Introduction

The 1990s witnessed a massive influx of foreign funds into the infrastructure sectors of the developing world. Foreign direct investment (FDI) in infrastructure and construction leapt from US$1.9 billion in 1989 to US$27 billion in 1997.[1] Although infrastructure had for decades been seen as a core state responsibility, this view shifted as a new policy paradigm, the Washington Consensus, became dominant. International institutions, academics, governments, and large swaths of the population came to view transnational corporations as more capable than governments of modernizing and extending infrastructure systems. Through their access to international finance and new technology, it was argued, multinationals (MNCs) would transform the aging systems whose services in many cases failed to reach large portions of the population and suffered from severe quality deficits. Infrastructure improvements, in turn, would help spearhead faster rates of economic growth and improvements in living standards.

Eager to expand outside of their home markets and reassured by a new set of international property rights protections designed to protect their investments, European and North American MNCs vied for contracts to invest in and manage infrastructure systems in the developing world (Wells and Ahmed 2007). Historically, investments in infrastructure and natural resources have been plagued by what Vernon classically defined as an "obsolescing bargain" (Vernon 1971: 46–53).[2] The term refers to the temptation and tendency of governments to expropriate foreign investors' assets once up front expenditures have been made, thereby depriving them of income they expected projects to generate over their lifetimes. Vernon's formulation was borne out during the

[1] Total of FDI in electricity, gas, water, construction, transport, storage, and communications. Figures from United Nationals Conference on Trade and Development (UNCTAD) (1999: 421; 2009: 220).

[2] In an earlier depiction of the same phenomenon, Kindleberger (1969: 149–151) focused on the tendency of governments to push foreign investors to renegotiate the terms of their original contracts.

1970s, which witnessed expropriation in sectors such as oil, mining, and utilities (Kobrin 1980, 1984). The demonstrated vulnerability of infrastructure assets made property rights protections – believed to be important prerequisites for economic growth in general – particularly important for private investment in infrastructure. During the 1990s, states attempted to assuage investor fears that history could repeat itself by entering bilateral investment treaties under which investors could lodge grievances and obtain compensation through international arbitration. By 2008, states had signed 2,676 bilateral investment treaties.[3] In entering these agreements, they tied their own hands, thereby providing substitutes for domestic institutions such as independent courts, which would normally safeguard property rights in other contexts.

Privatization contracts now exist throughout the developing world. Between 1990 and 2009, 133 low- and middle-income countries privatized state enterprises in the telecommunications sector, 107 in the energy sector, 82 in transportation, and 61 in water and sanitation (PPIAF-World Bank 2011). These contracts are typically long term – many spanning decades – so that initial project costs can be amortized over a long period. More than twenty years into this privatization wave, it is both possible and necessary to examine the results of this major policy experiment, especially because a new wave of enthusiasm for privatization is taking hold as states face tightening budgets and reduced growth prospects.[4]

"Credible commitments" approaches to the study of property rights and development, including applications to investment in regulated industries, offer a set of concrete predictions regarding the likely fate of contracts entered during the 1990s privatization wave. A first set of analyses suggests that where domestic political institutions do not provide checks and balances on one another, property rights protections will be weak (e.g., North and Weingast 1989; Levy and Spiller 1994, 1996; Montinola et al. 1995; Weingast 1995; Henisz 2002; Acemoglu et al. 2003; Beazer 2012). Regulatory agencies and judiciaries, for example, will not be in a position to resist pressures from heads of state to issue or sanction regulatory rulings that amount to unilateral changes in contractual terms. Anticipating expropriation, firms will be reluctant to invest. As a result, contracts are likely to yield few benefits for local populations, the firms providing infrastructure will become unpopular, and contracts will be vulnerable to cancellation by governments.

A second set of analyses suggests that countries without strong systems of checks and balances can improve their credibility with investors by turning to

[3] UNCTAD International Investment Agreements Database.

[4] On Russian, Indian, and Brazilian plans, see: "Macquarie Joins Recap in Russia." *Global Investor*. Oct. 1, 2008; "Russia: VEB Joins Macquarie in Infrastructure Fund." *Euromoney*. Sept. 1, 2009; "Infrastruggles: One of India's Most Important Industries Has a Knackered Balance Sheet." *The Economist*. Dec. 31, 2011; Brazil Launches $66bn Stimulus Plan." *Financial Times*. Aug. 16, 2012.

treaties that impose financial or reputational costs on governments if they renege on their commitments (Neumayer and Spess 2005; Elkins et al. 2006; Büthe and Milner 2008; Kerner 2009). Bilateral investment treaties, which typically allow investors to take states into international arbitration, are a prime example of this type of alternative commitment mechanism. This means that governments' hands are tied when interacting with MNCs, which enjoy supplemental protections unavailable to their domestic peers. Extending this line of reasoning, it could be argued that MNCs would be more likely to invest than domestic firms working in similar industries, and less likely to see their contracts cancelled prematurely. This implies that treaty protection would also increase MNCs' leverage with host governments during contract renegotiations, so that they would not follow the logic of the obsolescing bargain.

Patterns of investment and contract durability in the water and sanitation sector do not conform to these predictions. Levels of contract durability and investment vary dramatically among countries with weak checks and balances, and even within individual countries.[5] Moreover, contracts held by domestic firms are proving to be more viable politically and financially in the long run than those held by MNCs. Between 1990 and 2008, water and sanitation investment contracts held by MNCs in low- and middle-income countries were cancelled prematurely at almost four times the rate of contracts held by consortia led by domestic investors.[6] The stark difference in cancellation rates is striking given that MNCs often won what were perceived to be the most lucrative contracts because award processes tended to privilege capital requirements, expertise, and experience. Developing-country companies working in their home market, in contrast, maintained smoother relationships with host governments while achieving similar rates of service improvements as foreign firms did. The most comprehensive large-N study conducted to date on factors contributing to privatization success did not find evidence suggesting that foreign firms improved services more consistently than domestic investors did.[7] Moreover, the continuing eagerness of developing-country investors to enter contracts in their home markets in the 2000s suggests they have managed to make water projects

[5] On varied results within the developing world and Latin America, see Gassner et al. (2009: 4, 42) and Andrés et al. (2008: chapter 7). On across-country and within-country variation, see Harris (2003: 23) and Marin (2009).

[6] The rate of premature contract cancellation for concession contracts and divestitures with majority foreign ownership is 19%, whereas the cancellation rate for projects with majority domestic ownership is 5%. Host governments or firms can initiate contract cancellations. Cancellation data are from the Private Sector Participation in Infrastructure database for concession contracts and divestitures entered during the 1990–2008 period (PPIAF-World Bank: data downloaded in May 2008). This is a nearly comprehensive database of private infrastructure contracts in low- and middle-income countries. Criteria used to differentiate between projects controlled by foreign and domestic investors are discussed in detail in Chapter 7.

[7] Analyzing performance data for forty-nine firms in the Latin American water and sanitation sector, Andrés et al. (2008: 215–216) find that increases in network coverage have been, if anything, higher under domestic investors.

work in financial terms whereas MNCs have struggled to earn attractive returns in the medium run. For instance, following the Argentine economic crisis, twenty-seven out of twenty-nine consortia awarded new investment contracts in Latin America were led by domestic firms. Domestic firms bought stakes in existing projects as well.[8] In other words, domestic firms in the sector have been less vulnerable to the obsolescing bargain.

INFORMAL SUPPORTS FOR LONG-TERM CONTRACTS: DOMESTIC INVESTORS' HOME COURT ADVANTAGE

This book seeks to explain variation in contract durability and investment levels in weak institutional environments: settings in which rules may exist on paper but tend not to be followed in practice, or are unstable and frequently subject to change (Levitsky and Murillo 2005, 2009). I develop a general theoretical argument and offer an initial illustration of its explanatory power through an empirical study of long-term privatization contracts in the water and sanitation sector. Long-term contracts between the state and the private sector have been multiplying at an impressive rate as a result of the aforementioned privatization trend in developing countries. Between 1990 and 2008, for instance, low- and middle-income countries entered 4,302 contracts for private sector participation infrastructure (PPIAF-World Bank 2010). The number of long-term contracts between governments and private firms also grew through efforts to "contract out" social and health services.[9] To understand variation in the durability of such long-term contracts, we must shift our focus from institutional to noninstitutional, or informal, supports for property rights.

Long-term contracts with states in weak institutional environments face special challenges. The first is contractual incompleteness, or the failure to address any possible scenario. All contracts are incomplete, but long-term contracts in infrastructure sectors are likely to be less complete than short-term contracts or long-term contracts in many other sectors (Gómez-Ibáñez 2003; Laffont 2005: 3). Economic volatility, which tends to be especially prevalent in emerging markets and weak institutional environments (Gavin 1997; Wibbels 2006), makes long-term contracts even more vulnerable to incompleteness.[10] Moreover, contracts *with the state* in weak institutional environments are particularly difficult to maintain because there is little to prevent new officeholders from changing contractual terms.[11] Informal contractual supports, however,

[8] Data for concession contracts and divestitures calculated from the PPIAF-World Bank (2008).
[9] For a treatment of this trend, see Gough and Wood (2004).
[10] Spiller and Tommasi (2007: 27–28) make these points with respect to public policy more generally.
[11] As Hogan et al. (2010: 2, 19) argue, there are only imperfect ways to appeal to a third party when contracts are held with a state.

can help states and investors negotiate settlements in the wake of changing circumstances.

The central insight of this book is that firms' organizational structure affects their ability to maintain long-term contracts with the state in weak institutional environments. It can help or hinder their efforts to reach mutually acceptable agreements with states about changes in contractual terms following political or economic change. In making this argument, this study combines a political economy emphasis on how firm assets affect corporate preferences and political activity with an economic sociology emphasis on firm cultural and structural embeddedness. I bring these two theoretical traditions together to explain why domestic business groups – particularly those with a long-standing, diversified presence in their contract jurisdiction – are better able to negotiate politically and financially workable adaptations to infrastructure contracts as the preferences and bargaining power of both parties shift over time than are MNCs.[12] My argument not only provides microfoundations for the obsolescing bargain theory but also predicts the circumstances under which it is likely to apply most strongly.

Studies of business organization suggest that while MNCs tend to diversify across countries and specialize in particular sectors, investors based in the developing world tend to diversify across sectors while maintaining a strong presence in their home market through business group or conglomerate structures.[13] Because of their sector focus within particular countries, MNCs have strong incentives to make investment decisions and formulate policy proposals based on the fate of their operations in the sector that comprises their primary investment in a country. Domestic investors with a conglomerate or group structure, however, will view investments in a given regulated sector in the context of a broader, local portfolio because they have sunk costs in their home market. This leads them to exhibit greater patience and entertain a wider set of negotiating outcomes. Aggressive lobbying efforts, after all, may jeopardize their operations in other sectors, and firms may value the regulated asset for returns it can provide at other points in the economic cycle. Overall, a conglomerate structure encourages domestic investors to be more patient and bring more moderate demands to the negotiating table than their MNC counterparts would at any given point in time.

[12] In bringing two research traditions to bear on a substantive problem, this project represents an example of "analytic eclecticism" as described by Sil and Katzenstein (2010).

[13] This is a general characterization, of course. Granovetter (1994, 2005), Guillén (2001), Khanna and Yafeh (2007), and Schneider (2008, 2009) provide excellent reviews of the literature on business groups. The argument proposed in this book should be read as applying to diversified conglomerates and business groups from developing country markets rather than developing country firms that do not resemble the "ideal type." The MNC ideal type is particularly applicable to infrastructure sectors, where multinationals tend to develop strong sector specializations (Scott 2011: 74).

Cross-sector diversification also enables many developing-country business groups to draw on a different and less controversial set of negotiating strategies than those available to MNCs. For domestic investors, negotiations may be facilitated by the opportunity for informal agreements encompassing their operations in multiple sectors. MNCs, in contrast, tend to have access to a different and more formal set of bargaining tactics because of their cross-country organizational structure. In the many countries that have provided for recourse to international arbitration for investors through bilateral investment treaties, domestic investment law, or individual contracts, MNCs can force host governments to the bargaining table by threatening to take them into international arbitration. Recourse to such formal means of pressuring host governments, however, makes conflict more visible and smacks of bullying. Threats to sue, after all, recall long histories of exploitation by foreign firms and colonial powers. The greater and often negative publicity associated with such bargaining tactics can make it more difficult to reach stable settlements. Furthermore, the financial sanctions that could be imposed through international arbitration are far off and therefore unlikely to affect the host government's current officeholders. As a result, the formal negotiating strategies available to MNCs are likely to be less effective than the range of informal strategies available to domestic investors operating in their home market. This is particularly likely when governments come to possess healthy revenue streams, and are therefore less dependent on private capital to supply infrastructure. As a result, domestic investors' contractual relationships with host governments are likely to be more resilient than are those of MNCs.

While this general logic suggests a divergence in the trajectories of utilities and infrastructure contracts held by domestic investors and MNCs, it has a second and very important implication when contracts are granted and regulated by subnational, rather than national, governments. Subnational contracts are very common in infrastructure sectors such as transportation, urban water and sanitation, and electricity. When contracts are regulated at the subnational level, we expect firms with a strong local presence – that is, numerous and diverse operations in the state or municipality in question – to exhibit higher levels of patience, possess more opportunities for linking negotiations with the state in multiple sectors, and maintain more significant ties with the local establishment than domestic firms without diverse local holdings. While all domestic firms may exhibit high levels of cultural embeddedness and be less likely than international firms to initiate legal claims against the governments holding their contracts regardless of the structure of their asset portfolio, they will typically not have opportunities for issue linkage and strong local ties unless they possess a significant set of holdings in the project jurisdiction. Domestic firms without a diverse local presence will also have lower exit costs than firms with long-standing and diverse local operations and are therefore likely to be less patient in negotiations. As a result, domestic investors with significant and diverse local portfolios are more likely to negotiate effectively in the long run with host governments than are domestic investors with few local ties.

ADDITIONAL CONTRIBUTIONS

In addition to critiquing political economy's recent scholarly emphasis on institutional rather than informal supports for property rights, this book also contributes to two relatively new and increasingly important literatures in political economy. First, it provides conceptual innovations to the nascent literature on the politics of public policy in weak institutional environments. Second, it contributes to a new wave of research on the political economy of development that examines the growth and behavior of large firms based in the developing world, as well as the implications of their increasing prominence. In addition, it aims to reframe academic and policy debates on the merits of private sector participation in infrastructure.

Literature on the politics of regulation in developing countries is part of a relatively new and rapidly growing literature on the politics of public policy in weak institutional environments. Although there have been many studies of market reform (e.g., Domínguez 1997; Gibson 1997; Montero 1998; Kingstone 1999; Schamis 1999; Manzetti 1999, 2009; Thacker 2000; Etchemendy 2001; Stokes 2001; Teichman 2001; Corrales 2002; Murillo 2002, 2009; Armijo and Faucher 2002; Madrid 2003; Treisman 2003; Kogut and MacPherson 2004; Weyland 2002, 2005; Arce 2005; Henisz, Guillén, and Zelner 2005; Jordana and Levi-Faur 2005; Victor and Heller 2007; Armijo and Faucher 2008; Brooks 2009), there has been much less scholarship on post-privatization regulatory politics, particularly after the first years following privatizations, and more generally regarding the politics of FDI in infrastructure or utilities. Existing research on regulatory politics has been largely focused on the extent to which policy design and the configurations of institutions and other actors that provide checks and balances on one another together moderate regulatory policy making, thereby protecting firms from unexpected policy changes and producing incentives for investment (Levy and Spiller 1994, 1996; Heller and McCubbins 1996; Henisz and Zelner 2001; Henisz 2002; Shirley and Ménard 2002; Laffont 2005; Krause 2009). Other work examines how institutions providing checks and balances can restrain firm-government collusion (Manzetti 2009). These approaches, while helpful in understanding why there might be more arbitrary regulation in developing countries than in developed ones, offer less analytic leverage for understanding the wide range in investment outcomes in weak institutional environments. This study instead focuses on one of the main interest groups involved in the regulatory process – firms – and argues that variation in firm structure contributes to stark differences in regulatory outcomes. In stepping back from the recent emphasis on institutions to examine interest groups, I join scholars such as O'Rourke (2004), Rhodes (2006), Murillo (2009), and Frye (2010), who examine how citizen pressures, consumer group mobilization, political partisanship and competition, and political polarization affect regulatory politics and enforcement.

Although there has been an outpouring of research on FDI over the last decade, political economy scholars have only recently renewed their interest in developing country firms and their role as influential economic and political actors.[14] Scholars have recently sought to explain why business groups vary across countries (Granovetter 1994, 2005; Guillén 2001; Khanna and Yafeh 2007; Schneider 2009). Scholarship has also probed developing country business groups' motives for international expansion (Ramamurti and Singh 2009), how local institutional environments affect their proclivity to influence politicians through corrupt means (Yadav 2011), their ability to manage oil sector holdings efficaciously (Jones Luong and Weinthal 2010), and the extent to which states turn to them to attain developmental objectives (Wengle 2012). This attention is warranted: developing country firms now operate at a scale and in sectors where they did not forty years ago. This book contributes to the growing body of work through comparative analysis of the respective ability of MNCs and developing country investors to work effectively in the utilities and infrastructure sector.

Perhaps most importantly, this study also suggests we reframe the highly contentious scholarly and policy debates regarding the merits of private sector participation in infrastructure and utilities. A large literature examines the effects of private sector participation in infrastructure, including in the water and sanitation sector specifically.[15] Large- and medium-N studies (Harris 2003; Andrés et al. 2008; Roland 2008; Gassner et al. 2009; Marin 2009) have suggested that it has not had a uniform effect. Given the differing results observed even within individual countries, assessments of sources of *variation* in the performance of privatized utilities within a single sector – water and sanitation – can contribute greatly to the privatization debate. Existing studies have attributed variation to institutional environments, sector policies, contract structure, and firm-specific management decisions but have paid little attention to investor organizational structure.[16] If domestic conglomerates are more likely than MNCs to preside over contracts that remain economically and politically viable in the long run, domestic management should be evaluated as the main alternative to public provision, especially given the dislocations that can occur under failed privatizations.[17]

[14] The preceding wave of scholarship focused on the role of domestic business groups in "late industrialization" in East Asia (e.g., Amsden 1989; Doner 1992; Amsden and Tikino 1994).

[15] Budds and McGranahan (2003), Davis (2005), Lobina (2005), Prasad (2006), Krause (2009), Marin (2009), and Bakker (2010) review the literature on water and sanitation.

[16] Savedoff and Spiller (1999), Shirley (2002), and Krause (2009) examine the influence of the institutional environment as well as sector-specific institutions and regulation on water privatization outcomes. Nickson and Vargas (2002) examine the influence of contract structure and regulatory system features on outcomes. Wu and Malaluan (2008) examine how firm-specific management decisions impact the effects of privatization.

[17] Privatization reversals can have negative, lingering effects: payment rates and public support for systems can plummet and take years to improve again, hence starving systems of resources that could otherwise be used to maintain and improve system infrastructure. Also, major investments in system improvements tend to be deferred during such periods. A prime example of this is the case of Cochabamba, Bolivia: this infamous privatization, which sparked the "water wars," was designed to finance major investments in water supply in a parched region. When the privatization failed, control was returned to the former public provider, which has let system infrastructure fall further into disrepair (Schultz 2008: 35–39).

RESEARCH DESIGN

A Sector Focus on Urban Water and Sanitation

This study follows a venerable tradition of work in political economy that examines variation in single economic sectors (Evans 1995; Bates 1997; Karl 1997; Paige 1997; Snyder 2001). Taking a sector approach offers a number of important advantages. First, it allows us to control for many sources of variation and isolate the principal independent variable: investor organizational structure. Second, given the technical complexity of infrastructure sectors, focusing on a single sector helps ensure that cases are comparable with one another and that case studies devote sufficient attention to the relevant technical background information.

The analysis centers on the water and sanitation sector for several reasons. Investment in water and sanitation is crucial in humanitarian terms. Access to clean water and sanitation yields improved health outcomes, particularly reduced rates of child illness and mortality.[18] There are major coverage deficits in developing countries: according to UN estimates, 46 percent of the world's population currently lacks piped household water connections, and 48 percent lacks access to flush toilets, latrines, or composting toilets.[19] Improving household access to clean water can also contribute to important secondary outcomes, such as improvements in school attendance rates among girls and the ability of all children to learn in school.[20]

The water and sanitation sector also offers excellent variation on the main independent variable: investor organizational structure. The trend toward strong domestic investor participation – not just as a joint venture partner but also as the principal investor – was comparatively strong at the beginning of the privatization wave and grew stronger over time as foreign investors sold their stakes to domestic firms. For this reason, the water sector offers the chance to evaluate over a relatively long period the influence of a set of actors that is becoming increasingly relevant in other infrastructure sectors as foreign investors sell out to domestic firms.

[18] On the link between clean water access and health outcomes, see Merrick (1985); Behrman and Wolfe (1987); Esrey et al. (1991); Lavy et al. (1996); Lee et al. (1997); and Jalan and Ravallion (2003). On the link between improved sanitation facilities and health outcomes, see UNICEF-WHO (2008: 2). Scholars have found that individuals must be educated in personal hygiene and the nature of disease transmission in order for health improvements to be fully realized (Green 2003: 230–231).

[19] Figures from the UNICEF-WHO (2008: 6, 23). An additional 33% of the population obtains access to other "improved sources" of water such as standpipes, boreholes, and protected dug wells or springs.

[20] See "Water, Sanitation, and Hygiene in Schools" and "In Cameroon, Changing Attitudes and Safe Water Mean More Girls in School," www.unicef.org. (Downloaded May 2, 2011).

The water sector is also ideal for analysis because private sector participation has typically occurred at the subnational level. According to 2008 World Bank estimates, subnational governments have granted approximately 87 percent of the water contracts in low- and middle-income countries.[21] This allows for comparisons of a significant number of cases within as well as across countries. The opportunity to conduct within-country comparisons is particularly important because it permits us to control for country-specific influences on privatization outcomes, such as national institutions and privatization program design.

Furthermore, the sector represents a "critical case": business-state relations have been more politicized in water and sanitation than in other sectors because of the fundamental nature of the service *and* the fact that state firms did not charge large swaths of the population for decades, making the transition from operating under deficits to cost recovery particularly political. This being said, as Murillo (2009) and others have demonstrated, many infrastructure sectors attract the attention of politicians and the public. Given that infrastructure contracts are typically long term, tensions are simply likely to surface earlier in water and sanitation. As a result, experiences there can offer important insights regarding tendencies likely to emerge in the long run in other cases.

Within the water and sanitation sector, my analysis focuses on the most popular type of private sector participation. Politicians who sought private investment most often privatized via concession contracts: detailed management and investment contracts that by definition left infrastructure assets under state ownership. This model was generally preferred because large sums were not expected from asset sales and because it allowed governments to establish very specific contractual targets with respect to investment and expansion for particular firms.

Nested, Subnational Comparisons

Within the water and sanitation sector, this book employs a multilevel research strategy: a study of fourteen concession contracts in Argentina is nested within a broader analysis of patterns of premature contract cancellation in low- and middle-income countries.[22] Analysis of the fourteen Argentine contracts takes two forms: medium-N analysis of observed correlations between the main variables of interest and process tracing designed to reveal the ways firm-government negotiations unfolded over time. Focusing on the full sample of cases from a single country allowed me to assemble a broad range of indicators regarding utility performance from primary and

[21] Percentage calculated for all project types (PPIAF-World Bank 2008).
[22] The fourteen include the contract for the Buenos Aires Metropolitan Area, which was granted by the national government and regulated by an agency also including directors from the city and province. It does not include two small city-level contracts from the province of Buenos Aires.