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The Rise of the Regulatory State of the South

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The Regulatory State Under Stress: Economic Shocks and Regulatory Bargaining in the Argentine Electricity and Water Sectors

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Over the past decade, scholars have chronicled the rise of the 'regulatory state' or 'regulatory capitalism' in Europe and other parts of the industrialized world (Majone 1994, 1997; Moran 2002; Levi-Faur 2005). According to this literature, the government delegation of services typically provided by the state to private or non-profit actors, alongside the establishment of formally independent regulatory agencies, represents a shift to rule-based policymaking relatively sheltered from electoral pressures (Vogel 1996; Majone 1997; Scott 2000; Thatcher 2002a, 2002b). Recently, attention has turned to the rise of the 'regulatory state' in the developing world. This shift in focus is natural given that reforms adopted under the 'Washington Consensus' involved not only large-scale privatization efforts, but also the establishment of myriad new regulatory agencies following the experience of industrialized countries. Indeed, Jordana and Levi-Faur (2005) and Henisz et al. (2005) have documented the rapid diffusion of utilities privatization and the establishment of regulatory agencies throughout the developing world.

Regulatory agencies may in fact operate at a distance from everyday politics in Europe, as the 'regulatory state' literature suggests. We concur with other contributors to this volume, however, in stressing that regulatory processes are inherently political in the developing world. A number of factors ensure that regulation is intrinsically political in low- and middle-income countries. First, countries formed regulatory agencies at the strong encouragement of financial institutions and donor agencies; as new institutions, they have had little time to develop roots and reputations of legitimacy. Second, states undergoing privatization processes often incorporated significant public interest goals into privatization contracts. Given the fact that contracts are inevitably incomplete, government officials remain involved in not only enforcing original contractual conditions, but also reformulating them when unexpected situations arise. Third, as Levy and Spiller (1994, 1996) stressed, much of the developing world lacks strong systems of checks and balances that constrain politicians from intervening in functions formally delegated to regulatory agencies. Finally, developing countries experience high rates of economic volatility

(Ardanz 2010; Gavin 1997; Wibbels 2006a), which aggravates problems of contractual incompleteness, especially given the long-term nature of infrastructure contracts (Guasch 2004; Post 2008; Zeller et al. 2009). Economic crises in particular place regulatory arrangements under enormous stress. They often make existing contracts either financially or politically unworkable, and bring urgent redistributive questions to the fore, such as who will bear the costs of adjustment.

This chapter examines a cogent example of the political character of regulation in the developing world: processes of contract renegotiation between Argentina's provincial governments and private investors holding concession contracts in the country's electricity distribution and water sectors following the country's 2001–02 crisis. The crisis eroded consumers' ability and willingness to pay for basic services. At the same time, the national government's decision to devalue the currency and subsequently freeze utility rates created economic difficulties for providers. Contract renegotiations dealt with the thorny question of who should shoulder the burden of the crisis: consumers, firms, or some combination of the two? Because the provincial governments—rather than regulatory agencies—originally granted the privatization contracts and politicians felt the need to be seen taking concrete actions to address fallout from the crisis, these negotiations took place directly between provincial governments and investors. Government ministers completely sidelined regulatory agencies. As some contract renegotiation processes continue to drag on a full ten years after the crisis, *regulation via negotiation* between ministers and firms became the everyday form of regulation.

We examine two aspects of post-crisis contract renegotiations in the Argentine electricity and water sectors. First, we examine the circumstances under which firms and host governments are able to conclude contract renegotiations, thereby reaching an agreement about how consumer rates, firm investment plans, and other contractual provisions would be adjusted to post-crisis realities. We then examine factors associated with investor exit from their concession contracts. Contract renegotiation and investor exit decisions were, of course, linked. Concluding contract renegotiations generally improved firms' financial situations, giving them greater certainty and policy concessions, and thus provided them with incentives to remain in the market.

Focusing on contract renegotiation processes and investor exit decisions in two sectors in a single country, Argentina, offers important analytic opportunities. A number of factors are held relatively constant in the Argentine case. First, one can hold national-level political institutions and other cultural factors constant. In addition, while national privatization programmes often differed dramatically from one another in terms of degrees of control retained by the state and the types of contractual models adopted, privatizations in the electricity distribution and water sectors in Argentina exhibited a number of common features, including similar contractual and regulatory institution design.¹ Finally, the fact

¹ See Murillo (2009) for a study of the diverging features of national privatization programmes. See Azpiazu et al. (2008) for a review of regulatory agency and contractual features for provincial privatizations in both sectors in Argentina.

that Argentina privatized relatively early allows for the comparison of a large number of cases within a single context over an extended time frame. Taken together, these various factors suggest that a study of post-crisis contract trajectories in Argentina promises to provide important insights into the regulatory state in the developing world, particularly given the prevalence of economic crises in emerging markets and the long-term nature of infrastructure and utilities contracts.

Our aggregate analysis of the 30 contracts in place after the crisis in these two sectors suggests that rates of contract renegotiation and market exit vary considerably with investor characteristics. Moreover, dynamics vary by sector. Investors that possess diverse holdings in their contract jurisdiction conclude contract renegotiations at a higher rate. Investors whose reputations would suffer were they to exit their Argentine contracts, however, often chose to stay on in Argentina even in the absence of revised contractual agreements. This tendency was particularly strong in the electricity sector. The higher level of patience we observe among electricity investors can at least in part be explained by higher revenues and lower investment obligations in the electricity sector.

This chapter will proceed as follows. The next section describes regulation in the Argentine water and electricity sectors prior to the economic crisis. It establishes that even prior to the crisis, utilities regulation was hardly an apolitical affair. The third section outlines the main effects of the Argentine crisis upon regulated sectors and the issues at stake during the post-crisis renegotiation processes. A fourth section examines variation in the ability of investors possessing different characteristics to conclude contract renegotiations and in their decisions regarding market exit in the water and sanitation and electricity distribution sectors. A final section highlights the main theoretical contributions of the chapter.

I. Utilities regulation in Argentina prior to the crisis

Argentina was one of the first developing countries to privatize extensively in its utilities sector.² As it did so during the 1990s, it adopted a particularly 'interventionist' approach to regulation that charged regulatory agencies with not only pursuing efficiency objectives, but also ensuring investors complied with important investment obligations designed to ensure that the reach and quality of services improved. In the years following privatization, this section will show, regulation was certainly not an apolitical affair. Regulators, responding to political pressures, catered to consumer interests during competitive political periods and when serious service problems drew attention to the sectors. On numerous occasions, government ministers also sidelined regulatory agencies during contract renegotiations regarding burden sharing between low- and middle-income consumers.

President Carlos Menem launched Argentina's utility privatizations as part of a far-reaching economic reform programme following the country's 1989

² See PPIAF-World Bank (<<http://ppi.worldbank.org>>) for a nearly comprehensive data set of infrastructure privatizations in low- and middle-income countries since 1990.

macroeconomic crisis. The president and his ministers aimed to reduce state subsidies for utilities and infrastructure, as well as encourage foreign investment in system upgrades and expansion, in sectors such as telecommunications, transportation, power, and water and sanitation. During the early 1990s, most provincial governments possessed administrative responsibility for electricity distribution and urban water and sanitation systems within their borders.³ Alongside its national-level reform effort, the Menem administration also pushed the country's provincial governments to privatize the electricity and water systems under their control. Menem's economy minister viewed these privatizations as a means of reducing provincial deficits, which contributed directly to the country's macroeconomic difficulties. The Menem administration launched a set of negotiations with the provinces to revise revenue-sharing arrangements that culminated in two new fiscal pacts, reached in 1992 and 1993. Menem required provinces signing the Fiscal Pact of 1993 to privatize many public services administered at the provincial level, including provincial banks, electricity distribution systems, and water and sanitation services.⁴

Of Argentina's 24 provinces, 14 privatized their electricity distribution systems and 13 privatized their urban water and sanitation systems between 1990 and 2000. The privatization format chosen by the provinces provided for important forms of government intervention following privatization, consistent with the country's approach to privatization at the national level as observed by Murillo (2002, 2009). Provinces followed a common policy template promulgated by the international financial institutions and national government technocrats: the *concession contract* model, which kept infrastructure assets in state hands while assigning investment and operational responsibilities to private-sector operators.⁵ In all cases, privatization contracts for both electricity distribution and water and sanitation systems were designed as geographical monopolies because of the important economies of scale associated with network development. Just like the national government, the provinces set up formally independent regulatory agencies to monitor concessionaires' compliance with their contractual goals.⁶ Regulatory agencies, in other words, were charged with ensuring that important state social objectives—such as extending water and sewerage services to poor portions of the population and avoiding electricity blackouts—were achieved in practice. Regulatory agencies were also charged with ensuring that companies be allowed to introduce measures outlined in their contracts designed to help utilities recoup

³ A few provinces had previously decentralized responsibility for one or both services to the municipal level.

⁴ See article 9 of the Pacto Federal para el Empleo, la Producción y el Crecimiento, signed 12 August 1993. Eaton (2004, pp. 147–50) and Wibbels (2004, 2006b) describe these negotiations.

⁵ In both the water and electricity sectors, consultants adapted standard contract templates promulgated by the national government to local socio-economic conditions. Contracts bear striking similarities, including common formats, obligations for firms and governments, sanctioning regimes, and so on.

⁶ Of the 32 concession contracts granted by the national or provincial governments in the two sectors, only two were regulated by agencies that were formally dependent upon the provincial administration: the electricity concessions in San Luis and San Juan.

their costs, such as updates to consumer databases and service cut-offs designed to improve payment rates.

Given the political sensitivity of issues like service access and blackouts, regulation was destined to be a political process even in the absence of major economic turbulence. A variety of actors, including ombudsmen, government ministers, citizens' organizations, and state senators and congressmen, attempted to influence, or override, regulatory agency decisions. Regulatory agency directors, conscious of the concerns of the politicians that appointed them, often delayed rate increases justified according to contractual formulae until after elections.⁷ Sector-specific crises, such as electricity blackouts and algae blooms affecting water quality, also spurred elected officials to champion consumer concerns.⁸ Their efforts to champion consumer interests were often spurred by civil society non-payment campaigns and public protests among network insiders receiving services. This made regulation a very visible affair, and ultimately ensured that regulators would need to consider the political viability of any decisions they might make.

While these sorts of political debates about regulatory policy revolved around the costs that should be borne by companies and existing consumers, another type of distributive politics occurred in the water sector. On several prominent occasions, clear conflicts arose between the advocates of network insider and network outsiders. For example, contract renegotiations between the concessionaires in Metropolitan Buenos Aires and the province of Santa Fe and the responsible ministers in each jurisdiction focused on who should shoulder the burden of connection fees for new users.⁹ While the original contracts had stipulated that the new users on the urban fringe should finance the cost of their connections to the system, concessionaires found it very difficult to collect charges for this comparatively less affluent set of consumers. They proposed having existing users, which were generally more affluent, cross-subsidize the cost of new connections through a per-user fee. Consumer associations based in more affluent sections of each metropolitan area mobilized against the measure, but the firms and government ministers decided to move forward with the contractual changes. Regulatory agencies, importantly, were sidelined during these politically sensitive negotiations.

⁷ Murillo (2009) provides a theoretical framework for thinking about the effects of electoral competition: regulators will face incentives to redistribute from firms to consumers during periods of electoral competition. Post (2008) makes an analogous argument and documents the many instances in which this occurred in Argentina's provincial water and sanitation concessions prior to the 2001 crisis.

⁸ Murillo (2009) makes the theoretical point that regulatory policy will tend to favour consumers when utilities are salient in the minds of voters. Sector-specific crises such as those mentioned above constitute obvious instances during which such salience would increase. Murillo (2009) describes concrete instances of blackouts affecting sector policy in Argentina, and Post (2008) analyses the cases of Azuara and Tucumán, in which algae blooms created episodes of 'brown water', which made it impossible for elected officials to defend concessionaires. Both concessions were subsequently revoked. Morgan (2011) also analyses the Tucumán case.

⁹ See Post (2008) for detailed documentation of these negotiation processes.

II. The Argentine crisis as prompt for contract renegotiation

Concession contracts in the electricity distribution and water sectors experienced a common shock with the onset of the Argentine crisis in 2001 and 2002. Privatized companies, regulatory institutions, and associated policies (such as contract conditions and prices) became a focal point for citizens and politicians questioning the neo-liberal reforms of the 1990s as gross domestic product (GDP) dropped by 12% in 2002, the middle class saw their savings accounts frozen, unemployment jumped to 25%, poverty levels reached 50% of the population, and inflation skyrocketed. Interim President Eduardo Duhalde moved quickly to freeze consumer utility rates within the context of the January 2002 Law 25,561, which ended the currency peg to the dollar, nullified contractual provisions allowing utility companies to charge customers in dollars (article 8), and granted the federal government temporary price regulation powers (article 13). The same law stipulated that concession contracts with private providers would need to be renegotiated. Provincial governments quickly issued laws and decrees confirming their adherence to the national law.¹⁰

Duhalde's decision to suspend existing privatization contracts and call for contract renegotiations ushered in a new period characterized by a very different style of state regulation. Prior to the crisis, as the previous section stressed, regulatory agencies played an important—though admittedly circumscribed—role. Concessionaire requests for rate increases would be made to regulatory agencies, which would decide whether or not input cost increases justified price hikes for consumers based on specific formulae included in contract appendices. Agencies would monitor firms' compliance with the service quality and coverage targets included in the concession contracts as well, and determine which category of fine should be applied if firms failed to meet them. Because the regulator's role was defined in terms of monitoring contractual compliance, it became marginal when contracts themselves were suspended. Provincial government ministers, as representatives of the '*concedente*', or contract grantor, began to negotiate directly with the concessionaires regarding not only contractual amendments that would help adjust concessions to new, post-crisis political and economic realities, but also regarding consumer rates and investment targets for the interim. As contract renegotiation processes dragged on, *regulation via direct negotiation* became the new modus operandi. Regulation during this period, in other words, could not be viewed as anything other than political.

Key distributive issues were at stake in these negotiations. The devaluation and subsequent tariff freeze reduced concessionaire income by approximately two-thirds, when measured in foreign currency. Meanwhile, the costs of imported inputs increased dramatically. High rates of domestic inflation raised the costs of domestic inputs. Should existing consumers shoulder some or even all of the costs

¹⁰ Note that three electricity concessions and one water and sanitation concession were regulated by the national government or a regulatory agency partially controlled by the national government. See Appendix I.

of these changes to concessionaires' income and costs? Or should investors shoulder some or all of the burdens through not only decreased profits, but also outright losses? Should network outsiders—those who did not yet receive or pay for service, but who were slated to receive services under concessionaire investment programmes—instead pay for some of the costs through forfeiting new connections so that rate increases would be less urgent?¹¹

Provincial governments, as a general rule, possessed the upper hand in contract renegotiations with concessionaires. Government negotiating power increased following the crisis for two main reasons. First, public opinion swung against private-sector service providers following the crisis, constraining the sorts of policy concessions governments could make to private firms when facing electoral competition. Even though the national government moved quickly to freeze utility rates and inflation eroded their real value starting in 2002, surveys show that perceptions about the unfairness of tariffs increased over time. The percentage of the population perceiving consumer rates as too expensive rose from 57% in September 2003 to 75% in November 2005—despite a decline in their real value (Murillo 2009, p. 204). In response to this swing in public opinion, the political discourse shifted from attracting investment to blaming utilities for the crisis: in February 2002, 81% of the population opposed providers' demands to 'adapt' public service prices to the new cost structure created by the devaluation. A similar percentage perceived that private providers had previously abused weak state regulation prior to the crisis. Indeed, 97% of the public supported contract renegotiation (Murillo 2009, p. 203). Second, the Argentine federal government's budgetary situation improved dramatically following the crisis, particularly once the country benefited from taxes on swelling commodity exports. This allowed the government to fund infrastructure on its own rather than rely upon private-sector investors for financing (Post 2008).¹²

While investors did not possess the upper hand during contract renegotiations, they nevertheless viewed the successful conclusion of accords as an improvement upon the status quo. After failing to convince governments to allow them to continue charging tariffs in dollars, private service providers sought other changes to their contracts that would help them to cope with post-crisis realities. The cost of imported inputs had increased between three- and fourfold as a result of the 2002 currency devaluation, which had decreased the value of the peso by more than 70%. For foreign investors, the value of repatriated profits fell dramatically as well following the devaluation. In addition, inflation triggered rises in the costs of key inputs such as labour, while customers experienced an income shock that reduced their ability to pay for services. A third of residential electricity consumers stopped paying their bills in 2002. Finally, concluding a contract renegotiation—including obtaining legal sanction for the new contract with the provincial legislature—

¹¹ This latter consideration was more prominent in the water and sanitation sector, given higher coverage deficits.

¹² Argentina's federal government devoted significant resources to funding infrastructure projects in the provinces in the decade after the crisis.

promised to provide concessionaires with a more stable set of rules and regulations regarding their investment and service quality obligations.

While some concessionaires in the electricity and water sectors concluded contract renegotiations successfully, other negotiation processes failed outright or continue on to this day. Table 6.1 presents the strong association between the successful conclusion of renegotiations and rates of investor exit following the crisis for the full set of provincial and national concession contracts in the electricity distribution and water and sanitation sectors. As Table 6.1 shows, investors chose to stay in the market following the successful conclusion of a renegotiation at higher rates. While 72% of the investors exited their projects after failing to secure a full accord, only 30% of the investors achieving accords left the market.

Stepping back, one can draw a few conclusions about the character of regulation during the post-crisis period in these two sectors. The Argentine crisis prompted a major shift in the predominant mode of regulation. Whereas regulatory agencies had played an important, albeit circumscribed, role prior to the crisis, they ceased to be central actors following the crisis. Negotiations regarding revised contracts as well as ongoing terms of operation occurred directly between government ministers and investors. The basic rules of the game and contentious redistributive issues were at stake, after all. Our data on the rate at which negotiations were concluded successfully and investors' exit decisions suggests that the ability to reach accords with provincial governments was crucial. Investors that failed to achieve accords exited the Argentine market at far higher rates.

III. Explaining differential rates of contract renegotiation and investor exit

As Table 6.1 demonstrates, while some investors concluded contract renegotiations and retained their contracts between the Argentine crisis and 2009, others failed to secure agreements and/or exited the market through state takeover or sales of equity

Table 6.1 Conclusion of contract renegotiations and rates of investor exit in post-crisis Argentina, 2003–9 (electricity distribution and water & sanitation sector)

	Investor exits
Full formal or informal accord	30% (3/10)
No full formal or informal accord	72% (23/32)

Notes: A one-way analysis of variance was conducted to examine the association between concluding a full accord on investor exit. There was a significant relationship at the $p < 0.01$ level for the two conditions [$F(1, 47) = 7.33$, $p = 0.01$]. This suggests that failing to reach a full accord serves as a statistically significant predictor of investor exit. Observations were weighted by 0.5 when ownership was split 50/50 between two investors. (This reduces the total number of investors in this table from 49 to 42.) See the Appendix for the coding criteria used to identify instances of investor exit and the achievement of full accords. Note that these results are suggestive only, as cases are not independent of one another and other factors may contribute to investor exit decisions.

stakes to new owners. How do we explain these varied post-crisis trajectories? This section analyses aggregate data for the full set of 30 provincial and national contracts in the electricity distribution and water and sanitation sectors still in place by 2003. In doing so, it highlights the investor characteristics associated with higher rates of contract renegotiation and lower rates of investor exit.

The strong observed association between the successful conclusion of contract renegotiations and low rates of investor exit prompts one to ask what factors contribute to high rates of contract renegotiation. Based on field research focusing on specific cases, we hypothesized that certain types of investors may negotiate more effectively than others. In particular, we suggest that investors that possessed diverse operations in the jurisdiction of their contract would be more patient and have access to a wider set of negotiating strategies—including the possibility of linking negotiations in regulated sectors to their other activities—than investors without significant local holdings. While not all domestic investors possess diverse local operations in the Argentine cases we study, they do so with greater frequency than multinationals, particularly those based in the developed world. Second, investors from developed countries, and particularly domestic investors, should be better positioned to enter informal negotiations than multinationals from the developed world. Third, firms that are privately owned—and as a result, exempt from the sorts of reporting requirements and pressures for short-term returns placed upon publicly traded firms—should enjoy greater flexibility in negotiations. Private ownership is also a feature more commonly observed among developing-country investors in infrastructure sectors, although private investment funds based in OECD countries are increasingly entering infrastructure sectors. In this section we provide aggregate data showing the extent to which these characteristics are associated with higher rates of contract renegotiation. In the following section, we use case studies in both sectors to illustrate how these factors work.

To provide an initial assessment of our argument, we compiled information regarding the ownership history of each of the 30 concession contracts and obtained basic information regarding the 49 sets of lead investors participating in these contracts (that is, the largest shareholder in each concession).¹³ Drawing on this original data set, we compared the respective ability of investors that did and did not possess each characteristic to successfully conclude a full contract renegotiation. As shown in Table 6.2, investors possessing these characteristics secured contract renegotiations at a higher rate than those without. In particular, investors possessing diverse holdings in their contract jurisdiction successfully concluded contract renegotiations at the highest rate—though even they were not able to do so in half of the cases.

As Table 6.1 showed, however, not all investors that failed to conclude full contract renegotiations exited the market: nine lead investors (28%) chose to stay despite failing to secure a full agreement. How can one explain these investors'

¹³ Documentation of our coding decisions for our dependent variables, contract renegotiation, and investor exit, and the investor characteristics we consider important explanatory factors is included in the chapter Appendix.

Table 6.2 Lead investor characteristics and conclusion of contract renegotiations 2003–9 (electricity and water)

Investor origin	Developing country (LDC)	48%
	Developed country	8%
	Diversified	61%*
Investor diversified in contract jurisdiction?	Not diversified	14%
Listed on Stock Exchange?	Privately owned	44%
	Publicly traded	12%

Notes: In all cases, difference in means tests suggest that the cited investor characteristics are associated with higher rates of concluding full accords, which are statistically significantly different from the rates achieved by investors without such characteristics. Note that these results are suggestive only, as cases are not independent of one another and other factors may contribute to the ability to reach accords. *This percentage is buoyed by the electricity concessions in the Buenos Aires Metropolitan Area.

choice to remain in the market under such circumstances? We first split our sample by sector to see whether these cases of persistence in the absence of an agreement fell within the electricity or water and sanitation sector, hypothesizing that improvements in the Argentine economy following the crisis would lead to greater revenue increases in electricity distribution where the elasticity of demand is higher than in the water and sanitation sector (where demand is less elastic), thereby making electricity distribution concessions comparatively more profitable.¹⁴ Higher levels of profitability during the post-crisis period would, in turn, make investors in the electricity sector more patient during negotiations with host governments, *ceteris paribus*. According to this line of reasoning, if one were to disaggregate Table 6.1 by sector, one would expect the majority of cases of investor persistence in the absence of successful contract renegotiation to occur within the electricity distribution sector. Table 6.3 compares the rates of contract renegotiation and investor exit by sector and shows that the majority of the cases of persistence in the absence of an agreement indeed fall within the electricity distribution sector.

Among electricity investors, what are the conditions that make them more likely to stay even when no agreement has been reached? Interviews conducted for case studies in the electricity sector suggested that firms anticipating that exit from their contracts would negatively affect their market reputations would be inclined to exhibit greater patience in negotiations with host governments before pulling out.

¹⁴ The post-crisis economic recovery fuelled industrial demand for electricity. Increasing revenues from industrial users cross-subsidized services for residential customers, whose rates had been frozen following the devaluation. The national and provincial governments allowed concessionaires to raise rates charged to large users in more cases than rates for residential consumers. Also, exchange rate appreciation since 2007 should have improved their relative position.

Table 6.3 Contract renegotiation and rates of exit 2003–9 by sector

Sector	Contract renegotiated?	Investor exits
Water and sanitation	Full formal or informal accord	25% (1/4)
	No full formal or informal accord	89% (8.5/9.5)
Electricity distribution	Full formal or informal accord	33% (2/6)
	No full formal or informal accord	64% (14.5/22.5)

For the water sector, a one-way analysis of variance was conducted to examine the association between concluding a full accord and investor. There was a significant effect at the $p < 0.01$ level for the two conditions [$F(1, 15) = 10.67$, $p = 0.005$]. For the electricity sector, the same analysis yields a significant association at the $p < 0.05$ level for the two conditions [$F(1, 30) = 5.79$, $p = 0.02$]. In other words, failing to reach a full accord serves as a statistically significant predictor of investor exit for both sectors. Observations were weighted by 0.5 when ownership was split 50/50 between two investors. See the Appendix for the coding criteria used to identify instances of investor exit and the achievement of full accords. Note that these results are suggestive only, as cases are not independent of one another and other factors may contribute to investor exit decisions.

Firms with a significant number of operations in Argentina, for whom these Argentine holdings represented a large share of their total assets, firms which possess other holdings in the same sectors (thus under the jurisdiction of the same regulators), and which possessed a strong brand name in the sector would be particularly concerned about the reputational costs of exit.¹⁵ According to this line of argument, we would be likely to observe lower rates of exit before 2009 among such investors. Indeed, neither of the two electricity companies with high reputational exit costs that achieved a full accord exited the market; yet rates of exit were also very low among those with high reputation exit costs that *did not* achieve accords: only one out of eight investors, or 13%, chose to pull out of their projects. By contrast, among those with low reputational exit costs, the rate of exit without agreement was 88%—that is, all but two of the 12 investors of this type exited the market.¹⁶

These differential rates of investor exit between sectors in the absence of a contract renegotiation had major implications for the continuing viability of private-sector service provision. Table 6.4 compares the extent to which concession contracts in place following the Argentine crisis survived until 2009. It highlights the stark difference between electricity distribution and water and sanitation. Investors pushed very hard to conclude contract renegotiations in the water and sanitation sector because of their concessions' very poor financial situation in the years immediately following the crisis. Many investors who were unable to secure a renegotiation agreement ushering in major tariff increases by the middle of the

¹⁵ The reputational costs of exit are analytically distinct from investor diversification in the *contract jurisdiction*, which refers to an investor's holdings in the province or other governmental unit holding the concession contract.

¹⁶ These investor totals are unweighted. In the preceding analyses, investors that hold only 50% of the shares in a concession through a joint venture with another investor that controls the other 50% are weighted by 0.5.

Table 6.4 Contract survival by sector

Sector	Number of national and provincial contracts in 2001	Number of contracts in 2009
Electricity distribution	18	16
Water and sanitation	13	4

decade, however, decided to pull out. Governments searched for alternative investors to purchase their shares, but were in most cases unsuccessful.¹⁷ This left them with no other choice than to take over services. In other cases, renegotiation agreements shifted investment obligations to the provincial governments, which increased the political vulnerability of privatized service provision.¹⁸ The end result was the same: a return to state provision. In contrast, investors choosing to exit the electricity sector were usually able to find buyers. As stressed before, investors with high reputational exit costs were willing to stay on longer in the absence of a renegotiation agreement. The end result is that regulated, private provision has endured in the electricity sector in the medium run, whereas private water and sanitation provision persists in only a small set of provinces.

In summary, our analysis of 49 lead investors in 30 concession contracts in the Argentine electricity and water and sanitation sectors suggests that different types of investors are better placed than others to navigate the contentious regulatory politics animating utilities sectors following major economic shocks. Investors with diverse holdings in their contract jurisdiction, that originate in developing countries, and that are not listed on stock exchanges conclude contract renegotiations more often than their peers. Investors that successfully conclude renegotiations are more likely to stay in their contracts than those that fail to secure agreements. This being said, investors in the water and sanitation sector were more likely to pull out, either of their own accord or at the insistence of host governments, when negotiations broke down than investors in the electricity distribution sector. Electricity investors that faced important reputational costs in the event of exit comprised a large portion of those investors remaining in the absence of an agreement.

IV. Discussion and conclusion

This chapter has analysed the cases of privatized electricity and water distribution in Argentina following the country's 2001–2 economic crisis. Regulation in the

¹⁷ It was impossible to find a replacement investor willing to accept the government's terms for the Buenos Aires Metropolitan Area, Santa Fe, Mendoza, and Catamarca concessions. Post (2008) provides extensive documentation of these cases.

¹⁸ This was the case in Salta and La Rioja province.

aftermath of crises, this study suggests, is an inherently political process. Rather than leaving regulation to formally independent regulators, government ministers negotiated directly with investors regarding ongoing terms of operation and eventual revisions to their concession contracts. These negotiations dealt with distributive issues of major importance and salience, the most important of which was who would bear the costs of the country's economic crisis. Moreover, if successful, negotiations could lay the groundwork for the continuing viability of regulated, private-sector provision. If parties were unable to reach a post-crisis accord, this accelerated a transfer back to state provision, especially in the water and sanitation sector.

What types of firms were able to negotiate effectively with the state in this eminently political regulatory environment? Which were able to secure contractual revisions that made them willing to continue in the market? Our analysis of the 30 national- and provincial-level concession contracts in Argentina, which draws on an original data set, suggests that investors with diverse holdings in their contract jurisdiction are better able to conclude contract renegotiations that helped them cope with the effects of the crisis. These renegotiation agreements have generally provided for consumer rate increases that help to partially compensate for the effects of the devaluation and subsequent, high rates of inflation. In the water sector especially, renegotiation agreements have typically adjusted contractual investment commitments to reflect concessionaires' lower revenues in the post-crisis period. In many cases, the state has taken over funding a portion of the investment programme.

Investor decisions regarding whether or not to stay in the market were associated with an additional investor characteristic: the reputational costs that investors would incur through exit. Investors that possessed a significant presence in the country and sector in question, had strong brand names in the sector, or for whom Argentine holdings constituted a large fraction of their assets were less likely to exit. Importantly, they were also more likely to stay on in the Argentine market even in the absence of concluding a renegotiation agreement. This association was particularly strong in the electricity distribution sector. Our intuition, which draws on informal interviews with investors working in both sectors, is that electricity distributors' greater patience stems from the higher revenues they earned during the country's economic upturn in years following the crisis, and investors' lower investment requirements. Water and sanitation concessions, in contrast, benefited less from increasing consumption in the post-crisis period because of a lower-income elasticity of demand and the fact that firms' original, pre-crisis contracts required more substantial investments. Because exiting water investors were less able to find buyers willing to purchase shares in their concessions, provincial governments found themselves needing to take over infrastructure management more often. Private-sector provision in the post-crisis period has remained more viable in electricity distribution as a result, at least during the first decade following the crisis.

Our findings contribute to the broader literature on regulation in the developing world, which has traditionally relied on two approaches to analysing the variation in

regulatory politics and outcomes. The first body of work, written primarily by regulatory economists, examines the effects of agency and policy design upon regulatory outcomes such as the pro-company or pro-consumer bias of policies (Laffont and Tirole 1993) and the probability of contract renegotiation (Estache et al. 2003), and investment and quality levels (Andrés et al. 2008). A second literature, drawing on the insights of positive political economy, suggests that it is important not only to look at regulatory design but also to examine enforcement. Governments will interfere less with regulatory agency enforcement of specific rules included in contracts and regulatory laws, this literature suggests, when strong 'veto players' place constraints upon the discretion of the political executive (Levy and Spiller 1994, 1996).¹⁹ A body of relatively recent work (Shirley and Ménard 2002; Krause 2009) combines these two perspectives. Importantly, these perspectives focus on the enforcement of regulatory rules as originally defined in contracts or enabling laws.

By contrast, we focus on weak institutional environments, or environments in which rules change frequently or are often not enforced (Levitsky and Murillo 2009), to analyse the conditions that shape the interaction between governments and private providers after they face a shock to the original contractual conditions. The Latin American experience suggests that weak institutional contexts tend to heighten political and economic volatility. As Latin American party systems are less institutionalized and electoral volatility is high (Mainwaring and Scully 1995; Roberts and Wibbels 1999; Kirschelt et al. 2010), the preferences of host governments are likely to change more frequently than might be the case in the industrialized world; moreover, new governments face less resistance to efforts to change regulatory policy than they might in more institutionalized political systems with more entrenched veto players. Additionally, economic volatility gives both governments and investors reason to desire major changes in regulatory policies and incentives for contract renegotiation. Macroeconomic crises provide a particularly powerful prompt to contract renegotiation, as providers face unstable input prices and demand for their services, while consumers face eroding real incomes. In the context of such volatility, it is very difficult for new regulatory agencies, which constitute institutional transplants, to take root (Weyland 2002; Henisz and Zelnier 2005). Overall, then, in the context of high levels of political and economic volatility, politicians and investors often face strong incentives to renegotiate privatization contracts and amend the legislation providing a legal foundation for regulator activity (Post 2008). In weak institutional environments, there will be few barriers to such negotiations. Empirical studies of the prevalence of contract renegotiation in Latin America document the importance of these tendencies (Guasch 2004; Basañes and Willig 2002).

Our paper contributes to this emerging literature by providing a cross-sector analysis of the conditions that shape interactions between host governments and

¹⁹ Levy and Spiller (1994, 1996) also argue that certain types of institutional environments will provide better 'matches' with particular regulatory framework designs. For example, contract-based regulation is more likely to work effectively in countries with independent and respected judiciaries.

private service providers after major macroeconomic shocks. In so doing, we emphasize the redistributive content of those interactions as discussed in the introductory chapter by Dubash and Morgan. While Murillo (2009) examined politicians' incentives to back regulatory decisions benefiting different sets of firms and consumers, we build here on earlier contributions by Post (2008) emphasizing how investor characteristics affect regulatory outcomes. In emphasizing the importance of investors' characteristics, we depart from the literature on varieties of capitalism (Hall and Soskice 2001) by moving beyond investor origin to consider investor organizational structure. We focus on corporations' approaches to risk diversification—across sectors, countries, or jurisdictions—and how these shape firms' subsequent access to bargaining strategies and their incentives to exit particular projects. In contrast to the varieties of capitalism literature, we emphasize how these factors can vary between firms from the same countries and the incentives they generate for firms in their negotiations with politicians.

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Appendix 1: National and Provincial Concession Contracts in the Argentine Electricity Distribution and Water & Sanitation Sectors

Sector	Grantee (jurisdiction)	Concessionaire	Year awarded
Electricity distribution	National Government for Buenos Aires Metropolitan Area	Edenor	1992
Electricity distribution	National Government for Buenos Aires Metropolitan Area	Edesur	1992
Electricity distribution	National Government for La Plata Metropolitan Area	Edelap	1992
Electricity distribution	San Luis Province	Edesal	1993
Electricity distribution	Formosa Province	Edefor	1995
Electricity distribution	La Rioja Province	Edelar	1995
Electricity distribution	Santiago del Estero Province	Edese	1995

(Continued)

Sector	Grantee (jurisdiction)	Concessionaire	Year awarded
Electricity distribution	Tucumán Province	Edet	1995
Electricity distribution	Camarca Province	Edecat	1996
Electricity distribution	San Juan Province	ESJ	1996
Electricity distribution	Entre Ríos Province	Edensa	1996
Electricity distribution	Salta Province	Edesa	1996
Electricity distribution	Rio Negro Province	Edersa	1996
Electricity distribution	Jujuy Province	Ejesa	1996
Electricity distribution	Buenos Aires Province	Edes	1997
Electricity distribution	Buenos Aires Province	Edesa	1997
Electricity distribution	Buenos Aires Province	Eden	1997
Electricity distribution	Mendoza Province	Edensa	1998
Water & sanitation	Corrientes Province	Aguas de Corrientes	1991
Water & sanitation	National Government for Metropolitan Buenos Aires	Aguas Argentinas	1993
Water & sanitation	Formosa Province	Aguas de Formosa	1995
Water & sanitation	Tucumán Province	Aguas del Aconquija	1995
Water & sanitation	Santa Fe Province	Aguas Provinciales de Santa Fe	1995
Water	Córdoba Province	Aguas Cordobesas	1997
Water & sanitation	Santiago del Estero Province	Aguas de Santiago	1997
Water & sanitation	Mendoza Province	Obras Sanitarias de Mendoza	1998
Water & sanitation	Salta Province	Aguas de Salta	1998
Water & sanitation	Buenos Aires Province	Azuñix	1999
Water & sanitation	Misiones Province	SAMSA	1999
Water & sanitation	La Rioja Province	Aguas de la Rioja	1999*
Water & sanitation	Buenos Aires Province	AGBA	2000
Water & sanitation	Camarca Province	Aguas del Valle	2000

* This contract was granted originally as a management contract in 1991. It was converted to a concession contract in 2002.

Sources: Concession legal documentation and press coverage. Cross-checked with Arpiuz et al. (2008).

Appendix II: Coding of the Main Variables Utilized in the Analysis

Dependent variables

Contract renegotiation concluded successfully

This is coded as a dichotomous variable. We examine whether comprehensive contract renegotiations have been concluded during the relevant time frame (either 2003–09 or under the tenure of a specific set of owners), ratified by the legislature (if applicable), and

implemented. In this analysis, we create a composite score for periods during which ownership is split 50/50 between two investors. This reflects the fact that contract renegotiations are achieved jointly by the set of two investors. On the basis of regulatory documentation, case histories constructed from the local press, and interviews, we code each contract renegotiation process as falling in one of the following categories: (a) formal or informal renegotiations concluded and implemented; or (b) comprehensive formal or informal renegotiations not concluded and implemented. The latter category incorporates partial renegotiations that are concluded and implemented, full renegotiations that are concluded but not implemented, and cases in which no progress is made towards renegotiation.

Investor exit

Investor exit can take two different forms: exit via a sale of the firm's equity stakes in a concession (a change that requires the permission of political authorities) or contract cancellation by the host government, investor, or both parties following allegations of contract noncompliance.²⁰ We draw on a range of country-level sources to code each instance of exit by the 'lead investor', or the investor holding at least 50% of the concession's share, during the 2003–9 period. For cases in which ownership was split 50/50 between two primary investors, both sets of investors are included and are weighted by 50%. This approach makes sense because exit decisions are not always made jointly. More specifically:

a) Exit via share sale

In such cases, private provision continues under new owners. Exits via sale are only registered if at least 50% of the shares held by private investors change hands. (If a private investor holding exactly 50% of the shares leaves, we create two observations, which are each weighted by 0.5. One observation will register the exit, while the other observation will register the fact that the other lead investor is staying.) When a different holding company acquires an investor that owns the majority of the shares in a concession, this acquisition is not considered to be an exit. However, when a holding company sells the company that holds shares in a concession, this is considered an instance of exit, presuming that the company holding the shares is a smaller entity. Sales of large multinationals with sector expertise to new owners that leave concession contracts in the hands of the same sector company would not constitute an exit. (E.g., the sale of the Argentine holding company Emdeesa—which holds three electricity distribution companies in the country—to another holding company would constitute an exit. The sale of the French multinational SAUR from Bouygues to PAI partners, however, would not be registered as an exit from a particular Argentine concession contract.) Coded based on regulatory documentation, case histories constructed from local press coverage, and interviews.

b) Exit via contract cancellation and nationalization

Note that this mode of cancellation can actually occur at the instigation of the investor as well as at the behest of the host government. When the government 'intervenes' or passes a

²⁰ Concession contracts in Argentina provided for the premature termination of contracts by one or both parties in the event of severe levels of non-compliance.

decree or law allowing it to take over management of the contract, this is treated as the onset of a nationalization process. (All cases in our data set of intervention later culminate in formal nationalizations.) Coded based on regulatory documentation, case histories constructed from local press coverage, and interviews.

Independent variables: investor characteristics

Reputational cost of exit

This measure refers to the lead investor's non-financial cost of exit, or the expected reputational and political consequences of exit for the investor's remaining holdings in the country and region. The non-financial impact of exit was coded as *Low*, *Medium*, or *High* based on the importance of Argentine assets within the investor's overall portfolio, whether or not it works in other regulated industries or projects (particularly in the same jurisdiction), and if exit is likely to affect the firm's reputation due to its brand name in the electricity or water sector. Cases are coded as *High* if the concession in Argentina represented a large share of the international holdings of the corporation AND they have other companies in Argentina that may be affected by exit from the project in question OR if they have a strong brand name in electricity or water. Cases are coded as *Medium* if the concession in Argentina represented a large share of the international holdings of the corporation OR the company has other companies in Argentina that may be affected by the exit from the particular project OR has a strong brand name in the sector they are interested in maintaining in the region. Cases are coded as *Low* if the concession in Argentina did not represent a large share of the company's international holdings AND the investor did not possess other important operations in Argentina AND especially if the investor has no brand name in the sector.

Lead investor diversified in the contract jurisdiction? (0/1)

Investors possessing diverse holdings are coded as 1. As with exit costs, coding is based on the characteristics of the lead investor (investor controlling the largest fraction of the shares held by private investors) in the concession. If private shares are split 50/50 between two investors, separate scores are created for each investor and the observations are weighted by 0.5. Lead investors are coded as having a diversified local presence if they possess multiple operations in a variety of sectors in the contract jurisdiction.

How does one define 'investor' for the purposes of this analysis? We refer to the Argentine division of a particular firm. For an Argentine business group, we would consider any operations owned by the group to count towards a diversification score. For a foreign entity, we look to whether or not the firm has multiple, separately administered companies in a country or operates out of a single head office. We only count an investor as diversified if the country-specific office that manages the firm's participation in the concession also holds additional operations in the jurisdiction. For example, the Suez group, a French group, has a number of companies in Argentina, including Suez Environnement, Degremont, Cibra, and so on. There is little managerial coordination between these separate companies, and they often operate in competition with one another. We therefore measure diversification with respect to Suez Environnement's holdings. However, AES had one Argentine affiliate that oversaw all of its work in the country in the electricity sector. In this case, multiple holdings

by AES in a single jurisdiction would be coded as a diversified presence in the contract jurisdiction.

Lead investor privately-owned? (0/1)

Investors that are privately owned are coded as a 1.

LDC investor

Investors based in an emerging market are coded as 1.