firms generally enjoy stronger property rights protection. Furthermore, including the measure of firm-level political influence lessens the distinction of regime types we have seen previously. In particular, the effect of autocratic regimes on firms' property rights confidence loses both substantive and statistical significance in comparison with previous estimates. The difference between autocratic and democratic regimes is statistically insignificant ($p = 0.24$).

Column 2 displays the estimates of Equation 4.11, the fully interactive model of property rights confidence. Our interpretation of the effect of political influence shifts substantially, and in line with Chapter 2's expectations. The effect of political influence in mixed regimes (γ_{10}) is statistically indistinguishable from 0, inferring that it has little role in firms' property rights protections in those countries. In democratic countries, the effect of political influence is positive, but the insignificance of the interaction term indicates that that the effect of influence is statistically indistinguishable between democracies and mixed regimes. In contrast, the effect of political influence is substantively larger in autocracies and the difference from mixed regimes is statistically significant. The fully interactive model also clarifies the dif-

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Table 4.6: Political Influence and Property Rights Discrimination

	Country-level Intercept Effects	Fully Interactive
Intercept (γ_{00})	$0.049^{0.02}$	$-0.0455^{0.03}$
Firm-Level		
Influence (γ_{10})	$0.0180^{0.08}$	$-0.0003^{0.99}$
Size	$0.0045^{0.00}$	$0.0045^{0.00}$
State ownership	$0.0142^{0.00}$	$0.0142^{0.00}$
Manufacturing	$0.0176^{0.00}$	$0.0176^{0.00}$
Age	$-0.0052^{0.00}$	$-0.0051^{0.00}$
Exporter	$0.0115^{0.00}$	$0.0116^{0.00}$
Foreign	$0.0035^{0.21}$	$0.0036^{0.21}$
Country-Level Intercept Effects		
Democracy (γ_{01})	$-0.0317^{0.19}$	$-0.0349^{0.15}$
Autocracy (γ_{02})	$0.0087^{0.82}$	$-0.0140^{0.72}$
Country-Firm Interactions		
Influence*Democracy (γ_{11})		$0.0151^{0.55}$
Influence*Autocracy (γ_{12})		$0.0989^{0.02}$
Variance Components		
Influence (δ_{1j})	$0.0569^{0.00}$	$0.0545^{0.00}$
Intercept (δ_{0j})	$0.0762^{0.00}$	$0.0759^{0.00}$
N	26,331	26,331
Countries	66	66

Cell entries are coefficients with p-values$^{super-scripted}$.

ferences among political regimes. When $PI_{ij} = 0$, the differences among regimes are insignificant. Both the democratic (γ_{01}) and autocratic (γ_{02}) indicator variables are negatively signed, but statistically indistinguishable from 0, particularly the autocratic indicator. Together with Column 1, these results suggest strongly that the generally positive record of autocratic regimes in protecting private property rights owes to their ability to discriminate protection in favor of politically connected firms.

Table 4.7: Effect of Political Influence on Property Rights Security

		Effect$^{p-value}$
	Autocratic	$+0.0985^{.009}$
Regime Type	**Mixed**	$-0.0003^{.99}$
	Democratic	$+0.0003^{.22}$

Table 4.7 reinforces these points by comparing the effect of political influence and its statistical significance across political regimes. The effect of political connect-

edness is clearly strongest and highly significant statistically in autocratic regimes. In mixed and democratic regimes, its effect is statistically insignificant. Figure 4.2 compares Column 2's model predictions of property rights confidence for a domestic, privately owned, manufacturing firm that is five years old and employs 20 people. The predictions are compared across political influence for the three regime types, with the slope of each line corresponding to the effect displayed in Table 4.7. As that table showed, the effect of political influence is far greater in autocracies. Whereas the predicted probability actually declines very slightly in mixed regimes in response to political influence and increases only moderately for democratic regimes, the effect is quite large in autocratic regimes. Figure 4.2 also illustrates the effect of different regime types on property rights confidence. For firms lacking any political power (i.e., $PI_{ij} = 0$), the differences among different regime types is very small and, as shown in Table 4.6, statistically insignificant. Previous estimates that suggested general advantage of firms in autocratic regimes clearly depends on those firms' political influence; until a value of about 0.1, mixed regimes actually better protect firms than autocratic regimes. It is only for much larger values of political influence that autocratic regimes clearly provide a protective advantage over other regime types.

Together, these results indicate that the differences among political regimes are dependent not on a general ability of autocratic regimes to better protect private property, but their ability to discriminate in favor of politically well-connected firms.

4.4   Selectorates, Winning Coalitions, and Property Rights

A more rigorous theoretical approach to political institutions — the selectorate theory — suggests a different causal mechanism for property rights discrimination. As discussed in Chapter 2, the main intuition of the selectorate theory in regards to
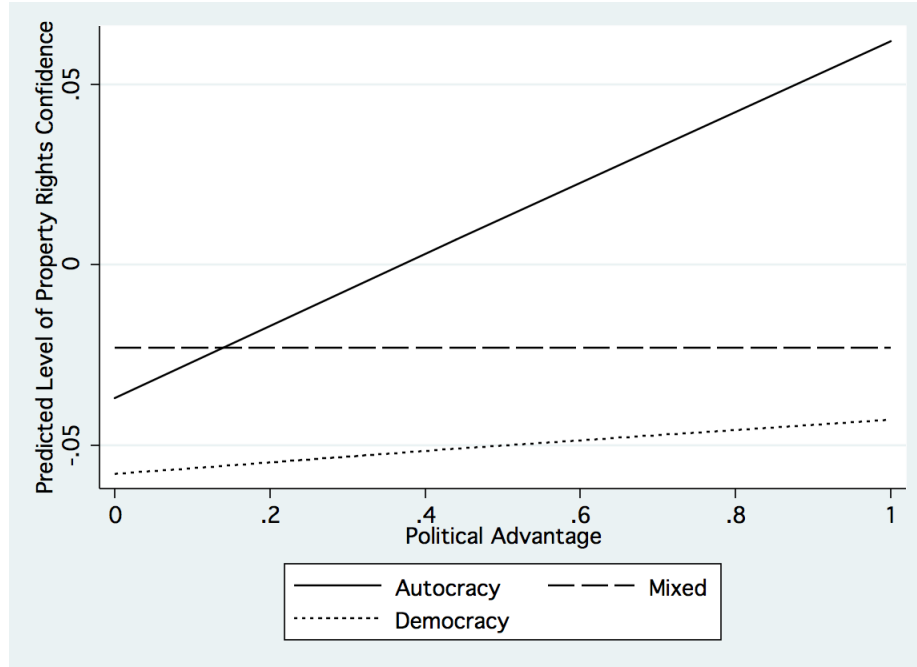
Figure 4.2: Comparing Predicted Property Rights Confidence Across Political Influence and Regime

property rights discrimination is that the security of an individual's private property rights will depend on the interaction of her political station and the kind of regime she inhabits. Put in terms of the selectorate theory, the security of a citizen's private property rights depends the interaction of whether or not she is in the selectorate or winning coalition and whether the regime is democratic, non-democratic with a small selectorate, or non-democratic with a large selectorate, as discussed above:

Table 4.8: Selectorate Theory Predictions

	Membership ...		
Type of regime	In W & S	In S (not W)	In neither
Large W, Large S	Good	Good	Not quite as good
Small W, Small S	Good	Good	Fair
Medium W, Large S	Good	Fair	Poor

Firms in the winning coalition in any regime could be expected to enjoy secure private property rights However, the key comparative static is for firms that are in the selectorate, but outside the winning coalition. For countries with a large winning

coalition, those outside the winning coalition can still expect protection of their rights by the State. In contrast, such firms in small-W systems will be less confident in their property rights. Among smaller-W regimes, we will expect different distributions. For small-W, small-S regimes, we expect a large population with only fair confidence in their private property rights. In medium-W, large-S regimes, we expect a larger group with high confidence.

4.4.1 Measuring the Selectorate and Winning Coalition

Bueno de Mesquita and his co-authors (2003) confess that:

> The measurement of the selectorate size and winning-coalition size, especially in nondemocratic states, is in its infancy. This means the approximations we propose are crude and primitive . . . It is possible . . . that others may have too little confidence in our approximations of the size of a winning coalition or the selectorate to accept the empirical results that rely on those variables. We hope that such disagreement will motivate the search for better ways to estimate the institutions with which we are concerned. (133)

Only four years since the publication of *The Logic of Political Survival*, their assessment of the empirical challenge of the selectorate theory regrettably remains true. The theoretical and empirical development of the theory will hopefully improve the measurement of the key variables in time. However, Clark, Kaufman, and Flores (2005) propose a new method for testing the selectorate theory's propositions that relies on Barbara Geddes' (1999, 2003) classification of non-democratic regimes. Here, I describe both the original approach from Bueno de Mesquita, et al (2003) and the latter, newer approach.

Original Approach

Bueno de Mesquita and his co-authors (2003) code the size of the selectorate as a function of the *LEGSELEC* variable from Arthur Banks' cross-national time-series data (2001).[16] That variable is coded 0 for countries where no legislative body is present; 1 for countries with an unelected legislature (e.g., chosen by hereditary title or by the ruler); and 2 for an elected legislature. Assuming that countries with a broader method of choosing the selectorate more likely have a larger S, they divide the measure by 2, creating a measure of S that takes the value of 0, .5, or 1.0.

Coding W is slightly more complicated. The authors rely on three variables from the Polity IV dataset (Polity IV Project, 2007) — *XRCOMP*, *XROPEN*, and *PARCOMP* — and the *REGTYPE* variable from Banks' data (2001). The authors create a four-point index, adding another point to the index for each of the following that is true: the regime is not a military or military/civilian regime (i.e., $REGTYPE \neq 2, 3$); executive recruitment is relatively competitive (i.e., $XRCOMP \geq 2$); recruitment of the executive is relatively open (i.e., $XROPEN > 2$); and political participation is open (i.e., $PARCOMP = 5$). As with S, they divide the scale by its maximum value, 4, to create a measure of W that varies between 0 and 1.

I follow Bueno de Mesquita and his co-authors' (2003) method for every year between 1991 and 2000, inclusive. I then take the mean value of S and W, for that time period discussed I then generate the multiplicative interaction of $\bar{S}_{1991-2000}$ and $\bar{W}_{1991-2000}$ in order to test Bueno de Mesquita, et al's (2003) predictions regarding the effects of S and W.

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[16]For the remainder of this discussion, I refer to the selectorate and winning coalition by their initials, S and W.

Regime Type Approach

Bueno de Mesquita, et al (2003) emphasize that S and W "can be readily related to conventional labels for describing different political systems" (69). A selectorate equal to the size of the adult population and a winning coalition roughly half the size of the selectorate should characterize democracies. Military juntas and monarchies, in contrast, should have both smaller winning coalitions and selectorates, since we expect that only a small group of citizens choose leaders and roughly half those citizens are necessary for the leaders to remain in power. Single-party regimes likely extend the franchise to as wide a group of citizens as democracies, but the winning coalition should be somewhat smaller. Though the authors stress the usefulness of moving away from categorical distinctions of different regime types, Clark, Kaufman, and Flores (2005) follow their mapping in order to obtain empirical leverage to further test the selectorate theory, a method I duplicate here.

Geddes (1999, 2003) classifies authoritarian regimes in a manner that correlates closely with Bueno de Mesquita and his co-authors' conjectures regarding different non-democratic regimes. For every country year between 1946 and 2000, Geddes classifies regimes as being single-party, military, and/or personalist. A regime can be any combination of these three ideal types in a given year. She also sub-classifies single-party regimes according to whether they have fair elections, Based on her scheme, I create dummy variables for each regime type equal to 1 if a regime had that authoritarian characteristic in that year. Geddes (1999, 2003) does not code monarchies, however. I rely on the Polity IV dataset to code these regimes, classifying regimes as monarchies according to the Polity IV dataset. According to Polity IV, a monarchy is characterized as a regime with regulated recruitment of the chief executive (i.e., $XRREG = 3$; the executive is chosen by either hereditary succession

or regular elections), non-competitive executive recruitment (i.e., $XRCOMP = 1$; the executive is recruited through heredity or designation by a previous monarch), and closed executive recruitment (i.e., $XROPEN = 1$ or $XROPEN = 2$; potential adherents to the executive must be from a particular family).[17]
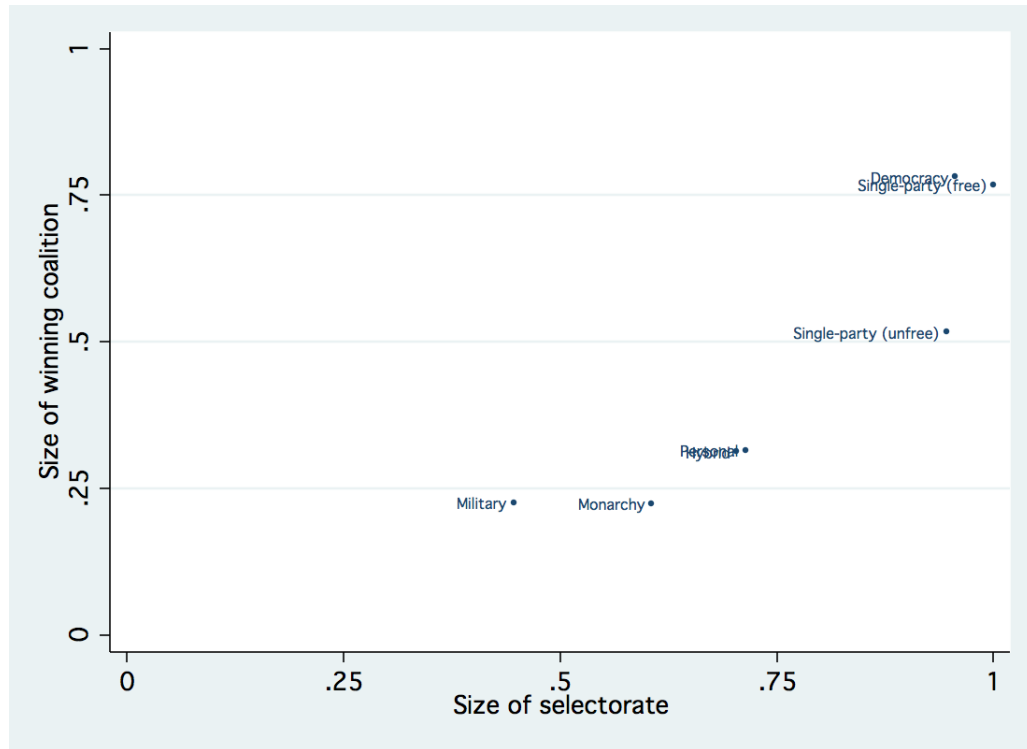
Figure 4.3: Comparing S and W in different regime types

In order to describe a regime during any given year, I implement a two-step strategy. First, I characterize a country as being a monarchy, military junta, single-party with free elections, single-party with un-free elections personalist, or hybrid non-democracy on the basis of Geddes' codings. Any combination of regimes is coded as hybrid in that year, whereas each pure non-democratic type is coded 1 only if that type was the sole authoritarian characteristic. In order to explore further the relationship between size of selectorate, winning coalition, and regime type, I

[17]The sole overlap between Geddes' classifications and the Polity IV codings is Haiti under the Duvalier regime, which Polity IV codes as a monarchy and Geddes (1999, 2003) codes as a personalist regime. I characterize Haiti during this period as personalist.

first calculate the average values of S and W for each regime type described by Geddes (1999, 2003) for all years between 1946 and 2000. I then graph each regime type according to its mean values of S and W in Figure 4.3. In that figure, we can see that democracies and freer single-party regimes evince similar values of S and W and thus have very weak loyalty norms (0.82 for democracies and 0.77 for single-party regimes with free elections). Single-party regimes with unfree elections have similarly large selectorates, but smaller winning coalitions and thus stronger loyalty norms (0.55). Personalist and hybrid regimes cluster together, with smaller selectorates and winning coalitions than single-party regimes, implying still stronger loyalty norms (0.44 and 0.45, respectively). Meanwhile, both military regimes and monarchy have very small winning coalitions and the smallest values of S. However, they differ in terms of their loyalty norms, which are stronger for monarchies (0.37) than in military regimes (0.51).

4.4.2 Preliminary Evidence

As in Section 4.3, I begin by estimating two simple models of the effect of the size of selectorate and winning coalition on property rights discrimination. First, I estimate a model of the country-level standard deviation of firm managers' confidence in their private property rights. For the original coding of the size of the selectorate and winning coalition, the model is specified as follows, where $\overline{S_j}$ and $\overline{W_j}$ represent the average size of the selectorate and winning coalition for the ten year period from 1991 to 2000.

$$(4.11) \qquad SD_j(p_{ij}) = \beta_0 + \beta_1 * \overline{S_j} + \beta_2 * \overline{W_j} + \beta_3 * \overline{S_j} * \overline{W_j} + \epsilon_j$$

As discussed in Chapter 2, the selectorate theory predicts patterns of property

rights discrimination on the basis of the sizes of the selectorate and winning coalition, as well as the loyalty norm, or the ratio of W/S. That discussion suggested that large-W regimes would engage in less property rights discrimination than regimes with smaller-W (i.e., non-democracies). However, the distinction between various forms of non-democracies is less apparent in terms of the standard deviation of property rights confidence, since the *form* of property rights discrimination changes across smaller-W regimes, but perhaps not the *degree.* Therefore, the expectations for the coefficients in Equation 4.11 are as follows. We should expect that $\beta_2 < 0$, since increases in the size of the winning coalition, regardless of the size of the size of the selectorate, will decrease variation in property rights confidence. The effect of the selectorate size, however, is less clear. The effect of selectorate size, however, is contingent on the size of the winning coalition. In a non-democratic regime (i.e., one with a small W), increasing S strengthens the loyalty norm, motivating the leader to shift how property rights are protected, as discussed in Chapter 2. Some citizens will find their property rights protected less rigorously, particularly those outside the winning coalition. However, it is unclear whether the overall level of variation in property rights confidence will increase or decrease. Therefore, we are unsure of the of the sign of β_1 in Equation 4.11 because that coefficient represents the effect of S when $W = 0$. In large W regimes, increasing the size of the selectorate likely has little effect on the extent of property rights discrimination. At sufficiently high values of W, the effect of increasing S may even be positive. Therefore, we expect that $\beta_3 < 0$ in Equation 4.11, demonstrating that as W rises, the effect of S ceases being positive. Similarly, in parallel to the logic for S, the effect of an increase in W decreases (i.e., intensifies) in the size of S because of the additional effect on the loyalty norm.

Table 4.9: The Selectorate Theory and Property Rights Discrimination

	Original Measures	Regime Types
Selectorate (S)	$-0.16^{0.00}$	
Winning Coalition (W)	$-0.28^{0.01}$	
$S * W$	$0.25^{0.02}$	
Years Democratic		$-0.002^{.50}$
Years Military		$0.007^{.06}$
Years Single-Party		$0.0004^{.88}$
Years Personalist		$0.001^{.71}$
Years Hybrid		$0.007^{.02}$
Constant	$0.33^{0.00}$	$0.16^{0.00}$
N	70	71
R^2	0.45	0.41

Cell entries are coeffcients with p-values$^{super-scripted}$.

For the Geddes-based measures of regime type, I estimate Equation 4.11, but substitute Geddes' measures of S and W with measures of how long during the ten from 1991 to 2000 were spent as each of the regime types identified above — democracy, military, personalist, one-party democracy, and hybrid —for the measures of S and W.[18] According to the logic of the selectorate theory, regimes with larger winning coalitions and weaker loyalty norms should engage in less property rights discrimination. Democracies will therefore engage in less property rights discrimination. The differences among non-democracies will depend on the specific combination of winning coalition and selectorate. In single-party regimes, which are often characterized with larger winning coalitions and selectorates than other non-democracies, we may expect a lower level of property rights discrimination. Conversely, personalist and hybrid will likely engage in extensive property rights discrimination, whereas military and monarchical regimes will engage in less, due to a weaker loyalty norm. Estimates are displayed in Table 4.9.

Table 4.9 displays the estimates of Equations 4.11, using the de-meaned com-

[18]Years spent as a monarchy are left reference category. Without a reference category, the regime type measures would be perfectly collinear.

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bined measure as the dependent variable.[19] I begin with the first set of estimates of Equation 4.11, which use the Bueno de Mesquita, et al (2003) measure of the size of winning coalition and selectorate. The coefficient on W is negatively correlated with variation in firm managers' property rights confidence, as the selectorate model might expect; when S is very small, we expect that expanding the size of the winning coalition will decrease property rights discrimination. The size of the selectorate is also negatively correlated with property rights discrimination, inferring that in a very small-W regime (which only rarely exists), moving from a small-S to a large-S regime decreases property rights discrimination. The interaction of W and S is positively signed, in contrast to theoretical expectations, since we expected that the effect of an increase in S would be more beneficial the larger the winning coalition.

Table 4.10: Predicted Level of Property Rights Discrimination

Regime Type	W and S	Prediction
Large W, Large S	$W = .45$; $S = .9$; $W/S = .5$	0.161
Small W, Small S	$W = .1$; $S = .2$; $W/S = .5$	0.275
Medium W, Large S	$W = .35$; $S = .9$; $W/S = .39$	0.167

The estimates predict that small-W, small-S regimes will have lower variation in their property rights confidence than both large-W and small-W, large-S regimes, as shown in Table 4.10. There, we see that democratic countries and authoritarian regimes characterized by a medium-sized winning coalition and larger selectorate exhibit nearly the same predicted level of property rights discrimination. Meanwhile, non-democatic regimes with a small selectorate tend to engage in substantially more property rights discrimination. Table 4.10 does not accord closely with Chapter 2's interpretation of the selectorate theory, which expected a lower level of property rights discrimination in large-W, large-S regimes and perhaps little difference be-

[19]In this specification, I do not include the measure of the mean.

tween the two latter forms of regimes. Instead, it appears that small-W, small-S regimes engage in the most pernicious forms of property rights discrimination.

The second column of Table 4.9 reveals an intriguing set of differences among regime types. A country that spent ten years as a monarchy would have a standard deviation in firm managers' property rights confidence of 0.16 (i.e., the constant). Experience as a democracy, single-party regime, or personalist regime has no statistically significant effect on the variation in property rights confidence. However, military rule increases variation in property rights confidence; ten years as a military junta would raise the standard deviation to 0.23. Hybrid regimes are also more discriminatory; ten years as a hybrid regime would raise the standard deviation of property rights confidence to 023. We may further compare these results to our theoretical expectations by comparing the individual coefficients on regime types with simple Wald tests. Compared in this way, democracy is more beneficial than military, single-party, and hybrid regimes, but statistically indistinguishable from personalist regimes at $p = 0.1$. Military regimes are more discriminatory than single-party, personalist, and democratic regimes at $p = 0.1$. Similarly, hybrid regimes are more discriminatory than both democratic and single-party regimes at $p = 0.01$. Democratic regimes are less discriminatory than single-party regimes at $p = .06$. Altogether, military and hybrid regimes evince the highest level of overall property rights rights discrimination.

Table 4.11 compares the predicted results from the second column, assuming a country of that regime type for the entire period. These predictions corroborate those in Table 4.10 and clarifies the poor performance of small-W, small-S regimes. A country that remained democratic for the entire ten-year period possesses the lowest degree of property rights discrimination, with a predicted standard deviation

of 0.143.[20] Military regimes, which in Figure 4.3 have small winning coalitions and selectorates exhibit the highest predicted standard deviation. However, monarchies, which have similar selectorate institutions in Figure 4.3, exhibit less severe property rights discrimination. The results suggest, then, that the tendency of small-W, small-S regimes to engage in more severe property rights discrimination, as found in Table 4.9, derives primarily from the record of military juntas. Hybrid regimes, which tend to exhibit a different set of selectorate institutions in Figure 4.3 also engage in deeper property rights discrimination. Furthermore, personalist regimes, with selectorates and winning coalitions on average nearly identical to hybrid regimes, exhibit far less property rights discrimination. Finally, single-party regimes exhibit a similar level of property rights discrimination as personalist regimes, despite different selectorate institutions.

Table 4.11: Predicted Level of Property Rights Discrimination

Regime Type	Prediction
Democracy	0.143
Military	0.230
Single-Party	0.162
Personalist	0.169
Hybrid	0.225
Monarchy	0.158

Together, these results only partially support the selectorate theory's predictions. In general, regimes with similar selectorate institutions often exhibit different degrees of property rights discrimination. Democracy doesn't appear to improve substantially on the performance of particular forms of authoritarianism. However, we observe that small-W, small-S regimes, particularly military juntas, engage in far more property rights discrimination than other regimes. Hybrid regimes also appear prone to property rights discrimination.[21] To further this analysis, I estimate two models

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[20]Recall, however, the statistical significance of the coefficient on democratic regimes in Table 4.9.

[21]Interestingly, this result may depend on the role of military coercion in hybrid regimes. Of the 753 country-years

of firm-level confidence that allow selectorate institutions to inform the country-level conditional mean of property rights confidence, though not the effect of firm-level characteristics. The first model is based on the measures of the size of the selectorate and winning coalition, as discussed above.

$$p_{ij} = \beta_{0j} + \alpha * Z_{ij} + \epsilon_{ij}$$

$$(4.12) \quad \beta_{0j} = \gamma_{00} + \gamma_{01} * S_j + \gamma_{02} * W_j + \gamma_{03} * S_j * W_j + \delta_{0j}$$

$$p_{ij} = \gamma_{00} + \gamma_{01} * S_j + \gamma_{02} * W_j + \gamma_{03} * S_j * W_j + \alpha * Z_{ij} + (\epsilon_{ij} + \delta_{0j})$$

The second model substitutes the number of years a country spent under Geddes' six non-democratic regime types. In this case, the base category is ten years as a democracy, to allow a more instructive set of comparisons between democracies and non-democracies. Table 4.12 contains the results of these two models. The firm-level effects, displayed in the first panel of the table, are consistent with those in previous estimates; larger, state-owned, manufacturing, younger, and exporting firms tend to enjoy stronger protection of their private property rights. Conversely, foreign firms, all else equal, do not evince grater confidence in their private property rights.

Our estimates of Equation 4.12, contained in Column 1, echo previous results using Bueno de Mesquita et al's (2003) measures of S and W. The negative sign of the coefficient on S indicates that for countries with a small winning coalition, increasing the size of the selectorate generally decreases confidence in private property rights, as the selectorate theory might expect; however that effect is highly insignificant. The positive sign and statistical significance on the size of the winning coalition might instill some confidence that more democratic regimes tend to better protect private property rights generally. However, recall that this coefficient indicates the effect of

coded as hybrid authoritarian, 503 of those years (66.8%) had a military component.

increasing W when $S = 0$, which is to some degree non-sensical, since W cannot exceed S as a proportion of the population. The sign of the interaction term is negative, inferring that as S increases the effect of W decreases, which runs opposite to the predictions of the selectorate theory. Comparing the sizes of coefficients, we can see that at $S = 1$, the effect of increasing W is slightly negative, inferring that moving from a large-S, medium-W regime to a mass democracy will decrease firm managers' confidence, all else equal. Similarly, the statistical insignificance of S infers that changing the loyalty norm in smaller-W regimes has little effect on a firm's property rights confidence.

Table 4.12: The Selectorate Theory and Property Rights

Variable		
Intercept	$-0.025^{0.81}$	$-0.075^{0.00}$
Firm-Level		
Size	$0.004^{0.00}$	$0.004^{0.00}$
State ownership	$0.013^{0.00}$	$0.012^{0.00}$
Manufacturing	$0.018^{0.00}$	$0.018^{0.00}$
Age	$-0.004^{0.00}$	$-0.001^{0.00}$
Exporter	$0.012^{0.00}$	$0.010^{0.00}$
Foreign	$0.002^{0.81}$	$0.0008^{0.77}$
Country-Level Intercept Effects: S and W		
Selectorate (S)	$-0.084^{0.44}$	
Winning Coalition (W)	$0.67^{0.05}$	
$S * W$	$-0.69^{0.05}$	
Country-Level Intercept Effects: Regime Type		
Years Monarchical		$0.014^{.08}$
Years Military		$0.006^{.56}$
Years Single-Party		$0.009^{.01}$
Years Personalist		$0.016^{.03}$
Years Hybrid		$0.007^{.17}$
Variance Component		
Intercept	$0.08^{0.00}$	$-0.08^{0.00}$
N	27,631	28,756
Countries	70	71

Cell entries are coeffcients with p-values$^{super-scripted}$.

The second column of Table 4.12 displays the effect of selectorate institutions as coded with Geddes' taxonomy of non-demcoratic regime (1999, 2003). As in Table 4.9, each coefficient represents the effect on a firm manager's property rights

confidence of a year as that regime type; since the base category is ten years spent as a democracy, each of these coefficients represents the effect of an extra year spent as a particular kind of non-democracy. The positive coefficients on all non-demoratic regime types indicates that no non-democratic regime type, all else equal, reduces property rights confidence relative to democracy. The converse, however is often true. Monarchies improve property rights confidence at $p = 0.08$. Single-party regimes improve property rights confidence at $= p = .01$ and personalist regimes improve property rights confidence at $p = .03$. Only military and hybrid regimes are statistically indistinguishable from democracies. Using Wald tests based on Table 4.12, there is no statistically significant difference in firm managers' reported property rights confidence among non-democracies.

Table 4.13 completes this analysis by comparing the predicted level of property rights confidence for a domestic, privately owned, non-exporting, five-year old manufacturing firm with 20 employees in different political institutional settings. Table 4.13 returns to our ideal regime types using the continuous measures of W and S. Firm managers in democratic and medium-W, large-S regimes tend to profess lower property rights confidence, whereas firm managers in small-W, large-S regimes report higher confidence. However, the difference between regimes, all else equal, is somewhat small. The predictions do little to support the selectorate theory's prediction of higher overall property rights confidence in large-W regimes. The emergence of small-W, small-S regimes as those with the most property rights confidence contrasts with its position as the regime type with the highest variation in firms' assessment. Similarly, large-W and medium-W regimes, previously found to exhibit lower variation in property rights confidence, here are reported as lower confidence. Together, the results suggest that small-W, small-S regimes gravitate to a

high-mean, high-variation equilibrium, whereas other regime types tend towards a low-mean, low-variation outcome.

Table 4.13: Predicted Level of Property Rights Confidence

Type of regime	Prediction
Large W ($W = .45$; $S = .9$; $W/S = .5$)	-0.039
Small W, Small S ($W = .1$; $S = .2$; $W/S = .5$)	0.050
Medium W, Large S ($W = .35$; $S = .9$; $W/S = .39$)	-0.044

4.4.3 Property Rights Discrimination and the Selectorate Theory

Initial statistical testing has found weak evidence that firm managers in regimes report lower property rights confidence, accompanied by less variation in their responses. This evidence suggests a low-mean, low-variation tendency in such regimes. Nevertheless, such testing fails to test fully the implications of Chapter 2's adaptation of the selectorate theory, as encapsulated in in Figures 2.2 through 2.4 and Table 4.4. According to Chapter 2, a firm manager's confidence in her private property rights depends on her political grouping — in the winning coalition, in the selectorate, but not in the winning coalition, or out of the selectorate completely — and the size of those groupings. Assuming we could measure firm-level membership in the winning coalition and selectorate, we might estimate the following model.

$$p_{ij} = \beta_{0j} + \beta_{1j} * s_{ij} + \beta_{2j} * w_{ij} + \epsilon_{ij}$$

(4.13)
$$\beta_{0j} = \gamma_{00} + \gamma_{01} * S_j + \gamma_{02} * W_j + \gamma_{03} * S_j * W_j + \delta_{0j}$$

$$\beta_{1j} = \gamma_{10} + \gamma_{11} * S_j + \gamma_{12} * W_j + \gamma_{13} * S_j * W_j + \delta_{1j}$$

$$\beta_{2j} = \gamma_{20} + \gamma_{21} * S_j + \gamma_{22} * W_j + \gamma_{23} * S_j * W_j + \delta_{2j}$$

In the preceding set of equations, p_{ij} is a measure of firm-level confidence in property rights for firm i in country j; s_{ij} is a measure of whether firm i in country

j is in the selectorate; w_{ij} is a measure of whether firm i in country j is in the selectorate *and* the winning coalition; and S_j and W_j are measures of the size of the selectorate and winning coalition for country j, respectively.[22]

Equation 4.13 shows the firm-level relationship of particular interest theoretically — the effect of a firm's political grouping (i.e., membership in the selectorate and/or winning coalition) on firm confidence in property rights protection. The intercept term is a function of the national-level political institutions, as is the effect of s_{ij} and w_{ij}. Substituting yields in the following interactive model:

$$
\begin{aligned}
p_{ij} = \quad & \gamma_{00} + \gamma_{01} * S_j + \gamma_{02} * W_j + \gamma_{03} * S_j * W_j + \delta_{0j} \\
& + s_{ij} * (\gamma_{10} + \gamma_{11} * S_j + \gamma_{12} * W_j + \gamma_{13} * S_j * W_j + \delta_{1j}) \\
& + w_{ij} * (\gamma_{20} + \gamma_{21} * S_j + \gamma_{22} * W_j + \gamma_{23} * S_j * W_j + \delta_{2j})
\end{aligned}
$$
(4.14)

Multiplying the interaction terms and rearranging yields:

$$
\begin{aligned}
p_{ij} = \quad & \gamma_{00} + (\gamma_{01} * S_j + \gamma_{02} * W_j + \gamma_{03} * S_j * W_j) \\
& + \gamma_{10} * s_{ij} + \gamma_{11} * s_{ij} * S_j + \gamma_{12} * s_{ij} * W_j + \gamma_{13} * s_{ij} * S_j * W_j \\
& + \gamma_{20} * w_{ij} + \gamma_{21} * w_{ij} * S_j + \gamma_{22} * w_{ij} * W_j + \gamma_{23} * w_{ij} * S_j * W_j \\
& + \epsilon_{ij} + \delta_{0j} + s_{ij} * \delta_{1j} + w_{ij} * \delta_{2j} + s_{ij} * w_{ij} * \delta_{3j}
\end{aligned}
$$
(4.15)

As specified in above, the model results in the following predictions for the three political groupings by regime type. Equation 4.15 echoes Table 4.4 in displaying the

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[22]One may be tempted to characterize the firm-level political groupings differently, inserting a separate proxy for membership in the winning coalition and an multiplicative interaction term of the selectorate and winning coalition proxies (i.e., $\beta_{2j} * w_{ij} * s_{ij}$). Doing so would have the advantage of including all constituent terms. However, in this case one of the constituent terms (w_{ij}) does not logically exist (i.e., a firm cannot be in the winning coalition without being in the selectorate). If a firm is in the selectorate, $p_{ij} = \beta_{0j} + \beta_{1j}$. If the firm is in the winning coalition, then $p_{ij} = \beta_{0j} + \beta_{2j}$. If the firm is neither, then $p_{ij} = \beta_{0j}$ Therefore, the effect of moving from the selectorate but outside of the winning coalition into the winning coalition is equal to $\beta_{2j} - \beta_{1j}$.

predicted value of p_{ij} for each of the three types of political groupings in each of the three types of firms.[23]

Table 4.14: Multi-Level Model's Predictions for Property Rights Discrimination

	Membership in ...		
Type of regime	W & S	S (not W)	Neither
Large W, Large S	$(\gamma_{00} + \gamma_{01} + \gamma_{02} + \gamma_{03})+$ $(\gamma_{20} + \gamma_{21} + \gamma_{22} + \gamma_{23})$	$(\gamma_{00} + \gamma_{01} + \gamma_{02} + \gamma_{03})+$ $(\gamma_{10} + \gamma_{11} + \gamma_{12} + \gamma_{13})$	$\gamma_{00} + \gamma_{01} + \gamma_{02} + \gamma_{03}$
Small W, Small S	$\gamma_{00} + \gamma_{20}$	$\gamma_{00} + \gamma_{10}$	γ_{00}
Small W, Large S	$(\gamma_{00} + \gamma_{01}) + (\gamma_{20} + \gamma_{21})$	$(\gamma_{00} + \gamma_{01}) + (\gamma_{10} + \gamma_{11})$	$\gamma_{00} + \gamma_{01}$

The main impediment to estimating such a model is the measurement of s_{ij} and w_{ij}. How would we know that a firm inhabits the winning coalition? The selectorate? Neither? Unfortunately, as hinted in the introduction to this chapter, these questions remain difficult to answer. In all likelihood, membership in the selectorate and winning coalition is defined by a set of rules that vary across countries. In one country, membership may be defined by gender and in another by ethnic group. Furthermore, defining how *firms* fit into the selectorate theory's trichotomous depiction of political groupings also engenders a number of questions. The challenge, as with the creation of the political influence variable discussed in Section 4.3 remains creating firm-level measures on the basis not of firm native characteristics, but the reporting of political activity that could proxy for membership in one of the political groupings. One strategy might make use of data from the *ES* on membership in business associations, which could be thought of as groups legally allowed to lobby on the behalf their members. We could then define winning coalition membership as the value of the business association, size, or the firm's reporting of political influence. However, none of these strategies, nor others attempted as part of this process, capture the interaction of selectorate and winning coalition satisfactorily. Most importantly, in

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[23]This depiction over-simplifies the selectorate theory by assuming that "small" infers a size of 0 and "large" infers a size of 1.0. For the ease of presentation, I use this formulation.

many countries the proportion of firms coded as in the selectorate and/or winning coalition did not correspond to national-level measures (e.g., in a democracy, only a small fraction of firms were coded as being in the selectorate). Despited repeated attempts, these data likely render the estimation of Equation 4.15 impossible.

As in Section 4.3, we might test whether the size of the selectorate and winning coalition condition the firm-level effect of political influence, firm size, etc., postulating that selectorate institutions shift the nature of the collective action problem. Though not as theoretically satisfying, such models would offer an initial investigation in property rights discrimination across different sizes of the selectorate and winning coalition, lending further credence to Table 4.9's preliminary finding that, depending on measurement, large-W regimes have lower variation in the distribution of property rights confidence among firm managers. Analysis along these lines has revealed little evidence of diverging patterns of property rights discrimination among different sizes of the selectorate and winning coalition. For example, the effect of a firm's political influence — which I found to be larger in autocratic regimes in Section 4.3 and specifically Table 4.7 — does not vary meaningfully across selectorate institutions.

4.5 Conclusions: Studying Property Rights Discrimination with Firm-level Surveys

The last two chapters have been dedicated to a statistical study of the shape, economic consequences, and political institutional origins of property rights discrimination, all using firm-level data from the World Bank. Whereas Chapter 3 sought to quantify the macroeconomic *repercussions* of property rights discrimination, this chapter has focused on its political *origins*.

We may summarize this chapter's results as follows. There is strong empirical sup-

port for the collective action conceptualization of bargaining over property rights. Larger, state-owned, and exporting firms tend to enjoy higher property rights confidence, as this approach might expect. In contrast, the results on democracy are mixed. In general, firms in democratic countries generally exhibit lower property rights confidence. However, it does not seem that that lower property rights confidence emanates from an effort on the part of democratic politicians to expropriate the property of richer citizens and redistribute it to the poor. In fact, democracy is the only regime type in which firm size has a positive and statistically significant effect on property rights confidence. Altogether, Chapter 2's implications for firm size and democracy are not supported here. However, tentative evidence suggests that overall variation in property rights confidence is lower in more democratic countries and that autocratic regimes more likely have a distorted sample of firms. Finally, there is some evidence that the autocratic advantage disappears when we control for firm-level political influence. In autocratic countries, political influence plays a major role in a firm's ability to gain protection of its private property rights, whereas in mixed regimes and democracies, that effect is statistically indistinguishable from 0.

This chapter's testing of Chapter 2's adaptation of the selectorate theory reveals a similar pattern. There, I argue that the selectorate theory of Bueno de Mesquita and his co-authors (2003) makes a series of precise predictions regarding property rights discrimination. Unfortunately, those predictions prove nearly impossible to test using these data. The statistical analysis of the theory necessitates firm-level measures of membership in the selectorate and winning coalition. Despite careful attempts, these measures prove impossible to create with any confidence in their utility. Consequently, the selectorate theory is tested only superficially. I find that

large-W regimes are characterized by lower variation in firm managers' property rights confidence, but also lower mean confidence. In contrast, small-W, small-S regimes are characterized by higher mean confidence with more variation. A more definitive set of tests of the selectorate theory's effect on property rights confidence must await better firm-level measures of political characteristics.

CHAPTER V

Property Rights Discrimination in Colombia: Land, Coffee, and Reform, 1870-1936

5.1 Introduction

Chapters 3 and 4's statistical analysis accomplishes several goals, depicting empirically the existence of property rights discrimination among firms and providing tentative evidence of its origins and consequences. However, there is good reason to supplement this analysis with a more qualitative exploration of property rights discrimination, utilizing small-n research methods. As discussed in Chapters 1 and 2, political economists have focused little attention even on the *possibility* of property rights discrimination, either implicitly or explicitly assuming that the public goods aspects of property rights protections are paramount. Thus, a major focus of this dissertation is to posit that the phenomenon exists at all. In this sense, small-n research can be enormously useful. Geertz (1973) argues that "thick description" may be used in case study research to more clearly understand the meaning of a construct and how that meaning depends on context (Geertz, 1973). In this dissertation, case analysis can hone our definition of property rights discrimination and how it is executed. Similarly, Collier (1991) contends that thick description provides a "parallel demonstration of theory," highlighting whether a proposed causal process is reflected. Lieberman's (2005) defense of "nested analysis" recommends that

scholars combine statistical analysis with the close analysis of one or more carefully chosen cases from the statistical analysis.

Therefore, the state of research into property rights institutions, need for greater validation of the concept of property rights discrimination, and relatively weak statistical results all suggest the utility of small-N analysis. Therefore, in this chapter, I shift focus and method, carefully elaborating a detailed case study of property rights discrimination. The focus of this research is not theory testing, but an elaboration of the concept of property rights discrimination and the identification of potential factors that drive it.[1] In it, I study a series of conflicts over land rights in Colombia, beginning in 1870 and ending with the passage of a comprehensive land reform law, Law 200 of 1936. The series of conflicts over property rights to land and contracts sharing land rights closely resemble Chapter 2's theory of the origins of property rights institutions. Fifty years after its independence, nearly 75% of Colombia remained vacant, the result of the country's arduous geography and poor transportation networks. A jumble of legal rules and titles theoretically governed land rights, including decrees to encourage colonization, land titles dating back to the colonial era, and land concessions of unclear size and shape granted by a frequently insolvent Colombian government. Little conflict emerged out of this confusion over private property rights, however, until a major shift in the Colombian economy beginning in the 1850s, but finding its fullest expression in the 1870s and into the twentieth century — the insertion of Colombia into the world economy and the rapid expansion of coffee production (Kalmanovitz 2003; Palacios 1980; Safford and Palacios 2002). These changes raised the relative value of unexploited Colombian land and revealed

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[1]Lieberman (2005) envisions "model-building small-N analysis" in response to a lack of robust results that support the theory under analysis. Such analysis should suggest a new model with empirically verifiable implications. However, I do diverge from Lieberman's nested analysis approach by analyzing case not included in the statistical analysis.

the inadequacy of extant institutions governing access to those lands.

As Chapter 2 predicts, deficiencies in property rights institutions combined with greater demand for land caused two stages of conflict. Section 5.2 discusses how Colombians flocked to uncultivated areas in search for land suitable for planting coffee. This race to enclose land created conflicts between and among peasant farmers, urban merchants, and holders of ambiguous titles to uncultivated land. Intent on capturing the gains from coffee production, these actors competed over land rights, using both legal and extra-legal methods to cement their claims. Despite several attempts at the national level to promote small settlers' goals, the weakness of the national government left political bargaining to land rights to local and regional governments, usually friendly to larger landowners' interests. The result of these initial conflicts was a more concentrated ownership of land and a particular set of contracts between large estate owners and tenant farmers that furthered the formers' interests. Section 5.3 then reviews how the economic dislocations of the coffee industry, combined with new forms of collective action among peasants, intensified these conflicts and led to violence in the countryside. This led to a new round of political bargaining, this at the national level. I show how the rigidly bipartisan nature of Colombia's political system limited peasants' ability to advocate for recognition of their rights, leading to land reform legislation that in the long-run favored large estate owners. The experience of Colombian land reforms help us understand how property rights discrimination can develop and hint at its fundamental origins.

5.2 First Stage: Allocating Land Rights

Between Colombia's independence in 1819 and the 1870s, land rights did not cause a great deal of social or political conflict, aside from the issue of lands owned

by the Catholic Church. Colombia's obstinate geography and post-independence economic stagnation created little need to exploit the 75% of territory estimated to be *baldíos*, or public lands. A jumble of institutions governed land access and, although land rights remained unclear, they did not materialize as a major area of conflict. In short, Colombians felt little need to claim a resource that seemingly held little economic promise. However, a series of changes to the Colombian economy awakened hunger for land, most prominently increases in demand for coffee and concomitant emergence an export economy based on agricultural products, rather than gold. Waves of Colombians of diverse social origins sought to appropriate land rights to begin growing bananas and coffee for export. That race to cultivate land previously thought worthless created conflicts that prevailing institutions could not contain.

5.2.1 Land Rights Before the 1850s

Colombia's combination of mountains, coastline, jungles, and extensive plans makes it one of the most diverse countries in the world in terms of biodiversity. However, its rugged terrain remains, even today, one of its foremost challenges — and a starting point for accounts of the country's political and economic challenges. As shown in Figure 5.1, the Andes stretch northwards from the border with Ecuador, dividing into three *cordilleras* or ranges. The Andes divide Colombia into three main regions, which mostly have developed separate economies (Safford and Palacios 2002). The easternmost *cordillera* demarcates an eastern zone, anchored by the capital city of Bogotá consists of the valley of the Magdalena River and the flanks of the *cordillera* itself, stretching north as far as Pamplona. The western zone encompasses the area between the central and eastern *cordilleras*, with the valley of the Cauca River in between the two ranges, centered on Medellín, a city that fig-

ures prominently in the remainder of this case study. Finally, the Atlantic coast dominated by the port cities of Cartagena, Barranquilla, and Santa Marta. The difficulty of traversing the Andes figures prominently in explanations of the difficulty of asserting truly national rule from Bogotá.

Figure 5.1: Map of Colombia

Colombia's unyielding geography also partially explains the concentration of Colombia's population, beginning during the colonial period and continuing through today. The Italian geographer Agustín Codazzi estimates during the 1850s that approximately 75% of Colombia's area consisted of *terrenos baldíos*, or public lands

(LeGrand 1986)[2] The lack of colonization brings into question the legal status of unclaimed lands. Theoretically speaking, the whole of the territory in Spanish America was the property of the King of Spain, although tracts of land were granted to subjects for development. Three waves of Spanish explorers claimed the territory that would become Colombia. Leading an expedition from Santa Marta along the Atlantic Coast,Gonzalo Jiménez de Quesada founded Bogotá in 1558 after defeating the Muiscas, who had settled densely in the surrounded areas (Bushnell 1993). Soon afterwards, another wave of *conquistadores* led by Sebastián de Belalcázar, a lieutenant of Pizarro, arrived from Peru. Soon afterwards, a Germany company arrived as part of an effort to recover debts incurred by the spanish. Eventually, the three groups submitted their claims to the Spanish Crown who, ironically, allocated the new area to the son of the governor of Santa Marta (Bushnell 1993: 11). Each of the three explorers earned certain sets of rights to explore other areas.

With permanent Colombian independence in 1819, ownership of *baldíos* passed to the democratically elected government of Gran Colombia, a confederation of Ecuador, Peru, Venezuela and Colombia. According to LeGrand (1986), colonial land grants interspersed with *baldíos* in much of the country, virtually untouched by any native population or subsequent Spanish exploration. The loss of records from the colonial period, unclear demarcation of colonial land grants, a shortage of trained surveyors, and the weakness of the Colombian government created a context in which, according to LeGrand (1986) "property rights in land were not clearly defined" (6). The early republican period did little to alleviate the confusing legal status of land in Colombia. Frequent civil war bankrupted the government which turned to the *baldíos* as a source of revenue and a means to paying its debts (Colom-

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[2]Strictly speaking the word *baldío* translates as "wasteland." However, it is more commonly used to denote unclaimed public lands and I therefore rely on that definition here.

bia 1931; LeGrand 1986). Beginning in 1838, the Colombian Congress issued waves of public debt payable in land, with no limit on the size of the land grants or the number of land grants one citizen could acquire (LeGrand 1986: 11-12). Such land certificates first served as rewards to soldiers in the wars of independence and later as remuneration to victors in Colombia's periodic civil wars (Safford and Palacios 2002: 157).

Given the lack of a comprehensive land census during this period, it is difficult to re-construct land redistribution for this period. However, records do exist for land concessions between 1823 and 1931, thanks to a report of the Colombian Ministry of Industries (Colombia 1931) that recorded land concessions for the entire republican period. Table 5.1 records the number of concessions by their size and calculates the percentage of public lands granted for each category.[3] To understand Table 5.1 better, we can rely on Machado's (1988: 93) classification of farm sizes. He classifies farms with fewer than 3 hectares of land as *minifundios*, or small farms, whereas those between 3 and 12 hectares as family farms. Palacios (1980: 176) sets these limits slightly differently, defining a small farm as having fewer than 10 hectares of land and a medium-sized family farm as fewer than 50 hectares. With this basis in mind, Table 5.1 signals that the Colombian government generally distributed land in large estates. Small holders obtaining fewer than 10 hectares received only .12% of land allocated during the period. Put differently, only about 42 hectares of land per year were allocated to small land holders during this period. Nearly half of allocations went to medium-sized holdings, but these still comprise only 2.8% of the total land allocated. In contrast, over 79% of land was dedicated to large estates, or

[3]A hectare equals 10,000 square meters; a square that is 100 meters on each side covers one hectare. To calculate the total area for each category, I assume that all allocations in each category were for the maximal size (i.e., 9.9 hectares each for the first category, 49.9 for the second, etc.) Assuming instead that each allocation is for the average size in each category does not alter Table 5.1's conclusions regarding the relative extent of land allocations by more than half a percentage point.

Size (in hectares)	Allocations (%)	Area in 000s hectares (%)
0 — 10	627 (10.6%)	4.7 (0.12%)
10 — 50	2,690 (45.6%)	111.8 (2.8%)
50 — 100	689 (11.7%)	68.8 (1.7%)
100 — 1,000	1,253 (21.2%)	645.5 (16.2%)
1,000 +	645 (10.9%)	3,146.9 (79.1%)
Total	**5,904 (100%)**	**3,977.6 (100%)**

Table 5.1: Land Adjudications, 1823-1931

latifundios, that contained 1,000 hectares or more.

Table 5.1 provides evidence supporting the proposition that frequent insolvency forced successive Colombian governments to allocate lands in large tracts to pay debts to bond holders. In contrast, Colombian law problematized the allocation of land to squatters. Peasants often opted for what one Colombian historian has called a "precarious independence" by squatting on public lands and engaging in subsistence farming (Kalmanovitz 2003: 106). Until reforms in the 1870s and 1880s, however, their occupation could not form the basis of legal title under Colombian law (LeGrand 1986: 12; Colombia 1931). Kalmanovitz (2003: 124) estimates that at most 0.05% of adjudicated public lands went to small cultivators until 1881. Instead, politicians hoped to use land policy to attract foreign immigrants and pay debts, goals it satisfied only superficially (Safford and Palacios 2002: 158).

By the middle of the nineteenth century, then, a hodgepodge of different rules and titles regulated the appropriation of public lands, or *baldíos*. Neither citizens nor government could distinguish clearly between publicly and privately owned lands. The insufficiency of property rights institutions, however, failed to spur serious economic or legal conflict over land ownership.[4] This lack of conflict reflected the relatively

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[4]Politicians did, however, frequently sparred over two land rights issues. The first concerned lands owned by the Roman Catholic Church, which more conservative politicians generally wished to preserve. The second involved *resguardos*, or reservations, collectively held by the relatively small population of indigenous peoples, which, again, the Liberal Party generally wished to convert to private property and the Conservative Property wished to preserve (Safford and Palacios 2002: 136-7).

somnolent post-independence economy. The wars of independence had depressed the economy and the malaise persisted, particularly on the Atlantic Coast (Safford and Palacios 2002). Gold mining, Colombia's primary colonial enterprise, recovered only slowly from the instability of independence, apart from the region of Antioquia, centered on Medellín in the west of the country. The population of the country grew only slowly — about 1.5% per year between 1825 and 1905, according to one estimate — and the population of particular regions, such as Cali in the southwest of the country, decreased (Kalmanovitz 2003: 106). Agricultural technology remained somewhat backwards, as did transportation (Kalmanovitz 2003: 107). Furthermore, recession in Europe between 1820 and 1850 squashed hopes for exports during this period (Kalmanovitz 2003: 111-112). Roughly 85% of the population worked in rural areas, mostly in the highlands areas in the east (Kalmanovitz 2003). In combination with the difficulty of creating a truly national market due to geography, these factors created an economy dominated by intra-regional economic activity and sparse prospects for international trade (Ocampo 1984: 100).

5.2.2 Coffee and Conflict

By the middle of the century, however, political and economic factors slowly began to transform this stagnation into dynamism. First, Colombia's two dominant political parties managed to forge a consensus in favor of free trade about the mid-1840s, fusing the Liberal Party's more radically liberal faction, known as the *gólgotas*, with a strain within the Conservative Party that saw free trade as a means to republican order.[5] Second, demand for Latin American goods generally increased with the conclusion of civil war in the United States and the recovery of Europe's economy

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[5]Palacios (1980: 2-3) qualifies this description of Colombian politics by emphasizing continuing differences among the parties and the power of regional governments during this period to legislate policy that differed from the national government's.

(Legrand 1986: xiii). Slowly, an export economy based on agricultural products began to develop, beginning with a series of generally short-lived commodities booms in tobacco, cinchona bark, and cotton. Despite the eventual collapse of each of these booms, Colombian exports began to rise after a steady deterioration since independence, recovering pre-independence levels by the early 1870s (Ocampo 1984: 89).

However, it was coffee that thrust Colombia onto the international economic stage, particularly after about 1870, helped along by increasing demand for the product in Europe and especially the United States (Palacios 1980: 14).[6] Two particular characteristics of coffee quickly had an immediate effect on its production in Colombia. First, coffee trees require a particular climate to thrive. Coffee generally favors middle altitudes, favoring altitudes of about 1,000 to 1,800 meters (about 3,300 to 5,900 feet), as opposed to the highlands of highly populated areas, which can exceed Bogotá's elevation of 8,600 feet (LeGrand 1986: 14). This climactic requirement increased the relative value of land along the middle altitudes of Colombia's unexplored mountains, precisely where a hodgepodge of large land concessions, unclaimed colonial titles, squatters, collective settlements, and public lands. Second, the cycle of coffee production favors small and medium-sized family farms. Coffee is easily grown alongside more traditional foodstuffs and its labor-intensive growing cycle favors family production.

These factors created a groundswell of migration to Colombia's frontiers, as settlers cleared previously unexplored land in the hopes of growing coffee. In the west, they moved south from Medellín, building new towns such as Manizales, Armenia, and Pereira, in an episode generally considered to be transformative for Colombian history. In the east, a second wave drove from Bogotá into previous unexplored por-

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[6]Bananas also played a major part in exports in the late nineteenth and early twentieth centuries, particularly along the more tropical Atlantic coast. However, I focus on coffee here.

tions of Cundinamarca and Boyacá, particularly the region known as Sumapaz south and east, stretching across the borders of Cundinamarca and Tolima (Marulanda 1991). The initial stages of exploration usually brought peasant farmers, known in Colombia as *colonos.* LeGrand (1986) explores the origins of *colonos*, concluding that they constituted a diverse range of multi-generational squatting families, blacks who had withdrawn from white society after the abolition, and indigenous and mixed indigenous-Spanish peasants who descended from the highlands. Pushed by chronic political instability that often resulted in forced drafts of peasants, advertisements by land entrepreneurs, and low wages, *colonos* pushed into the multiple Colombian frontiers, clearing multiple parcels of land in order to diversify production and sell lands to families arriving in the area later (LeGrand 1986: 24). Confined to subsistence farming in the first few years of settlement, *colonos* turned afterwards to profitable commercial crops, particularly coffee (LeGrand 1986: 24). In this effort, they could build profit-making parcels within several years of settlement.

Historians studying Colombia have tended to emphasize the importance of the *colonos* to the colonization of previously untouched portions of Colombia. However, the upper and middle classes also readily sought access to public lands and, for many historians, were primarily responsible for the shape of colonization (Palacios 1980: 25). In many cases, these land entrepreneurs represented the very upper stratum of Colombian society, families that had attained influence since the colonial era. However, many were drawn from more recently prominent families, usually from urban areas, who had attained wealth as merchants, lawyers, or bankers (LeGrand 1986: 33). Regardless, they tended towards great wealth and political influence. For many of these aspiring landowners, land represented a means to diversify their holdings (Palacios 1980). They hoped to produce coffee for export on a large scale

and profit from the sale of land.[7]

Land entrepreneurs' desire to create *latifundios*, or large estates, brought them directly into conflict with *colonos*, however. As we have already seen, property rights institutions largely could not distinguish between publicly owned *baldíos* and privately held lands, creating large areas of undefined borders, absentee owners, and unexploited titles. *Colonos* could expropriate private property purely out of ignorance, since public and private lands intermingled without clear markers. Moreover, prospective *hacendados*, or large estate owners, frequently targeted *colonos'* lands for expropriation (LeGrand 1986: 37). Land entrepreneurs recognized that *colonos* had often chosen the most fertile land with access to markets in urban areas. Their improvements to the land, or *mejoras*, augmented the market value of the land and decreased the time and effort to ready the land for production and put coffee on the market, of great value to upper and middle class entrepreneurs with little use for a period of subsistence agriculture. Palacios (1980: 36) estimates that for prospective *hacendados*, five years were necessary to clear the land and ready it for production, requiring capital spending on the purchase of the land, machinery and tools, and contracting a labor force. Half the expenditure was concentrated in the first year, particularly purchasing the land, pushing landowners into debt (*ibid*). By the turn of the century, the price of land had risen dramatically (*ibid*). By appropriating land that had already been cleared, *hacendados* could slash their fixed costs.

Intensifying entrepreneurs' desire for already settled tracts of land was the presence of the *colonos* themselves. As peasant farmers sought their independence, the available labor force dwindled, presenting challenges to *hacendados* hoping to create large estates with cheap labor. In 1907, a municipal council put the matter as

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[7]*Colonos* also speculated on land values, though on a smaller scale (LeGrand 1986: 27).

follows:

> Here the majority of the *hacendados* have taken over vast zones of public
> lands and even parts of the Indian *resguardos* that they neither work them-
> selves nor allow others to work. By monopolizing the land they aim only to
> undermine the position of the independent cultivators so as to form from
> their ranks groups of dependent laborers. (*Public Land Archives*, Volume
> 42. Quoted in LeGrand 1986: 39)

Large investors generally appeared after *colonos* already had improved the lands
and increased their value, usually somewhere between ten and thirty years after the
original arrival of settlers (LeGrand 1986: 39-40).

Hacendados' and *colonos'* claims to land clearly conflicted. At the heart of the
conflict lay the allocation of rights to valuable resources, which would affect the
distribution of gains to economic activity. In a deeper sense, the conflicts pitted
two visions of economic development. Whereas *colonos* envisioned small-scale in-
dependent production of coffee, which eventually would necessitate the legalization
of their claims. Meanwhile, *hacendados* foresaw large commercial estates utilizing
cheap labor (i.e., *colonos*). Certainly, the efficiency of coffee production and the
larger Colombian economy also hung in the balance. However, the main competition
revolved around individual gains and competing claims to land rights. This clash
often took place within the legal and bureaucratic institutions of the Colombian
government. As we have seen, Colombian regulations of land tenure, while weak,
generally did not take up the issue of squatters' rights, leaving questions regarding
squatters' rights largely unanswered. However, in 1874 and again in 1882, the na-
tional government passed legislation that favored *colonos'* land rights, reflecting a
newfound dedication to stimulate rural production. Law 61 of 1874 enshrined for

the first time the legal principle that public property could be acquired through cultivation, with the construction of a dwelling and planting of crops proof of possession (LeGrand 14-15; Palacios 1980: 172). Furthermore, land adjudicated to *colonos* could include twice the area than that under cultivation (*ibid*). The legislation also encouraged *colonos* to apply for legal title to their lands in order to solidify their claims and allow the legal sale or mortgage of their plots (LeGrand 15, 84). In short, national policies seemed, at least generally, to favor *colonos'* claims to land rights and, with those claims, *colonos'* vision of a small-holding rural production.

Despite the repeated endorsement of occupation as the legal basis of ownership, the legal framework remained tilted towards *hacendados*, for two main reasons. During the same period, the national government passed Law 57 of 1905 that regulated eviction procedures for squatters on privately held lands. Article 15 read as follows:

> When a landed estate has been occupied *de facto* without the intervention of a rental or tenancy contract and without the consent of the owner, the chief of police before whom the complaint is made will go to said estate within forty-eight hours after the written presentation of the complaint; and if the occupants cannot show tenancy contracts or if they conceal themselves, he will proceed to evict them, admitting no appeals or formalities which might delay their removal from the property. (Colombia, Congreso Nacional 1906: 302-303)

Taken together, these laws assumed that local officials could ascertain the veracity of claims by *hacendados* that a *colono* had squatted on private, not public, land. If that claim proved false, then *colonos*, under laws passed in 1874 and 1882, became "good faith" occupants of the land with legal standing. Otherwise, *hacendados* possessed the legal right to eject *colonos*.

The resolution of land conflicts therefore devolved to local governments, a reality reinforced by the congenital weakness of the central government and, until 1888, the heavily federalist bent of the Colombian constitution. In particular, mayors were to play an integral role in adjudicating disputes over land. As has been noted, most *hacendados* were from urban areas. Furthermore, they often preferred to reside in large cities, rather than on their holdings. As a result, most declined to personally hold local offices (LeGrand 1986: 203). However, they retained a great deal of political power through their connections to municipal officials, particularly mayors and municipal councils (Palacios 1980: 186). Prior to 1885, departmental governors, themselves elected by rules decided at the departmental level, appointed mayors, who in turn depended on municipal councils for their salaries. After 1885 and the elimination of federalism in a new constitution, governors also became appointees, in this case of the President of the Republic. In both events, rich *hacendados* appear to have successfully influenced the appointment of mayors through their connections in departmental capitals and Bogotá itself, as well as their influence on municipal councils (LeGrand 1986: 74). A National Labor Office report in 1930 stated that:

> Municipal authorities are in the habit of constantly abusing Law 57 of 1905 . . . . Colonos and their families very often are despoiled by the misapplication of this statute which, in turth, has become a legal betrayal of our poor citizens. (Quoted in LeGrand 1986: 82)

Judges, too, proved generally sympathetic to *hacendado* claims and, when more inclined to the *colonos*, found their rulings ignored by municipal councils and mayors.

The weakness of the national government, continuing confusion concerning land ownership, and *hacendados'* power at the local level combined to create an ideal environment for *hacendados* to gain legal recognition of their rights and the concomitant

economic benefits. They possessed a variety of legal and administrative instruments to force the allocation of land rights. Regardless, the end remained gaining rights to *colonos'* lands and bring the latter to farm their newly created haciendas. As already mentioned, land certificates were often used to obtain legal title and surveyors often could be relied on to expand *hacendados'* holdings for legal hearings (LeGrand 1986: 81-82). *Hacendados'* also filed legal suits that forced the drawing of generous boundaries and could later serve as proof of ownership (LeGrand 1986: 53-54). A number of other tactics, some decidedly illegal, also sufficed. Landholders often colluded with surveyors to enlarge their holdings past that dictated by land grants and, in many, cases simply occupied land and claimed prior ownership (LeGrand 1986: 50-51). Another common tactic consisted of obtaining a public land grant legally and then writing deeds that claim ownership of a far larger tract than granted legally. When *colonos*, thinking these adjacent lands to be *baldíos*, settled them, *hacendados* would allow them to do so and then re-appropriate the lands forcibly using the forged deeds as proof and engaging the local police in the effort. *Colonos*, displaying a keen recognition of their legal rights and economic self-interest, wielded the power accorded them by national law, applying for legal title and filing lawsuits. However, the costs of applying for legal title remained prohibitively high for peasant farmers. Most importantly, applications required *colonos* to hire surveyors and lawyers to ascertain the size of the parcel of land and manage the legal process. Although *colonos* often pooled the resources to hire surveyors and lawyers, previous conflicts amongst settler families over land could inhibit collective action to do so (LeGrand 1986). Moreover, the length of time needed to complete the applications frustrated their claims and opened opportunities for *hacendados* to use local political power to claim the disputed land. In one case, two *colonos* won a superior court decision enforcing

their legal rights to land they had cultivated for years. However, the lower district court simply ignored the superior court's decision in response to the *hacendado's* complaint, partially by removing all mention of the case from official bulletins, causing the *colonos* in question to abandon their lands to the *haendados* (LeGrand 1986: 85).

Often, these conflicts shifted from the legal arena to the disputed lands themselves, as both *colonos* and *hacendados* turned to violence to defend their claims. LeGrand (1986) documents several cases in which landowners arrived with the mayor and police in order to evict *colonos* from disputed lands, which usually produced the desired effect. In one case, for example, Liberal Party stalwart and coffee grower Sixto Durán used the presence of the police to pressure over 100 settler families to sign labor contracts and abandon their legal claims to land they had cultivated for some time (LeGrand 1986: 78). *Hacendados* also turned to force, employing *cuadrillas*, or gangs, to intimidate settlers into rescinding their rights. Tactics included burning down dwellings, destroying fences, confiscating work tools, and turning cattle into their fields (LeGrand 1986: 81). Kalmanovitz (2003: 123) recounts one case in which the Aranzazu family, which had been granted 200,000 hectares of land in the coffee-growing western region during colonial times, sought to enforce this claim against settlers by employing an armed band against them, which sparked a settler uprising against the family, which caught the attention even the central government's attention. In fact, *colonos* used a number of tactics to defend their rights forcibly. Such resistance often consisted of refusing to abandon disputed lands. Upon eviction by police, many *colonos* would re-occupy lands, harvesting their crops until re-discovered (LeGrand 1986: 67). In one case, a dispute over thousands of hectares of land ended with *colonos* ransacking the office of the company that claimed their

land (*ibid*). However, in most cases they found themselves forced, often forcibly, to recognize legal titles presented by *hacendados*.

5.2.3   Economic and Institutional Consequences

With the rise in the relative value of previously unexplored land, *hacendados* and *colonos* clashed over rights to resources whose ownership remained opaque, due to the jumble of often conflicting colonial titles, post-independence concessions, and national laws regarding the basis of property ownership. An intriguing regularity in this narrative, consistent with the idea of property rights discrimination, is how both sides of these disputes claimed legal rights, though they differed in their ability to have those claims recognized and enforced. Put differently, a simple injunction to "protect private property rights" would not suffice to resolve conflicting claims to land whose ownership remained blurred. Instead, the resolution of these disputes required a mechanism to adjudicate claims according to transparent guidelines, as well as choose between competing visions of the social functions of private property and *hacendados'* vision of an efficient coffee industry based on large estates. National laws fitfully sought to create rules to guide that adjudication by establishing occupancy and cultivation as the legal bases of property ownership, in line with a consensus in favor of encouraging colonization. However, *hacendados'* local political power and the weakness of the central government subverted any attempt to implement a transparent process of adjudication. The delineation of private property rights to disputed lands took place primarily in an administrative no man's land, which allowed *hacendados'* to utilize a series of legal and extra-legal measures to tilt the allocation of *baldíos* in their favor.

We can describe a series of institutional and economic repercussion of this first wave of land conflicts. Though the nature of the conflicts itself complicates a pre-

cise description of the distribution that resulted from these ongoing conflicts in the late nineteenth and early twentieth centuries, it appears that *hacendados* successfully shaped the process of colonization. In doing so, they implemented particular property rights institutions in which they shared rights to cultivation with *colonos* in a way that advanced their economic interests. These arrangements deserve closer analysis, particularly due to their role in the second wave of conflicts in the 1920s and 1930s described in Section 5.3. Recall that large-scale coffee production required large start-up costs and a long lead-time until profitability, as well as a labor force often absent from the *latifundios*. By winning disputes over land rights, *hacendados* created a landless peasant labor force and freed themselves to institute systems of tenant farming. Though these agreements often remained verbal and varied significantly over time and across regions of the country, we can briefly survey their form here. *Arrendatarios* were service tenants allowed to rent a parcel of land on an *hacienda* for subsistence farming, which they paid for through the *obligación*, working on the *hacendado's* coffee fields, particularly during harvest (Palacios 1980; LeGrand 1986; Machado 1988).[8] Additionally, the *arrendatario* often owed the *hacendado* some percentage of his food crops and faced restrictions on their sale at market. Most importantly, *hacendados* mostly prohibited *arrendatarios* from from planting coffee and other cash crops on their parcels, preventing any competition with small producers on their own lands. The severity of the tenant farming agreements, particularly the size of the *obligación*, varied over time and across regions. Machado (1988: 135) emphasizes that in many instances, the weak labor supply still forced *hacendados* to offer wages to *arrendatarios*. In other areas, a less rigid form of

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[8]The nomenclature of these different forms of tenant farming tends to be confusing and difficult to translate into English. The system of tenant farming are often referred to as *arrendatario*, although it also referred to as *agregado*, *terrazguero*, and *concertado*. The word *arrendatario* can refer both to the specific arrangement described here or the more general system of tenant farming.

share-cropping existed that consisted only in the rental of parcels of the *hacienda's* land in exchange for a percentage of the foodstuffs grown (LeGrand 1986: 88).

The institutions implemented by *hacendados* served their economic interests and, as a result, Palacios (1980: 196) concludes that the coffee industry of this period had not substantively improved peasants' living standards, failing to create a rural middle class or integrate peasants into a monetized economy. Instead, by the early twentieth century, coffee income was concentrated in very few hands. Though difficult to quantify, the various forms of share-cropping in coffee-growing regions mostly prevented *arrendatarios* from gaining substantially from coffee production, since they could not grow coffee themselves. Palacios (1980) hypothesizes that *arrendatarios* were generally better off than landless day laborers. Meanwhile, hundreds of *colonos* managed to retain rights to their lands, where they collectively became an important stratum of the coffee industry, though their rights to their lands remained precarious in the years ahead. LeGrand (1986: 89) summarizes the matter, " . . . such patterns of land use . . . constituted the logical outcome of an on-going historical process by which pre-existing inequalities were projected into newly developing areas."

What of the coffee industry as a whole? Chapter 2 hypothesizes that property rights discrimination not only funnels economic activity into "in" group hands, but also impairs aggregate performance. This period of disputed property rights generally produced a large expansion of the Colombian coffee exports, though subject to continued political instability and the vagaries of the international market for coffee. By 1910, exports of coffee were forty times levels in the 1850s, driving total exports to heights previously unknown in Colombia. (Kalmanovitz 2002). Furthermore, many authors credit the growth of the coffee industry with Colombia's industrialization beginning in the late 1880s (Kalmanovitz 2002; LeGrand 1986). This evidence supports

the proposition that a discriminatory land allocation supported unequal growth, but growth nonetheless. However, analysis of the coffee industry has also identified the under-utilization of land. By claiming far more land than they intended to dedicate to coffee production, most *hacendados* left fallow a large percentage of their holdings; Palacios (1980: 94) estimates nearly a quarter of land was left uncultivated on average. Certainly, these conflicts introduced a measure of social instability into newly colonized areas, which might have inhibited growth in the coffee industry, in line with the conventional account of property rights institutions. The deeper question of whether the coffee industry might have growth more quickly if *colonos* had more frequently won land rights disputes is unclear, though Section 5.3 will analyze the efficiency of different sizes of coffee estates.

What remains beyond doubt is that *hacendados* directed the production of coffee according to their economic interests. However, by the 1920s, it was clear that *haciendas* faced severe pressures from small producers and their own tenants. I turn now to this more explosive second wave of land rights conflicts and their resolution in Colombia's Land Reform of 1936.

5.3   Second Stage: Social Instability and the Land Reform

During this first stage of conflicts over land rights, both *colonos* and *hacendados* both resorted to violence to further their interests. However, the resulting disorder only rarely exceeded a low level of intensity. Each side limited its demands to the allocation of land rights and conflicts tended to pit individual *hacendados* against small groups of *colonos*. Seen in the aggregate, the social instability these conflicts introduced might seem consistent with any frontier region. In contrast, Colombia's economic crisis in the late 1920s and early 1930s provoked clashes over land rights

that pitted large organizations of *campesinos* and *hacendados* against each other in increasingly violent confrontations, arousing fears in *Bogotá* of a peasant revolution that would rupture the countryside.

After World War I and Colombia's Thousand Days War, a disastrous civil war that witnessed the secession of Panama and the loss of thousands of lives, coffee propelled the Colombian economy into a period of unprecedented economic growth. Coffee exports during the 1920-1924 period had increased elven times since the turn of the century (Kalmanovitz 2003: 220). Healthy international prices for coffee further boosted the industry, roughly doubling between 1900 and 1925 (Kalmanovitz 2003: 345). The health of the coffee industry permitted a period of economic modernization. Export earnings allowed growth in imports, which permitted not only new consumer luxuries, but imports of the machinery necessary for industrialization. The national government, whose revenues quadrupled between 1919 and 1929, more actively involved itself in sponsoring industrialization, promoting small textiles and food processing as part of a partisan consensus in favor of industrialization. (LeGrand 1986: 95-96). Foreign investment, mostly in the form of bank lending, fueled this boom in the government's finances at all levels (LeGrand 1986: 92). The government used the funds to create a massive public works drive that at its height employed 36,000 (more than 8% of the active rural labor force at the time) in projects in construction of roads and railroads, stimulating migration towards cities and away from *latifundios.* (LeGrand 1986: 103). Given the new demands for labor from industry and public works projects, wages grew dramatically during this period and rural workers celebrated their newfound market power by creating unions (LeGrand 1986: 103-105). The urban migration also forced *hacendados* to offer higher wages to daily laborers and improve the terms of agreements with tenant farmers (Machado

1988: 73).

However, two events brought Colombia's boom to an end in 1928 and 1929. First, the price of coffee collapsed, due in part to larger than expected coffee harvests in Brazil from 1928 until 1930 (Palacios 1980: 214-215).[9] As stocks rose, the price of coffee began to fall in mid-1928 and by 1936, the price of coffee was half what it was in 1929 (Kalmanovitz 2003: 330). Second, the international depression led to the suspension of credit and the abrupt closure of public construction (Palacios 1980: 214-215). Thousands of workers suddenly found themselves without work and those who retained their jobs saw their salaries crumble (Kalmanovitz 2003). Industrial production and exports also fell, though both began to recover by 1934 (*ibid*).

Most economic historians tend to conclude that signs of a recovery were evident by the mid-1930s at the latest, as wages, exports, and industrial production resumed their rise. However, for workers, the dislocations of the period — in particular unemployment and their reinsertion into the rural economy — created the impetus for new strife.

5.3.1 Land Disputes: Continuity and Intensification

Both the resurgence of the Colombian economy and its subsequent collapse in the late 1920s strained the already tense *hacendado-campesino* relationship and in particular shifted the balance of power towards the latter. During the boom years, the relative value of land continued its sharp increase, leading both *arrendatarios*, independent *colonos*, and *hacendados* to seek to appropriate more land for production and/or speculation, as *hacendados* continued to use the methods described above. Public works projects, incipient industrialization, and expanding coffee production bid up rural workers' wages, leading to labor shortages that led one departmental-

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[9]Similar collapses of the price of coffee due to the vicissitudes of Brazilian production have led to the sardonic joke amongst Colombians that, "When Brazil sneezes, Colombia gets the flu."

level assembly to prohibit the emigration of the department's rural workers to other departments (Legrand 1986: 103-104). Higher wages encouraged *arrendatarios* and other tenant farmers to demand improvements in their tenants' contracts, deepening friction with *hacendados.* New labor unions formed during the early 1920s, focusing on improving both rural and urban workers' lots (LeGrand 1986: 103-105). Economic depression reversed many of these trends and created new tensions in rural areas. Government policy encouraged newly unemployed workers to return to the countryside, partly out of fear of urban worker unrest. It offered free railroad to *campesinos* returning to rural life and encouraged the further colonization of frontier areas (LeGrand 106-107). The enlargement of the rural labor force created a kind of *hacendado* retrenchment, as they reestablished lower wages and more severe work obligations on tenant farmers (LeGrand 1986: 106-107).[10]

The transition from boom to bust created conflicts along two axes — tenant contracts and land rights — that showed both continuity and change from the first stage of conflicts. While the core economic issues should be familiar in the light of the first wave of land disputes in the nineteenth century, the tactic intensified. Collective action, the breadth of each side's claims, and the level of violence intensified until the national government felt the need to step in. The reinforcement of stringent terms for tenant farming contracts shocked *campesinos* returning to the countryside. Furthermore, many *hacendados* responded to economic collapse by exerting tighter controls on *arrendatarios*' movement throughout the *haciendas* and their ability to sell surplus crops at market (Palacios 1980: 114). *Hacendados'* urban origins raised a different set of difficulties, as most lived in urban areas far from their holdings, appointing administrators and foremen to manage tenant farmers. *Arren-*

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[10]Recall again that tenant farming contracts varied substantially across regions, a fact largely ignored here in favor of a consideration of their change across time.

datarios frequently complained of cruel treatment at the hands of these surrogates, as in one strike by *campesinos* in the town of Quipile, who complained of brutality, near-starvation, and an *obligación* that exceeded agreed-upon limits (Machado 1980: 182; Palacios 1980: 114-115). In another case, this on the estate *La Viña* ("The Vineyard") in the township of Viotá in the eastern state of Cuninamarca, a group of *arrendatarios* complained of "shameless" and "anti-Catholic" treatment, alleging the severe beating of one of their rank with no provocation (Machado 1988: 114).

The right to plant coffee quickly became the dominant issue during this period. As discussed above, *hacendados* prohibited *arrendatarios* from planting coffee for fear of competition from smaller producers. The issue increased in importance during the depression areas, when workers returning from rural areas, now accustomed to a degree of economic mobility, felt the restriction on their economic independence more deeply (LeGrand 1986: 107). Growing coffee opened a path to self-sufficiency that work as an *arrendatario* clearly restricted. By 1931, *arrendatarios* had filed formal complaints in twenty *haciendas* (Machado 1988: 189). In a formal letter of reponse to a government minister, large landowners justified the prohibition by citing the flood of Brazilian coffee and the resulting plunging world price for their product, arguing that further coffee production would damage the Colombian coffee industry and economy as a whole (Machado 1988: 194-196). They also argued that allowing *arrendatarios* to plant coffee would destroy the production of foodstuffs necessary for the survival of the *haciendas* and for regional economies (*ibid*). In reality, allowing *arrendatarios* to plant coffee likely would have caused irreparable harm to the *hacienda* as a form of production and thus decrease the *hacendados'* economic power. The prohibition on coffee planting prevented *campesinos* from attaining the kind of economic independence that would have removed them from

large coffee estates. Forced to work fields solely through wage labor, *hacendados* likely would have been driven to bankruptcy, unable to compete with small-scale, family-driven production that, as we have noted, lent itself well to family production (*ibid*). For both *colonos* and *hacendados*, the right to plant coffee as part of the *arrendatario* contract would determine the division of gains from the coffee industry.

Disputes over the nature of tenant contracts reinvigorated land rights disputes. In response to the restrictions of the *arrendatario* system, *campesinos* again began to move from *haciendas* to *baldíos*, clearing land for family farms (LeGrand 1986: 107). In doing so, they forcefully questioned the legality of *hacendados'* claims to private property appropriated in the first wave of land conflicts in the nineteenth century. Their tactics showed a particular ingenuity. *Colonos* often worked at night in order to escape the watchful eye of absentee *hacendados'* hired administrators, clearing land over the course of a few weeks. Once they had successfully cleared land, built a small dwelling, and planted crops, they would withdraw from working on the *hacienda* and file for formal legal title, claiming that the lands in questioned were baldíos illegally stolen from the national patrimony by *hacendados* (LeGrand 1986: 107-110). Sumapaz, in the east of the country, saw aggressive actions on the part of former *arrendatarios.* A decree by the departmental government of Cudinamarca asked all landowners to re-verify their claims in the department's civil courts (Marulanda 1991: 79-94). In the municipality of Pandi, peasant farmers celebrated by refusing to work the *obligación* and claiming private ownership of their parcels. No fewer than 800 families on the *hacienda Sumapaz* publicly claimed that the *hacendado's* title was fabricated and called for the division of the estate into small holdings (*ibid*). These disputes spread into at least seven areas of the country, including banana plantations along the Atlantic coast and coffee-growing regions in the west and east (LeGrand

1986: 110-111).

The issues at stake in these disputes — the content of contracts and the legality of *hacendados'* property rights — show some continuity from the first stage of conflicts reviewed in Section 5.2. Nevertheless, the expression of conflicts evolved and intensified, most notably in the assertiveness of the *campesinos'* claims and tactics.[11] This period witnessed an unprecedented degree of collective action among *campesinos*, which became institutionalized in unions, peasants' interest groups, and quasi-socialist collectives. In contrast to previous disputes, *campesinos* displayed a willingness to initiate disputes. As already discussed, the boom period witnessed the creation of the first Colombian labor unions. The National Workers' Congress, created in 1924 eventually gave way to the more ambitiously named *Partido Socialista Revolucionaria* (PSR), or the Revolutionary Socialist Party. Though its base remained largely urban, the PSR often supported *campesino* interests in disputes with landlords and sent organizers into rural areas (LeGrand 1986: 105). The *Partido Agrario Nacional* (National Agrarian Party, or PAN), on the other hand, dedicated itself solely to agrarian interests. Founded by Erasmo Valencia, a journalist, the PAN published a magazine, *Claridad* (Clarity), that widely published alleged accounts of *hacendado* illegality and abuse (Marulanda 1991: 126-129) PAN also fielded candidates in municipal and departmental elections in 1935 and Valencia found himself an assemblyman in Cundinamarca (Marulanda 1991: 129).

The *Unión Nacional Izquierdista Revolucionaria* (National Leftist Revolutionary Union, or UNIR, the Spanish word for "to unite") also deserves special attention. UNIR was founded in 1933 by Jorge Eliécer Gaitán, a fiery politician who had broken from the Liberal Party earlier that year. Gaitán represented a more radical,

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[11]For the remainder of this discussion, I use the words *campesino* and *colono* interchangeably, whereas I use the word *arrendatario* to indicate a *campesino* in the particular tenant farming contract already discussed fully.

leftist wing of the traditional Liberal Party and created UNIR as a vehicle for a leftist, populist movement in Colombia. UNIR promoted agricultural causes by calling meetings of *campesinos*, creating local federations, and offering legal advice on titling and land rights issues. Gaitán, a lawyer by training, himself defended *campesinos* in several court cases (Marulanda 1991: 130-131). UNIR called for a democratic and socialist revolution in Colombia, beginning with the creation of a more democratic economy. In agricultural terms, UNIR proposed a program in line with *campesino* interests, emphasizing a first stage of dividing *haciendas* into smaller properties and a second stage of heavy state involvement in agricultural production (*ibid*). Although UNIR proposed a kind of corporatist or state-directed capitalism in Colombia, there is little evidence that it advocated a communism, per se, as evidenced by its championing of private property rights to land for *campesinos* and its relationship with the Communist Party of Colombia, which consisted of "permanent confrontation" (Marulanda 1991: 132). In addition to these national organizations, peasants also organized themselves at the local and regional levels. Federations of *arrendatarios* and squatters on one *hacienda* often formed, while many squatter organizations took the form of colonies (LeGrand 1986: 128-129). The most famous of these, the *Colonia Agrícola de Sumapaz*, formed by Erasmo Valencia of PAN, included more than 6,000 squatters and encompassed all of the Sumapaz region in the east (*ibid*).

New forms of collective action through *campesino* organizations provoked an *hacendado* response. In 1928, they created the *Liga de Defense*, or Defense League, as a mouthpiece for their interests and mediator for negotiations with rural workers and the government (Marulanda 1991: 133). In 1933, *hacendados* created the *Asociación de Propietarios y Empresarios Agrícolas* (Association of Agricultural Landowners and Businessmen, or APEN), which had as its goal the defense of private property

against what it termed subversive and communist influences (Marulanda 1991: 133). Importantly, APEN united rich landowners from both of Colombia's traditional political parties, Liberal and Conservative, as a defense of *hacendado* interests and to counter *campesino* organization such as PAN and UNIR. The largest of the *hacendado* organizations was the *Sociedad de Agricultores de Colombia*, (Society of the Farmers of Colombia, or SAC), which also portrayed civil strife as a result of socialist ideas and the rejection of private property itself (Marulanda 1991: 135).

Competing *campesino* and *hacendado* organizations expanded the economic strife. As mentioned briefly in Section 5.2, neither of these groups were monoliths; large landowners competed against each other for rights to fertile land, as did *colonos*. Intra-class discord impeded collective action, particularly since many of the conflicts described here consisted of local actions between an *hacendado* and *campesinos*. By the late 1920s, however, a more heterogeneous set of disputes yielded to a more purely class-based antagonism. Although the core issues at stake — rooted in the distribution of gains from coffee production — reflected previous clashes over land rights, new forms of collective action imbued those disputes with a previously unseen socio-political breadth. As has already been seen, APEN portrayed the *hacendado-colono* struggles as a defense of private property itself, a question of patriotic loyalty to capitalist development. Such movements dismissed new *campesino* organizations as the product of urban or even international agitation (LeGrand 1986: 121). In turn, *campesino* organizations portrayed *latifundistas* as opponents of Progress, stuck in colonial, feudal practices that obstructed Colombia and impoverished the majority of its citizens.

In a deeper sense, *colono* organizations such as PAN and UNIR disturbed Colombia's traditional politics, both at the local and national level. *Hacendados* were

drawn from both traditional political parties, Conservative and Liberal and were accustomed to some measure of political control over the rural poor, particularly tenant farmers (LeGrand 1986: 122). The weakening of urban labor unions in the wake of economic depression meant that political organizers moved to the country-side, applying their lessons to rural constituencies in the hopes of awakening the rural poor as an electoral constituency. Self-organized groups of squatters and/or *arrendatarios* also threatened local control by removing peasants from the immediate control of their landlords. *Hacendados'* reactions reflect this dynamic, as APEN contained both Liberal and Conservative elites. The Liberal Party also responded to these challenges by channeling rural interests into Liberal-led unions. It does not appear that these had much success, especially given Gaitán's exit from the party and intra-party divisions (LeGrand 1986: 126). Altogether, the leftist *campesino* movement added a political dimension to the economic struggles over land.

5.3.2 Political Bargaining: Judicial and Bureaucratic Failure

As *campesino* organizations sought to build a new rural political base, Liberals returned to power after a Conservative hegemony that had begun in 1898. In 1930, Enrique Olaya Herrera was elected president as a representative of the moderate wing of the Liberals, to be succeeded by Alfonso López Pumarejo in 1934 as the chief of the more leftist wing of the party. As we shall see, the results of land reforms would not follow expectations based on the ideology of the two presidents.

Even in advance of the economic depression of the late-1920s and early-1930s, successive Colombian governments had expressed concern for agricultural production, fearing that a labor shortage in the countryside might short-circuit industrialization by under-supplying foodstuffs and raising their prices, causing inflation. As the depression developed, high unemployment triggered a fear of urban labor unrest

and policies that encouraged a migration from the cities and colonization of *baldíos*. Among national policymakers, a sense developed that the large estates' monopoly of land, backwards production methods, and under-utilization of resources were the root cause of lethargic agricultural production, prompting one minister to state the importance "to have done with the noxious and antiquated latifundia system, the cause of the ruin of our agriculture" (quoted in LeGrand 1986: 97). The national government saw the small *colono* as the key to building a rural middle class, quelling unrest, and sparking agriculture (LeGrand 1986: 98). Colombian legislators, for example, passed no less than ten laws between 1917 and 1930 designed to ease restrictions on *colonos* gaining legal title to their lands and close loopholes through which *hacendados* had evicted settlers (LeGrand 1986: 99). In 1926, the Supreme Court also responded to these new goals when it announced a major decision that re-defined the nature or private property ownership. Specifically, the judges ruled that the entirety of Colombia would henceforth be considered public land unless the prospective landowner could procure the original title by which he had received the land from the colonial or national domain (LeGrand 1986: 99-100). Unlike previous land titling provisions, the judgment rendered inadmissible documents such as wills and previous court decisions.

The Supreme Court's decision and the Colombian government's enforcement effort immediately encountered a number of obstacles and contributed to confusion regarding legal titles. Most landowners lacked original title to their lands because such documentation had been destroyed during Colombia's frequent nineteenth century civil wars. Furthermore, the chaotic colonization and accompanying conflicts of the late nineteenth century meant that *hacendados* often lacked title. In effect, the Supreme Court had undermined most land ownership in the country (LeGrand

1986: 100). Furthermore, *hacendados* immediately delayed execution of the law by filing civil suits against the government (LeGrand 1986: 100-101). The Colombian Congress failed to confirm the law, as was then legally necessary, and the Supreme Court itself compounded the confusion by rescinding its decision in 1927, the confirming it in years later (LeGrand 1986: 100-102, 143-144).

Nonetheless, *campesinos* seized on the 1926 decision as a rejection of *hacendados'* rights and vindication of *campesino* claims that the lands on which they squatted were, in fact, public lands. In general, *campesinos* began to clear untouched lands and plant crops, confident that the new legal framework would support their claims that the lands were *baldíos* and hence open to colonization (Marulanda 1991: 84-85). *Arrendatarios* ceased payment of their labor requirement on their *haciendas* and asked for the adjudication of lands they occupied (*ibid*). They also leveraged their allies in PAN and UNIR to obtain legal advice and assist in pleas for help to municipal, departmental and national authorities. National review of one hacienda revealed that one *hacendado* had converted an original legal title of 9,300 hectares into holdings of 290,000 hectares, the majority of which remained fallow (LeGrand 1986: 113). Land invasions also became more common, as organized groups of *campesinos* would occupy lands and refuse to leave, claiming it as public lands (LeGrand 1986: 115). In Sumapaz according to one estimate in 1931, 2,500 *colonos* had established themselves on 500,000 hectares. In the department of Huila, tenants on one *hacienda* refused to pay their *obligación* and squatters soon invaded the estate (LeGrand 1986: 118). In Quindío in late 1931, an organized group hundreds of *colonos* invaded eleven estates, with the squatters doggedly resisting arrest until 1936 (LeGrand 1986: 116). In the town of Fusagasugá, in Sumapaz, *arrendatarios* reacted to *hacendado* opposition to their petition for fairer treatment by occupying lands, refusing to pay

their obligations, and proclaiming the entire *hacienda* public land that had been illegally appropriated (Marulanda 1991: 106-109). *Colonos*, it would seem, had taken the offensive.

Alongside these judicial efforts, the Ministry of Industries, which governed agrarian matters, launched a series of efforts to aid *campesinos*, concentrating on plans to sub-divide large estates to create farms for *campesinos*. It proposed a program by which it would buy land from *hacendados* and in turn sell it to *colonos*, creating a national agricultural mortgage bank to financially assist *campesinos* in the purchases (Marulanda 1991: 99). The proposal tended to create a division within the *campesino* movement between those who supported the measure and those who did not. Many opposed the policy on the grounds that it enriched *hacendados* while asking peasants to pay dearly for the land that, in many cases, they already had occupied and improved (Marulanda 1991: 109-112). They argued that the government had backtracked from its previous commitments to expropriate lands previously appropriated illegally by *hacendados* (LeGrand 1986: 138). Furthermore, *hacendados* often sold less fertile land, leaving *colonos* with land that could not support families and mortgage debts. In other cases, peasants envisioned an opportunity to officially and legally own land and participated in the program. However, the program had only moderate success in the late 1920s and early 1930s.

These judicial and bureaucratic interventions on the part of the national government proved pro-*colono* in their design and consistent with repeatedly stated goals of increasing agricultural production and fostering social stability. However, they often obscured further the already inconsistent jumble of legal and bureaucratic institutions distinguishing between private and public property, allocating public lands, and adjudicating disputes among citizens. Judicial actions could last as many as ten

years (LeGrand 1986: 137). The Ministry of Industries was overwhelmed by claims of false title and found it difficult to judge the legality of most cases (LeGrand 1986: 138). These institutional failures intensified a spiral of extra-legal, violent conflict over land rights. In Viotá, just north of Bogotá, one thousand *campesinos* attacked the town, targeting the police station and mayor's office, wounding 25 and killing 4 (Machado 1988: 199). In the early months of 1936, twenty-five strikes had gripped the town of Quilpe (Machado 1988: 205). *Hacendados* often responded with similar acts of violence, co-opting the police as patrols to quell riots. The departmental civil guard and local officials often could be counted on for armed support (LeGrand 1986: 119-120). In one case, a departmental government attempt to divide an hacienda floundered when *hacendados* and local police forcibly ejected the peasants selected to buy the land and defied the order (Machado 1988: 202). They also organized gangs to eject squatters and confiscated *arrendatarios'* produce (Marulanda 1991: 87-88). In 1934, the governor of Cundinamarca declared that the region had fallen into anarchy (Machado 1988: 204). Economic disputes over land rights threatened the social fabric of Colombia.

5.3.3 Political Bargaining: Legislating Land Reform

By the mid-1930s *campesino* organizations had managed to place agrarian reform onto the center of the political stage. Through publications, legal challenges, and the violent instability discussed above, politicians moved towards a political solution to the question of land rights. Judicial and bureaucratic efforts had largely failed to quell the violence and the successive presidents turned to a more fundamental legislative reform. President Enrique Olaya Herrera stated the issue simply in his annual message to Congress in 1933:

> The public now must turn to an issue of singular importance to society, so disquieting to the very spirit of our farmers that it has provoked in certain parts of the country a precarious unrest and numerous conflicts on the ground. That issue is property claimed by some as colonizers of public lands and by others as private property (Mártinez 1939: 9).[12]

Olaya, elected under the Liberal banner in 1930, represented the more centrist wing of the Liberal Party. His administration, however, proposed an agrarian reform that favored *colonos'*. In 1933, his government created a commission to study the land issue and make recommendations for reform (Martínez 1939: 6, 23-24; LeGrand 1986: 144). The commission, which included members of the president's cabinet, recommended legislation in August 1933, which Olaya submitted to Congress (LeGrand 1986: 144). In proposing the law, Olaya synthesized the basis of agrarian conflicts as follows:

> In much of the country . . . the perversion of the process of legal titling has created large estates where rural laborers' lives are subject to the despotism of a backwards economy dedicated solely to the minimal production of immediately consumable goods and lacking real investment, and that without rights to the land that nourishes them, cannot support their families, so that instead of being factors in the creation of a richer society, are instead the cause of social unrest. If, for a long period of time, they have remained tranquil, subdued by ignominious work regimens and condemned to poverty, their own interests and the awakening of a collective consciousness has uprooted this submissiveness and inspired within them

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[12]References to the text of laws, presidential messages to Congress, reports, and Congressional debates are taken from a compilation of all archival resources leading to the the land reforms of 1936 undertaken by Marco A. Martínez in 1939. I have translated quoted passages into English.

an urgent reclaiming of their rights to the land. (Martínez 1939: 53)

As this passage suggests, Olaya had proposed a law that largely favored the *colonos'* interests. The proposal first concluded that, owing to the inability of most title holders to trace their titles back to the original concession from either the Colombian government or Spain, the system of legal titling was irrevocably broken. Private property, in this sense, could not exist within the realm of the law. The fourth article of the law enshrined the exploitation of land as the only means of converting public lands to private possession. In line with the 1926 Supreme Court decision discussed above, then, the legislation declared that all uncultivated land would revert to the Colombian government, regardless of legal title, unless the titular owners had put the land to use within ten years of the bill's passage (Martínez 1939: 25). Land disputes would be judged by the Ministry of Industry and a new set of land courts, in order to dispense of the disputes efficiently (Martínez 1939:33-41). The law also sought to prevent any attempts to circumvent its goals through future re-concentration by reducing the maximum allowable land grant (Martínez 1939: 30-31). In short, Olaya's administration had proposed a law that challenged *hacendados'* claims, limited their ability to reclaim large expanses in the future, and decided a key legal issue — whether land rights derived from title or from cultivation — in favor of the *colonos*. LeGrand (1986: 146) cites a contemporary estimate that if the law had gone into effect, it would have converted 75% of private property into public lands.

However, the proposal did not become law. According to the record, after its proposal on August 30, 1933, the lower chamber of the legislature empowered a commission to review the law and in October, the commission submitted its report in advance of a second debate (Martínez 1939). As part of that review, it recommended several modifications to the bill. By Christmas 1933, the Congress had debated those

modifications, but new elections on February 12, 1934 ended the consideration of the bill (*New York Times* 1934a).[13] With the Liberal Party firmly in power, the more radically leftist wing of the party put its champion forward and Alfonso López Pumarejo won an election that Conservatives refused to contest (*New York Times* 1934a). López referred to his term in office as "*la revolución en marcha,*" or the "revolution on the march." However, in terms of *campesinos'* political lobby in favor of the recognition of their land rights, his election brought a political closure. Most importantly, the bipartisan system had re-asserted itself. Jorge Gaitán returned to the Liberals, winning election to Congress in the spring of 1935 and disbanding UNIR, his independent populist movement. His motives remain unclear, but in retrospect it seems likely that his road to the presidency would have to run through the Liberal Party.[14] Furthermore, López's more left-leaning platform generally agreed with UNIR's orientation. Even the more combative Communist Party also supported the *revolución en marcha* (LeGrand 1986: 146). National organizations that had supported *colonos'* agenda therefore became subsumed under the ascendant Liberals' broader agenda, a trend exacerbated by López's concentration on the urban labor movement (LeGrand 1986: 147).

Just as López came to power, therefore, *campesinos'* ability to project their power on the national stage seemed to dissipate. Simultaneously, attempts at *parcelización*, or dividing large estates into smaller family-sized parcels, undermined collective action at the local level. As mentioned previously, the program had evoked strong opposition among certain quarters of the *campesino* movement. However, many

[13]Ironically, the notice of López's election in the *New York Times* was accompanied by an article on the expropriation of unexploited land by the Ministry of Industry (*New York Times* 1934b).

[14]Gaitán was assassinated in Bogotá on April 9, 1948 — in all likelihood not the result of a political plot — and at the time, it seemed likely he would win the Liberal nomination for the presidential elections of 1950, having contested the 1946 election and placed third. His assassination sparked the *Bogotazo*, a riot that destroyed large sections of Bogotá and in turn eventually gave way to Colombia's long-running civil war.

peasants did participate and those who did seemed to lose interest in political organization (LeGrand 1986: 147). In other words, dividing estates into parcels and selling them introduced a new heterogeneity into the *campesino* alliance of sharecroppers, small parcel owners, and squatters, particularly in the Sumapaz region, a flashpoint of the conflicts.

The decline in the *campesinos'* power of collective action at the national and local levels was compounded by the continued rise of *hacendado* organizations. As we have already seen, organizations such as the APEN and the SAC already had advanced an interpretation of the civil strife as a socialist-inspired attack on private property. After the Olaya administration's legislation in 1933 and López's election in 1934, they accelerated these efforts. The SAC formed chapters throughout the country and won the backing of the Catholic Church (LeGrand 1986: 147). APEN, in response to López's expansion of state economic interventions, launched a campaign that branded the regime as socialist and any attempt at land reform an attack on private property. Coupled with the loss of the organizing power of the *colonos*, this alliance of *hacendados* managed to unite "a broad cross-section of the Colombian upper and middle classes . . . landowners, merchants, professionals, and some financial and industrial interests." (LeGrand 1986: 148). Importantly, that united front included López's own party, since *hacendados* inhabited both political parties. The president seemed to have little political capital at hand.

Consequently, the new land reform law proposed by the López administration in 1935, though superficially dedicated to the same goals as Olaya's proposal in 1933, represented a compromise with *hacendados,* a compromise that in the long-run would favor their claims (LeGrand 1986; Marulanda 1991; Safford and Palacios 2002). The comments that accompanied the proposal clarify the compromise and

contrast sharply with Olaya's proposal:

> Because the great majority of private landholdings in Colombia lakck perfect titles, in the light of abstract jurisprudence, they should return to the public domain. Technically, then, we find ourselves faced with the juridical alternative of directing this country towards a socialist orientationn, or of re-validating such property titles, purifying them of imperfections. My government has chosen the second path ... Accused of doing away with private property, this administration instead presents to you, honorable members of Congress, the bases that it considers adequate to defend the extant system of private property in the rural area (Martínez 1939: 13-14)[15]

Recall that the 1933 proposal essentially allowed that only occupancy to determine ownership, with the exception of unexploited lands that the prospective owner exploited the land within ten years. In contrast, the López proposal, which would become Law 200 of 1936 after passage by Congress, created the following process for determining ownership:
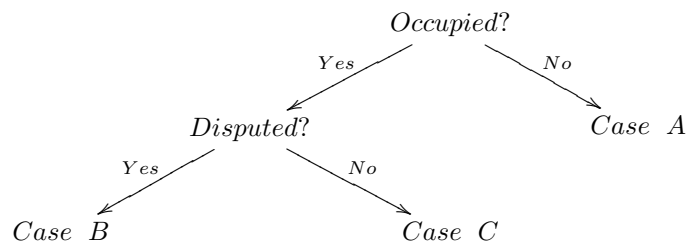

Figure 5.2: Land Ownership in Law 200 of 1936

In Case A, Article 1 of the legislation proposed that if a piece of land remained unoccupied, it would be considered public. However, Article 4 inserted a loophole; if

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[15] In this case, I rely on LeGrand's (1986: 150) translation of this passage, with a few minor changes.

a claimant could show title or chain of custody extending back thirty years or more, the land would be considered the claimant's private property. However, the land would revert to the government if left unused for ten years after the adjudication. In short, the law recognized what it referred to as the "social function" of private property; land would not be allowed to lay unused. In Case C, the occupant of the land would be considered its owner, as in the 1933 legislation. However, Case B diverged from the 1933 legislation. If a land was disputed and one of the disputants was a squatter who had invaded the land before 1935, then the squatter would acquire formal ownership if he could prove five years of occupation and that the occupation had been in good faith (i.e., that the squatter did not know the land was private). Any squatters from 1935 or afterwards were termed illegal and subject to eviction and imprisonment. The *hacendado* claiming ownership would retain ownership only if he possessed the original title to the land, either from the Colombian or Spanish government. If the *hacendado* retained legal ownership, then he would be responsible for paying for any improvements the squatter had made to the land; if he refused, the squatter would assume formal ownership. In the Olaya proposal, the squatter in this case would win legal ownership, regardless of titles (Martínez 1939: 123-130).[16]

Several more minor aspects of Law 200 of 1936 also bear mention. Deviating from the 1933 proposal, the law set no rules for the future appropriation of *baldíos*. In essence, the legislation neglected to attend to the question of how to prevent future conflicts and left open the possibility of future concessions of lands in large estates. The law also created land judges to adjudicate disputes, review titles, and determine claims of occupancy. In addition to this new body, the law created checks on *hacendados'* ability to evict immediate squatters, particularly their ability to use

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[16]For an excellent discussion of the fine points of the law, see Marulanda (1991: 136-246).

the police for this function (Martínez 1939: 126-127). However, opaque wording of these provisions and *hacendados'* interpretations of them law largely frustrated this section of the law (Marulanda 1991: 195-197). Finally, the law did little to regulate tenant farmer contracts.

By admitting the social value of private property, allowing a path for squatters to legitimate their land claims, and restricting the ejection of squatters, Law 200 of 1936 did bow to several *campesino* demands. However, the law allowed estate owners several loopholes to evict squatters, retain lands appropriated by force, and expand their holdings in the future — loopholes they would soon exploit. Furthermore, the years following the passage of the land reform saw *hacendados'* allies in Bogotá weaken its provisions further. Most importantly, the SAC pushed Congress to pay supplementary legislation in 1944 that eliminated the requirement that landowners exploit lands within ten years or risk the lands reverting to public ownership (LeGrand 1986: 151). Second, legislators began to chip away at the land judges' authority, wages, and finally, their existence. Implementing legislation was delayed until 1938, delaying the deployment of the land judges into the countryside and allowing *hacendados* to bring cases to civil judges, thought to be more friendly to their interests (Marulanda 1991: 204). By the end of 1937, legislators had proposed laws that would eliminate the land judges and return to civil judges the authority to decide land tenure cases (Marulanda 1991: 237). Though this legislation failed to pass, a 1941 decree substantially reduced the land judges' wages, causing many to resign, obstructing their function (Marulanda 1991: 238-239). A 1943 law finally disposed of the land judges and granted their responsibilities to civil judges.[17] Further legislation in 1944 sought to protect *hacendado* interests further by introducing

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[17]LeGrand (1986: 156-157) judges that the land judges were partial to *hacendado* interests and therefore concludes that their elimination did little to further obstruct the enforcement of Law 200 of 1936.

measures to boost share-cropping contracts, which had been threatened by the rise of wage labor in the late 1930s (LeGrand 1986: 161-162).

What of Law 200's effects on disputes over land rights and agricultural productivity? The immediate aftermath of the law's passage created confusion over its terms, as both *campesinos* and *hacendados* hoped the law would advantage their interests. *Campesinos* continued land invasions in the hopes of proving five years of occupancy to land judges in the years to come (Marulanda 1991: 205). *Hacendados* responded with evictions and also took the initiative by evicting *colonos* and *arrendatarios* from their lands. The delay in the law's implementation lent the *hacendados* extra time to utilize civil judges and local police to execute these evictions (Marulanda 1991: 205). Once the legislation finally took effect, both sides immediately availed themselves of its provisions, seeking rulings on land disputes. Marulanda (1991: 208) comments that for the *colonos*, the land judges represented a near religious ritual and often their best option to vindicate their land rights claims. In certain cases, *hacendados* leveraged local networks to subvert land judges' rulings; one land judge commented that the *campesinos* were "persecuted daily" and often put in jail by local police at the behest of the local estate owner (Marulanda 1991: 212-213). In one case in Tolima, a large estate owner simply refused to acknowledge a land judge's award of 1,500 parcels to *colonos* (LeGrand 1986: 157).

Despite these difficulties, Law 200 and ongoing attempts to divide *haciendas* for re-sale likely democratized access to land slightly. A shift away from tenant farming and towards drove up large estate owners' costs; they became more willing to sub-divide their estates to exit coffee production (Machado 1988: 237-244). LeGrand (1986) concludes that the 1936 land reform did little to modify the system of large estates or improve peasants' incomes, though it did convert them to wage laborers in-

stead of share-croppers. Neither did the legislation galvanize agriculture production. Landlords increasingly put their land to pasture because it required fewer workers and more quickly showed the kind of occupation required by Law 200 (LeGrand 1986: 161). Continuing fears regarding low agricultural production and the high price of food led the national government to pass further legislation in 1944 to revive the *arrendatario* system and relieve *hacendados* of further pressure on land rights from *colonos* (LeGrand 1986: 161-162). However, evidence suggests that land disputes did diminish overall during the period immediately after passage of Law 200, a result of recovery from depression and the sub-division of *haciendas*.

5.4 Conclusions

What have we learned form this brief survey of land issues in Colombia? And what can Colombia tell us about property rights discrimination? First, the two stages of land conflicts within the coffee industry furthers our understanding of Chapter 2's emphasis on the *process* of property rights discrimination. In both stages of conflict over land rights, self-interested economic actors reacted to largely exogenous shifts in the relative value of land. When coffee production increased that value, Colombians migrated to uncultivated areas and pursued their economic interests by clearing land and planting crops. As they did so, they came into conflict with one another, since they often claimed rights to the same land. A more conventional account of property rights institutions might interject here to complain that these economic agents sought to improve property rights institutions, clarifying titles and modifying procedures for appropriating land, so that they could all better capture gains from coffee production. The inability of the Colombian state to consistently articulate and enforce a set of institutions governing the colonization of public lands, therefore,

represents inefficient institutions.

In contrast, the case suggests that economic actors competed amongst themselves for the gains from the coffee industry, with little sense of the most "efficient" course for Colombia. Policy makers did seek to foster national goals, such as improving national agricultural production. *Hacendados* and *colonos*, however, competed over the design of rules that would affect their relative gains. Each side wished to design property rights institutions that would essentially result in property rights discrimination. *Hacendados* saw in land the creation of a model of coffee production that would favor their interests by capturing a cheap labor force and allowing them to speculate in land. Their interest in local institutions — police, mayors, and civil courts — concentrated on closing institutional channels to *colonos*. In turn, *colonos* engaged in extra-legal actions designed to present *hacendados* with a *fait accompli* of occupied land already in production. They favored occupancy and production as the basis of ownership because it favored their interests over those of landowners. Each side hoped to build discriminatory property rights institutions that would facilitate its access to valuable rights while closing access to rights to others. In this competitive cauldron, the health of national coffee production was an afterthought.

We can also see that bargaining over property rights institutions occurred in the shadow of political institutions. Local political institutions played a major role in this story, as *hacendados* translated their political connections into support for their land rights claims. As Chapter 2 predicts, collective action proved difficult and, in this case, more difficult for the *campesinos*, a larger, more heterogeneous group. The sub-division of large estates into small parcels further weakened collective action, since land-owning peasants were content to leave the protests to others. The smaller group of *hacendados* found it easier to build lasting organizations to represent their

interests, organizations that made an important difference during the national debate over land reforms. The bipartisan nature of democratic politics in Colombia exacerbated this collective action problem, as *campesino* organizations found themselves folded into the Liberal Party's general agenda, where *hacendado* interests found representation in both traditional parties. Simply put, political power mattered for pursuing property rights discrimination.

This case study also suggests factors missing from the statistical analysis in Chapters 3 and 4 that may help us better understand the origins of property rights discrimination. Perhaps the most important of these is the role of economic inequality in bargaining over future property rights institutions. *Hacendados'* greater wealth facilitated their efforts at crucial points in this narrative. Access to education improved their access to legal institutions, experience in urban centers allowed close access to political power, and greater funds fostered more durable organizations representing their interests. By examining this narrative in two stages, we can also see how a discriminatory result in the *allocation* of rights in the first stage of land disputes left *hacendados* in possession of large tracts of land, a status quo that proved difficult to budge. Previous inequality, then, may drive inequality in bargaining over present and future institutions of private property, regardless of political regime. This suggests a kind of path dependence in property rights institutions, where the concentration of private property ownership will tend to foster institutions that preserve and concentrate still further the possessions of the "in" group, particularly in cases like Colombia's where the government finds it difficult to enforce its dicta.

With these thoughts in mind, I turn to concluding the dissertation and highlighting the contributions and limitations of this research.

CHAPTER VI

Conclusions

Capitalism is built upon institutions and its performance cannot be understood without attending carefully to the institutional context, particularly the protection of private property. This is the great insight of what this dissertation has called a hegemonic consensus in institutional economics. That literature — alongside its followers in the academic and public policy realms, including studies of governance, investment climate, economic freedom, etc. — has built a theory of "economic institutions," the complex of rules that govern the protection of private property, resolution of disputes over rights, and restrictions on citizens' (and foreigners') enjoyment of those rights. They convincingly have argued that such institutions, broadly construed, underlie economic agents' decisions to invest in technology and physical and human capital. Economic institutions meant the difference between order and anarchy, capitalism and socialism, growth and stagnation. Empirically, the field has used sophisticated statistical methods to quantify the impact of economic institutions on macroeconomic performance.

Economists' abiding interest in long-run economic growth has motivated their emphasis on the *public* benefits of protecting private property. However, it has also obscured the *distributional* benefits of protecting private property. In this disser-

tation, I break from that tendency to build a theoretical and empirical narrative rooted in a single premise — that economic actors desire and politicians can provide property rights discrimination, protecting only certain groups' rights while ignoring or violating others' rights in order to fix the distribution of economic activity. In the preceding chapters, this research has moved from economic and political institutional theories, through the statistical analysis of cross-national surveys of firm managers, and ended in the rural frontier of 1930s Colombia. Here, I pause to summarize briefly this dissertation's approach and revisit Chapter 1's discussion of its contributions to the study of political economy.

6.1   The Political Economy of Property Rights Discrimination

This dissertation began with a seemingly unassailable consensus in institutional economics that identifies the quality of institutions that protect private property as the primary factor affecting international divergence in economic performance. In short, countries with robust institutions protecting private property grow and those that lack such institutions stagnate or collapse. With the collapse of the Soviet bloc and conversion of many Eastern European economies to capitalism, this academic consensus also seized the imagination of public policy makers around the world, including at some of the most powerful international financial institutions and aid agencies. The consensus made intuitive sense and satisfied economic liberals' faith in free markets and private property. It helped explain the economic dislocations of socialist economic policies from Mao's China to Allende's Chile and supported the case for institutional reform around the globe.

Beginning in Chapter 1, I examined this consensus more closely. Economists' focus on property rights institutions originated in the search for an explanation of

differences in economic performance across countries and time. Consequently, institutional economists have largely studied the public benefits of property rights institutions, particularly on economic growth. This focus on *international* comparisons of institutions and economic performance, I argued, concealed a vital assumption of the literature — that property rights institutions are public goods, inexhaustible and undifferentiable. The public good assumption was useful, yielding a more tractable set of institutional comparisons — property rights institutions varied only internationally and only along one dimension. Certain countries had "high-quality" institutions that protected contract and property rights, where others had "low-quality" institutions that left those rights in limbo. Like any simplifying assumption, the public good assumption served a purpose in the construction of a body of knowledge concerning growth and institutions.

I assert that the public goods assumption has out-lived its usefulness, obscuring the nature, origins, and consequences of property rights institutions. In effect, the public good assumption requires the acceptance of one or both of two presumptions regarding private property rights, one about economic agents' *demand* for property rights institutions and the other about politicians' *supply* of those institutions. First, it presumes that a self-interested economic agent prefers property rights institutions that protect other agents' rights, as well. By protecting other agents, property rights institutions facilitate an agent's acquisition of rights and involvement in contracts that maximize her gains. Second, it imagines that, even if that demand existed, politicians cannot differentiate the protection of private property. Although the actual mechanisms by which institutions that protect private property are left unclear, scholars have assumed those mechanisms cannot be closed to particular segments of society.

In contrast, I claim that economic actors demand, and politicians can provide, property rights discrimination. In contrast to the hegemonic consensus on private property institutions, I argue that, under certain circumstances, an economic actor profits mightily from institutions' failure to protect other agents' rights. At the very least, there is no reason to believe that economic agents *require* the protection of other agents' rights. Using a simple extension of the Coase Theorem, I show how the allocation of rights affects the distribution of economic benefits, suggesting that economic actors, all else equal, prefer institutions that allow them to extend their economic rights. Under certain circumstances, politicians will differentiate the protection of private property rights to create an "in" group of well-protected rights and an "out" group of unprotected rights. Chapter 3 provides the empirical counterpart to this theoretical contention. Previous measures of the quality of property rights institutions inhered the public goods assumption, characterizing institutions as varying across countries, but not within them. In contrast, I allow the data to speak for themselves as to the *distribution* property rights institutional quality. I analyze data from the World Bank's *Enterprise Surveys*, which ask firm managers in a wide range of countries to state their confidence in the protection of their private property rights. The careful design and analysis of firm-level measures of property rights confidence reveals a pattern that supports the theoretical case for property rights discrimination. In short, property rights confidence varies *within* countries and the degree of within-country variation itself varies *across* countries.

The decisive first step of this dissertation, then, is a kind of existence proof for property rights discrimination, a phenomenon unexpected by previous research in institutional economics.[1] In short, property rights discrimination exists and varies

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[1]As Chapter 1 discusses, previous authors have attended to discrimination in property rights institutions (Knight 1992; Haber, Razo and Maurer 2003; Acemoglu et al 2004).

meaningfully across countries. In making this claim, I fundamentally re-define the nature of institutional failure. In certain countries, institutional failure is total; most, if not all, actors suffer from weak property rights protection from the state, with grave repercussions for macroeconomic performance. In other countries with the same "mean" institutional obstacles, failure is discriminatory in nature. An "in" group enjoys relatively secure rights, whereas an "out" group must suffer the violation of its rights, either through negligence or official policy. The next step after defining the phenomenon is theorizing its origins and repercussions.

In Chapters 2 and 3, I attend to the question of the micro and macroeconomic consequences of property rights discrimination. The hegemonic view from institutional economics commits a form of ecological inference. The logic of property rights protection is fundamentally microeconomic in nature; when an individual doubts the protection of her property rights, she will forego otherwise profitable economic activity. Yet tests of that logic tend to use macroeconomic data; countries with better property rights institutions also perform better. Thinking of property rights confidence as *distributed* allows a test both of the basic logic of property rights and of the microeconomic effect of property rights discrimination. In short, citizens with greater confidence in protection of their private property rights should invest more, transact in the formal economy, and use more sophisticated financial instruments. Chapter 2 also considers, however, how property rights discrimination influences macroeconomic outcomes, as well. Again, I lean on the Coase Theorem. In the presence of non-zero transaction costs, discriminatory property rights institutions will threaten aggregate efficiency. When property rights institutions funnel rights towards an "in" group chosen for any reason other than efficiency, rights will fail to accrue to productive actors, with consequences for the aggregate performance of the

economy.

Chapter 3 tests these intuitions. Using statistical methods designed for multi-level data, I generally find empirical support for the notion that firm managers alter their behavior in response to their confidence in their property rights. All else equal, higher property rights confidence correlates positively with investment and negatively with informality, even when controlling for the national-level mean of property rights confidence. At the macroeconomic level, findings suggest that aggregate informality declines in mean property rights confidence, but that effect depends on the degree of property rights discrimination. Though weaker than might be expected, Chapter 3 does provide general support for Chapter 2's portrait of the micro and macroeconomic consequences of property rights discrimination.

Having theorized and estimated empirically the *extent* and *impact* of property rights discrimination, I turn to the issue of its origins. Following previous accounts, I conceptualize property rights institutions as the outcome of bargaining between self-interested economic agents and politicians. Exogenous shifts in the relative value of resources tend to exert pressure on property rights institutions, as when technological change enables new forms of economic activity that raise questions unanticipated by extant institutions. When such shifts occur, economic agents will form preferences over changes to property rights institutions. A key insight of institutional economics their *common* interest in promoting efficient institutions. In contrast, I emphasize how their preferences often conflict, leading to competition over changes to property rights institutions. Agents will vary in their ability to overcome the collective action problem and successfully lobby politicians; smaller, richer, and more homogenous groups of agents will more likely win this institutional competition. More funda-mentally, however, I argue that this competition is inherently *political,* occurring

according to the rules set by political institutions. Therefore, a particular citizen's probability of securing favorable changes to property rights institutions depends on her relationship to politicians, as structured by political institutions.

This discussion begs the question of *how* political institutions affect the distribution of property rights confidence. In Chapter 2, I consider two sets of theories that answer this question. First, I blend disparate claims regarding how democracy shapes politicians' incentives to protect private property. I argue that while democratic leaders are tempted to discriminate against the property rights of the rich, non-democratic leaders will discriminate in favor of the rich. However, more extensive limits on executive power in democracy should temper property rights discrimination more generally. Second, I consider the predictions of the selectorate theory of Bruce Bueno de Mesquita and his co-authors (2002). The theory's logic suggests that politicians will wish to discriminate the protection of private property in favor of members of their winning coalition. However, their willingness to do so depends on the size of the winning coalition, particularly in relation to the selectorate, or the group from which the winning coalition is drawn. The theory suggests little property rights discrimination in large-winning coalition regimes (e.g., mass democracies), as most citizens should enjoy full confidence in their private property rights. In contrast, we should expect some property rights discrimination in non-democracies, though its shape will vary. In medium-W, large-S regimes, the larger winning coalition encourages wider property rights protections, but the strong loyalty norm counteracts that effect; the result will be strong property rights protection for the winning coalition, but weaker rights for those outside the winning coalition. In contrast, small-W, small-S regimes will protect the rights of the winning coalition as a private good, since it is so small. However, the weak loyalty norm motivates

leaders to protect property rights of those outside the winning coalition in order to augment economic performance. In these latter two regime types, mean property rights confidence will be similar, but its distribution will differ.

Each of the theories of the political institutional origins of property rights discrimination predicts not only the general pattern of property rights discrimination, but also *whose* rights more likely suffer. To test those hypotheses, I return to the World Bank *Enterprise Surveys*. Using statistical techniques recommended for multi-level data, Chapter 4 reports on models that test the principal hypotheses of Chapter 2. That analysis first provides strong empirical support for the collective action conceptualization of bargaining; all else equal, larger, state-owned, and exporting firms report higher confidence in the protection of their private property rights. In contrast, the results on democracy are mixed. Firms in democratic countries generally exhibit lower property rights confidence. However, it does not seem that that effect emanates from efforts by democratic politicians to redistribute rights from rich to poor citizens. Furthermore, the analysis suggests that politically influential firms enjoy great property rights confidence in autocratic countries, but not in mixed regimes and democracies. This evidence partially favors Chapter 2's portrait of democracy. However, Chapter 4's attempt to test the hypotheses of the selectorate theory is largely frustrated by the difficulty of creating firm-level measures that match the demands of the theory. The initial tests conducted suggest that regimes with large winning coalitions tend towards lower mean property rights confidence, but a tighter distribution about that mean.

Altogether, the statistical analysis of Chapters 3 and 4 show strong evidence that property rights discrimination exists; tentative evidence that it affects firm behavior and national economic performance; weak evidence that democracy affects the

pattern of property rights confidence, and no corroborating evidence for my interpretation of the selectorate theory. In Chapters 3 and 4, I consider whether this generally weak empirical portrait is the consequence of a selection bias inherent in firm-level surveys. Since property rights discrimination likely stops "out" group members from starting businesses, a survey of existing firms likely understates the degree of property rights discrimination, its effect, and the effect of political institutions. However, the early state of research into the origins of property rights institutions, the need for greater validation of the concept of property rights discrimination, and this statistical weakness all suggest the utility of close case analysis. Therefore, Chapter 5 shifts focus and method to carefully elaborate the history of land rights conflicts in nineteenth and twentieth century Colombia.

Chapter 5's analysis of land conflicts within the Colombian coffee industry emphasizes the *process* of property rights discrimination. In two stages of conflict over land rights, self-interested actors — peasant settlers and large estate owners — reacted to largely exogenous shifts in the relative value of land to compete over land rights. In doing so, each set of actors pursued a vision of Colombian coffee production that would maximize its gains. They did so within the context of a weak Colombian state. Though Colombian policy makers attempted to foster national goals (e.g., galvanize agricultural production), their attempts at governing this competition resulted in a jumble of conflict property rights institutions. The hegemonic school of property rights institutions would find in this case proof that "inefficient" property rights institutions inhibited production and exacerbated economic conflict. However, the case also reveals patterns of property rights discrimination. Large estate owners largely succeeded in leveraging their greater wealth and control over local institutions to enforce their prerogatives over land. At the national level, they built more

enduring forms of collective action in the pursuit of land reform, given the smaller, more homogenous group of actors. The bipartisan nature of democratic politics magnified this advantage, as peasant organizations found themselves subservient to the Liberal Party's broader agenda, while large estate owners enjoyed support from both traditional parties. Neither side in these conflicts enjoyed perfect property rights confidence, yet it seems clear that large estate owners largely succeeded in fending off challenges to their land rights.

6.2   Contributions and the Road Ahead

At its core, this dissertation proposes a new dimension by which we should rate the performance of property rights institutions and, by extension, the governments that create them. It thus re-states Huntington's (1968: 1) proposition — the most important political economic distinction among countries concerns neither their *form* nor their *degree* of government, but their *distribution* of government. Its principal contribution to the study of political economy, therefore, is the very idea of property rights discrimination — that it exists, matters for microeconomic and macroeconomic outcomes, and is the predictable outcome of a discoverable process. I conclude by considering soberly this dissertation's contribution to the study of political economy and identifying new avenues of research it implies.

For a moment, let us consider the political economy of trade as an instructive example. A country's volume of international trade likely has a positive effect on a country's macroeconomic growth rate (Frankel and Romer 1999). However, scholars do not assume that the design of trade *policy* revolves around an effort to maximize the aggregate benefits. Rather, political economists theorize trade policy as the product of rent-seeking behavior by different interest groups whose relative power

over policy depends on their ability to act collectively, the nature of the country's economy, and political institutions. Likewise, the *public* benefits of institutions that fairly and vigorously protect private property should not blind us to the process through which those institutions are created. In a fundamental sense, the protection of one citizen's property rights necessitates restricting other citizens' behavior; your rights to your car inherently prohibit me from stealing it. As with trade, this dissertation proposes that the origins of property rights institutions can only be understood as the result of a process by which actors pursue their self-interest, which fixes their distributional implications as the starting point for theory-building. We should therefore apply the tools of political economy (e.g., the formal study of institutions) — tools that have furthered our understanding of fiscal policy, central bank independence, and trade policy — to the study of the design of property rights institutions.

Ironically, a valuable first step in this effort would be to define the sadly obscure term "property rights institutions." The central hypothesis of this agenda — that actors' economic behavior depends on their confidence in the protection of their private property rights — is based on economic agents' *perceptions*, rather than the design of specific institutions, such as the judiciary or bureaucracy. Institutional economics, in contrast, has chosen to theorize and measure the latter concept, measuring the "efficiency" of specific arms of the state. We observed many such institutions in play in Chapter 5's analysis of Colombian land rights disputes. Economic actors disputed the design of judicial institutions that would judge property rights disputes, bureaucratic rules that restricted the appropriation of land rights, etc. In turn, those institutions influenced actors' confidence in their land rights. We do well, however, to distinguish between the function of, say, judicial institutions on one hand and citizens' property

rights confidence on the other. At the very least, these are conceptually distinct.

This discussion suggests that researchers should work towards a consensus on defining and measuring property rights institutions, an effort that could work along two tracks. First, cross-national survey research holds great promise as a means to measuring individuals' property rights confidence. Here, I use firm-level surveys to accomplish those goals, but the selection bias discussed in Chapters 3 and 4 suggest that individual-level surveys might improve upon that choice. Individual-level surveys might allow us to directly assess the distribution of property rights confidence within any given country and investigate why those distributions vary across countries. Analyzing such data would also facilitate the statistical investigation of why certain citizens' rights more generally suffer from property rights discrimination. Second, researchers should work towards the identification and investigation of specific institutions that protect private property rights. For example, Haber, Razo, and Maurer (2003) identify different methods that successive short-lived Mexican governments used to protect particular industries' property rights, allowing growth in key sectors during civil war. In a far less impressive effort, Chapter 5 identifies various institutions, including local ones, that protected land rights. Finally, researchers might unite these two efforts by testing whether those institutions really do increase property rights confidence. For example, we might *assume* that judicial independence instills greater confidence in private property rights, but do not test that assumption.

Finally, I propose that researchers begin to build more *dynamic* explanations of the origins of property rights discrimination. Both the theoretical framework and the statistical tests were static in nature. Chapter 2 envisions that modifications to property rights institutions depend on the reigning political institutions. That

framework did not allow the distribution of economic resources or the nature of the extant property rights institutions to influence bargaining. Likewise, the nature of the data used in Chapters 3 and 4 do not allow an analysis of how the distribution of property rights confidence changes over time. However, Chapter 5 strongly suggests a particular form of path dependence. Large landowners consistently translated their wealth and standing in society into new rules that favored their economic interests. Consequently, *campesinos* found it difficult to lobby for rules that would recognize their land claims. Economic inequality began continued property rights discrimination, which in turn reinforced economic inequality. Acemoglu, Johnson, and Robinson (2004) propose a "hierarchy of institutions" that accords with this view, arguing that the openness of political institutions, fairness of economic institutions, and distribution of resources modify each other across time, creating patterns of economic inequality and institutional change. Thinking in these terms, perhaps including the use of formal models and even complex systems, will yield new understanding of the origins not only of property rights institutions, but the distribution of wealth and political institutions.

In this sense, the continued study of property rights institutions promises new answers to foundational questions of the development of democracy and wealth. Let us hope that promise is fulfilled.

BIBLIOGRAPHY

BIBLIOGRAPHY

[1] Daron Acemoglu, Simon Johnson, and James A. Robinson. The colonial origins of comparative development: An empirical investigation. *American Economic Review*, 91(5):1369–1401, 2001.

[2] Daron Acemoglu, Simon Johnson, and James A. Robinson. Reversal of fortune: Geography and institutions in the making of the modern world income distribution. *Quarterly Journal of Economics*, 117(4):1231–1294, 2002.

[3] Daron Acemoglu, Simon Johnson, and James A. Robinson. Institutions as the fundamental cause of long-term growth. Unpublished manuscript prepared to be included in *Handbook of Economic Growth*, edited by Philippe Aghion and Steve Durlauf., 2004.

[4] Joshua Aizenman and Nancy Marion. Volatility and investment: Interpreting evidence from developing countries. *Economica*, 66:157–179., 1999.

[5] Armen Alchian and Harold Demsetz. The property right paradigm. *The Journal of Economic History*, 33(1):16–27, 1973.

[6] Louis De Alessi. Gains from private property: The empirical evidence. In *Property Rights: Cooperation, Conflict, and Law*, ed. by Terry L. Anderson and Fred S. McChesney.

[7] Terry L. Anderson and Peter J. Hill. The evolution of property rights. In *Property Rights: Cooperation, Conflict, and Law*, ed. by Terry L. Anderson and Fred S. McChesney.

[8] Terry L. Anderson and Fred S. McChesney, editors. *Property Rights: Cooperation, Conflict, and Law*. Princeton University Press, Princeton, NJ, 2003.

[9] Janine Aron. Growth and institutions: A review of the evidence. *The World Bank Research Observer*, 15(1):99–135, February 2000.

[10] Reyes Aterido, Mary Hallward-Driemeier, and Carmen Pageés. Investment climate and employment growth: The impact of access to finance, corruption and regulats across firms. Inter-American Development Bank Discussion Paper No. 3138, November 2007.

[11] Arthur S. Banks. Cross-national time-series data archive 2001. Available at: http://www.databanks.sitehosting.net/Default.htm, 2001.

[12] Robert J. Barro. Democracy in Congo? Laugh on. *Hoover Digest*, 4, 1997.

[13] Robert J. Barro. *Determinants of Economic Growth: A Cross-Country Empirical Study*. MIT Press, Cambridge, MA, 1997.

[14] Robert J. Barro. Democracy and the rule of law. In *Governing for Prosperity*, ed. by Bruce Bueno de Mesquita and Hilton L. Root, 2000.

[15] Yoram Barzel. *Economic Analysis of Property Rights*. Cambridge University Press, Cambridge, UK, 1997.

[16] Robert H. Bates. *Essays on the Political Economy of Rural Africa.* California Series on Social Choice and Political Economy, No. 8. University of California Press, Berkeley, CA, 1991.

[17] Thorsten Beck, George Clarke, Alberto Groff, Philip Keefer, and Patrick Walsh. New tools in comparative political economy: The database of political institutions. *World Bank Economic Review*, 15(1):165–176, 2001.

[18] BERI. Business environment risk intellgence guide. Available at: http://www.prsgroup.com/Default.aspx.

[19] Timothy Besley. Property rights and investment incentives: Theory and evidence from ghana. *Journal of Political Economy*, 103(5):903–937, 1995.

[20] Duncan Black. On the rationale of group decision-making. *Journal of Political Economy*, 56(1):23–34, 1948.

[21] Jake Bowers and Katherine W. Drake. Eda for hlm: Visualization when probabilistic inference fails. *Political Analysis*, 13(4):301–326, 2005.

[22] David Bushnell. *The making of modern Colombia: a nation in spite of itself.* University of California Press, Berkeley, CA, 1993.

[23] Christopher Clague, Philip Keefer, Stephen Knack, and Mancur Olson. Property and contract rights in autocracies and democracies. *Journal of Economic Growth*, 1(2):243–276, 1996.

[24] Christopher Clague, Philip Keefer, Stephen Knack, and Mancur Olson. Contract-intensive money: Contract enforcement, property rights, and economic performance. *Journal of Economic Growth*, 4:185–211, 1999.

[25] William R. Clark, Robert Kaufman, and Thomas E. Flores. What's so good about democracy? a research note. Unpublished paper, 2005.

[26] Ronald H. Coase. The problem of social cost. *Journal of Law and Economics*, 3:1–44, 1960.

[27] David Collier. New perspectives on the comparative method. In *Comparative Political Dynamics*, ed. by Dankwart A. Rustow and Kenneth Paul Ericson., 1991.

[28] Paul Collier. *The Bottom Billion: Why the Poorest Countries are Failing and What Can Be Done About It.* Oxford University Press, Oxford, UK, 2007.

[29] Colombia. Informe del congreso nacional. Report of Colombian government, 1906.

[30] Colombia. Memorias del Ministro de Industrias. Report of Colombian government, 1931.

[31] William D. Coplin, Michael K. O'Leary, and Tom Sealy. *A Business Guide to Political Risk for International Decisions.* Political Risk Services, Syracuse, NY, 1996.

[32] Bruce Bueno de Mesquita and Hilton L. Root, editors. *Governing for Prosperity.* Yale University Press, New Haven, CT, 2000.

[33] Bruce Bueno de Mesquita, Alastair Smith, Randolph M. Siverson, and James D. Morrow. *The Logic of Political Survival.* The MIT Press, Cambridge, MA, 2003.

[34] Hernando de Soto. *The Other Path: The Economic Answer to Terrorism.* Basic Books, New York, NY, 1989.

[35] Hernando de Soto. *The Mystery of Capital: Why Capitalism Triumphs in the West and Fails Everywhere Else.* Basic Books, New York, NY, 2000.

[36] Anthony Downs. *An Economic Theory of Democracy.* Harper & Row, New York, NY, 1957.

[37] Thráinn Eggertsson. Open access versus common property. In *Property Rights: Cooperation, Conflict, and Law*, ed. by Terry L. Anderson and Fred S. McChesney.

[38] Robert C. Ellickson. *Order Without Law: How Neighbors Settle Disputes*. Harvard University Press, Cambridge, MA, 1991.

[39] Kathryn Firmin-Sellers. The politics of property rights. *American Political Science Review*, 89(4):867–881., 1995.

[40] Jeffrey A. Frankel and David Romer. Does trade cause growth? *American Economic Review*, 89(3):379–399, 1999.

[41] Robert J. Franzese. *Macroeconomic Policies of Developed Democracies*. Cambridge University Press, Cambridge, UK, 2002.

[42] Robert J. Franzese. Empirical strategies for various manifestations of multilevel data. *Political Analysis*, 13(4):430–446, 2005.

[43] Gloria Gaitán. *La lucha por la tierra en la década del 30*. El Áncora Editores, Bogotá, Colombia, 1984.

[44] José Antonio Ocampo Gavira. *Colombia y la economía mundial, 1830-1910*. Siglo XXI, Bogotá, Colombia, 1984.

[45] Barbara Geddes. What do we know about democratization after twenty years? *Annual Review of Political Science*, 2:115–144, 1999.

[46] Barbara Geddes. *Paradigms and sand castles: Theory building and research design in comparative politics*. University of Michigan Press, Ann Arbor, MI, 2003.

[47] Clifford Geertz. Thick description: Toward an interpretive theory of culture. In *The Interpretation of Cultures: Selected Essays*, 1973.

[48] Stephen Haber, Armando Razo, and Noel Maurer. *The Politics of Property Rights: Political Instability, Credible Commitments, and Economic Growth in Mexico, 1876-1929*. Cambridge University Press, Cambridge, UK, 2003.

[49] Robert E. Hall and Charles I. Jones. Why do some countries produce so much more output per worker than others? *Quarterly Journal of Economics*, 114(1):83–116, 1999.

[50] Mary Hallward-Driemeier and Reyes Aterido. Comparing apples with apples: How to make (more) sense of subjective rankings of constraints to business. World Bank Working Paper, 2007.

[51] Garrett Hardin. The tragedy of the commons. *Science*, 162(3859):1243–1248, 1968.

[52] Jeffrey Herbst. *States and Power in Africa*. Princeton University Press, Princeton, NJ, 2000.

[53] Samuel P. Huntington. *Politial Order in Changing Socities*. Yale University Press, New Haven, CT, 1968.

[54] Nathan Jensen. Democratic governance and multinational corporations: Political regimes and inflows of foreign direct investment. *International Organization*, 57(3):587–616, 2003.

[55] Salmón Kalmanovitz. *Economía y nación: una breve historia de Colombia*. Editorial Norma, Bogotá, Colombia, 2003.

[56] Daniel Kaufmann, Aart Kraay, and Massimo Mastruzzi. Growth and governance: A reply. *Journal of Politics*, 69(2):555–562, 2007a.

[57] Daniel Kaufmann, Aart Kraay, and Massimo Mastruzzi. Growth and governance: A rejoinder. *Journal of Politics*, 69(2):570–572, 2007b.

[58] Philip Keefer and Stephen Knack. Why don't poor countries catch up? A cross-national test of an institutional explanation. *Economic Inquiry*, 35(3):590–602, 1997.

[59] Stephen Knack. Institutions and the convergence hypothesis: The cross-national evidence. *Public Choice*, 87(3):207–228, 1996.

[60] Stephen Knack and Philip Keefer. Institutions and economic performance: Cross-country tests using alternative institutional measures. *Economics and Politics*, 7(3):207–227, 1995.

[61] Jack Knight. *Institutions and Social Conflict.* Cambridge University Press, Cambridge, UK, 1992.

[62] Roger C. Kormendi and Philip Meguire. Macroeconomic determinants of growth. *Journal of Monetary Economics*, 16(2):141–163, 1985.

[63] Marcus Kurtz and Andrew Schrank. Growth and governance: Models, measures, and mechanisms. *Journal of Politics*, 69(2):538–554, 2007a.

[64] Marcus Kurtz and Andrew Schrank. Growth and governance: A defense. *Journal of Politics*, 69(2):563–569, 2007b.

[65] Finn E. Kydland and Edward C. Prescott. Rules rather than discretion: The inconsistency of optimal plans. *Journal of Political Economy*, 85(3):473–492, 1977.

[66] David A. Leblang. Property rights, democracy, and economic growth. *Political Research Quarterly*, 49(1):5–26, 1996.

[67] Catherine LeGrand. *Frontier expansion and peasant protest in Colombia, 1850-1936.* University of New Mexico Press, Albuquerque, New Mexico, 1986.

[68] Gary D. Libecap. *Contracting for Property Rights.* Cambridge University Press, Cambridge, UK, 1989.

[69] Evan S. Lieberman. Nested analysis as a mixed-method strategy for comparative research. *American Political Science Review*, 99(3):435–452, 2005.

[70] Absalón Machado. *El café: de la aparcería al capitalismo.* Tercer Mundo Editores, Bogotá, Colombia, 1988.

[71] Monty G. Marshall and Keth Jaggers. Polity iv project: Political regime characteristics and transitions, 1800-2006. the polity iv dataset. Available at: http://www.systemicpeace.org/polity/polity4.htm.

[72] Marco A. Martínez. Regimen de tieras en colombia: antecedents of law 200 of 1936. Publication of the Ministry of the National Economy., 1939.

[73] Elsy Marulanda. *Colonización conflicto: las lecciones del Sumapaz.* Tercer Mundo Editores, Bogotá, Colombia, 1991.

[74] Fred S. McChesney. Government as definer of property rights: Tragedy exiting the commons? In *Property Rights: Cooperation, Conflict, and Law*, ed. by Terry L. Anderson and Fred S. McChesney.

[75] Allan H. Meltzer and Scott F. Richard. A rational theory of the size of government. *Journal of Political Economy*, 89(5):914–927, 1978.

[76] *New York Times*. Colombia takes back 1,000,000 idle acres. page E8, February 11, 1934.

[77] *New York Times*. Colombia to elect a president today. page 32, February 11, 1934.

[78] Douglass North. *Structure and Change in Economic History*. W. W. Norton and Company, New York, NY, 1981.

[79] Douglass North. *Institutions, Institutional Change and Economic Performance*. Cambridge University Press, Cambridge, UK, 1990.

[80] Mancur Olson. *The Logic of Collective Action: Public Goods and the Theory of Groups*. Harvard University Press, Cambridge, MA, 1965.

[81] Mancur Olson. *The Rise and Decline of Nations: Economic Growth, Stagflation, and Social Rigidities*. Yale University Press, New Haven, CT, 1982.

[82] Mancur Olson. Dictatorship, democracy, and development. *American Political Science Review*, 87(3):567–576, 1993.

[83] Mancur Olson, Naveen Sarna, and Anand V. Swamy. Governance and growth: A simple hypothesis explaining cross-country differences in productivity growth. *Public Choice*, 102(3):341–364, 2000.

[84] Elinor Ostrom. *Governing the Commons: The Evolution of Institutions for Collective Action*. Cambridge University Press, Cambridge, UK, 1990.

[85] Marco Palacios. *Coffee in Colombia, 1850-1970: An economic, social, and political history*. Cambridge University Press, Oxford, UK, 1980.

[86] A. Mitchell Polinsky. *An Introduction to Law and Economics*. Little & Brown, Boston, MA, 1989.

[87] Adam Przeworski and Fernando Limongi. Political regimes and economic growth. *Journal of Economoic Perspectives*, 7(3):51–69, 1993.

[88] William Riker and Itai Sened. The origins of property rights. *American Journal of Political Science*, 35(4):951–969, 1991.

[89] Dani Rodrik. Getting institutions right. Mass. Mimeo. Available at: http://ksghome. harvard. edu/drodrik/ifo-institutions% 20article% 20_April% 202004_. pdf, 2004.

[90] Dani Rodrik, Arvind Subramanian, and Francesco Trebbi. Institutions rule: The primacy of institutions over geography and integration in economic development. *Journal of Economic Growth*, 9:131–165, 2004.

[91] Clinton Rossiter, editor. *The Federalist Papers*. Penguin Books, New York, NY, 1961.

[92] Dankwart A. Rustow and Kenneth Paul Ericson, editors. *Comparative Political Dynamics*. Harper Collins, New York, NY, 1991.

[93] Jeffrey D. Sachs. Institutions don't rule: Direct effects of geography on per capita income. NBER Working Paper 9490, February 2003.

[94] Frank Safford and Marco Palacios. *Colombia: Fragmented Land, Divided Society*. Oxford University Press, Oxford, UK, 2002.

[95] Edella Schlager and Elinor Ostrom. Property rights regimes and natural resources. *Land Economics*, 68(3):249–262, 1992.

[96] Amartya Sen. *Development as Freedom*. Anchor Books, New York, NY, 1999.

[97] Itai Sened. *The Political Institution of Private Property*. Cambridge University Press, Cambridge, UK, 1997.

[98] David Stasavage. Private investment and political institutions. *Economics and Politics*, 14(1):41–63, 2002.

[99] Marco R. Steenbergen and Bradford S. Jones. Modeling multilevel data structures. *American Journal of Political Science*, 46(1):218–237, 2002.

[100] Jakob Svensson. Investment, property rights and political instability: Theory and evidence. *European Economic Review*, 42:1317–1341, 1998.

[101] Charles Tilly. *The Formation of National States in Western Europe*. Princeton University Press, Princeton, NJ, 1975.

[102] Shawn Treier and Simon Jackman. Democracy as a latent variable. *American Journal of Political Science*, 52(1):201–217, 2008.

[103] James R. Vreeland. Research note: A problem with polity — unpacking anocracy. Unpublished manuscript. Yale University. Available at: http://pantheon. yale. edu/jrv9/Vreeland anocracy. pdf, 2005.

[104] Barry R. Weingast. The political foundations of democracy and the rule of law. *American Political Science Review*, 91(2):245–263, 1997.

[105] World Bank Group. World bank enterprise surveys. Dataset and documentation available at: http://www.enterprisesurveys.org.

[106] World Bank Group. *Doing Business in 2004*. World Bank Press, Washington, DC, 2004.

[107] World Bank Group. Doing business. Dataset available at: http://www.doingbusiness.org, 2007.

[108] World Bank Group. World bank enterprise surveys implementation notes. Available at: http://www.enterprisesurveys.org, 2007.

[109] World Bank Group. *Doing Business in 2008*. World Bank Press, Washington, DC, 2008.

[110] World Bank Group Governance and Anti-Corruption (GAC) Group. Strengthening world bank group engagement on governance and anticorruption. Unpublished paper., 2007.

[111] World Bank Independent Evaluation Group. Doing business: An independent evaluation. Report published by the World Bank Press., 2008.

[112] Yi Feng. *Democracy, Governance, and Economic Performance: Theory and Evidence*. The MIT Press, Cambridge, MA, 2003.