Water & Politics

CLIENTELISM AND REFORM IN URBAN MEXICO

Veronica Herrera

WATER AND POLITICS

Most of the world's population lives in cities in developing countries, where access to basic public services, such as water, electricity, and health clinics, is either inadequate or sorely missing. Through the lens of urban water provision, this book shows how politicians fail to provide reliable and high-quality public services because they often benefit politically from manipulating public service provision for electoral gain. In many young democracies, politicians exchange water service for votes or political support, attempting to reward allies or punish political enemies. Surprisingly, the political problem of water provision has become more pronounced in many young democracies, as water service represents a valuable political currency in resource-scarce environments.

When do politicians forgo the clientelistic manipulation of water services and invest in programmatic and universal service provision? *Water and Politics* finds that middle-class and industrial elites play an important role in generating pressure for public service reforms. Based on extensive field research and combining process tracing with a subnational comparative analysis of eight Mexican cities, *Water and Politics* constructs a framework for understanding the construction of universal service provision in these weak institutional settings.

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WATER AND POLITICS

Clientelism and Reform in Urban Mexico

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For Benjamin

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Acknowledgments

Access to clean drinking water is a critical problem in many parts of the developing world. This book shows how political leaders and societal forces shape whether this valuable public resource is delivered and who gets access. These pages offer an account of societal efforts at promoting accountability in government services and why scholars and practitioners should care about government performance. This project began as a doctoral dissertation at the University of California at Berkeley. My first debt is to Ruth Collier and David Collier, who were involved and encouraging mentors throughout graduate school and who shaped my professional trajectory in more ways than I can count. Ruth Collier's probing questions and analytical insights were critical to the development of this project, and I appreciate immensely the number of hours she gave to guide and encourage me along the way. I continue to reap the benefits of David Collier's generous advice and qualitative methods scholarship. Alison Post served as my dissertation cochair and has become a friend and collaborator. I also thank the other members of my committee: Isha Ray, who first introduced me to key issues in the water sector, and Kent Eaton, whose generosity of mind and spirit is inimitable.

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Acronyms

APAZU	Agua Potable, Alcantarillado, y Saneamiento en Zonas Urbanas (Potable Water, Sewage, and Sanitation in Urban Centers)
BANOBRAS	Banco Nacional de Obras y Servicios Públicos (National Works and Public Services Bank, or Mexican Development Bank)
CANACINTRA	Cámara Nacional de la Industria de la Transformación (National Industrial Association)
CNA	Comisión Nacional del Agua (National Water Commission)
CODEMUN	Consejo para el Desarrollo Municipal (Municipal Development Council)
COPACIS	Consejo de Participación Ciudadana (Citizen Participation Council)
COPLADEM	Comité de Planeación para el Desarrollo Municipal (Municipal Development Planning Committee)
FCC	Frente Cívico de Consumidores (Citizen Consumer Front)
FIFAPA	Fondo de Inversiones Financieras para Agua Potable y Alcantarillado (Potable Water and Sanitation Investment Funds)
MIR	Movimiento Izquierda Revolucionaria (Leftist Revolutionary Movement)
MOVIDIG	Movimiento Vida Digna (Dignified Life Movement)
PAN	Partido Acción Nacional (National Action Party)
PAS	Partido Alianza Social (Social Alliance Party)
PRD	Partido de la Revolución Democrática (Party of the Democratic Revolution)

PRI	Partido Revolucionario Institucional (Institutional Revolutionary Party)
SAPAL	Sistema del Agua Potable y Alcantarillado de León (Leon Potable Water and Sanitation Utility)
SAS	Sistema de Agua y Saneamiento Metropolitano Veracruz, Boca del Río, y Medellín (Veracruz, Boca del Rio and Medellin Metropolitan Region Potable Water and Sanitation Utility)
UCL	Unión Cívica de León (Leon Civic Union)
UCOPI	Unión de Colonias Populares de Irapuato (Irapuato Popular Sectors Union)

ONE

Public Services after Democratization and Decentralization

Two municipalities border Mexico City on its northwestern and eastern perimeters—Naucalpan and Nezahualcóyotl (Neza), respectively. Both cities have expanded dramatically in the last four decades, building residential communities and a host of amenities for laborers who years ago began to migrate to the capital city to seek employment. These two cities are not only located in close proximity to one another, but they also share similar historical legacies surrounding democratization. Both cities first developed government services under the one-party authoritarian rule of the Partido Revolucionario Institucional (PRI) and in 1997 experienced historic transfers of power as new political parties took the helm of city government.[1] Despite these similarities, these two cities offer their citizens a very different quality of public services provision, differences that are easily masked by official figures. For example, census data show that nearly 100 percent of both cities' residents have water and sanitation coverage, yet a visit to these cities reveals a different picture.

In Neza, the city government provides tap water that is often cloudy and yellow, resembling yellow sludge. Pablo,[2] the city engineer I inter-

1. The PRI controlled Mexico's presidency from 1929 to 2000 and dominated all levels of government until the 1980s and 1990s, when elections at the state and local levels became competitive. Thus, Mexico experienced subnational democratization *prior* to the national-level democratic transition in 2000.

2. To protect anonymity, I have changed the names of interviewees throughout the book.

viewed, admitted that the city's water pressure is so weak that many residents often receive only a trickle of water from their taps. Although census data report that 97 percent of the city's population has water service, in practice residents receive water only every few days, on a schedule that is so unpredictable that citizens rarely know when to expect service. On the day when Pablo and his team of engineers showed me around the city, an unexpected thunderstorm sent them into a frenzied panic. When I asked what the problem was, Pablo explained that because the utility lacked backup generators, electricity outages would likely shut down their tenuous sewage delivery system and cause raw sewage to flow into the streets.

Later the next day, a woman, Margarita, who had been trying to reach the utility over the phone to no avail for several days, marched into the central offices. She accosted Pablo and nearly physically assaulted him because she had not had water in her home for weeks. She waved her paid water bills in Pablo's face to show that she was not behind on payment. After desperate pleas and more yelling, Pablo made a phone call and promised that her water cistern would be half full by the afternoon. Appeased, Margarita grudgingly went home to wait.

Just a few miles away, citizens in Naucalpan experience a remarkably different type of public water service. In recent years, the local utility had made drastic improvements to the city's tap water, rigorously testing and treating the water supply so that mostly clear water runs from the taps. Water service outages had been reduced or eliminated for the majority of residents, but for the households that still lacked 24/7 access, a predictable water rationing schedule lets residents know when they will have water to fill their cisterns. At the utility's new service center, all of the employees wore matching uniforms, a different color for each day of the week. Customers could pay their water bills at ATMs and register complaints and suggestions through a call center that rivaled that of a multinational corporation. Elena, a human resources manager, showed me diagnostic statistics tracking employee performance based on responsiveness to consumer requests. Online, I found information about water service schedules, water tariff changes, and the rules for setting up new residential connections. José, a public relations manager, showed me the utility's public outreach programs, complete with a cartoon mascot, Aguita, who encourages citizens to conserve water and pay their water bills. He proudly noted that the water utility was reputed to be one of the best-functioning institutions in the city.

Ten years after local democratic transitions, these two city govern-

ments provided their citizens with not just very different levels of public services but very different vantage points from which to view the merits of living in a competitive democracy. In Neza, water service was unreliable or nonexistent for many residents, and the public water utility as a government institution was unresponsive and unaccountable to citizens, continually changing the rules about who receives water and when. Citizens in Neza lacked not only good-quality water service but also the opportunity to experience government institutions as accountable, transparent, and serving the public good. Citizens in Neza would likely conclude that public institutions after democratization look very similar—or even worse—than they did under authoritarian rule. In contrast, water service in Naucalpan has become more reliable, and the public water utility has become a better-functioning public institution since democratization. Consequently, residents in Naucalpan might conclude that government institutions have become more responsive and accountable under democracy.

Unfortunately, too many countries that have recently transitioned to democracy offer their citizens poorly functioning urban public services—more closely resembling service in Neza than in Naucalpan. In fact, several cross-national studies have shown that young democracies tend to have poor government performance and service delivery, especially immediately following democratic transitions (Keefer 2007; Bäck and Hadenius 2008; Charron and Lapuente 2010). These countries are mostly low- or middle-income countries, located in the Global South. For the nearly three billion urban residents in young democracies, governments lack either the will or the capacity to provide an adequate level of public goods and services, such as clean drinking water, sewage disposal and treatment, waste management, and public transportation.

Why is public service provision faring so poorly in Global South cities after democratization? Public services are deficient because political leaders use them for political ends, and the political use and abuse of local public services has not lessened uniformly after democratization. For example, control over who receives access to piped water, how and when they receive it, and how fees from services are used are all important sources of political power. Elected officials who fail to improve local public services or provide them inequitably do so because it is often more politically beneficial to provide them particularistically.

Particularistic provision of public services was common during the second half of the twentieth century in statist economies with closed political systems, where public services developed as state-sponsored mate-

rial resources that built political support for the ruling elite. Since the 1980s, global advocates have promoted market-oriented reforms, in which costs of services are recovered, and decentralization, where the level of government closest to the consumer is responsible for service. Yet these solutions failed to consider that many of these countries were young democracies transitioning away from authoritarian, military, or one-party dominance. In an uncertain world of political competition where new political parties must build electoral constituencies, reforming services has been a deeply contentious process, a phenomenon that has hastened the deterioration of services in many cities. Transitions away from autocratic rule can produce better government performance but can also produce a disorganized clientelism in which services deteriorate dramatically.

In both Neza and Naucalpan, the PRI had historically used water delivery as a highly visible and politically useful public service to gain political support. On the eve of democratization, both of the new political parties that came to power in Neza and Naucalpan also found that water service was an important political resource. Politicians in both cities continued to exchange water service for political support, but the terms of the political exchange differed markedly.

In Neza, the old form of clientelistic exchange that the PRI had so masterfully developed was repurposed for new political constituencies by new political parties. Although services deteriorated rapidly, Neza's new political parties found it more beneficial to maintain the status quo and take political credit for free (if deficient) public services. In contrast, Naucalpan's new political parties found it politically beneficial to eliminate the former clientelist exchanges of free water service, instead exchanging improved water service with a new political constituency that favored less particularism and a better-functioning government. The experiences of these two cities reflect how increasing political competition in settings with highly clientelistic legacies has created a diverse set of incentives for political parties managing public services after democratization.

The combined presence of a strong middle class, urban industrialists, and the entry of new political parties seeking the political support of these groups prompted water service reforms. Employing a subnational comparative approach, I analyze public service provision strategies after democratization in eight cities in Mexico. In a newly competitive electoral environment, mayors catering to these elite groups found it electorally beneficial to eliminate clientelistic relationships in

water provision and to replace the practice of direct political manipulation of service provision with a new technocratic and professionalized service. In the cities that implemented these water service reforms, service access also became more transparent and accountable, and corruption has been curbed.

The mechanism by which reformers improved services was policy insulation, which shielded contentious changes from political conflict. Surprisingly, reformers improved public services and created better-functioning government institutions by limiting democratic procedures and participation during the initial stages of reforms. This book suggests that, paradoxically, in some settings, open public deliberation in policymaking may be at odds with improving government performance, and that limiting or controlling open participation may generate more social welfare improvements and accountability in government services than fully democratic processes in young democracies.

The Problem of Particularistic Public Service Provision

In recent years, several scholars have defined and measured the particularistic or nonprogrammatic distribution of state resources.[3] Stokes et al. (2013, 7) argue that programmatic distribution of goods and services have publicly known rules of distribution and that in practice, these publicized rules actually determine the distribution of benefits. As Kitschelt (2000, 850) notes, in programmatic policymaking, "political parties offer packages (programs) of policies that they promise to purse if elected into office. They compensate voters only indirectly, without selective incentives. Voters experience the redistributive consequences of parties' policy programs regardless of whether they supported the governing party or parties." In contrast, nonprogrammatic distribution includes a wide range of practices in which publicized rules do not determine the distribution of state resources and in which politicians distribute selective benefits to political supporters.

I focus on three practices that make up particularistic service provision. First, particularistic public service provision may entail clientelist exchanges—that is, the exchange of goods or services (e.g., cash, food,

3. For comprehensive reviews of this literature, see Kitschelt (2000); Kitschelt and Wilkinson (2007b); Hicken (2011); Stokes et al. (2013); Abente Brun and Diamond (2014, chapter 1). On conceptual stretching in studies of clientelism, see Hilgers (2012); Nichter (2014). For fine-grained examinations of clientelism, see Auyero (2000a, 2000b); Szwarcberg (2015).

water access, health care, housing) for political support.[4] Second, particularistic public service provision may include patronage—that is, the exchange of public sector jobs, typically for party members, for political support. Third, particularistic provision may involve corruption, which can occur at higher or lower levels of public sector employment. In these settings, distribution of service is not universalistic, rules and practices are not transparent, and government is unaccountable to citizens.[5]

Most studies of clientelism have examined the distribution of benefits that can be exchanged *individually*, such as benefits from social programs (e.g., poverty relief programs and conditional cash transfers) or the distribution of individual items such as food, clothing, and cash. However, clientelistic exchange is a mode of distribution that does not fit easily into conventional distinctions between public and private goods (Fox 2012, 196–201; Weitz-Shapiro 2014, 81; Min 2015, 16–19), and I find that networked public services provide an important means by which politicians can selectively dole out access to state resources to both individuals and groups in exchange for political support.[6] Although this form of particularistic distribution of state resources is widespread, clientelism in public services provision has been underexamined in prior treatments of distributive politics.

Networked public services can be governed by clientelist exchange in several ways. For example, when a politician provides a particular citizen, business, or organization free or highly subsidized piped water in exchange for political support, this can resemble a clientelistic exchange. Similarly, officials can issue bills for service but choose not to collect payment or collect only a token amount. A clientelist exchange can also occur when a politician allows a political supporter or a neigh-

4. Here I refer to relational clientelist exchanges rather than vote buying. Although there has been a lot of attention to the study of vote buying and contingency for defining clientelism in political science, clientelist exchanges involve practices other than vote buying. For example, Fox (2012) and Nichter (2014, 325) note that clientelism may involve ongoing benefits that extend beyond elections, which can be termed "relational clientelism." For examples of this type of relational clientelism, see Van de Walle (2003, 312–13); Montambeault (2011, 94–96); Hilgers (2012); Abente Brun and Diamond (2014).

5. This definition is intended to capture the most prevalent aspects of particularistic use of public services in young democracies. Incomplete public goods provision may also be influenced by other factors, such as the uneven character of pork barrel politics that favor some districts over others (see Stokes et al. 2013) or the uneven historical expansion by private entrepreneurs in some districts over others.

6. See Holland and Palmer Rubin (2015) on the practice of clientelism through organizations and group membership.

borhood to enjoy a clandestine connection.[7] In these scenarios, politicians are likely to be personally or individually involved in this decision making.[8] In contrast to assumptions that public (or club) goods cannot be repealed once they are extended, I find that politicians can (and do) repeal the "benefit" of networked local services in particularistic systems.[9] This is especially true in public utilities or networked public systems where the network is not automated, because reliance on manual and individualized levers allows a great deal of room for discretionary decision making. Furthermore, during a clientelistic transaction, citizens may provide politicians with forms of political support other than votes. Clientelism is more than just vote buying. Political support may entail, for example, societal leaders exercising group control (citizen leaders agreeing not to organize strikes and other forms of collective action) or mobilizational resources to provide political support (e.g., citizens helping politicians generate mass turnout at rallies). In modes of public service provision that are predominantly particularistic, service access (either narrowly to individuals or broadly to a neighborhood) can be exchanged for political support (electoral or otherwise) similarly to other forms of individual, selective benefits more commonly acknowledged in the clientelism literature.[10]

The exchange of public sector jobs for political support is also pervasive in public service agencies that are governed by particularistic practices. Although patronage is conceptually distinct from clientelistic exchange of service access, patronage is an important component of particularistic service provision. The practice of giving public sector jobs to political supporters is a well-documented phenomenon in young democracies (O'Dwyer 2006; Grindle 2012; Chandra 2014; Oliveros 2016). I find this to be a particularly pervasive practice at the local level, where a formal civil service system rarely exists. Other associated practices of poor human resources management include having a large number of "ghost employees"—workers who are receiving paychecks but are not working in that public agency, deceased (or otherwise nonexistent) workers whose benefits are being claimed by other workers, or workers who are engaging

7. In contrast, Holland (2016) refers to discretionary nonenforcement as a form of redistribution or policy extension to the poor, which she terms "forbearance."

8. On measuring clientelistic exchanges based on whether personalized decision making was involved, see Weitz-Shapiro (2014, 82).

9. This observation contrasts with prior characterizations of clientelism as a selective, individual exchange that is difficult to create with "club" or "public" goods, which cannot be repealed after they have been granted.

10. For examples of these types of exchanges at the group level, see Berenschot (2010); Hagene (2015); Min (2015); Auerbach (2016).

in other activities such as running outside businesses during work hours or using public resources for personal business endeavors.

Finally, corruption for personal gain is widespread in systems with particularistic modes of service provision. While clientelism is often measured by proxies of corruption (e.g., Keefer 2007), political clientelism and corruption are two different practices. Bussell (2012, 14–15) distinguishes between corruption for personal gain and for political gain. Here I refer to corruption for personal gain among both lower-level employees and higher-level employees or politicians. These run the gamut from kickbacks (e.g., from contracts with the private sector, with consultants, or for repairs), to funds stolen from the state program, to bribes to lower-level employees to expedite service (Bardhan 1997; Rose-Ackerman and Palifka 2016). Networked public services such as water and sanitation present a number of opportunities for bribes to lower-level employees. For example, bribes for falsified meter readings, expediting attention to repair work, or new connection applications are common in particularistic modes of provision (J. Davis 2004). These practices are common in nonautomated systems because higher-level managers have little control over the individualized decisions that lower-level employees make in the field or in individual exchanges with consumers. Extensive field research revealed that in water systems that are nonautomated, additional perverse forms of petty corruption occur, such as indiscriminately selling water access (closing one valve and opening another in exchange for a small bribe). In addition, operations workers—often the only employees who know what the underground network grid looks like as a consequence of the informal nature of nonautomated network systems—sometimes leverage their monopoly on information about the grid with higher-level management for additional payments and benefits.

The particularistic distribution of access to networked public services hinders the development of democratic accountability. Similar to studies that show how the erosion of clientelist practices helps to strengthen democratic accountability (Fox 2008; Pasotti 2010; Montambeault 2011; Weitz-Shapiro 2014), the erosion of particularistic local service provision helps support democracy-building efforts more broadly.

The Challenge of Reducing Particularism in Local Public Services after Democratization

Many young democracies inherited state-society relations from prior autocratic political systems that relied on particularistic distribution of gov-

ernment resources. For example, Indonesia, the Philippines, South Africa, Tanzania, and India have all become more politically competitive after decades of dominance by one unified political group that controlled state resources. Authoritarian and one-party regimes often built systems of political hegemony by controlling access to state-sponsored material and economic resources and then by exchanging these resources with societal actors for political support.[11]

Prior to democratic transitions, social policy and public services in many postwar economies of Latin America, Africa, and Eastern Europe were financed by statist economic policies, where state or political elites dominated goods and service provision. In these arrangements, state-owned public service providers were often important sources of employment and were therefore bloated with personnel.[12] In addition, public services were highly subsidized, often without consideration to recuperating the cost of services.[13] Revenues to finance services came from a monolithic public coffer dominated by a single political regime. A united political elite made top-down decisions about financing and expansion of services with few veto players and without having to compete with other political parties or justify expenditures.

As statist economies faced economic crises in the 1970s and 1980s, networked public services increasingly deteriorated, especially because the limited maintenance public services received failed to keep up with population growth. However, because these were closed political systems with no competition among political parties, political leaders faced no short-term pressure to provide public services. Rather, the pretransition political setting involved relatively long time horizons, where a unified political elite could build infrastructure and maintain services at the

11. On how one-party systems control state resources, see Collier (1992); Greene (2007); Magaloni (2008); Blaydes (2013).

12. This varied considerably across regions. For example, most dictatorships in Africa provided low levels of social services or public utilities, though oil-rich countries such as Angola, Congo, and Nigeria created bloated bureaucracies. In all of these settings, executive-controlled political clientelism served the needs of a small number of political elites (Van de Walle 2014, 234–37). In Eastern Europe under communist economies, "the primary goal of the party-state elite was to buy and enforce political loyalty by controlling and manipulating access to jobs, goods and services" (Cook 2014, 209).

13. For a discussion of these trends in middle- and low-income countries more broadly in the water and sanitation sector, see Herrera and Post (2014, 622–23). Electricity and telecommunications were also provided at subsidized prices prior to the privatization wave of the 1990s in Latin America (Baker 2010, 63–64). In Africa, social services and public utilities were underdeveloped for most low-income countries, with similar dynamics of subsidized services for supporters of a small number of political elites in oil-rich countries (Van de Walle 2014, 234–35).

pace that best suited its political ends. Overall, decision making surrounding public service financing and service allocation reinforced the political power of the closed political regime. The price of public services, who was charged for them, how much they paid—as well as who received services and when they received them—were decisions that helped sustain autocratic rule in many developing countries.

Transitions to democracy generated broad excitement about the possibility of improving public services and government performance under electoral competition. Scholars have associated electoral competition with improved performance (Geddes 1991; Navia and Zweifel 2000; Przeworski 2000; Grzymala-Busse 2007).[14] However, as several studies have shown, clientelism and particularistic politics have resisted reforms in many new settings, especially at the local level (Fox 1994; O'Dwyer 2006; Beck 2008; Joshi and Mason 2011; Simandjuntak 2012; Eaton and Chambers-Ju 2014).

When examining local public service provision, I find that three distinct macrolevel reforms were often implemented at the same time and unexpectedly created adverse conditions for reducing particularism in public service provision. First, subnational democratization introduced subnational electoral competition and charged mayors with creating and winning over new electoral constituencies.[15] Second, administrative decentralization transferred responsibility for service provision to municipalities, leaving newly elected mayors to administer what were often defunct networked systems that had received limited capital updates.[16] Third, market-oriented reforms reduced federal subsidies for local service provision and urged cities to increase the collection of tariffs for services and finance services with user fees.

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14. The idea that competition hinders opportunism has also been well documented in economics; see North (1981, 36).

15. I define *subnational democratization* as the entry of new political parties into local or state (provincial) offices. This idea differs slightly from *political decentralization*, which refers to a change in legal institutional frameworks to allow subnational political officeholders to be freely elected rather than appointed.

16. I define *decentralization* as a transfer of authority from the central government to a subnational unit of government and therefore do not consider transfers of service responsibility to the private sector a form of decentralization. I concur with definitions of *decentralization* that identify three types of decentralization: political, administrative, and fiscal (e.g., Falleti 2010). As such, water and sanitation decentralization is an example of administrative decentralization, where the responsibility for service provision is transferred from national governments to subnational governments. I do not consider deconcentration a form of decentralization because it is a transfer of responsibility for services from a central agency to a regional field office, where the federal government retains service responsibility.

These three policies pulled in opposite directions and created a great deal of both political and economic uncertainty for local governments.[17] New political parties sought strategies that would garner electoral support from new constituencies. In most places, this meant that the politically beneficial strategy for public service provision would be to avoid political conflict over tariff increases. Charged with improving services with scant fiscal resources, many city leaders have chosen either to maintain the status quo of particularistic service provision or to increase the rate and depth of corruption, further threatening the quality of services. In most newly democratized settings previously ruled by political hegemons, regulatory oversight remains weak, and political vacuums have emerged with little oversight of local finances and administrative practices.

This uncertain political and economic environment resulted in shorter time horizons for many local governments. Local political parties that alternate power at the local level have little political incentive to invest in long-term policymaking, especially when higher levels of government are run by opposition parties and when federal oversight is scant. In some cases, local government may also face structural limits to investing in longer-term policymaking, given the short-term nature of many municipal administrations (often only three or four years). Therefore, administrative decentralization and subnational democratization alone tell us very little about whether local governments were likely to improve government services. These processes were just as likely to lead to public service crises as to spur improvement, and where public service crises have ensued, this government failure threatens to undermine the larger democracy-building project.

How Making Public Services "More Public" Improves Democracy

Democracies are complex constructions. Several decades after key democratic transitions, the idea of "democratic consolidation" as a linear process with a final, irreversible endpoint has rarely played out in practice. Instead, numerous studies have shown democracies to be composed of additive bits and pieces that require complex manufacturing and upkeep. The construction of democracy takes circuitous routes and contains both undemocratic and democratic practices.[18]

17. Meg Rithmire (2015) makes a similar observation in her study of the construction of local property rights regimes in urban China.

18. See O'Donnell (1993, 1996). In addition, studies have shown a high degree of sub-

Scholars studying democracy have focused on the development—or lack thereof—of democratic procedures and practices. For example, studies have focused on the role of participatory institutions (Abers 2000; Wampler 2007; Avritzer 2009; Selee and Peruzzotti 2009; Goldfrank 2011; McNulty 2011), associational space (Yashar 2005; Van Cott 2008; Collier and Handlin 2009), societal oversight of government practices (Peruzzotti and Smulovitz 2006), and collective action (Haber 2007; Bruhn 2008; Silva 2009) in "activating" or shaping democracy. All of these works have focused on democratic procedures or processes as practiced by citizens in shaping state responses. What has been less examined is how the performance of and quality of services provided by government institutions can either reinforce or undermine the construction of democracy.

In fact, many scholars conflate the characteristics of democratic processes (such as whether government policies entail open participation) with the outcomes of state or government institutions and activities under democracy.[19] In other words, one could imagine a scenario where despite substantial citizen participation and input, the end policy result lacked equity or failed to develop long-term accountability and transparency. Conversely, we might imagine a policymaking scenario where citizen participation was limited and therefore there was little accountability and openness during the procedural construction of a policy but where the policymaking results led to greater equity and accountability in the long term for citizens (Rothstein 2011, chapter 9).

This book examines the adoption of programmatic local public service provision that led to better-performing government.[20] I find that these government performance improvements led to more equity, accountability, and responsiveness in citizens' experiences with their public institutions. Although the process of securing government improvements was not fully open and participatory, it led to two important policymaking characteristics that strengthen democracy building. First, reforms initiated material social welfare improvements that resulted in

national variation in democratic state and society practices within single countries (Fox 1994; Snyder 2001a; Gibson 2005; Fox 2008; Giraudy 2013).

19. Thanks to Mimi Keck for this observation. For similar claims, see also Whitehead (2002, 13); Fox (2008, 8–9). For examples of conflating democratic processes with outcomes, see Grindle (2007); Rose-Ackerman (2007, 1); Mainwaring and Scully (2010).

20. Scholars differ on how they measure government performance, using measures such as the presence of corruption, administrative capacity, and bureaucratic strength. For examples, see Tendler (1997); Evans and Rauch (1999, 2000); Grindle (2007); Charron and Lapuente (2010); Holmberg and Rothstein (2014).

greater equity in and access to government services. Second, reforms resulted in changes to government institutions that led to more accountable, transparent, and responsive government behavior. Although these reforms did not showcase open democratic participation for all citizens, they led to policymaking results that created more openness and transparency in government institutions and services, thereby supporting the democracy-building project more generally.

Public service reforms entail an increased level of exposure of the public service. Consequently, enhancing the public orientation or the openness of the public good is a crucial aspect of the reform project. The qualities I underscore in programmatic public service reform that both improve the quality of service and enhance its public exposure are changes to the (1) quality or effectiveness of service, (2) universalism of access, (3) reliability of access, (4) transparency of access, and (5) accountability of access.

First, the service should be effective, or of good quality. Does the service function as it is supposed to? For example, if the service in question is public transportation, does the bus run regularly, and is it reasonably safe? If it is tap water, does the tap water exist in reasonable quality and quantity? Universalism of access refers to the reduction of individual exchanges of public services that are often contingent on political support or are motivated by other reasons such as personal and professional connections or attempts to extract bribes. Programmatic public service provision does not mean that public services will be freely available to all without any other restrictions. It means that programmatic rules of access will be created and then applied consistently. Reliability of access refers to the idea that citizens can access the service based on a consistent schedule and that that the schedule of service is reasonable and functional. Transparency refers to whether information about the public service that impacts consumers is easily and publicly available, and accountability refers to whether the formal rules and informal practices of service providers allow citizens to hold the government responsible for public service obligations.

When the quality of the product being delivered functions well and the mode of access is universalistic, reliable, transparent, and more accountable, then public service improvements help support the construction of democracy. These reforms make public institutions more effective, open, and accessible to the public. They can boost citizen trust in government more broadly (Rothstein 2011).

In addition to improvements in the quality of government, the cre-

ation of programmatic provision of public services is likely to have secondary benefits for citizens. Important ecological and health benefits can accrue if comprehensive reforms are enacted in key policy arenas such as water and sewage, sanitation treatment, waste management, and public transportation. For example, improving the maintenance of underground aquifers can ensure water security for future generations. Maintaining proper sewage disposal and treatment can reduce water pollution and improve living conditions, especially for the urban poor, whose communities are often located near solid waste and open sewers. Creating programmatic waste management can facilitate more sanitary living conditions, improve ecological and health outcomes associated with living in close proximity to decomposing waste, and dramatically improve urban livability. Reforming public transportation provision can also improve air quality, contributing to overall livability and better urban health conditions. These types of changes can improve the quality of life for urban residents as well as reenergize local economies.

In this book, I analyze universalistic or programmatic public service reforms that entail controlled or limited democratic processes but result in public service improvements that enhance not only living conditions but also democratic policymaking outcomes. Using a subnational comparative approach in a sample of Mexican cities, I examine how these pockets of "improved government" emerge after democratic transitions, which societal and economic forces shape whether reform projects are launched, and how these projects are sustained over time in the places where they emerge. This book goes beyond a focus on either clientelism or service provision adequacy, instead presenting a framework for understanding the construction of more professional, universalistic service provision in settings previously ruled by clientelistic relationships or machine politics. Therefore, this book tackles a quintessential problem of development and democratic consolidation, and theorizes about the conditions under which reformers generate more accountable government.

The Argument of the Book

Mexican municipalities' varying experiences with water reforms present a puzzle: Why do some cities adopt successful reforms while others do not? Many of the prevailing explanations for uptake of reforms emphasize international or national processes, such as the coercive role of international financial institutions (Henisz, Zelner, and Guillén 2005), the role of "men-

tal models" or ideology in driving policy convergence (Appel 2000; Teichman 2001; Schneider, Fink, and Tenbücken 2005; Kogut and Macpherson 2008), and institutional changes such as decentralization.[21] While these influences are clearly important in the Mexican case, they do not help us make complete sense of variation from city to city, even when those cities share similar geographic and socioeconomic conditions.

Furthermore, evidence in the literature on determinants of reform presents a mixed view of what matters and why. For example, the role of electoral competition has been shown to be important in determining reform uptake and content in some settings (Chhibber and Nooruddin 2004; Murillo 2009; Weitz-Shapiro 2014), but not others (Cleary 2007; Grindle 2007). Political economy scholarship has emphasized the importance of partisanship in explaining national-level privatization preferences: for example, right-wing governments promoted market-oriented policies, while left-wing-governments fiercely rejected them (Remmer 2002; Murillo 2009). Others have examined the role of crisis, whether financial (Stallings 1992; Haggard and Kaufman 1995; Weyland 2002) or sector-specific (Madrid 2005; Murillo and Foulon 2006) in justifying market reform implementation. Scholars have also stressed the importance of strong leadership (Grindle 2007; Van Cott 2008) and dense citizen networks (Putnam, Leonardi, and Nanetti 1993; Tsai 2007) for improving local services and governance.

The Mexican experience, however, shows these explanations to be incomplete. Acute sector-specific crisis generated some reform initiatives but alone was not sufficient to convince elected officials to opt out of clientelistic service strategies in contexts where these were deeply embedded practices. Partisanship alone did not prove deterministic of local reform adoption: in settings where right-wing mayors came to office, they paid more attention to their local constituent base than to a national-level ideological platform. Similarly, strong mayoral leadership and citizen networks in some contexts worked together to promote reforms but in other settings helped maintain the status quo, preserving low-quality services in exchange for personal and political benefits. Finally, electoral competition in urban Mexico generated more political alternatives but did not necessarily lead to better public service performance.

In the case of infrastructure-based public services, the combination of middle-class voters, industrial firms, and new political parties catering to

21. For a review of the vast literature on decentralization, see Treisman (2007).

these groups was most likely to lead to programmatic reform adoption. I follow scholars who have suggested that socioeconomic class and electoral competition generate support for reduction in clientelism (Kitschelt and Wilkinson 2007a; Weitz-Shapiro 2014) but find that in infrastructure-based public services, the local political economy was also an important source of reform support. The presence of a combination of industrial firms, middle-class groups, and new political leaders catering to these constituencies was most predictive of support for reducing clientelistic service provision in water service and investing in programmatic reform. In the following section, I explore each of these variables, examining their role in earlier scholarship and the ways in which we may expect these factors to facilitate local public service reforms in young democracies.

The Role of Middle-Class Constituencies

The political role of the middle class has for centuries figured as a central question in scholarly debate.[22] Aristotle (1885, 127–28) noted that "a city ought to be composed, as far as possible, of equals and similar; and these are generally the middle classes . . . which [are] most secure in a state, for they do not, like the poor, covet their neighbors' goods; nor do others covet theirs, as the poor covet the goods of the rich. . . . [M]any things are best in the mean." The idea that the middle class valued stability was observed beyond the West; the ancient Chinese philosopher Mencius noted, "Those who have property are also inclined to preserve social stability" (Li 2010, 72).

Questions about whether the middle class contributes to stability, democracy, and development, while not new to the twentieth century, became most famously associated with modernization theory beginning in the 1950s. Modernization theorists argued that a close connection existed between a growing middle class and political democratization (Lipset 1959; Apter 1965; Nie, Powell, and Prewitt 1969). While varied in their approach, scholars associated with modernization theory emphasized that industrialization generates a rising middle class—with increased income, education, and socioeconomic mobility—that supports political openness.[23] Examining the development of Western European countries, writers such as Moore (1966) and Luebbert (1991) stressed the role of commercial classes in pressing for political change. In these types of

22. On defining and measuring the middle class, see Davis (2004, 363–68).
23. See Davis (2004); Chen (2013) for reviews of this literature.

arguments, the middle class supports democracy because it is a system where individual rights and property holding are more likely to be protected. The role of the middle class in promoting progress and stability is also echoed by scholars studying U.S. cities, such as Edward Banfield (1970, 50–51), whose controversial account stressed the "future-oriented," nature of middle-class groups that led them to support urban order and functioning government.[24] Diane Davis (2004, 29, n. 4) notes that middle classes were assumed to have a "strong achievement-orientation, an unbridled work ethic, a commitment to savings, a flair for entrepreneurialism, and faith in the practical value of education, all of which was seen as critical determinants of economic progress."

The assumption that the presence of a middle class would inexorably lead to democracy fell greatly out of favor after the 1960s. Diane Davis (2004, 26) summarizes the subsequent scholarly terrain: "Most contemporary scholars of late industrialization focus on practically every social or class force *but* the middle class, while capitalists, laborers and/or the state are invoked without pause." One reason for this shift in development studies is the rise of dependency theory, world systems analysis, and the myriad examples that demonstrated the multidirectional position of the middle class in their support of democracy. For example, the rise of military dictatorships—paradoxically supported by the middle class—in Argentina, Chile, Brazil, and Uruguay in the 1960s and 1970s contradicted expectations of modernization theorists, as has the rise of middle-class groups in Asia that are ambivalent toward democracy. In many of these examples, the middle class has shown itself as a staunch supporter of political stability, even if through authoritarian means.[25] Jie Chen (2013, 5–6), surveying comparative politics scholarship in recent decades, concludes that the political role of the middle class is contingent on other sociopolitical and economic factors, such as dependence on (or independence from) the state, perceived socioeconomic well-being, political alliances with other classes, class cohesiveness, and fear of political instability.

Does the middle class demand better public services, and if so, what are the implications of this demand for reforming public service provi-

24. These assumptions were echoed in urban politics scholarship about the Progressive era in the United States. For examples, see Banfield and Wilson (1963, 139–40); Teaford (1984, 187–214).

25. For the relationship between middle classes and support for democracy in China and other parts of East and Southeast Asia, see Brown and Jones (1995); Robison and Goodman (1996); Chen (2013).

sion in new democracies? Middle-class groups have certain qualities that can result in citizen demand for public service reforms. First, the middle class's relative level of material resources shapes preferences for public goods provision. Members of the middle class have more financial resources that make them more demanding of material comforts with respect to price. Middle-class groups can exercise patience as tariff increases are converted into service improvements, while members of the working class, who live from paycheck to paycheck, are necessarily more focused on the short run.[26] The middle class's socioeconomic standing positions it as a potential ally of medium- to longer-run policymaking.

Second, because middle-class groups generally possess higher incomes, they are less likely to be clients of political bosses through clientelist exchange.[27] Most studies of clientelism document exchanges between politicians and poor clients.[28] Several studies have noted that low-income voters prefer targeted handouts to distant policy change (Banfield and Wilson 1963; Kitschelt and Wilkinson 2007a, 25). Weitz-Shapiro (2014, 13) argues that middle-class voters may find clientelism morally objectionable but unlike low-income voters (who may also find it morally objectionable) do not face countervailing pressure to vote for a candidate who will provide them with much-needed material resources. In fact, politicians who engage in clientelistic exchange may lose electoral support from middle-class voters.

Middle-class groups have also been linked to support for procedural accountability and the rule of law. Citizens who pay taxes and own property likely have a stake in ensuring due process and government accountability (Li 2010, 75). Rule-based government practices and standardized "knowable" rules of the game best protect the interests of the middle class. Some urban politics scholarship has emphasized, perhaps provocatively, the middle class's role in "asserting a conception of the public interest" (Banfield and Wilson 1963, 14). This argument extends to public services, where middle-class groups are more likely to either own property or rent properties with legal land titles and are more likely to have formal, documented service connections to public services rather than clandestine ones. Informality and illegality are less likely to be tolerated

26. Although middle-class consumers may also be impacted by tariff increases, they may be willing to pay for access and better-quality services (Murillo 2009, 30). Middle-class groups will also likely be less resistant to onetime, up-front costs associated with new service connections that can be prohibitively expensive for members of the working class.

27. However, middle-class groups may have politically vulnerable jobs in the public sector.

28. For a review of this literature, see Weitz-Shapiro (2014, 12 n. 40).

or practiced by nonpoor groups such as the middle class, since socioeconomic position predisposes such groups toward maintaining property rights and working within the legal system.

The middle class may also be poised to support public service reforms as a result of the nonmaterial resources they possess. For example, middle-class groups may have more education and free time, resources that may help them to become informed about public affairs and to monitor government activity more effectively.[29] In Latin America, Dunning (2009, 116–19) finds that the members of the middle class are more likely to engage in direct action such as signing a petition, contacting the government, undertaking a legal process, or contacting influential intermediaries, since elites and the middle class are alleged to have greater access to the state. He also finds that the middle class participates at significantly higher rates than the working class. Li (2010, 75) notes that members of the Chinese middle class are more likely to initiate legal action to resolve disputes and to engage with formal institutions. Finally, studies have pointed to the middle classes as having a disproportionate amount of cultural and societal influence in shaping public debates and public opinion (Boudreau 1999; Mawdsley 2004; Fernandes 2006, 173). These nonmaterial (i.e., organizational, informational, and leadership) resources may position the middle class to be effective allies in promoting more accountability and efficacy in government service provision.

The Role of Business

Business is often described as motivated by rent-seeking behavior, materially driven at best and parasitic at worst. Especially in developing countries, business is seen as more often than not acting collusively rather than collaboratively and as not acting in the interest of the public good. It is difficult to argue with the myriad examples of business being primarily concerned with the bottom line, often at the expense of the local environment (e.g., Crenson 1971; Melosi 2001; Auyero and Swistun 2009), or scenarios where business engages in exploitative working conditions and even corrupt or illegal behavior. However, business is also the engine of economic development, and its role in shaping local government policies that help cities grow has been underexamined in the developing country context. Business, even when acting in its own material interests, can be an effective ally for infrastructure-based public service reforms,

29. Mills (1953); Lane (1959), as cited in Chen (2013, 5).

and its support of these reform initiatives can translate into considerable material improvements that serve the public good.[30]

While representing a diverse and multifaceted set of interests, business may support upgrades to public infrastructure and infrastructure-based services.[31] Infrastructure is most frequently considered a public good because of its nonrivalrous and nonexcludable qualities.[32] Public goods—and infrastructure is a prime example—are often provided by governments because the private sector would underprovide or inequitably provide them (Samuelson 1954). Yet private firms benefit tremendously from public sector infrastructure investment. Investments in public capital have been shown to play a direct role in private sector productivity. "Core" infrastructure contributes to a firm's labor, materials, and capital productivity (Aschauer 1990, 31). Greater public capital investment is likely to lead to increased employment (e.g., Munnell 1990). The presence of infrastructure in one location may attract additional investments. In sum, infrastructure is often described as an "unpaid factor of production" since its availability leads to higher returns for capital and labor (Kessides 1996, 213–14).

Urban development in the United States during the nineteenth century was characterized by private sector investment in large infrastructure improvements (Altshuler and Luberoff 2003, 9). As urbanization continued and the public sector's role in infrastructure development grew, business generally organized into chambers of commerce and supported infrastructural development as an economic development policy. Local elites in U.S. cities tended to strongly support infrastructure development into the mid-twentieth century; local businesses viewed these projects as part of an economic development policy that would bring private benefits (Peterson 1981; Altshuler and Luberoff 2003, 11; Dilworth 2005, 17). Water supply, for example, was the first municipal public utility in the United States and was supported by "chambers of commerce, boards of trade, and commercial clubs, [who] promoted a variety of downtown improvements in competition with rival communities" (Melosi 2000, 119). A number of case studies have shown how business

30. For an example from the U.S. context, see Portney (2007).

31. By *infrastructure*, I am referring to core infrastructure such as streets, highways, mass transit, airports, gas and electrical facilities, and water and sewage services, which economists have defined as "long-lived engineering structures, equipment and facilities, and the services they provide that are used both in economic production and by households" (Kessides 1996, 213).

32. Infrastructure in some settings may have qualities that make it excludable and/or rival (e.g., piped water in a particular neighborhood or a toll road).

elites in major U.S. cities pushed for urban infrastructure improvements that would increase land values and augment the success of urban businesses dependent on these upgrades.[33]

In developing countries, where public sector infrastructure services may be either unavailable or unreliable, firms may seek other alternatives or substitutes—that is, self-provision. However, self-provision of infrastructure can significantly raise firms' costs (Kessides 1996, 216). Even if firms resort to clandestine or illegal connections (which only some firms may be willing to do), companies may find managing their own access points costly or technically complex. Capital costs for self-provided infrastructure are likely to be greater for small firms, where these costs would constitute a larger percentage of the firms' overall operating expenses. While firms may have to learn to make do in some cities with subpar public investment in infrastructure, firms will likely prefer upgrades to infrastructure-based public services because self-provision of infrastructure-based services may be costlier, more complex, and more unevenly available than reliable public services.

Therefore, we may expect firms to think more systematically or rationally about infrastructure than do residential households or other types of not-for-profit organizations. Firms are likely to calculate self-generated infrastructure into their operating costs and have a clearer understanding of the monetary value of public infrastructure in the operating costs of the firm. Firms are also more likely to see infrastructure, such as water or road access, as a longer-term investment that will require maintenance and upkeep, as do other longer-term capital investments that firms must calculate for their business development plans. Whether firms themselves privately provide these infrastructure services or whether they rely on the public sector to provide them, they are more likely to have a long-term and cost-based approach to infrastructure-specific public services.

Business groups also tend to enjoy certain resources that allow them to be more effective in pressing for reforms that benefit their interests, making them allies in infrastructure-based public service reform projects. For example, business groups may have existing business associations through which they can work when pressing their demands on city governments (Dilworth 2005, 18). Associations and other forms of voluntary organizations allow business groups to overcome the collective-action dilemma that may otherwise limit the ability of atom-

33. For these general arguments, see Hunter (1953, 1980); Jennings (1964); Molotch (1976); Stone (1976, 1989); Mollenkopf (1983, 154–55); Altshuler and Luberoff (2003).

ized individuals to act, as Olson famously noted (1965). Business associations are one of several means through which businesses may mobilize and act collectively to further their interests (Schneider 2004, 11).[34] Other strategies include drafting policy statements, voicing demands through the media, and coordinating responses to government policies (Cammett 2007, 4, n. 1).

Business groups may also have more material and reputational resources at their disposal that can help them coordinate their policy interests across a wider group of stakeholders (Stone 1989, 235). Businesses may be able to offer material incentives (such as jobs or benefits) or sponsorship of local development projects or social clubs to generate support for their policy interests. In some cases (especially in developing countries, where insulated bureaucracies are rare), business associations have also served to self-police or check against rent seeking when business invests in collaborative relationships with government (Schneider and Maxfield 1997, 4–5). Business associations have also sometimes served as a check against arbitrary state power and authoritarian rule and have in some settings supported democracy in Latin America (Acuña 1995; Heredia 1995; Schneider 2004, chapter 9).

Business groups may also be helpful allies to city governments in public service improvements for financial reasons. As consumers of public services, businesses, especially manufacturing firms, are likely to consume a greater volume or quantity of public services than do residential consumers. Therefore, if public services are being partially financed through user fees where charges represent quantities consumed, business groups may generate more income for public service upgrades. (Similarly, if a city has some industry or business that can help create a nonresidential consumer tax base, the city government is going to have more tax revenue at its disposal than a city that relies only on residential taxes.) This arrangement is especially critical in infrastructure services with fixed capital costs, where returns on original investment depend on increasing the number of subscribers or achieving higher levels of service consumption. In some cases, businesses may subsidize residential consumption.

Firms are likely to approach support for infrastructure-based services with an eye toward what benefits their bottom line, which will vary depending on what goods they produce or services they offer and how the

34. For the variation in business association activism across and within nations, see Sellers (2002).

infrastructure-based services impact their operating costs and development plans. For example, manufacturing firms that need high volumes of gas or water for a particular product or have a location-specific need for a highway to a central airport are likely to support upgrades to those infrastructure grids, while a real estate office or nail salon may be less reliant on (and less supportive of) those upgrades.[35] Compared to manufacturing firms, service sector companies may find it easier to substitute the smaller amounts of public services needed for their retail shops if infrastructure-based public service provision is unreliable.

Some firms may act altruistically or as local boosters of particular urban development agendas. In addition, some firms—for example, domestic firms or family-owned businesses—may have more local professional, personal, or cultural stakes in their community than international firms.[36] To be sure, firms are unlikely to act against their own financial self-interest, and their support for reforms will vary depending on local context and the structural incentives that reforms present. Nevertheless, urban industrialists are often well served by public sector infrastructure upgrades and may be in a stronger position to support these types of reforms than previous scholarship has suggested.

The Role of Politicians' Electoral Strategies

Public service reforms are political projects. In settings where reformers seek to replace particularistic services premised on clientelist exchange with programmatic service provision, these reforms require support from elected officials who are willing to assume the political costs, which are twofold. First, local politicians are likely to face a backlash from users who had come to rely on individualized, contingent exchanges of public services and opportunities for patronage distribution. Social conflicts stemming from these changes may have damaging political consequences for local leaders, and mayors have varying levels of aversion to policies that generate intense public conflicts. Second, local politicians will also consider the extent to which reducing clientelistic service practices hurts their primary constituent base and their corresponding electoral mobilization strategies. Local elected officials will pursue reforms

35. For how goods-producing sectors and service sectors have different preferences for local public security reforms, see Moncada (2016, chapter 1).

36. For example, Post (2014) argues that domestic firms enjoyed higher levels of flexibility than did their international counterparts in negotiating privatization contracts in the Argentine water and sanitation sector.

that do not overly punish their primary constituent base and policies they can sell to their electoral base to benefit politically.

Local politicians who cater to middle-class voters and are aligned with reform-supporting industrialists are most likely to adopt public service reforms that entail breaking with clientelistic service practices. Politicians who rely on clientelistic exchanges primarily with popular sectors (the working class) as an electoral strategy are unlikely to adopt programmatic reforms. Even if enterprising mayors come to power with reformist agendas, if their parties' primary electoral mobilization strategy relies heavily on the popular sector vote, reducing clientelistic service provision will likely be challenging.

In contrast, political parties whose electoral strategies entail catering to the middle-class vote and who may be aligned with business interests are better positioned to implement changes that entail reducing clientelistic service provision. These changes are likely to be contentious yet provide important electoral benefits if successful. Advertising reforms as harbingers of major changes in the quality of government can be a politically savvy strategy for mayors courting the middle-class and business vote. Publicizing major changes in service quality—such as improvements in infrastructure and the quality, quantity, and reliability of service—provides enormous political visibility in a high-valence policy arena for these elite groups. Additional signals to middle-class voters about increased accountability and responsiveness of government services through customer-service-enhancing measures that promote equity and accountability rather than discretion can build further support for reforms by politicians seeking elites' political support.

For politicians who have the support of the middle class, programmatic reforms may introduce a virtuous cycle that provides electoral benefits: programmatic reforms reduce the electoral power of political opposition whose support comes from popular sector votes via clientelist exchanges. Reducing clientelistic access to public services may then reduce the power of the intermediary broker previously distributing these rents for the opposition party. This, in turn, strengthens support for reforms among middle-class groups who object to clientelistic service practices.

When mayors who cater to middle-class voters and who enjoy industrial support choose to invest in programmatic service provision strategies, they may reap a number of electoral benefits. A "good government" reputation can help consolidate local political careers or help local politicians leapfrog into higher levels of government. Political branding of these programmatic reforms can reap political benefits for mayors and

help generate support for reforms before all of the service quality upgrades have been realized. Political branding around small improvements in the short run allows politicians to mitigate public protest against reforms until more extensive reforms are realized in the medium term.[37]

Policy Insulation and Long-Term Policymaking

Once these three conditions are met, the primary mechanism through which reforms are converted into service improvements is reformers' ability to create policy insulation, effectively shielding reforms from political conflict. Policy insulation is necessary for reform implementation, and studies have shown how autonomous and insulated agencies perform the necessary activities associated with efficient and well-functioning government (Geddes 1990; Evans 1995). However, because institutional changes (such as formal rules creating legally and fiscally autonomous service providers) do not ensure that politicians will resist using public services as part of selective and individualized political exchanges, reform coalitions have used other means to protect reforms from political derailment. These strategies have included incorporating supporters through either broad or narrow means of policy influence, excluding and compensating reform "losers," and finding both institutional and noninstitutional means to extend the time horizon of policymaking to realize service improvements. As chapter 2 demonstrates, these political negotiations resulted in controlled—and in most cases, limited—participation in the policy process.

When reformers created policy insulation and used both informal and formal means to sustain it, they were able to extend local governments' policymaking windows. Building long-term policymaking windows in weak institutional environments is unexpected (Levitsky and Murillo 2009), but it does occur. Recent scholarship on the determinants of long-term policymaking have stressed the importance of structural rule changes (Patashnik 2008, 26–28) and policymakers' ideational orientation and cognitive preferences (Jacobs 2011, 42–58) in helping to create policy insulation and entrenchment. In contrast, flexible, noninstitutional arrangements can be especially critical to building policy insulation and creating local, multifaceted support structures for policy entrenchment. Examining the problem of long-term policymaking at the

37. For a discussion of the role of political branding in constituency building, see Pasotti (2010).

local level in developing countries brings to the fore the importance of experimentation (Abers and Keck 2013), flexibility, and unexpected coalition building that helps explain how policies are constructed and politically managed.

Combining Strategies of Causal Inference

This book evaluates public service reforms after democratization by examining Mexico, a country that has experienced concurrent processes of political and economic liberalization. Mexico transitioned to democratic rule at the subnational level much earlier than at the national level. It has also experienced high levels of administrative and fiscal decentralization as well as market-oriented reforms. As such, Mexico is an ideal setting to observe the various forces that can impede reforms of particularistic public service provision after democratization and the strategies reformers may adopt to overcome these challenges and create more accountable local government.

In this book, I employ two distinct strategies of causal inference. The first organizing principle is to conduct a cross-case comparison to evaluate whether the three conditions I identify as being important are correlated across cases in a manner consistent with the theory presented in this book. Are the conditions hypothesized to be necessary present in cases where urban water reform occurs? In cases where these causal sequences were absent, did urban water reform fail to take hold?

To compare urban cases, I designed a two-tiered subnational comparative analysis.[38] This strategy involves the comparative analysis of eight urban cases embedded within three state governments (Mexico State, Veracruz, and Guanajuato), which were deliberately chosen to reflect the socioeconomic, political, and economic variation found across Mexico's regions. For example, from the mid-1990s to 2010, Guanajuato had an industrialized corridor, middle-class base, high levels of religious attendance, and relatively high socioeconomic indicators. The state was dominated by the right-of-center Partido Acción Nacional (PAN) with relatively low levels of political competition, similar to PAN-dominated states in the country's wealthier north. In contrast, Veracruz had lower indexes of socioeconomic development and less industrial activity and was PRI-dominated with less political competition, similar to states dom-

38. The subnational comparative method allows researchers to hold constant sociological, economic, ecological, and cultural factors that would vary more widely in cross-national designs (Snyder 2001b).

inated by the PRI (and to a lesser extent the left-of-center Partido de la Revolución Democrática [PRD]) in central and southern Mexico. Finally, Mexico State sat between these two extremes, with significant variation across cities in terms of level of industrial activity, socioeconomic indicators, and political competition. While the primary unit of analysis is urban policymaking, this two-tiered subnational research design better accounts for the intervening role of state governments in local outcomes than a cross-case urban comparative design alone. Within each of these three states, I select among the largest cities, which results in eight urban cases with a significant amount of variation in public service performance after democratization.

The second organizing principle is to employ process tracing, a method of within-case analysis. Rather than explaining reform outcomes as a product of isolated variables, process tracing unveils the causal mechanism as a combination of factors that are sequential and temporally ordered, with particular events being necessary for each subsequent event (Falleti and Lynch 2009). Process tracing is founded on the use of evidence to affirm some explanations and reject others; wherever possible, I triangulated multiple data to strengthen causal inference. Within-case analysis relies on causal process observations—"an insight or piece of data that provides information about context, process, or mechanism, and that contributes to causal inference" (Collier, Brady, and Seawright 2010, 2). Process tracing can be used inductively or deductively, to both generate and test theories,[39] however, for topics where existing theories fail to explain outcomes such as those examined in this book, "process tracing proceeds primarily through inductive study . . . often [involving] analyzing events backward through time from the outcome of interest to potential antecedent causes, much as a homicide detective might start by trying to piece together the last few hours or days in the life of a victim" (Bennett and Checkel 2015, 18). This combination of cross-case and within-case analysis provides more systematic and robust theory testing than when either strategy is employed in isolation.[40]

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39. For example, process-tracing tests and counterfactuals can be used to test theories (a deductive exercise), and empirical observations may be used to generate theories (an inductive exercise) (Falleti and Mahoney 2015). For further discussion, see Collier (2011); Goertz and Mahoney (2012, chapter 7); Beach and Pedersen (2013); Bennett and Checkel (2015).

40. Cross-case comparisons that rely on Millian methods alone do not have a sufficient number of cases with which to effectively test theories via cross-case tests of hypothesis (Brady and Collier 2010; 10; Collier 2011, 824; Goertz and Mahoney 2012, 87–90), and for this reason, within-case analysis is critical to the viability of small-*N* analysis.

This book uses a "one-sector, many places" research strategy rather than empirical evidence from multiple sectors. Comparative politics studies have used a one-sector strategy to illustrate important dynamics of state-society relations and the changing nature of the state (Karl 1997; Bates 1999; Snyder 2001a). By comparing territorial units in a single sector, I hold institutional and sector-specific characteristics of policymaking more constant. The water and sanitation sector is selected for several reasons.[41] First, this sector is a principal arena where market-oriented reforms have been implemented by public authorities as well as a policy arena that has experienced an extensive amount of decentralization throughout the developing world (Herrera and Post 2014), making it a fertile area for examining public service reform strategies after democratization. Second, because of the humanitarian, social, and ecological issues associated with water provision, this sector is highly visible and therefore politically salient. Indeed, one study notes that 79 percent of all Mexican mayors list the water and sanitation sector as the most important municipal responsibility (Moreno-Jaimes 2007a, 142), which is likely to be the case in many countries. Third, reforms that increase the quantity and quality of water provision and sanitation disposal are crucial in humanitarian terms, given that more than half a billion people lack access to potable water and 2.4 billion lack access to sanitation (Joint Monitoring Program 2015).

I marshal evidence from a wide range of primary and secondary sources gathered during field research undertaken between 2007 and 2012. Data sources include interview material, participant observation data, archival material, reports at three levels of government, freedom of information requests, performance indicators for water utilities, economic census data, national water extraction permit data, and extensive newspaper article coverage. I conducted 180 in-depth interviews with mayors; members and presidents of citizen water boards; business leaders; civil servants in local, state, and national agencies; trade union representatives; party leaders; and water sector experts. Finally, for each case I rely on secondary sources in both Spanish and English to analyze the dynamics under study.

41. The water and sanitation sector includes water provision and sewage disposal provision and in some cases sewage treatment. For ease of writing, I use terms such as *water utilities* and *water reform*, although sewage disposal is also a component of the policy arena in all cases under study.

Looking Ahead

Chapter 2 applies the theoretical framework about the role of middle-class and industrial elites in shaping public service reforms in urban Mexico and provides an overview of the political crafting of policy insulation. I discuss measurement of reform outcomes and provide an overview of how these eight cases varied in their adoption of water reforms as a consequence of the presence or absence of middle-class constituency bases, industrialized economies, and new political parties seeking the vote of nonpoor groups.

Chapter 3 examines the history of urban water services under centralized and autocratic PRI rule. Next, I show how macrolevel shifts to market reforms, decentralization, and democratization in the 1980s produced similar policies in the water and sanitation sector. The chapter concludes with an analysis of the role of state governments in municipal service provision after decentralization.

Chapters 4 through 7 present the eight city cases as four paired comparisons that represent four pathways out of centralized, particularistic service provision. Each chapter illustrates two different urban policymaking experiences that share the same pathway toward the reform outcome, showing how diverse contexts can produce similar outcomes given the same set of necessary conditions.

The first two empirical chapters present two distinct pathways toward reform adoption. Chapter 4 presents two cases of extensive reforms in cities with large middle-class voting bases, water-intensive industries, and new political parties catering to middle-class and business constituencies. I demonstrate how León and Irapuato (both in Guanajuato State) adopted reforms through what I call *broad elite incorporation*. In these cases, civil, political, and economic elites were allowed to participate, but popular sectors were blocked from direct involvement in the reform process. This incorporation—which occurred through both institutional mechanisms and informal networks—also allowed reformers to extend the time horizons for reform so that they did not become politically derailed when the initial reformers left office.

Chapter 5 presents two more cases of extensive reforms in cities with large middle-class voting bases, water-intensive industries, and new political parties catering to middle-class and business constituencies. However, in these cities, extensive reforms were achieved through what I call *narrow elite incorporation*. In Naucalpan (in Mexico State) and Celaya (in Guanajuato), reformers excluded the popular sectors, but unlike in

León and Irapuato, they managed civil, political, and economic elites without allowing them to fully participate in the policymaking process. In these cities, reformers endeavored to give the appearance of participation without subjecting hard-earned reforms to reversal by giving too many stakeholders a voice in the process. In these cases, reforms were also consolidated through both institutional and informal mechanisms that allowed reformers to extend the time horizon of local policymaking beyond the administration of the first reform mayor.

The last two empirical chapters outline two different pathways toward reform failure. In Toluca, Xalapa [*ha-la-pa*], Neza, and Veracruz, new political parties took the helm of city government, but the absence of predominantly middle-class constituencies and large industrialized economies made new mayors uninterested in launching programmatic reform projects. Instead, they developed new strategies of public service management in an era of economic and political uncertainty.

Chapter 6 shows how in Toluca (in Mexico State) and Xalapa (in Veracruz), reforms failed to take root, and services have gradually decayed. Programmatic reforms lacked constituent support, and leaders were not insulated from societal demands for special favors in water service that had been routinely distributed under the previously closed political system. Therefore, new political leaders chose to leave the particularistic mode of service provision undisturbed, benefiting personally and politically from this exchange. However, external pressures on the status quo, such as fiscal crises, prompted responses from political leaders and served as a partial restraint on massive looting of public coffers. Yet these responses were short term and incomplete and did not lead to comprehensive reform. As a result, political leaders have been able to keep the system afloat with short-term fixes but have been unable to create sustainable financing models for achieving long-term improvements in service delivery. In these cases, failure to adopt reforms and short-term fixes has led to a gradual decay in services.

Chapter 7 examines reform failure in the cities of Neza (in Mexico State) and Veracruz (in Veracruz State) that have resulted in acute services decay. In these two cities, new political leaders entered office in an environment that lacked the structural conditions necessary to politically incentivize a move from the status quo. Instead, similar to the cases of Toluca and Xalapa, leaders in Neza and Veracruz continued to respond to societal groups demanding subsidized services in exchange for political support. Rather than breaking these ties and initiating reforms, new local political parties used water services as a material exchange to

help consolidate new forms of electoral support in an increasingly competitive political environment. They did so with impunity and little oversight from higher levels of government. The result has been extreme breakdown of public services, resulting in public health crises and irreversible environmental damage.

The final chapter synthesizes the argument and explores its implications for social welfare goals such as equity. Next, the chapter examines how the framework presented in this book may be applied to other sectors outside of water and sanitation and then proposes a broad research agenda for studying citizen participation in public services and government performance after democratization. The chapter concludes with an analysis of the global water crisis as a markedly political problem.

TWO

Accounting for Reform in the Mexican Urban Water Sector

In recent decades, many countries in the Global South have experienced democratic transitions away from autocratic or closed political systems. These transitions have been heralded as precursors to the construction of more just and accountable governments, but in many cases democracy building has been a difficult task and the results have been mixed. While many analysts have focused on rises and falls in *procedural* forms of democracy building after democratization (such as citizen participation and horizontal linkages between citizens), what has received less attention is the role of government performance after democratization in bolstering or diminishing support for democracy.

Scholarship that has focused on democratic transitions has also failed to tease out the impacts of concurrent macrolevel processes—such as decentralization and market-oriented reforms—that created unexpected challenges for improving government performance. Democratic transitions were accompanied not just by economic transitions but also by administrative and bureaucratic transitions such as decentralization. These parallel transitions initially made policymakers optimistic about their ability to improve government functioning. However, in practice these transitions prompted institutional changes that created extensive challenges for improving public services, and in many cases clientelism has persisted and merely been repurposed for new political ends. For many cities, this development has resulted in acute public services decay and poor government performance that has undermined public support for democratic governments. Yet in other cities, unexpected reform coalitions have emerged to drastically improve the functioning of local ser-

vices, well beyond even what federal governments had provided decades earlier.

This chapter presents a general framework for understanding public service reform projects in local settings after democratization. After an analysis of both the conditions likely to impact the political decisions to launch reform projects and the process through which reforms are politically managed, I turn to eight cases to illustrate how this framework can be applied to explain variation in public service reform success and failure after democratic transitions in urban Mexico.

Managing Local Services after Democratization

Navigating Political and Economic Uncertainty

Beginning in the 1980s, many countries in the Global South launched multifaceted plans to lessen the national government's role in public service provision. These macrolevel changes were intended to reduce central governments' fiscal responsibility for public services and shift the burden of public service provision elsewhere—for example, to lower levels of government, to private companies, and to citizens themselves. In some cases, these efforts resulted in privatization, but in many cases, they did not. Instead, these policies presented a new challenge for the subnational state: to produce a level of government performance that had eluded the federal government for decades.

However, the almost simultaneous appearance of institutional changes installed from above—that is, decentralization, market-oriented reforms, and democratization—created a climate of political and economic uncertainty at the local level. In this new setting, local officials began delivering services, many for the first time.[1] But democratic transitions also entailed an increased number of political parties and subsequently a growing number of actors delivering services, rather than a unified, political elite. New mayors, no longer appointed by a central government, had to compete in elections and build or remobilize electoral constituencies. In many countries, numerous small political parties and party coalitions—often many more than the number of parties that were electorally competitive at the state and federal levels—emerged at the local level. Increasing alternation of power between local political

1. For more on administrative and fiscal decentralization and local government performance, see Crook and Manor (1998); Grindle (2007); Landry (2008); Faguet (2012); see also Eaton, Kai, and Smoke (2011).

elites, while important for enhancing democratic accountability, became problematic for policymaking in infrastructure and public service provision, which requires long-term policymaking windows.

Furthermore, market-oriented reforms such as reductions in federal subsidies meant that local elected officials had fewer fiscal resources with which to improve services. In this climate, new mayors stepping into city halls throughout the Global South were encumbered by the historical legacies of clientelism in public service provision that worked against strategies to improve services under a new era of fiscal austerity. New political parties seeking to build electoral constituencies found that charging citizens for services that had previously been highly subsidized or provided (however particularistically) for free would likely alienate or enrage citizens rather than generate political support. In many cases, these tensions led to politically undesirable scenarios that failed to improve and sometimes worsened public services provision after democratic transitions.

Derailed by Short-Termism in Local Government

Policies that improve government performance often require longer time horizons, which runs counter to the shorter time horizons of politics, creating a time inconsistency problem.[2] While in some settings this dilemma is less pronounced (such as with strongly disciplined and programmatic-oriented political parties in advanced democracies), the short-term nature of electoral calendars is often a problem for policymaking for weakly institutionalized and nonprogrammatic political parties, a phenomenon prevalent in developing countries. I find this "short-termism" to be a widespread problem of municipal government in developing countries, and the problem is exacerbated by decentralization, democratization, and market-oriented reforms.

Numerous local-level constraints shorten the policymaking window. First, local governments may have institutional rules that make their mayoral administrations relatively brief. In some countries, local government administrations are as short as three or four years. In Latin America, Mexico, El Salvador, Peru, and Venezuela have three-year municipal administrations, while Argentina, Chile, Brazil, Colombia, Costa Rica,

2. For discussions of intertemporal choice and the politics of temporality, see Pierson (2004); Patashnik (2008); Gryzmala-Busse (2011); Jacobs (2011).

the Dominican Republic, Ecuador, Guatemala, and Honduras have four-year administrations. Short-termism can be further exacerbated in electoral settings where consecutive reelection is prohibited, such as in Mexico, Guatemala, Honduras, and Paraguay.[3]

Second, municipal governments tend to lack or to have weakly institutionalized programs of personnel retention. Administrative capacity may be a widespread problem in many settings, but inexperienced and underqualified staff is particularly pervasive at the municipal level in developing countries (Crook and Manor 1998, 287; Wunsch 2001, 281). Administrative capacity is low in these settings because municipalities are often not included in national civil service programs, meaning that local government positions are often patronage appointments or otherwise follow the electoral calendar, as is the case in Mexico (Camp 2003, 117–22; Moreno-Jaimes 2007b).

Furthermore, mayors often control city councils, replicating systems of centralized control at the local level (Cabrero-Mendoza 2000, 380) and resulting in reform agendas that are overly dependent on the mayor's will. These types of institutional constraints weaken local policymaking capacity and make even the most innovative mayors' reform agendas subject to policy reversal. The possibility of passing socially contentious reforms and making them stick over the long term is an overwhelming challenge in this type of weak institutional environment. Finally, most municipal governments lack a judicial arm that can legislate or otherwise create binding legal action. Consequently, municipal policies are often nonratified in legislation and prone to policy reversal (Cabrero-Mendoza 2000, 379–80; Graham and Jacobi 2002, 312–13).

After political and economic liberalization, the exit of a united political hegemon has in many cases led to a power vacuum at the local level, with extensive clientelistic exchange and limited regulatory oversight. A low-level equilibrium causes public services to degrade, with little to no influx of revenue for maintenance in settings where new political leaders eschew raising water tariffs for fear of political backlash (Savedoff and Spiller 1999). New political leaders, often cash-starved as a consequence of inadequate fiscal decentralization and

3. For more on the link between subnational leaders' consecutive terms in office and better government performance, see Alt, Bueno de Mesquita, and Rose (2011); Ferraz and Finan (2011); Pribble (2015). For more information on electoral rules in Latin America, see Zovatto (2011); http://pdba.georgetown.edu/Elecdata/systems.html (Inter-American Dialogue).

weak taxing capacity at the local level, find that public utility coffers are useful as a petty cash box.[4]

In these scenarios, alternation of power invites greater misuse of the revenue stream as well as ever-changing politicized decisions about which citizen groups receive public services. In these cases, political actors tend to engage in clientelistic service provision in an unregulated manner. There is no hegemonic autocrat who can slow down or otherwise regulate the looting and pillaging by local officials who, all else being equal, may seek to quickly take as much as they can as a result of the short-termism of local government.

State- or federal-level formal regulatory bodies or commissions may exist, but their influence is limited, as most decision-making continues to occur through informal or partisan relationships among power holders. In the power vacuum created after the exit of a hegemonic ruling elite, local leaders tend to receive little assistance in improving service provision and little regulation of their public service coffers. The results are quickly degrading infrastructure and service provision, a very limited system of revenue generation for financing upgrades, and ever-increasing particularism and corruption that is exacerbated by the short-termism of local government.

The Water Sector and the Local Service Provision Challenge

The water and sanitation sector aptly illustrates the local public service provision challenge. Several of the sector's characteristics make it a particularly useful medium for clientelistic exchange. First, it has a high amount of political salience because both water access and sewage disposal are vital to human health and economic development. Economists characterize piped water as having inelastic demand and non- (or low) substitutability. While people may use bottled water instead of piped water for drinking, it is much more difficult to use bottled water for bathing and household necessities, and in urban settings digging a well is often infeasible. Piped water is a highly desirable material benefit for citizens, and citizens of all income levels are likely to have at least some need for it.

Second, piped water delivery is a natural monopoly.[5] Water pipes

4. It is common for expenditures to have been decentralized (through administrative decentralization) but for revenues not to have been adequately decentralized (through fiscal decentralization).

5. Natural monopolies are industries with technical characteristics and economies of scale that make the total cost of production lower when serviced by a single provider rather than by multiple competing providers.

have no alternate use, are bulky, and are expensive to transport, meaning that piped infrastructure is a "sunk cost," or a large, specific and nonsubstitutable investment (Hanemann 2006). Capital investment is generally large in the initial stages of infrastructure development, and providers enjoy a return on investment only over the long run. These technical characteristics make water a material resource that is easily controlled by the state. Most countries have laws declaring water a publicly owned natural resource, meaning that nonstate service providers may extract water resources only with state permission. The state's technological and legal control over water extraction often further facilitates politicians' use of the water sector as a material, state-sponsored resource to be exchanged for political support.

Furthermore, the territorial nature of water—its distribution through piped networks within delineated neighborhoods—often enables political leaders to strategically coordinate service access to match specific electoral districts. Local elected officials may find it more politically beneficial to coordinate the distribution of water access with groups that represent entire voting districts rather than, for example, individual political supporters.

Prior to reforms in the late twentieth century, nondemocratic regimes routinely centralized and administered services throughout much of the developing world. In Africa, Asia, and Latin America, many postwar statist economies relied on irrigated agriculture and were accommodating urbanization for the first time, two phenomena that necessitated large infrastructure investments as part of a broader development strategy (Herrera and Post 2014). These regimes tended to provide piped water either at highly subsidized rates or for free (Smith 2004, 377; Swyngedouw 2004, 39; Zhong and Mol 2008, 899).

This model of service provision began to unravel by the 1970s and 1980s. Existing infrastructure showed considerable wear, and expanding urbanization rates further exacerbated service provision challenges. These challenges came to a head around the same time that many countries faced the fall of the statist economic model in the 1970s, and blind transfers from federal coffers for targeted improvements became increasingly difficult to secure.

In addition, existing water extraction and sewage disposal practices began to have visible environmental consequences. Underground aquifers were increasingly overextracted, especially in drought-prone regions. The doubling and tripling of previous water extraction rates reflected the need to make up for large amounts of water being lost through piped transport when leaky pipes went unrepaired. Sewage,

constantly increasing as a consequence of urbanization and industrialization, received little treatment and was routinely deposited in makeshift urban riverbeds, closed bodies of water, and estuaries. Raw sewage contaminated freshwater supplies, irrigated agriculture, and came into direct contact with both rural and urban populations during heavy rains and floods.

Global policy solutions emerged to address these conditions, which international policymakers viewed as a fundamental problem in statist and highly centralized economies. The lack of an economic valuation of water became central to international financial institutions' diagnosis of the problem and constituted a key component of their proposed solution. To improve services, proponents reasoned, piped water should be viewed as more of private good than a public good. After the 1980s, recommendations for the water sector from international financial institutions and the international donor community emphasized both treating water as an economic good and transferring water management responsibilities to the lowest tier possible, as detailed in chapter 3. Thus, a new emphasis on decentralizing and commercializing water services within the global water community echoed a far-reaching Washington Consensus, or neoliberal, reform agenda.

At least forty-one countries decentralized water services starting in the 1980s, and many of these countries decentralized down to the local level (Herrera and Post 2014, 621). In addition, many countries adopted institutional changes designed to weaken political intervention in public utilities—for example, creating corporatized utilities or utilities that were legally and fiscally independent from municipal governments.[6] These types of institutional changes were intended to facilitate the introduction of market-oriented policies that would treat water as an economic good. Market-oriented policies included the reduction of federal subsidies for local service provision, substantial tariff increases, enforced bill collection, suspending services for nonpaying customers, eliminating clandestine (or informal) connections, and introducing metered service or prepaid meters. These reform initiatives made up a substantial component of international financial institutions' loan conditionality and policy recommendations for the sector and were adopted widely throughout the developing world (Herrera and Post 2014).

When these global solutions were promoted in young democracies

6. In the U.S. context, a significant amount of public water is managed by special districts that were intended to have a similar level of expertise and insulation (Mullin 2009).

with strong clientelistic state-society relations, they unexpectedly created new challenges for improving the provision of public services. Increasing electoral competition pushed against public service reform agendas intended to make utilities more fiscally self-sufficient. Clientelism in service provision, well-developed under autocratic regimes, did not disappear once these new policies and institutions were adopted. Global policy recommendations failed to consider the political context in which these reforms were being implemented, and these approaches consequently have fallen short of providing an adequate blueprint for reform in young democracies.

Accounting for Reform: Conditions and Process

The Conditions: Examining Factors That Launched Reform Projects

Macrolevel shifts propelled the creation of new water service provision arrangements at the local level in Mexico. As documented in chapter 3, the federal government decentralized service provision to subnational governments, and in most large urban centers, city governments became directly responsible for administering water and sanitation provision. Market-oriented reforms in the water and sanitation sector created a cash-starved local environment where revenue from consumer fees became the primary means of financing service upgrades. Alongside these administrative and economic changes, a new political environment emerged. Opposition parties began to win local elections, and new mayors began cultivating new electoral constituencies for the long haul. As figure 1 illustrates, these macrolevel changes prompted adjustments to prior public service provision strategies and created the impetus for crafting new ones as mayors took the helm of city governments.

In this section, I examine three key conditions that prompted mayors to launch reform projects; the presence of (1) middle-class constituencies, (2) strong urban industrialization, and (3) new mayors courting support from nonpoor constituencies.

The Role of the Middle Class

In Mexico, the right-of-center PAN party leaders who came to power did not necessarily support market-oriented programmatic reforms, nor did left-of-center PRD or PRI party leaders necessarily reject them. What mattered most in explaining mayoral interest in supporting reforms was

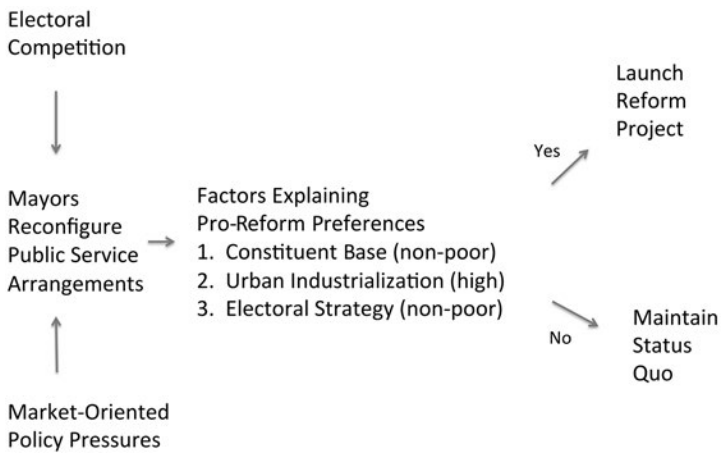

Fig. 1. Determining Whether to Launch Reform Projects

these politicians' primary constituent base and the primary local voting blocs they were courting.

Middle-class communities were better positioned to accept market-oriented policies for several reasons. First, tariff increases for services represented a much smaller percentage of their total income than was the case for lower-income communities. Second, nonpoor communities were likely to welcome service improvements even if they entailed higher costs. This trade-off would likely resonate with middle-class ideals of greater material comfort and a higher standard of living. Indeed, while both middle-class and poor consumers were in the habit of contracting private tankers for their potable drinking water needs, higher-income households also often outsourced water services for other non-subsistence uses such as car washing and swimming pool or lawn maintenance. Third, middle-class communities were more likely to have experienced a higher quality of service prior to reforms than shantytowns or other low-income areas. The initial condition of service quality affected decisions about whether to resist reforms: middle-class consumers who were already receiving some service (even if it was of poorer quality) were less likely to publicly contest tariff increases. In contrast, poor communities were particularly incensed when water tariffs increased dramatically even though they received water only two or three times a week, sometimes late at night, and often with extremely low pressure. Given the distributional preferences of middle-income

communities, they would be more likely than poor voters to politically reward mayors or local political parties who could translate price increases into visible service improvements.

In contrast, reforms were particularly contentious for the urban poor, entailing tariff increases, the elimination of clandestine connections, and the suspension of service as a penalty for nonpayment. Service upgrades financed primarily through user fees from lower-income communities would be so minimal that they would not justify the potential loss of electoral support that backlash against market-oriented programmatic reforms engenders. In addition, low-income constituents would be more constrained by the lower priority that politicians had placed on maintaining their infrastructure. Low-income neighborhoods often already received compromised levels of service, making initial infrastructure upgrades much more costly. In cases where pipes had to traverse mountain ranges or lake beds to reach lower-income communities, upgrades might be seen by the public utility as financially or geographically prohibitive.

The Role of Urban Industries

The industrial makeup of a city's economy helped determine whether politicians were likely to launch programmatic reforms in the water sector and whether those reforms, once launched, were likely to succeed. Cities whose economies relied heavily on industrial manufacturing, particularly where manufacturing depended on reliable water service, were environments that were more hospitable toward programmatic public service reforms. Business leaders played a number of direct and indirect roles in advancing these policies. In some cases, they either pressured the government for reforms or directly oversaw them. In other cases, business association leaders expressed support for reforms but declined or were not invited to participate directly in the reform process. In all reform cases, the presence of water-intensive industries helped underwrite reforms, as utilities were able to implement cross-subsidies whereby high-volume users (e.g., industries) paid tariffs that subsidized low-volume users (e.g., residential consumers).

In Mexico, industrial firms access water supplies either through local utilities or by operating and financing their own water boreholes. As industrialization advanced in the second half of the twentieth century, the unreliability of local systems led many businesses to operate their own boreholes. Indeed, industrial and commercial consumption totaled only 10 percent of Mexico's total water use in 1990 (World Bank 1990, 5).

However, in the early 1990s, federal reforms began to restrict the distribution of water permits for industrial water extraction, forcing industries to rely more heavily on local utilities. The federal government hoped that limiting independent access to water extraction would reduce overexploitation of aquifers and help the federal government more effectively monitor water withdrawals throughout the country. While some industries continue to service their own boreholes or purchase water permits on the black market, many industrial parks rely on water service from the local utility.[7] Cities with more water-intensive industries that lacked registered water extraction permits tended to be cities where reforms went the furthest.[8]

Reform-oriented mayors' ability to incorporate industrial clients into their consumer bases helped determine the financial viability of reforms. While some industries enjoyed subsidies and preferential treatment prior to reforms, many were underserved by deficient and inconsistent services and encountered occasional flooding and other service-related problems.[9] Similar to middle-class constituent bases, industry provided a substantial high-volume consumer base on which to construct market-oriented programmatic reforms, making reforms more financially viable.

The Role of Mayoral Electoral Strategies

Even though not all mayors who came to power in Mexico after democratization were interested in launching public service reforms, the entry of new political leaders unaffiliated with the prior PRI regime was a necessary condition for these reforms. In cities that met the first two conditions—having a substantial constituent base beyond the poor and a highly industrialized economy with water-intensive manufacturing

7. It is difficult to obtain accurate information about the size and contours of the black market for water permits in Mexico, as it is a taboo subject. The sources of black market permits vary: some come from agricultural extraction permits from *ejidal* (or communal) land that has since been privatized; others are grandfathered permits from older industries or businesses; while others are simply fabricated (Interviews #10, 11, 29, 30, 157).

8. I use economic census data to determine the amount of water-reliant industry in each city in this study and review the National Water Commission's water permit registry to determine the extent to which industries in each city had formal permits for their own extraction or relied on the water utility. See appendix A.

9. While different industries rely on different aspects of service improvements (potability, pressure, or reliability, for example), I assume that industries will always prefer reliability (or nonintermittency) and pressure to potability, because the latter has substitutes (such as in-house treatment), while reliability and pressure are difficult to replace.

needs—the entry of new opposition party leaders created the opportunity to derive political benefits from changing the status quo.

When non-PRI mayors began to win elections in the 1980s and 1990s, they faced a number of challenges in the transition period. For example, PRI mayors were so loath to leave office after decades of one-party rule that many burned municipal documents and hid keys to city buildings and automobiles. In some cases, resistance was so fierce that federal troops had to force PRI leaders to concede their electoral losses.[10] In this initially hostile governing climate, non-PRI parties had to navigate municipal policymaking with low levels of experience and often a small number of party operatives, given the newness of opposition parties.

In addition, non-PRI leaders faced the question of how to consolidate power throughout their cities. The PRI had masterfully developed territorially based mobilization networks over decades that could deliver a large number of votes. Loyalty was ensured by the material benefits doled out by the hegemonic party, including free or highly subsidized access to water services.

For opposition mayors coming to power in industrialized cities with water-reliant industries and a strong middle-class base, applying programmatic reform initiatives to the water sector was a political opportunity to kill two birds with one stone. First, eliminating historic water subsidies for low-income users would help reduce the electoral mobilization networks that had previously served the PRI and weaken the PRI-leaning popular sector neighborhood association leaders who had previously delivered votes from their territorial bases. Launching programmatic reform projects helped non-PRI mayors reduce the power of their political enemies, an initiative that was particularly timely during the often conflict-laden entry of non-PRI mayors into city halls.

Second, opposition mayors used water service improvements to build new electoral constituencies based around middle-class and industrial-sector support. In contrast, PRI leaders had less success in eliminating mobilization networks supported by subsidized water. Similarly, opposition mayors who came to power in cities with large amounts of poverty and weak levels of industrialization were not well positioned to transform programmatic reforms into political opportunity.

Ambitious mayors with middle-class and business constituents were better positioned to turn a politically contentious reform agenda into a political benefit. Claiming credit for the reform process could strengthen

10. Interview #171. See also Valencia García (1998, 125); Rico Jordán (2000).

mayors' upward career mobility within the party and help them consolidate burgeoning middle-class electoral constituencies. To benefit politically from reforms during municipal governments' inherently short tenures, mayors launching reform projects widely advertised initial gains in service. Potential examples could include an infrastructure construction project benefiting a wide number of consumers that could be advertised as the project progressed, increasing service quality by increasing water pressure in particular neighborhoods, improving water quality, or improving service reliability.

Reform-oriented mayors and their political and technical advisers used public service reforms to create political capital in the uncertain electoral environment of multiparty rule in the 1990s and 2000s. They deftly used credit-claiming strategies to take personal and partisan recognition for reforms—directing their operatives to place announcements on billboards, on television, on the radio, and in newspapers as well as branding service improvements with the mayoral administrations' logo and party colors. They used the success of these reforms to leapfrog into higher elected office, to seek nonconcurrent reelection, or to obtain other key local or state appointments. Well-advertised initial reforms allowed leaders to advance politically, an effect that would be likely to be even more pronounced in countries where immediate reelection was permitted. Similarly, sector-level actors in the water reform process—at the utility level or more commonly within the citizen water board—went on to become city council members or mayors based on the news coverage and visibility that resulted from programmatic water reforms.

The Process: Examining Reform Implementation as a Sequenced Chain of Events

After the three conditions hypothesized to be necessary for reforms (the presence of a strong middle class, urban industrialists, and new political parties) were in place, implementation required reform architects to politically manage reforms to ensure success. This section examines reform implementation, outlining the causal process of reforms as a sequenced chain of events that are temporally ordered and causally necessary. Reformers needed to replace entrenched and clientelistically oriented interests with new bases of political support, insulate reforms from political conflict, and extend the time horizon of policy adoption. These steps reflect major reorientations in state-society relations and when adopted

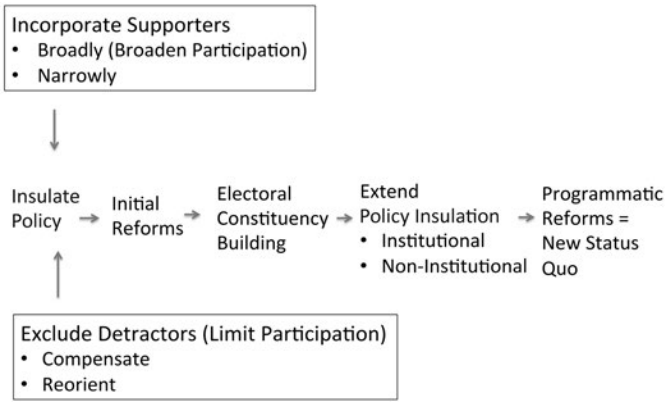

Fig. 2. Local Service Reform as a Sequenced Chain of Events

comprehensively can amount to a major transformation in local state building.

How are public service reform projects politically managed? How are reform initiatives extended over time to implement the types of technocratic changes that are necessary to improve service quality? Figure 2 represents the sequenced chain of events of reform implementation.

Incorporating Supporters and Excluding Detractors

The first step in launching local service reform projects was to organize new forms of political support while limiting the influence of potential detractors. While these two political tasks pulled in opposite directions, both entailed developing new strategies of societal interaction under procedural democracy. This open political setting is one where horizontal (or societal) influence in policymaking is newly salient. Electoral competition increases the importance of building electoral constituencies for political survival, while decentralization shortens the distance between policymakers and their constituencies. Furthermore, architects of decentralization have routinely encouraged stakeholder participation and building new institutions for increasing citizen access to local government. Therefore, the posttransition political setting is one where expectations about citizen involvement are often high. These new sets of expectations shape the repertoires from which reformers draw when incorporating supporters and excluding detractors.

Incorporating Supporters—Broadly or Narrowly

Reform projects require a base of societal support in democratic settings. In particular, reform projects in this new setting require at least the rhetoric or appearance of societal incorporation. However, whether citizen involvement is directly participatory or only rhetorically so and whether societal groups prefer to directly design and execute reform initiatives can vary dramatically. Directly incorporating societal groups to spearhead and implement reform initiatives is not necessary for reform success. For example, technocrats can make changes without direct citizen oversight.[11] Technocrats can poll citizens on their service preferences and design improvements that respond to citizen needs. However, successful service reform projects require a base of public support that may or may not include the direct participation of key groups.

In what I call the broad incorporation scenario, political leaders incorporate supporters by designating seats at the policymaking table for key societal groups. Broad incorporation refers to the creation or reinvigoration of institutional formats for direct citizen influence in the policymaking agenda. Broad incorporation may be achieved through numerous institutional channels—for example, creating citizen boards or councils to oversee public service provision, public assemblies, neighborhood committees, and auxiliary planning committees whose deliberations are institutionally designed to advise service providers. The degree to which influential social groups are incorporated broadly will likely depend on factors such as the identities of the key economic and social groups in a particular urban setting, whether these interests are aligned with improving the functioning of the public service in question, and whether the elected officials in question value sharing power and influence with these key groups. For example, societal groups may be organized by economic sector (such as in professional associations), territorially by neighborhoods or districts, or by racial, ethnic, or cultural affinity. If a particular city has legacies of pluralistic or community-oriented practices, this may expedite broad incorporation. Nevertheless, broad incorporation is unlikely to occur without a supportive elected official, political party, or other political

11. In fact, technocratic solutions may be more effective in urban public service contexts as a result of population size and the complexity of infrastructure design. Large populations can make democratic solutions to complex problems more challenging.

leader. Even when local societal elites lead a reform process or directly shape its content, creating and maintaining participatory programs requires political support (Wampler 2007, 35–37).

Reform adoption can also succeed when political leaders engage in what I call a narrow incorporation scenario. Rather than creating and sustaining venues for direct citizen oversight of reform initiatives, reform leaders may adopt a more insulated reform strategy. In this scenario, technocrats receive political support and operational autonomy to implement reforms without direct citizen influence. Technocrats may poll consumers to determine their preferences for reform content. But this type of preference polling would intentionally be organized to determine consumer preferences about service content[12] and would purposefully exclude citizens from shaping the broader, macrolevel, and long-term planning of reform changes.

Some leaders may find that narrow incorporation is a useful strategy for pushing through contentious reforms because it limits the number of veto players. Narrow incorporation may also be helpful in excluding potential opponents of reform who might attempt to infiltrate participatory institutions and deter or reverse the reform process. Narrow incorporation is most likely to occur where legacies of horizontal linkages and pluralism are particularly weak and where reformers anticipate strong resistance to initiatives from entrenched societal groups or competing political parties. In these settings, reform leaders may bypass broader participatory frameworks to protect contentious reforms.

Excluding and Compensating Detractors

Public service reform projects during political transitions require dislodging entrenched interests associated with the previous political establishment. Reformers must politically manage detractors, excluding actors seeking to derail the reform process, compensating potential losers to defuse conflict, and wherever possible turning detractors into reform supporters. This delicate political dance requires flexible strategies of compensation and negotiation. Local actors with context-specific knowledge are likely to have more success in designing these strategies than international actors with macrolevel one-size-fits-all solutions.

12. For example, determining different households' ability to pay and methods of payment and the specific service needs of different neighborhoods or industries.

Public service reform can entail a great deal of conflict. Poor communities that rely heavily on informal arrangements and have less income to soften the blow of tariff increases are likely to oppose policies such as suspending services for nonpayment and eliminating clandestine service connections. The stronger and more pronounced the clientelistic exchange for public services under the previous political regime, the more conflict-ridden these changes are likely to be. Elites may have also been accustomed to receiving subsidized services as well as influencing or controlling the allocation of public services to the broader community.

Elites are more likely to use personal and professional connections to resist these new policies, while poor urban communities are more likely to mobilize collectively in mass movements. Reformers are likely to manage these two types of conflicts differently. With respect to managing elites, limiting their influence in the reform agenda-setting process may be an initial first step toward managing detractors, which may be achieved by narrow incorporation. However, dislodging these entrenched interests may require additional rounds of negotiations and compensation. Elites or key industries may be reoriented from alignment with the previous regime to supporting programmatic provision through a range of strategies that temporarily defuse or curtail conflict until broader, more comprehensive service upgrades can be realized. These strategies could entail, for example, providing special access to information, quickly implementing ad hoc and targeted service upgrades, and replacing immediate tariff hikes with graduated pricing arrangements that serve as transitions away from fully subsidized provision.

In contrast, managing political conflict from popular sector groups may entail strategies designed to defuse and negotiate around threats of organized collective action. The popular sector may generate social backlash through sit-ins, strikes, marches, and mass demonstrations. In some contexts, this backlash may even entail looting, rioting, and other forms of violence. These activities are likely to receive media coverage, further expanding the conflict and jeopardizing the reform project. Reformers must negotiate with protest leaders and devise solutions that compensate nonelites and defuse conflict. Short-term strategies that compensate protesters may include flexibility with new pricing arrangements, meter installations, and service suspensions. Service providers may also incentivize payment by raffling off household items or creating similar inducements. Longer-term strategies may include creating

means-tested subsidies for low-income users. Disembedding societal ties that supported clientelistic service provision requires excluding reform detractors from primary decision making in the reform project and compensating these detractors through negotiations and material and informational inducements.

Building Policy Insulation

Dislodging entrenched interests and incorporating new forms of support are the first steps toward insulating reforms from political conflict so that technocratic changes can be implemented. Policy insulation is not a onetime event, nor does the principal reform leader construct it alone. Rather, it is a symbiotic and ongoing relationship between elected officials, technocrats, and societal groups. Policy insulation occurs when elected officials defend and uphold technocratic changes that may be socially contentious but do not seek to directly intervene in the daily operations of the agency. When a policy project is insulated, elected officials allow operational autonomy but simultaneously provide political support. When elected officials provide political support, they manage and oversee the political negotiations and social conflict in a manner that does not derail the overall reform initiative. They do not make particularistic demands about who receives services and how much they will pay, nor do they seek to reroute public service revenues for other purposes. Political support softens social conflict surrounding contentious reforms. In contrast, elected officials who engage in political intervention do not provide operational autonomy to service providers and seek to use services through individualized, selective political exchanges. Policy insulation is an interactive relationship that requires maintenance over time, but initial policy insulation is the foundation on which programmatic service delivery can be constructed.

Extending the Time Horizon of Policy Insulation

Comprehensive reforms require time and continued maintenance. Infrastructure construction is never completed overnight and can often be stalled by logistical but unavoidable problems such as the slow-moving nature of federal transfers or an inability to build during rainy seasons. The interconnected nature of networked infrastructure often necessitates targeted updates at multiple points in a grid before service quality

visibly improves, which can often take years of continual tweaking. Therefore, the success of programmatic reforms requires an extension of the typical short time horizon to protect reforms from political conflict for more than one political administration. Reformers may invest in both formal and informal means of extending the time horizon of the reform project and will likely need to creatively engage in both.

Formal time horizon extenders create institutional changes that extend the time that reform policies are insulated from political derailment. For example, citizen boards can be created with bylaws that force members to limit their terms (so they do not serve indefinitely) but stagger when members are replaced (so that board member replacements do not mirror the electoral calendar). This can insulate board member autonomy and limit partisan intervention. State and national laws can further reinforce these types of local bylaws. State or federal laws, regulatory agencies, and citizen watch groups are some examples of institutional and societal supports that can help make policy reversal more challenging for incoming political leaders. Formal time horizon extenders are most likely to create policy insulation over time when accompanied by informal means of policy continuity.

Informal time horizon extenders are noninstitutional strategies of policy continuity. Informal policy continuity requires initial reform leaders to remain influential in city politics for long enough to protect the reform project over multiple mayoral administrations. Reform leaders may be, for example, mayors, local party leaders, or social leaders. Political leaders may be reelected or may continue to influence the reform project by remaining politically powerful (for example, by becoming city council member, party leader, governor, or so on). Reforms are more likely to be stewarded successfully over time by either initial reform leaders or their acolytes. The same political party staying in power over time will not, all else being equal, be a sufficient means by which to extend the time horizon of the reform project as a consequence of political parties' propensity to form rival factions, a phenomenon that field research revealed is particularly pervasive at the local level. In other cases, social leaders (from industry or professional associations, for example) are well positioned to bypass short-termism because the duration of their influence is not dictated by electoral calendars. They can help extend policy insulation from the vantage point of membership on citizen service provider boards or other relevant sector-specific or community organizations. These types of noninstitutional factors require leadership, creativity and experimentation.

Finally, these strategies are further enhanced by relying on informal ties with higher levels of government that utilize professional, personal, or partisan ties to obtain resources and protect reforms from derailment. These ties are common in clientelistic forms of provision but can also be instrumental when crafting and sustaining programmatic provision by expediting resource allocation, construction projects, and a whole range of other tasks that are necessary for implementing reforms. Programmatic service provision is not premised on eliminating these types of informal interactions; they are, in fact, crucial to the success of reform implementation. Reformers who implement programmatic public service delivery repurpose personal, professional, and partisan relations between levels of government and across community associations to support the overall reform project.

Measuring Service Improvements

How can programmatic provision of public services be measured across different cases in a meaningful way? While public sector reforms could be defined in a variety of ways, I am most interested in reform successes as improvements in the quality of government services being provided—that is, their effectiveness, efficiency, responsiveness, and accountability. I am interested in improvements in the performance of public sector agencies and the accompanying decline in discretionary and particularistic decision making that is associated with local public service reforms. The outcomes analyzed in these eight city case studies are the extent of service improvements and decrease in discretionary allocation of water and sanitation services. While these categories are derived from reform initiatives in the water and sanitation sector, they apply to a wide range of reforms that are intended to improve the quality and programmatic content of public services.

The approach I chose to measuring public service reforms incorporates three components of public service performance: (1) fiscal health changes, (2) operational changes, and (3) institutional changes. These three aspects of public sector performance work together in a feedback loop, and the extent to which comprehensive reform emerges depends on the interlocking adoption of these three changes. These reforms must complement one another because visible improvements in service provision, customer relations, and workforce efficacy help to further justify consumer costs such as fee increases, more rigorous fee collection, and the elimination of clandestine connections. I compiled data on

twenty performance indicators that correspond to these three dimensions of public service reform to measure performance outcomes, outlined in table 1. I provide a discussion of the operationalization and measurement choices in appendix A.

This exercise led to scores for each of the eight cases in each subcategory of fiscal, operational, and institutional changes as well as a total

TABLE 1. Twenty Performance Indicators Measuring Water and Sanitation Provision

Fiscal Changes: Increasing Fiscal Health and Reducing Discretion in Pricing and Collection Practices

1. Creating Tariffs That Reflect Consumption
   - Were new tariff-setting structures for water service created that were a function of quantity of water consumed, in contrast to an annual payment unrelated to consumption?
2. Creating Uniformity in Pricing of Additional Services
   - Were additional services—such as new service installation, meter installation, and new tube placements—uniformly priced for all consumers?
3. Automating Tariff Setting Practices[a]
   - Were tariff-setting decisions automated to promote gradual and periodic increases through indexing to inflation or the minimum wage, as opposed to being discretionarily determined on an ad hoc basis?
4. Aligning Tariff Setting Practices with Cost of Administering Service
   - Were tariff-setting methodologies created to promote tariffs that reflect at least some portion of the cost of providing service in that location?
5. Creating Transparency in Tariffs and Pricing Policies
   - Were rules about tariff-setting practices made public and regularly disseminated to consumers?
   - Was the presentation of information clear and easily accessible to consumers?
6. Measuring Consumption[b]
   - What is the percentage of homes with meters installed?
7. Enforcing Payment
   - Were service-suspension policies for nonpayment created and uniformly enforced?
8. Reducing Clandestine Access
   - Were policies enacted that routinely monitor and eliminate clandestine connections?
9. Creating Ease of Payment
   - Were new, "easier-to-use" payment options created to facilitate bill payment? For example, did agencies create electronic modes of payment and new payment locations throughout the city in outlets such as shopping centers, grocery stores, and banks?
10. Promoting the Culture of Payment
    - Were civic outreach programs created to promote a culture of payment underscoring the relationship between tariff payment and service improvements?

Operational Changes: Improving Service Provision Quality, Quantity, and Reliability

11. Decreasing Water Loss
    - Were leaks elimination campaigns undertaken to increase water supply and minimize water loss (for example, comprehensive pipe replacement programs in targeted neighborhoods)?

12. Standardizing Water Pressure
    - Were water pressure regularization strategies adopted (for example, creating elevated storage tanks or applying breakers at the initial points where water enters the network grid) to guarantee water pressure for all users, not just the ones living closest to the water sources?
13. Automating Network
    - Did the network grid become more automated or digitized through comprehensive strategies such as sectorization? These are technical and administrative procedures enacted to systematically measure how much water enters and exits the grid. These measures decrease water loss and reduce propensity for operations workers to create black markets in water.
14. Improving Water Quality (Potability)
    - Were water quality testing procedures implemented (as measured by the increase in potable water treatment plants, adherence to testing methodology, and tracking water quality indicators)?
15. Treating Sewage[c]
    - Are sewage treatment plants being constructed and becoming operational in a timely fashion?

Institutional Changes: Improving Bureaucratic Administration and Government Responsiveness

16. Improving Workforce Professionalization
    - Was the workforce required to undergo further training? Were employees well suited for their positions given their training, education, and experience?
17. Improving Human Resources Management
    - Were new protocols for work staff and job responsibilities created and clearly communicated to work staff? Were there redundancies and inefficiencies?
18. Reducing Overstaffing[d]
    - Was overstaffing controlled so that the utility did not have a number of workers on payroll that greatly exceeded the number needed for the number of consumers being served?
19. Improving Responsiveness to Consumers
    - Were new efforts to increase responsiveness to consumers implemented? For example, did agencies create new customer service centers, telephone hotlines, and track consumer satisfaction data?
20. Improving Access to Information for Consumers[e]
    - Did the utility have a functioning website independent from City Hall?
    - Did the website provide relevant and accessible information to consumers?

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[a]The range of potential scores for this indicator is: 0 = no; 0.5 = indexing to minimum wage or similar category; 1 = indexing to cost calculations or similar category.

[b]The range of potential scores for this indicator is: 0 = ≤ 29 percent consumers are metered; 0.5 = 30–69 percent consumers are metered; 1 = ≥ 70 percent consumers are metered.

[c]The range of potential scores for this indicator is: 0 = no treatment plant; 0.5 = plant is under construction to treat > 90 percent of sewage; 1 = plant is in operation with > 90 percent of sewage treated.

[d]The range of potential scores for this indicator is: 0 = ≥ 7 employees/1,000 connections; 0.5 = 5–7 employees/1,000 connections; 1 = ≤ 4 employees/1,000 connections.

[e]The range of potential scores for this indicator is: 0 = no changes; 0.5 = website exists but is not functional or accessible; 1 = website exists and is both functional and accessible.

numerical score for each of the cases, as shown in table 2. By giving each reform case a numerical total reform score, the changes in public service reforms can be compared in a meaningful way and general categories of high performers and low performers can be identified. As table 2 indicates, there are two broad categories of performance, with León, Irapuato, Naucalpan, and Celaya performing in the top half and Toluca, Xalapa, Neza, and Veracruz performing in the bottom half. Neza and Veracruz are extremely low performers, with scores of 5 out of 20, whereas Toluca and Xalapa have scores that make them closer to average rather than remedial performance.

Four Pathways toward Reform Adoption and Failure in Mexico

Four distinct patterns of managing water provision after democratization emerged in these eight cities, with two patterns leading to reform adoption and two patterns leading to maintenance of the status quo. Figure 3 illustrates these four pathways.

The first two pathways led to extensive reforms in four cities (León, Irapuato, Celaya, and Naucalpan). These cities had a strong industrial demand for good water service that, prior to reforms, industries had overcome through ad hoc and suboptimal improvisations. In addition, middle-class constituencies were strong, with a diverse middle-class and some upper-middle-class groups. These conditions brought the center-right PAN party to power in the first historic transfer of power that these cities had ever experienced. These first PAN mayors had varying degrees of qualifications, leadership skills, and competent staff, but they all shared a singular interest in defending their mayoralty against the hostile and extremely contentious political and social environment. PRI-based social networks, local PRI politicians, and city council members worked together to challenge the authority and policymaking initiatives

TABLE 2. Measuring Reform Initiatives in Research Cities

Dimensions of Reform Initiatives	León	Irapuato	Naucalpan	Celaya	Xalapa	Toluca	Veracruz	Neza
Fiscal Changes	10	9	9	9	6	4.5	2.5	3.5
Operational Changes	5	5	3.5	4.5	3	3	1	0
Institutional Changes	5	4	3.5	2.5	1	2	1.5	1
Total Reform Score	20	18	16	16	10	9.5	5	4.5

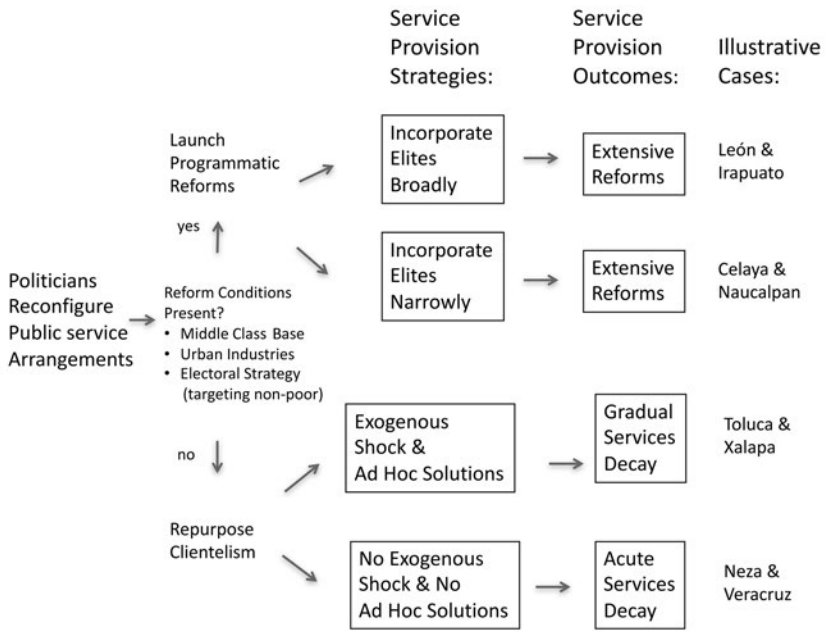

Fig. 3. The Politics of Local Service Provision in Eight Mexican Cities

of new PAN leaders, and these leaders looked for ways to defend their interests and undermine the deeply entrenched power of the PRI opposition. One such method was water service reform, which was adopted in these four cities to weaken the political opposition and build new middle-class electoral constituencies. Water reforms—and the ensuing increase in water tariffs, elimination of clandestine connections, and service suspensions for nonpayment—allowed the PAN to weaken the PRI's political base of support, which had previously been sustained in part by highly subsidized or free water. As organized sectors of society came into the PAN-led water utilities with subsidized water pacts that the previous PRI regime had historically maintained, the PAN found it politically useful to end these agreements, calling for individual and rule-based (rather than collective but contingent) exchanges for public services. When mass social protest ensued, the PAN in these cities negotiated with popular sector groups, creating some ad hoc and informal subsidies to mitigate social protest, but continued to apply the majority of programmatic changes and protect reforms from political derailment.

In these four cities, citizen water boards were created to oversee water

service, but they excluded the direct, autonomous participation of popular sector groups for two reasons. First, the PAN feared that popular sector neighborhood association leaders would derail the reform process by continuing to demand free water services and extensive clandestine connections. But the PAN also feared that if citizen water boards were not controlled, the PRI would infiltrate this participatory institution and block policymaking on partisan grounds. In the four cases where extensive reforms occurred, popular sector organized groups—seen as protectors of clientelistic modes of exchange—were blocked from direct participation in the reform process.

The two distinct service provision strategies that led to extensive reforms differed in the extent to which middle-class and elite citizens were allowed to participate in the policymaking process. In León and Irapuato, citizen elites were allowed to directly participate in the reform process (broad elite incorporation). In these two cities, societal elites had longer histories of pluralistic engagement in city government, although this was much more pronounced in León than in Irapuato. In both cases, business elites, professional associations, and middle-class groups headed up the citizen water boards and directly oversaw the reform process. In León, business elites and other professional association members directly led the reform process to a remarkable extent, creating a level of policy insulation that was extraordinary compared to the other cases in this book. In both León and Irapuato, citizen elites and technocrats negotiated with popular sector groups over tariff increases, distributing some small concessions to protect reforms from further derailment, and enjoyed widespread political support from PAN mayors without direct and selective political intervention. Mayors advertised the autonomy of decision making in the water boards and took credit for reforms when doing so was politically convenient. In these two cities, water reforms were part of the PAN's larger project of consolidating middle-class electoral support through programmatic government reforms.

In the cities of Celaya and Naucalpan, PAN mayors and their teams catered to middle-class and industrial interests in programmatic reforms but did so without extensive direct participation by these groups in the policymaking process (narrow elite incorporation). In these two cities, societal elites had not previously developed strong and expansive modes of pluralistic engagement in city government. In addition, the PRI remained very strong and deeply entrenched throughout these two cities—much more than in the two other high-reform cities. Therefore, PAN mayors in these cities chose to engage in water service reforms as a means

to reduce the PRI's power and engage in constituency building but did so in a more insulated and less participatory manner than what occurred in León and Irapuato.

Mayors and citizen elites used both formal and informal means of extending the time horizon in these four cases of extensive public service reforms. In particular, mayors promoted long-term policymaking by creating institutional rules for the citizen water boards that disconnected members' term renewals from the electoral calendar and promoted consecutive terms for members (but with term limits). Reformers also relied on formal or institutional resources from their state governments, which were more readily available in the three cities located in Guanajuato State (León, Irapuato, and Celaya) than in Mexico State (Naucalpan), as discussed in chapter 3. Mayors used an extensive array of informal means to extend the time horizon of local government, including encouraging their successors to retain utility personnel and citizen water board members over multiple administrations and using political negotiations, personal and professional connections, and extensive advertising to build broad support for reforms that helped sustain the reform project after initial reform leaders left office.

In contrast, the four cities of Toluca, Xalapa, Neza, and Veracruz did not launch public service reform projects on the eve of democratization, and dramatically different public service provision strategies ensued. In these four cities, the three initial conditions hypothesized as necessary for adoption of programmatic reforms were missing or only partially present. In all four cities, new political parties did come to power—in Toluca and Veracruz, the center-right PAN; in Xalapa and Neza, the center-left Convergencia and PRD, respectively. However, despite the entry of these new political parties, the extent to which these cities had predominantly middle-class bases and industrialized economies with water-intensive industry determined the party's approach to public service provision. In Toluca and Veracruz, the limited presence of water-intensive industry and an insufficient middle-class constituent base made water reforms politically unattractive to new PAN mayors, who instead chose to maintain the status quo despite the PAN's commitment to programmatic and market-oriented reforms in other settings.

In these four cities, new political parties that came to power were not willing or able to undo clientelistic linkages in water provision and instead found it more politically useful to continue the mode of particularistic service provision that had been pervasive under the PRI. In these cases, political leaders found it useful to repurpose clientelism for new

political constituencies. Party leaders and lower-level bureaucrats also found the utility a useful source of revenue and used the paltry but otherwise unsupervised water revenue as a cash box for other priorities, both in other sectors and for personal gain, with few restrictions. The citizen water boards in these four cities were directly controlled by party leaders and uninsulated from demands by popular sector groups that negotiated the ongoing use of clientelistic exchanges in water service.

However, in Toluca and Xalapa, exogenous shocks and resources led to some problem solving by authorities that kept the system afloat and led to gradual rather than acute water services decay. In Xalapa, a canceled privatization contract for a sewage treatment plant negotiated by the previous PRI mayors stuck the Convergencia leaders with a massive debt obligation, paving the way for some revenue collection and lip service to tariff increases as local authorities struggled to deal with the political and fiscal fallout. Xalapa's leaders did not engage in extensive reforms, but some revenues were raised in a manner that circumvented contentious tariff increases to keep the utility from declaring bankruptcy and being recentralized back under the state government. In Toluca, while political leaders failed to launch reform projects, savvy lower-level technocrats obtained resources from the state and federal governments, obtaining some revenue to keep the system afloat despite the utility's political inability to dramatically increase water tariffs, institute collection practices, or collect past due payments.

Finally, in Neza and Veracruz, the PRD and the PAN, respectively did not experience an exogenous shock or have access to resources that otherwise altered their service provision strategy. In both cities, mayors repurposed clientelism for new political ends using a variety of selective individual exchanges. Water service access was bartered with powerful societal groups, from popular sector groups to small businesses, in exchange for political support. Patronage was the dominant form of appointment in these utilities, leading them to be administered by personnel many of whom had little education and most of whom had no prior experience in the water sector. Lower-level operators sold water access for bribes, pocketed water fees, and even started new businesses (like water bottling companies) using city supplies. New personnel, technocrats, and politicians might object to these practices but could not undo a deeply entrenched and profitable set of practices. In these two cities, services deteriorated quickly, and so did the urban environment and the city's dwindling water supply.

Conclusion

This chapter advances a theory of local public service reform after major political and economic transitions. Democratization and market-oriented reforms created electoral competition during a time of austerity, and decentralization reforms transferred this tension onto local governments. These macrolevel changes launched new public service arrangements in an era of political and economic uncertainty. Reducing clientelism in public services is most likely in cities with strong middle-class bases, industrialized economies, and new political parties catering to the nonpoor vote. I distinguish between the necessary conditions for reforms and the causal process that leads to reform outcomes. In the cases where reform conditions exist, reform coalitions may choose to incorporate societal groups either narrowly or broadly in the policymaking process. Disembedding clientelistic service provision can be a highly contentious process, and successful reform coalitions can insulate policymaking from political pressures and protect reforms by controlling participation, at least in initial stages.

I apply this theory of local public service reform to the water sector in eight Mexican cities. I measure programmatic water reforms using a twenty-point indicator scale and identify two broad patterns of reform—adoption and failure. I then evaluate four pathways toward reform adoption and failure and draw two major conclusions. First, successful reform adoption strategies blocked popular sector participation and controlled—to varying degrees—elite participation to protect reforms from political derailment and insulate policymaking from individual, selective demands for public service access. These were top-down reforms with a coercive element—participation was controlled and popular sectors were blocked from influencing the policymaking agenda. However, these strategies resulted in a public service provision that was more public—that is, less individual and selective and more transparent and accountable—in terms of government responsiveness to consumer demands for quality public service.

Second, in the cases of failed reforms, public service provision deteriorated and city governments became increasingly paralyzed by individual, selective demands on public services. In these cases, disorganized clientelism can be more damaging than the clientelistic service exchange strategies that existed prior to democratization. Unchecked by a political hegemon or regulatory authority, local public services have become a

politically important resource for local leaders looking to build new electoral constituencies based on clientelistic exchange as well as a fiscal resource easily diverted for other professional or personal uses. These dynamics have worsened the quality of government and dramatically undermined expectations for greater accountability and transparency after democratization.

THREE

Water and Particularistic Politics in Urban Mexico

A Historical Overview

While Mexico has transitioned to multiparty rule in the last two decades, the legacies of autocratic rule continue to linger and reemerge as different parts of the country experiment with political opening. Juan, a local bureaucrat I interviewed in 2008 at the PRI-controlled Veracruz state water commission, remembered that just a few years earlier, PRI party brokers would enter the state offices on election days, "borrow" everyone's state employee identification cards, and use these cards to stuff the ballot box. He seemed surprised that his superiors had allowed me to interview him, given that the PRI continued to tightly control the government and that the state had yet to transition to opposition rule.[1] Juan had been a state employee for thirty years, and he remembered how the PRI had controlled all aspects of water and sanitation services throughout the country until recently. But in the preceding ten years, the party had been forced to make room for other political parties and societal actors—however begrudgingly and incompletely. As Juan explained the history of the PRI's political control of the state's urban water and sanitation services, he provided a window into the persistence of clientelism and particularistic politics in Mexico after democratization.

This chapter illustrates the political role of urban water service as it emerged under Mexico's one-party rule and its changes following democratization. It provides a broad overview of the development of auto-

1. Interview #107.

cratic rule in twentieth-century Mexico before turning to initiatives beginning in the 1980s that loosened federal (and one-party) control over the economy, the bureaucracy, and eventually and unenthusiastically the political system itself. The chapter then examines federal initiatives that have promoted a more programmatic and less particularistic form of service delivery in an era of neoliberal policymaking. While federal-level initiatives in the sector—influenced by international financial institutions—have attempted to create rules and institutions promoting programmatic public services, their local-level adoption has varied greatly across the country, as chapters 4 through 7 illustrate. In some settings, the legacies of clientelism in water service have proven too sticky or too politically attractive to shake.

The chapter is divided into four sections. First, I present an overview of the creation of centralized and exchange-based rule under the PRI and explore how the nation's urban water networks developed under this closed political system. Second, I trace the global advocacy networks that promoted shifts toward treating water as an economic good and decentralized management in the developing world, all of which had a significant impact in Mexico. Third, I examine the PRI's 1980s fiscal and political crisis, which prompted economic liberalization and decentralization across many sectors, including urban water and sanitation. Finally, I explain state governments' new role in these new federal initiatives, setting the stage for the empirical chapters—where different cities benefited from varying levels of support from state governments when implementing reforms.

Autocratic Rule and Water in Mexico

Centralization and Patronage under One-Party Rule

Historically, a substantial gap has existed between the structure of the Mexican government in theory and its functions in practice. Formally, Mexico has been a federal system since its inception, but until recent decades, substantive federalism was extremely limited. Throughout most of the twentieth century, Mexican federalism developed into its own brand, with extreme concentration of powers in the center despite its formal federal architecture (Rodríguez 1997, chapter 2).

The construction of Mexican federalism dates back to the country's colonial origins. While the Mexican territory has been ruled firmly

from the center since as far back as the Aztec empire, it was a reaction against the Spanish colonial tradition of central control that provided a foundation for the future organization of Mexican federalism. As Nettie Lee Benson observes, "Federalism . . . was adopted in 1823 because it was the only possible way to unite and solidify a country which, under the influence of a Spanish institution, had broken up into independent provinces that were verging on becoming independent states or nations."[2] During this period, each of Mexico's twenty-two provinces was considered an autonomous political division with a political chief who was responsible to the Cortes in Spain. The Cortes, realizing that the American provinces resented previous Bourbon centralization efforts, created two new home rule institutions: the provincial deputation (which consisted of locally elected members and an appointed executive) and the constitutional *ayuntamiento*, which introduced popularly elected officials for overseeing city government (Rodríguez O. 1994, 4). These subnational divisions adopted during the early nineteenth century provided an important blueprint for the creation of Mexican federalist institutions after independence.

Internal conflict and war destabilized the nation throughout the nineteenth century. Damage to the nation's infrastructure, agriculture, and economy caused by the wars of independence led to a period of political and constitutional crisis that left Mexico virtually ungovernable. During its first fifty years as an independent nation, Mexico was unable to found stable institutions of political rule, leaving the traditional oligarchy (i.e., the church and landed elites) substantially weakened (Collier and Collier 2002, 114). During this period, the federal republic possessed a weak executive and a powerful legislature, and the national government lacked authority vis-à-vis the states. These tensions—between local and regional bosses and the center and between congress and the president—generated support from different political and economic interests for a more stable political system under tighter control from the center.

Mexico's tradition of unilateral executive rule began under Benito Juárez (1861–65, 1867–72) and was consolidated under the oligarchic rule of Porfirio Díaz (1877–80, 1884–1911). Upon coming to power, Díaz squashed the infighting and reordered the Mexican political system through executive supremacy over legislative and judicial branches as

2. As cited in Rodríguez (1997, 18).

well as over the states, presiding over a period of relative stability often called the Pax Porfiriana. The growth of the oil sector, foreign expropriations, and rapid industrialization swelled the nation's coffers. Díaz gained widespread political support by extending the country's newly acquired wealth to local regional bosses—many bosses were content to exchange local autonomy for a share of federal revenues (Rodríguez 1997, 19). The Díaz dictatorship exchanged economic stability for political support, ensuring the rule of a highly centralized government that used strongman (caudillo) politics to legitimate extraconstitutional powers and a hyperpresidentialist rule.

Díaz's oligarchic state collapsed with the 1910 Mexican Revolution, and after nearly a decade of civil war, the country's 1917 constitution launched the interventionist state that would develop under the PRI. The new constitution inscribed the gains of the Mexican Revolution by promoting a liberal project (of individual rights, effective suffrage, and rule of law), a social welfare agenda, and a nationalist-oriented state (Bailey 1988, 6; Collier and Collier 2002, 103). The nationalist, proworker state that emerged from the Mexican Revolution provided the rhetorical legitimacy needed for a broad range of reforms, and the following decades saw an expansion of federal authority in most aspects of Mexican society.

Under Lázaro Cárdenas (1934–40), the Mexican government launched institutional and economic development plans based on progressive ideas and concentrated technical capacity and fiscal resources in the federal government. Cárdenas used populist reforms such as land distribution, state protection of labor, and nationalization of the petroleum industry to strengthen the central government. Cárdenas also created a political party, eventually called the PRI, organized into key sectors (industrial labor, peasants, middle class, and the military) with parallel organizations in society. The president became the arbiter of interests between these four sectors, creating an enduring corporatist (rather than pluralist) organization of interest intermediation that was the hallmark of PRI rule.

Ruth Collier (1992, 39) argues that two features of the Mexican regime were especially important: first, the nature of one-party dominance that was founded on an inclusionary regime that claimed to represent the entire population; second, labor's support for the state and the institutionalization of a state-labor alliance that provided the PRI regime with a wide number of political resources. Elections were especially important

in regime continuity. Kenneth Greene (2007, 12) notes, "The key feature of dominant party systems is that elections are meaningful but manifestly unfair." Scholars have offered different explanations for the PRI's domination for nearly seven decades. The role of interlocking union-party leadership and the acquiescence of labor, concessions to business, mass fraud, corruption, and the co-optation of political opposition were all political maneuvers that the PRI deftly handled for decades. All of these practices were made possible by the state's control of material and economic resources, which the party used to win supporters and control the opposition (Magaloni 2008).

There is broad consensus that the PRI distributed material benefits in exchange for political support (Ames 1970; Hansen 1971; Needler 1971; Collier 1992; Dresser 1994; Fox 1994; Wayne, Craig, and Fox 1994). Cornelius notes (2004, 48), "Particularistic material rewards—everything from minor kitchen appliances to land titles to public-sector jobs—were routinely and systematically used to purchase electoral support." Magaloni (2008, chapter 3) shows how before elections became competitive, the PRI flooded districts at election times with generous government spending and that other policy instruments such as the money supply, wages, inflation, and economic growth all moved according to the electoral calendar. While the PRI's doling out of material and political resources has been well documented with respect to organized labor (Collier 1992; Murillo 2001; Collier and Collier 2002), rural labor and agricultural policy (Fox 1993; Harvey 1998; Collier and Collier 2002; Kurtz 2004); and business elites (Camp 1989; Schneider 2004), the distribution of rents took on particular qualities when administered by PRI operatives in the urban setting.

Urban interest intermediation in Mexico occurred through local PRI brokers such as city hall workers, party operatives, and neighborhood association leaders. Urban party brokers were especially busy as rural workers migrated into cities in large waves after the 1960s. Urban brokers doled out particularistic material benefits as well as symbolic benefits that at times had little material value but were nonetheless important for generating mass support (e.g., constructing plazas) or sponsoring local entertainment (e.g., circuses). Martin Needler observes,

> The PRI plays somewhat the same role with respect to the newly urbanized that was played by the urban political machines in the northern United States with respect to new immigrants in the nineteenth

> century. That is, party politicians make the cause of the poor their own, intervening with the bureaucracy to secure jobs or licenses, to arrange bail, to clarify title to plots of land, and so on. (1971, 86)

The party's ability to meet the demands of the urban poor, however incompletely, reinforced the PRI's political hegemony in urban settings, as "the distribution of breads, circuses, and other symbolic and material payoffs [was] sufficient to appease or enlist at least the tacit cooperation of most important groups in Mexico" (Fagen and Tuohy 1972, 31–32). Urban popular movements formed in the 1970s as a response to housing shortages in the midst of mass migrations, and the PRI worked, with differing levels of success, to mediate increasing demands for housing and public services during this time (Bennett 1995; Gilbert and Ward 1984).

Under these conditions, urban party leaders had to be both good brokers for the party (to generate electoral support) and good administrators (to manage social conflict). Fagen and Tuohy describe how

> officials are evaluated by their superiors according to their capacity to accomplish the tasks handed down from above as well as to manage the not inconsiderable challenge thrown up to them from below in the course of dealing with various clienteles. But these challenges must be handled in a special way—with absolutely minimal public controversy, disturbance or scandal. (1972, 26–27)

Therefore, local PRI leaders became adept at using clientelistic strategies to respond to particularistic demands and garner electoral support for the party as well as to maintain the stability that the party so valued. Local party brokers distributed benefits to generate electoral support for the PRI, enabling local party bosses to advance professionally within the party hierarchy. Like other corporatist organizations with which the PRI negotiated, the urban poor in Mexico were represented through "social leaders" who negotiated directly with PRI authorities on behalf of a neighborhood or squatter settlement. These leaders—many of whom had been leaders of land invasions[3]—promised PRI leaders mass voter turnout from the residents they represented in return for negotiated group benefits such as public service improvements, water supply, paved

3. It was common for rural workers migrating to cities to collectively set up encampments on vacant land plots and later request land titles and public services from the government. These dynamics created many squatter settlements in urban Mexico, many of which eventually gained formal recognition by the city.

streets, or even food or cash. In this sense, the party and the state were two different if fully intertwined entities; the party brokered electoral support for the state, and the state in turn provided the material resources necessary to sustain mass support for the party.

Considerable economic growth under statist economic policymaking during the post–World War II period, often called the "Mexican Miracle," financed at least some portion of the state's patronage- and clientelist-based political relationships. Mexico implemented import-substitution industrialization, which led to a more than 6 percent rate of economic growth for three decades beginning in 1940 (Hansen 1971, 41). Aided by oil wealth, Mexico's PRI regime oversaw levels of sustained economic growth and balance-of-payment stability that were unusual in the developing world (Teichman 1988, 37). The relative economic stability Mexico enjoyed allowed the PRI to consolidate its rule by exchanging a wide range of material concessions for political support. Petroleum exports, expanded agricultural outputs, and initial successes in manufacturing durable consumer goods all helped generate economic resources to support particularistic politics.

In sum, centralization and exchange based relationships went hand in hand in the development of the Mexican political system under the PRI. The PRI controlled all aspects of the Mexican state, doling out material benefits to generate mass support and make defection from the PRI politically costly. This tight control was exercised on corporatist sectors of society, as well as on party leaders at three levels of government, who would be hard-pressed to forget that the president and federal government controlled all state resources.

Therefore, Mexican federalism developed into a political system that was highly controlled by the center, to the exclusion of subnational authority or development of local capacity for governance, despite the constitutional overtures to an independent municipal level of government. Subsequent laws and constitutional amendments would continue to acknowledge Mexico as a federalist system while simultaneously undermining the responsibilities and resources of lower levels of government (Grindle 2007, 28). As Garrido (1989, 422–24) notes, the president has not only constitutionally prescribed authority but also "metaconstitutional" powers—to amend the constitution (as chief legislator), to establish himself as the ultimate authority in electoral matters, to assume jurisdiction in judicial matters, and to remove legislators, governors, and municipal presidents. Victoria Rodríguez (1997, 20) notes that this combination of constitutional and metaconstitutional powers has made the

Mexican presidency one of the most powerful presidencies of any country. The country's modern water networks developed within this centralized system of exchange-based politics.

Developing Urban Water Networks under Centralized Statist Rule

Like many countries in the West, Mexico has vacillated between local (pre-1946), centralized (1946–76) and local (post-1980s) control of water. Although the 1917 constitution prescribed water services as a municipal responsibility, Mexico's federalist system was highly controlled by the center, and water services were no exception. Though water service was constitutionally delegated to municipal jurisdictions, the PRI amended laws to preserve federal control of water systems and oversee the expansion of water networks to advance economic development goals and retain patronage opportunities.

The creation of the National Water Ministry (Secretaría de Recursos Hidráulicos) in 1946 centralized many existing local water systems and began a period of network expansion throughout the country. PRI officials not only recognized the role of water for irrigation as central to economic development but also viewed developing urban water services as essential for modernizing the country (Aboites 1998, 162; Whiteford and Melville 2002, 16). Water utilities were managed from Mexico City in a top-down fashion, making it difficult for local operators to even change a water valve without authorization from the center. Under these conditions, the federal government commonly constructed local water projects without any input from local leaders or citizens and then rapidly transferred systems to local officials, who felt little ownership of the project and had few resources to maintain the system (World Bank 1992, 45).

Subsidized financing schemes further reinforced Mexico's centralized control of water systems. Local agencies rarely updated water fees, and there was no consumer base: citizens received water free of charge or for a token fee. One federal document notes that payment was often not collected, metering was minimal, and water prices remained low (Secretaría Agricultura 1976, 291).

Table 3 shows 1960s tariffs ranging from 0.68–0.74 Mexican pesos per cubic milliliter, but official figures indicate that the average cost of delivery service ranged from 1.50–1.75 pesos (Secretaría de Recursos Hidráulicos 1973, 208). Prices were not only low for domestic consumers; as one study notes that commercial and industrial users were charged only 30

percent of the long-run marginal cost of providing service (World Bank 1990, 13). A 1964 international mission reported that "Even though operating agencies admit their water rates are too low, both in respect to costs and to the capacity of the people to pay, the rates have not been sufficiently increased because of inertia and political considerations" (World Bank 1964, 2). Rodríguez (1997, 120) notes,

> [Historically], fees collected for the provision of water seldom cover[ed] the maintenance costs of the water supply system, thereby turning into a major expense rather than a source of income. . . . [T]here is the critical issue of a lack of political will to institute an effective system of charging for fees for providing services. In many localities, these services have traditionally been subsidized by higher levels of government, and people are simply not accustomed to paying for the services they receive, . . . at least until non-PRI municipal presidents were elected, very few municipal presidents were prepared to buck the traditional orthodoxy of power relations and tackle the issue . . . the reason is obvious: it was felt that the political cost for the PRI would be too high.

While tariffs did exist and were sometimes publicly disseminated, bill collection was haphazard—more of a symbolic ritual than a deliberate exercise. Local utilities rarely demanded payment from users in a systematic and comprehensive manner (even though formal tariffs were low), and in many cases the PRI brokered arrangements with mass sectors and organizations to suspend the symbolic exercise of charging for water service. All government buildings were formally exempt from payment. Neighborhood association leaders who mobilized votes for the party or presented a sizeable threat to organize collectively against the party received some form of free or subsidized water service in many cities.

TABLE 3. Water Tariffs in Mexico, 1960s

Population	Price per m^3 (pesos)
<2,500	0.68
2,500–5,000	0.73
5,000–20,000	0.67
20,000–50,000	0.71
50,000–100,000	0.68
>100,000	0.74

Source: Secretaría de Recursos Hidráulicos (1973).

These arrangements were sometimes informal and were periodically renegotiated. At other times—as we will see in this book's case studies—formal exemptions were codified, with signed paperwork that allowed neighborhood association leaders to "prove" their exemption status to incoming municipal authorities. These *acuerdos* were usually granted through orders from PRI political organizers with the support of city or state government officials. Collective *acuerdos* were granted most commonly to popular sector groups, as higher-income groups tended to have direct political, professional, and personal connections with city officials and therefore more direct strategies to avoid payment. Lower-sector groups not subscribed to an urban associational group, and therefore virtually invisible to the ruling party as well as middle-sector groups who did not have direct government connections, typically bore the brunt of payment obligations. Small sums from these groups, along with periodic federal injections, kept some systems afloat. The political value of subsidized water service in Mexico was characteristic of the situation throughout the developing world, given water's role in social policymaking and economic development. In Mexico, this relationship was particularly pronounced because of the PRI's effectiveness in using clientelism and patronage as the foundation of political support.

Federal financing policy for capital investment created disincentives for local officials to charge for water and demonstrated the centralizing zeal of the federal government, whose contributions to the sector were designed as loans to municipal governments with very long amortization periods. In practice, these contributions functioned like grants because they were structured to be paid back only when systems' revenues exceeded operations and maintenance costs. This financing formula encouraged local utilities to set water prices low enough to avoid generating a surplus and triggering repayment of the "loans" (World Bank 1964, 4, 1976, 34; Rodríguez Briceño 2008). If an operating surplus existed and loans were repaid, federal law dictated that the federal government would have to transfer the system to the municipal government (*Diario Oficial* 1948, 1956). Most systems operated at a deficit, while financially healthy local utilities sometimes undertook expensive and unnecessary construction projects to remain indebted to and under the auspices of the federal government.[4]

The World Bank (1976, 25) notes that by 1973, the National Water

4. Interview #140.

Ministry directly operated water systems directly in 554 cities and indirectly financed and administered at least 400 other systems throughout the country.[5] In many cases, construction of new works took precedence over maintenance of systems, in large part because new construction was highly visible and more politically popular than updating existing infrastructure. Some observers have noted that ongoing subsidies increased the tendency to overbuild because budgetary considerations were not based on internal cash generation (World Bank 1964, 4–6). The high level of dependence on federal budgetary resources meant that water systems received limited financing during periods when there was a higher-priority claim in another sector (World Bank 1975, 11).

By the 1970s, Mexico's economic crisis and demographic growth revealed the centralized era of urban water provision to be financially untenable. Many connections suffered from intermittent service and poor water quality, leading the population to suffer a relatively high incidence of water-borne disease and a child mortality rate 70 times higher than that of the United States (World Bank 1975, 10). Seventy percent of urban populations had access to piped water, but sewage coverage was much lower, at 40 percent. The unreliability of local systems led many businesses to operate their own boreholes; indeed, industrial and commercial sectors' consumption of publicly provided water accounted for only 10 percent of the total in 1990 (World Bank 1990, 5).

Global Influences for "Marketizing" Urban Water in Developing Countries

Mexico's adoption of a market-oriented reform package was influenced by a broader—and more global—debate about the state's role in public service provision. Washington Consensus, or neoliberal, reforms sought to craft a leaner and more fiscally self-sufficient state through public service reform beginning in the 1980s and 1990s. These international policy influences sought to address a range of public services such as electricity, gas, telecommunications, and water, where national economic crisis, centralized and subsidized service, and lack of capital investment had led to poor—and often crippled—service quality. A series of prescriptions for improving public services in the context of austerity arose, in-

5. One government official estimated that the federal government held the deeds of 1,549 systems by the late 1970s (Dau Flores 2008, 112).

cluding decentralization, commercialization, privatization, and new public administration reforms promoting technocratic and business-oriented strategies.

Specifically, market-oriented practices within the urban water and sanitation sector (policies initiated to treat water as an economic good) were promoted in tandem with decentralization (the transfer of service responsibility to lower levels of government). While both of these policies were part of broader neoliberal reforms, they were distinct policies involving different justifications, policy networks, and consequences. For the water sector, the promotion of these twin reforms emerged from two different international development camps in the 1980s and 1990s.

The first means of implementing neoliberal reforms in the water sector was through transnational policy networks promoting "marketization" strategies in water resource management broadly defined (Conca 2006, chapter 7; Goldman 2007; Bakker 2010, 88–92; Morgan 2011, chapter 1). Global water policymakers working in the subsectors of river basin management, irrigation, water pollution, and urban and rural services within organizations such as the World Bank, the Organization for Economic Cooperation and Development and the Inter-American Development Bank converged on a set of principles that embraced similar strategies for liberalizing the water sector. Proponents advocated market principles for improving water governance, reducing water-related environmental pollution, and improving the quantity and quality of drinking water available throughout the world. Ken Conca (2006, 216) describes a shift in the transnational global water environment toward the establishment of private property rights to own or use water; the adoption of full-cost pricing of water; the creation of market mechanisms for the exchange of water-related goods and services; the involvement of the private sector in production, delivery, and marketing of water supplies; the liberalization of bulk water transfers; and an overall decline in the role of the state in traditional functions of service provision. These ideas were formalized through the 1992 Dublin Principles: the fourth principle declared that "water has an economic value in all its competing uses and should be recognized as an economic good." In addition, the second Dublin Principle promoted a participatory and decentralized approach for water management, to be taken at the lowest appropriate level (International Conference on Water and the Environment 1992).

The second impetus for promoting marketization strategies in urban water and sanitation systems came from political economists working in international financial institutions' public service and utilities subsec-

tors. These actors focused narrowly on reforming the sector and viewed the task of treating water as an economic good—through increasing cost recovery for water services—as conditioned on countries' ability to separate politics from service provision. Political economists working in the sector were in broad consensus regarding government intervention's pernicious effects on service quality.[6] According to these analyses, government interference trapped water provision in a clientelist model of provision, where elected officials kept prices low (particularly before elections or as part of campaign promises), payment for services was not obligatory, elected officials raided utilities' budgets, and political appointments and employment decisions were made on a patronage basis following elections. The proposed solution was a series of institutional reforms, such as privatization and market-oriented public sector policies, that were thought to insulate public utilities from political interference and allow for the implementation of cost-recovery strategies (Herrera and Post 2014).

These international development objectives emphasized a reduced role for the national government in the sector and institutional reforms to promote fiscal self-sufficiency in urban water delivery. Both market-oriented reforms and decentralization have been promoted to achieve these goals. These reforms have been disseminated in part through development banks' loan conditionality agreements with developing countries' water sectors (Goldman 2005, 242–52; Conca 2006, 221–22) and have had widespread impact in shaping reform agendas in the water and sanitation sector throughout Africa, Latin America, and Asia (Herrera and Post 2014). Mexico's reform experiences reflect broader tensions in the developing world between the promotion of macrolevel policies from abroad and their in-country implementation.

Political and Economic Liberalization in Mexican Urban Water

Economic Crisis, Market Reforms, and Decentralization

By the 1970s, Mexico's import substitution industrialization development strategy, which had once generated a period of stabilizing development, had devolved into economic stagnation. The petroleum-export strategy developed during the López Portillo administration (1976–82) provided temporary economic relief as Mexico benefited from the rise

6. For examples, see Foster (1996, 2); Savedoff and Spiller (1999).

in petroleum prices and the excess liquidity of international capital markets. But because the government had been financing its expenditures through international borrowing, by the end of 1982, Mexico faced its most severe economic crisis since the Great Depression (Teichman 1988, 113). In severe debt and without a viable strategy to increase state revenues after tax reform and petroleum export strategies had failed, Mexico signed a 1982 loan agreement with the International Monetary Fund that committed the country to a strict austerity program.

PRI president Miguel de la Madrid (1982–88) introduced a series of austerity measures that formed part of a larger structural adjustment agenda: encouraging foreign investment, widespread privatization of state-run industries, reduction of tariffs, and entry into the General Agreement on Tariffs and Trade in 1986. These macroeconomic policies were accompanied by a new technocratic managerial approach to government and policymaking that mirrors new public management practices (Smith 1986; Bailey 1988; Centeno 1994). The new public management agenda called for a thinning of government and was at odds with the PRI's traditional reliance on patronage and a bloated public sector. In many ways, the technocrat surge within the PRI undermined the party's political base and challenged its hegemony.

De la Madrid's successor, PRI president Carlos Salinas (1988–94), took office in a tenuous economic and political climate. The negative economic growth that Mexico experienced during the 1980s became known as the "lost decade." Moreover, support for the PRI reached an all-time low, and Salinas barely defeated the opposition presidential candidate, Cuauhtémoc Cárdenas, amid accusations of widespread voter fraud. As his administration progressed, Salinas implemented additional economic restructuring polices, removing restrictions on foreign ownership, destroying the power base of entrenched leaders in top unions, privatizing additional state-run industries, participating in the Brady Plan debt negotiations, aligning Mexico's financial services sector with international standards, and most famously, entering into the North American Free Trade Agreement. These structural adjustments created a large group of losers directly and indirectly hurt by the reforms, which further threatened the PRI's already dwindling political base.

To compensate the losers of market reforms and regain legitimacy for the PRI regime, Salinas in 1989 launched a social fund program, PRONASOL, to provide funds for local initiatives in health, education, nutrition, housing, employment, infrastructure, and other services. These programs were intended to curb the immediate deleterious effects of

neoliberal reforms. The government invested twelve billion dollars in aid in the program's first five years (Wayne, Craig, and Fox 1994, 8). A key innovation was that PRONASOL skirted national and state bureaucracies and allocated resources directly to municipalities, a direct route to local communities that yielded political benefits for the PRI, which politically manipulated the program in various ways (Grindle 2007, 30–31; Magaloni 2008). Nevertheless, PRONASOL emphasized decentralization and improving local services and was especially important in the urban water and sanitation sector.

Reforming Urban Water in Mexico—Federal Initiatives

Given the dire state of Mexico's water provision by the 1980s, access to potable water was one of the "most frequently and intensely voiced demands heard by Salinas in his 1988 presidential campaign" (Bailey 1994, 112 n. 14).[7] The candidate clearly articulated the problem:

> The rapidly growing demand for water in urban and regional centers throughout the country, the depletion and overextraction of water sources, the constant contamination of the water supply and the disproportionate increase in [service] costs have made access to [potable] water one of the gravest problems facing this country and one of the principal limiting factors of development. (Salinas 1987, 11)

To address these problems and fulfill campaign promises, Salinas pushed for the creation of the National Water Commission (Comisión Nacional del Agua, CNA) in 1989. The creation of the agency marked the beginning of a new policy agenda in water resource governance, especially in operationalizing the decentralization reforms in the sector that began decades earlier.

Decentralization and market-oriented practices were two distinct policies that were promoted in the urban water and sanitation sector under a larger rubric of public sector reform. Decentralization efforts have generally preceded market-oriented reforms and began with the dismantling of the National Water Ministry, the central bureaucracy that delivered services directly throughout the country, in 1976. A 1980 presidential decree transferred 1,549 federally administered systems to state and municipal governments (*Diario Oficial* 1980; Secretaría de Asentamientos

7. Interview #140.

Humanos y Obras Públicas 1981), and in 1983, a constitutional amendment to Article 115 mandated decentralization of water services to municipalities. By the time the CNA was created, it was designed to be an institutional rector for (among other things) promoting decentralization and market-oriented reforms and was not to deliver services directly. By 2009, 2,571 legally autonomous water and sanitation utilities (*organismos operadores*) had been created.

Under PRONASOL, the CNA launched the ambitious National Potable Water and Sanitation Program (1989–93), with a target scope and budget that made it in some respects the "heart of PRONASOL" (Bailey and Boone 1994, 338). The program sought to reorient water delivery toward the market-oriented framework and managerial approach espoused by the Salinas administration. This new approach was rooted in the conviction that water should be assessed through its economic value, as Salinas clearly stated during his presidential campaign: "There was [historically] a notion, that water and air are free, but today we cannot continue to view either water or air in that manner. . . . [W]ater should be assessed by its true [economic] value" (Salinas 1987, 11). This economic valuation of water and its implications represented a triumph of modernizing technocrats over traditionalist PRI figures in water governance and the party more generally.

Concurrently, the involvement of international financial institutions heavily influenced both decentralization and market-oriented practices in the urban water and sanitation sector. Three World Bank loans to Mexico between 1975 and 1983, known collectively as the Fondo de Inversiones Financieras para Agua Potable y Alcantarillado (FIFAPA), were instrumental in shaping policymaking. FIFAPA created autonomous water utilities in thirty-four cities and introduced the concept of financing systems through user charges.[8] This initiative revealed the systemic challenges in raising water tariffs and the complex politics of creating legally autonomous water utilities under municipal jurisdictions (Dau Flores 2008, 113).

Building on FIFAPA, subsequent World Bank and Inter-American De-

8. FIFAPA took place at a time of great economic and political flux—the federal ministry overseeing the implementation of the program changed four times over the course of the loan dispersal. FIFAPA I addressed the contentious issue of eschewing the concept of free water in place of cost recovery, with mixed results given the long history of subsidies in the sector. FIFAPA II and III aimed at supporting the government's ongoing decentralization efforts. The FIFAPA program supported a selection of medium-sized cities and had a limited impact in improving coverage in the cities that signed on as beneficiaries (World Bank 1992).

velopment Bank loans disseminated a new market-oriented approach in the sector, including promoting privatization (the transfer of some portion of ownership and/or management of systems to the private sector) as well as market-oriented reform for the public sector. The 1992 National Water Law reflected the changing global policy environment in which water was treated as an economic good, permitting private participation and allowing for tradable water rights. Despite considerable promotion of privatization in the 1990s,[9] privatization contracts for water and sanitation service have been limited. As table 4 shows, in 2012, Mexico had only thirty contracts, and they accounted for less than 2 percent of all water service (INEGI 2009, 9).

The more pervasive policy has been market-oriented practices within the public sector for decentralized urban water and sanitation utilities. Shifting from a subsidized to a cost-recovery financing strategy was the primary objective of market-oriented policy in urban water and sanitation. Loan documents show that while decentralization and the promotion of cost recovery were separate policies, they were conceived—at least by international financial institutions—as needing to be implemented in tandem to reform the sector. From the perspective of international financial institutions, decentralization was a first step toward creating utilities that could implement cost recovery or collect user fees to cover the partial or full cost of delivering service. Policymakers reasoned that it would be easier to collect tariffs if citizens could see how their money was being used and if local knowledge and input were taken into

TABLE 4. Private Participation in Mexico's Water and Sanitation Sector

PP Type	Project Count
Concession	5
Greenfield Projects[a]	24
Management & Lease	1
Total	30

Source: World Bank, Public-Private Infrastructure Advisory Facility (PPIAF) (Washington, DC: World Bank), http://www.ppiaf.org/PPIAF (accessed April 2012).

[a]Includes Build, Lease, and Transfer (BLOT); Build, Operate, and Transfer (BOT); and Build, Own, and Operate (BOO).

9. For examples of promotion of private sector participation, made legally permissible after the passing of the National Water Law (*Diario Oficial* 1992), see CNA (1993, 2003). For a discussion of privatization of water and sanitation in Mexico, see Pineda Pablos (2002); Barocio and Saavedra (2004); Wilder and Romero Lankao (2006).

account when updating systems. Studies of consumers' ability to pay would also be more effectively undertaken if implemented at the local level. Promoting decentralization and cost recovery in tandem also complemented the policy agenda of eliminating fiscal reliance on federal budgets.

International lenders and donors also imagined that creating water and sanitation utilities that were legally and fiscally separate from municipal government meant that political intervention would be minimized and utility operators would be able to set prices based on system needs rather than political considerations. In international policy recommendations, this came to be known in the 1990s as "corporatization"—the creation of a public corporation or entity that would be governed by a citizen board of directors, have minimal political appointments, and be managed by commercial principles (Herrera and Post 2014). Proponents hoped that by creating autonomous municipal-level utilities, mayors would be blocked from intervening in water and sanitation utilities' daily operations and financial management. In Mexico, the creation of autonomous water and sanitation utilities that are institutionally, legally, and administratively separate from the municipal public works department occurred in most major metropolitan cities during the 1990s. These reforms were executed through the creation of a federal program, Agua Potable, Alcantarillado, y Saneamiento en Zonas Urbanas (APAZU), whose operating rules required that federal funds for infrastructure development be dispersed through decentralized, "autonomous" water utilities in urban centers. APAZU was financed in part by international loans, which required that the Mexican government strengthen market-oriented practices for municipal water utilities, as table 5 shows.

Funds for infrastructure construction were distributed through loan- rather than grant-based financing. This arrangement required local governments to use matching funds to access federal loans and revenues to be generated by implementing cost-recovery practices. Utilities had to generate internal revenue through cost recovery not only to fund daily operations (World Bank 1990, 16) but also to receive sufficient matching funds to access federal loans for infrastructure development through APAZU. The principles of cost recovery entailed elevating tariffs to more closely reflect the cost of service and investment in maintenance, eliminating clandestine connections, and suspending service for nonpayment. These practices affected local service delivery throughout thousands of local providers, especially in urban centers where these policies were most likely to be promoted. Mexico's development bank (Banco

Nacional de Obras y Servicios Públicos, or BANOBRAS), acted as the borrower of the loan, sublending only to municipal governments that met certain criteria. The program sought to strengthen cost recovery principles by limiting the amount of revenue municipalities could access for hydraulic infrastructure outside of APAZU's operating rules. International financial institutions' loan conditions mandated that the CNA eventually eliminate federal subsidies to the sector and that sector financing derived from international loans follow APAZU operating rules (World Bank 1990, 11).

To access this new loan-based financing, utilities would need to be decentralized to the municipal level and operate with legal, fiscal, and administrative autonomy from city hall (World Bank 1990, 15–17). A legally autonomous utility has independent legal character in court (can sue or be sued). Fiscal independence implied the ability to generate revenue (from service charges), set budgets and determine expenditures,

TABLE 5. International Loan History for Mexico's Water and Sanitation Sector

Year	Loan Number	Project Name	Loan Amount ($ millions)	Federal Program in Mexico
1973	909-ME	Mexico City Metropolitan Area Project[a]	90	N/A
1975	1186-ME	Medium Cities Water and Sewerage Project	40	FIFAPA I
1980	1913-ME	Second Medium Size Cities Water and Sewerage Project	125	FIFAPA II
1983	2281-ME	Third Medium Size Cities and Sinaloa State Water Project	100.3	FIFAPA III
1991	3271-ME	Water Supply and Sanitation Sector Project	300	APAZU
1992	ME0128	National Investment Program Potable Water (IDB)	200	APAZU
1994	3751-ME	Second Water Supply and Sanitation Sector Project	350	APAZU
2004	N/A	Water Supply and Sanitation Technical Assistance Loan	15	N/A
2010	N/A	Water Sector Development Policy Loan Project	450	N/A
2010	N/A	Water Utilities Efficiency Improvement Project	100	N/A
2010	N/A	Water Utilities Efficiency Improvement Project	100	PROME

Source: Based on author's calculations from World Bank and IDB archives.
[a]The World Bank is the cosigner of all loans except for the 1992 IDB loan.

and, most important, to receive federal revenues directly. Administrative autonomy dictated independence in hiring decisions and in operational policy setting. Throughout the 1990s, the new APAZU rules prompted most of Mexico's major cities to create legally autonomous municipal utilities (CNA 1993, 39–107).

These new market-oriented water policy initiatives were promoted in the 1980s and 1990s, when Mexico was experiencing subnational democratization processes. Elections, which had historically been standardized rituals won only by the PRI, became newly competitive in the 1980s as the PRI allowed opposition parties to win at the subnational level as an attempt to hold on to power nationally.

Opposition parties, especially the PAN, have won elections in many middle-class and industrialized cities, and the PAN won the presidency in 2000. Therefore, the market-oriented and decentralization initiatives were designed both by PRI federal-level policymakers in the 1980s and 1990s and by PAN policymakers in the 2000s and show a considerable level of federal-level policy congruence to promoting market-oriented and programmatic reforms in the sector. What has varied more dramatically has been the adoption of these reforms at the local level by political parties of different stripes as well as the support for these local-level reforms by state governments, which have been very politically diverse throughout the country.

Reforming Urban Water in Mexico—The Role of State Governments

Although the primary political determinants of water reform occurred at the local level, state governments remained influential in municipal service provision in numerous ways. Federal reform architects envisioned state governments as playing a principal role in water resource management. States became the "provider of last resort" if municipalities were unable to provide service (*Diario Oficial* 1980; Secretaría de Asentamientos Humanos y Obras Públicas 1981).[10] Each state government created

10. Although reform architects originally intended to decentralize all urban utilities to the municipal level, several state governments chose to not decentralize further, while others chose to sponsor intermunicipal utilities. Over time, APAZU rules changed to accommodate these arrangements, and state governments utilized APAZU funds for the urban utilities that they serviced directly. As of 2012, there were five state-level operators (Nuevo León, Tabasco, Querétaro, Chihuahua, and Distrito Federal), ten intermunicipal providers (San Luis Potosí, Guadalajara, Colima, Zacatecas, Pachuca, Monclava, Oaxaca, Apizaco, Veracruz, and Mérida), while the remainder are municipal operators (author correspondence with National Water Commission, April 2, 2012; INEGI 2009, 9).

water commissions to manage a range of hydraulic resource governance tasks across the state's municipalities. State governments received authority and political discretion to determine further decentralization to municipalities and influence the extent to which municipalities pursued programmatic reforms.

The emphasis on municipal-level control that gained traction under Presidents de la Madrid and Salinas continued through subsequent presidential administrations.[11] However, by the mid-1990s, the federal government hoped to ameliorate what were considered dire problems with the original decentralization design in the water and sanitation sector: a lack of legal frameworks at the state government level, a failure to adopt cost recovery, and a serious lack of municipal administrative capacity. These problems undermined the municipal providers' ability to improve service quality. New policies in the 1990s emphasized the creation of decentralized municipal utilities in metropolitan areas with populations over fifty thousand and the decline of state-level provision in those urban centers. The federal government wanted state governments to focus on water resource management, not direct service provision. Instead, the state service providers would become institutional overseers of urban municipal services.

States could support municipal service providers in three ways. First, state governments were responsible for providing an adequate legal framework for municipal service provision, primarily through the adoption of a "model state water law" that would effectively replace all prior state hydraulic laws.[12] State governments could choose whether to adopt the law and could amend it based on local conditions. The model law was the conduit for the federal government's efforts to deepen decentralization in the sector (Dau Flores 2008, 68). Inscribing these policy initiatives into law would be critical to developing the sector. In particular, as opposition parties began to win subnational elections, the PRI could no longer dictate policies informally through party channels. The model law regulated actions of state and municipal governments in all matters related to the use, extraction, and consumption of water as a natural resource as well as to water and sanitation delivery (CNA, n.d., Article 1).

Second, the state support structure consisted of promoting market-oriented tariff policies. State governments were now in a position to co-

11. See Rodríguez (1997); Grindle (2007, chapter 2).

12. The model state water law (*ley tipo*) was designed by Urbano Farías, a prominent expert on Mexican water law (interviews #16, 23).

ordinate a statewide effort to standardize tariffs and institutionalize the tariff-setting process with the state Congress, which was responsible for approving price increases. These efforts discouraged political intervention in municipal utilities' financial management. Two channels of action are relevant to this process: (1) updating tariffs and introducing metered consumption fees (as opposed to annual fees or annual lump-sum fees not linked to amount being consumed), automating tariff changes so that they are less subject to political approval and based more on the cost of service, and (2) improving commercial accounting capacity and thereby increasing the effectiveness of tariff collection.

Third, state governments provided technical support to urban utilities. State governments were in a unique position to serve in an advisory role for municipal provision, because they generally have more sectoral expertise and fiscal resources to facilitate technical training than do municipal governments. Also, while Mexican municipal administrations last for three years, state administrations last for six years, allowing greater policy continuity, technical expertise, and knowledge accumulation that can help municipal governments extend reforms. Examples of state-government-provided technical support include sponsoring staff training and certification programs, technical assistance in hydraulic project designs, and tracking and compiling performance indicators for municipal utilities.

State governments provided these three types of institutional support to varying degrees. Municipal reformers drew on more institutional forms of support in Guanajuato State (in the cities of León, Irapuato, and Celaya) than in Mexico State (in the cities of Naucalpan, Toluca, and Neza), while the cities in Veracruz (Xalapa and Veracruz) drew on very few of these state-level resources.

Conclusion

This chapter offered a historical overview of water and sanitation policymaking in twentieth century Mexico, emphasizing how the development of water services under the PRI's autocratic rule generated a set of exchange-based practices that became deeply embedded. While the political distribution of a range of public resources has been explored in the literature, few studies have examined how public services, and especially water, become part of clientelistic and patronage based relationships. In the 1980s, Mexico's decentralization and market-oriented reforms for large urban centers signaled a major departure from the prior

era of centralized and subsidized water and sanitation management. As chapters 4 through 7 demonstrate, the country's democratization campaign at the local level, coupled with the institutional limitations of Mexican municipal government, problematized the widespread adoption of market-oriented reforms in the water and sanitation sector. The politicized use of water services became newly attractive in an electorally competitive setting, and federal initiatives to promote programmatic reforms had little impact on reform initiatives at the local level in cities with poor urban constituency bases, limited industrialization, and limited turnover in political control. In contrast, in cities with strong middle-class constituency bases and water-intensive industries, the entry of opposition mayors prompted the dismantling of particularistic provision and the construction of higher-quality and more accountable public services, as chapter 4 examines.

FOUR

Reform Adoption in León and Irapuato

Policy Insulation through Broad Elite Incorporation

This chapter analyzes reform adoption in León and Irapuato, located in the northern state of Guanajuato. In these two cities, Mexico's first democratic transition ushered in center-right PAN mayors who were aligned with business groups that favored political and public sector reforms. The PAN, governing for the first time after decades of political struggle against the PRI, faced several governing challenges. The first task was to consolidate power and strengthen the local party base. This was achieved by reducing the PRI's electoral networks while building an electoral base among the city's growing middle classes and business elites. These developments led to numerous confrontations among sectors of society that had spent decades supporting the PRI in exchange for access to state resources.

These reforms were contentious, but the mayoral-business coalitions that achieved them received important benefits. For example, programmatic water sector reforms delivered benefits (such as service extensions and improvements) back to political supporters, helped eliminate the power of the PRI's collective negotiations with corporatist sectors, and helped establish the PAN as a competent party that could get things done. This record of accomplishment generated support from the middle class and business elites who had been concerned about poor public services prior to Mexico's democratization.

In both León and Irapuato, reformers endeavored to insulate decision making from political conflict, particularly by blocking nonelites from participating. PAN-led reform coalitions viewed these nonelite groups as having the strongest clientelist networks with the PRI and therefore represented the biggest threat to the PAN's reform agenda. However, while nonelites were barred from decision making, PAN party leaders in these cities incorporated civil society elites (i.e., business and professional associations) into their reform coalition. Therefore, these instances of reform are broad elite incorporation. In León and Irapuato, the preexisting strength of business and civil society elites made it unlikely that they could be excluded from the reform coalition, as occurred in the two cases of narrow elite incorporation discussed in chapter 5.

Furthermore, after assuming office, these first PAN mayors in León and Irapuato needed to validate their "participatory" campaign rhetoric to legitimate their party as a democratic alternative to the PRI. The new leaders created numerous participatory venues, both to make good on their electoral promises and to establish new venues for citizen participation that would complement rather than disrupt the PAN's electoral constituency-building project. The political openness of water reforms in León and Irapuato (relative to the more insular and exclusionary dynamics in Naucalpan and Celaya) was influenced by the PAN's interest in associating itself with more participatory forms of governance. In the water and sanitation sector, this participatory agenda led to the creation of citizen boards of directors (*consejos directivos*, which I call citizen water boards) that were institutionally independent of the municipal government.[1]

The industrial and demographic conditions in León and Irapuato facilitated programmatic reform and made it politically attractive to PAN mayors. Both cities were important industrial centers, with water-intensive industries that supported better-functioning services and provided the high-volume consumer base necessary for cross-subsidizing residential consumers. Both cities also enjoyed a growing middle- and upper-class base, which made the reorientation away from clientelistic provision and toward programmatic provision feasible. PAN leaders could benefit politically from reform success, exchanging higher-priced

1. Citizen water boards were created throughout the country, although the extent to which they were autonomous varied dramatically. In the most autonomous cases, such as those discussed in this chapter, board members were selected through open elections, and members were picked from societal organizations that were not affiliated with political parties.

public services for better-functioning government and reaping the political rewards of constituency building and career enhancement along the way.

Finally, reform coalitions in León and Irapuato relied on both formal and informal resources in extending the policymaking time horizon beyond an initial three-year municipal government term. In addition to the local-level resources discussed in this chapter, the Guanajuato state government (one of the first PAN-controlled state governments) provided substantial resources for reform. The Guanajuato state water commission supported the programmatic reform agenda in many ways—providing technical, administrative, and employee-training resources that helped shorten the learning curve of incoming mayors and citizen board presidents.

Reform Adoption in León

Politics and Public Services prior to the Democratic Transition

León, located in the central highlands of Guanajuato, is one of Mexico's largest cities, with a population of 1.4 million (INEGI 2010). It is also Guanajuato's wealthiest city and one of the country's most important industrial hubs. The city is known for its thriving leather industry, which has become an economically and politically powerful player (Valencia García 1998, 85–97; Shirk 1999, 51). The leather industry generates half of the city's industrial production, which is considerable given that the city's industrial output makes up 25 percent of the state's GDP (INEGI 2004). The city is home to a number of well-organized and consolidated business associations, most notably the leather industry association, the Unión de Fabricantes de Calzado de León. León is such an important business center that Mexico's first sector-wide business association, the Consejo Coordinador Empresarial, originated there in the 1970s (Valencia García 1998, 146–47). Observers note that business leaders are "perhaps the best organized social class" in León (Valencia García 1998, 147). Unsurprisingly, the majority of the city's political leaders emerged from its business sectors after local democratization began in the late 1980s.

It is no coincidence that business entrepreneurs have thrived in a city that has been a bulwark of political opposition in Mexico. Since the Mexican Revolution, various movements in Léon have attempted to create an alternative to the PRI. These movements have been characterized by adherence to principles that were antithetical to those of the PRI—such

as religious freedom, private property, and anticentralization. For example, the Unión Nacional Sinarquista, a far-right Roman Catholic political party, was founded in León in 1937. As one of the largest landholders in the country, the church opposed the PRI's centralizing initiatives and land reforms. As a precursor to the types of civil society networks that would later develop in the city, the Sinarquistas were known for communitarianism and promoting democratic ideals. In subsequent years, different Sinarquista parties fielded candidates for local elections despite the PRI's ongoing refusal to recognize electoral victories by non-PRI candidates (Valencia García 1998, 101–6).

A pivotal turning point occurred in 1945, when a new civic group and political party, the Unión Cívica de León (Leon Civic Union, UCL), petitioned the PRI government to run a mayoral candidate in the upcoming election. The UCL declared itself a proponent of "respect for individual rights and private initiative" (Valencia García 1998, 101). The PRI refused to recognize the UCL candidate's victory, installing the PRI candidate instead. On January 2, 1946, more than ten thousand people protested, leading to a military crackdown that killed thirty protesters and injured six hundred (Bassols Ricardez and Arzaluz Solano 1996, 109; Santos Zavala 1996, 252; Valencia García 1998, 103–4). The PRI's violent repression was so controversial that even the PRI-controlled Supreme Court ruled that the federal government had acted "unfavorably" (Valencia García 1998, 103). These events prompted the PRI governor of Guanajuato to reach out to regime opponents, including business leaders and members of the UCL and the PAN, for support. These groups used this unprecedented political opening to demand a role in local decision-making (Valencia García 1998, 102–3). In 1976, the PAN mayoral candidate, Juan Manuel López Sanabria, won the election, but the PRI once again refused to recognize the victory, leading to more protests and an eventual power-sharing compromise between the PRI and the city's business elites (Valencia Garcia 1998, 103–6). These types of power-sharing agreements were born out of necessity, given the strength of political dissent as well as the strength of business elites well before León inaugurated its first PAN mayor in 1989.

Political activism went hand in hand with civic activism in León, as business leaders, religious leaders, and other local activists developed networks that served as an alternative to PRI corporatism. The PAN's growing electoral strength in León was a testament to the development of non-PRI civic networks: local party operatives won a key congressional election in 1964, and the city's urban constituent base developed into

one of the greatest generators of voter turnout for the party (Valencia García 1998, 103–4).

Because León is the epicenter of the state's industrial sector, the quality of public services has always been an important concern for business elites and to some extent the ruling party. Having reliable water services was especially crucial for the city's leather curers, whose manufacturing processes rely heavily on it. Therefore, when the federal government administered services directly in the 1940s, the city received a relatively large amount of resources, which were invested in expanding networks throughout the downtown center.[2] However, centralized service provision ended by 1980. The Guanajuato state government received responsibility for service provision as part of Mexico's decentralization reforms but transferred services to the León municipal government within three years. The municipal government assumed responsibility for service provision and created a water and sanitation utility, Sistema del Agua Potable y Alcantarillado de León (SAPAL) in the early 1980s, partially financed by a World Bank loan under the FIFAPA program (World Bank 1992, 58).

The city's water network had begun to show its age by the 1970s, and the government's ability to provide decent services degraded considerably over the next decade. Increased urbanization—4.38 percent growth from 1950 to 1990 (Santos Zavala 1996, 249), much of it unplanned[3]—accompanied by periods of intense drought left entire neighborhoods without water service.[4] These conditions and the PRI's growing inability to provide adequate solutions, helped consolidate support for political alternatives.

By 1988, the water utility's citizen board president admitted that the situation was so extreme that resolving it could become a central issue in the 1988 mayoral campaign.[5] At rallies and in debates, candidates noted that addressing the citywide water shortage was one of their top priori-

2. The National Water Ministry administered León's local utility from 1946 to 1976. Prior to the 1940s, a local utility, Ramo de Aguas Municipales, provided services.

3. "En 5 años se atenderá 95% de la demanda de tomas de agua: Debe frenarse el crecimiento anárquico: SAPAL," *El Sol de León*, August 1, 1988.

4. "Sólo promesas al problema del agua: Escasez, angustia diaria de los Leoneses: Abasto terciado, por horas, en la zona centro y la Azteca," *El Sol de León*, February 5, 1989; "Situación desesperada en barrios marginados por falta de agua: MV," *El Sol de León*, May 30, 1989.

5. "El problema del agua podría ser bandera política: M. Plasencia," *El Sol de León*, July 11, 1988.

ties.[6] PAN candidate Carlos Medina Plascencia was particularly concerned about this issue and made it one of his key talking points. His campaign developed an ad featuring a water faucet twisted into a knot and a parched mouth. The text said, "Enough with water scarcity! Together we can build dams, improve water circulation through the network and increase civic awareness. [Vote for] Carlos Medina."[7]

As Santos Zavala (1996, 252) explains, deficient services played a major role in the city's historic election: "At the end of 1988, after a period of relative political stability, the PAN [emerged] as a solid political alternative, after [withstanding decades of] municipal governments perceived by citizens as inefficient and incapable of responding satisfactorily to the demands of [providing] public services."

Launching a Reform Project

The Economic and Demographic Landscape

Key structural conditions in León made the city a laboratory for programmatic water reform experiments that were part of a broader reform agenda for new opposition mayors. First, León's industrial manufacturing sector was not only an important supporter but also the key leader in water reforms. Industrial manufacturing accounts for 45 percent of the municipal economy, and the leather-curing industry makes up 49 percent of all manufacturing in the city, generating approximately fifteen million pesos per year (INEGI 2004). Leather curing and finishing is one of the most water-intensive industries: as much as 360 liters of water can be needed to produce one square meter of finished leather (BLC Leather Technology Centre, 2012; Tünay et al. 1999). The remainder of the city's principal industries—plastics, alcohol, tobacco, and food production—also rely heavily on water (INEGI 2004; Pacific Institute 2007).

Although León's economy is diverse, the leather industry is by far the most dominant. León's shoe industry, for example, made up more than one-third of Mexico's leather shoe manufacturers in 1990. This industry has particular characteristics: it is tradition-rich and is composed mostly

6. "Candidatos en campaña III," *A.M.*, November 7, 1988; "Enfrentará el PRI los 5 problemas graves que aquejan a León," *A.M.*, November 8, 1988; "Agua y seguridad, mi reto: Yamín," *A.M.*, November 26, 1988.

7. "!Ya Basta! . . . de escasez de agua . . . Carlos Medina para Presidente Municipal," *A.M.*, October 29, 1988.

of smaller mom-and-pop shops rather than industrial giants. In the 1930s, one-third of the city's workforce participated directly in curing, finishing, and selling leather products; by 1992, this figure had risen to 80 percent. These businesses have traditionally been small scale: 85 percent are considered microbusinesses or small businesses (Valencia García 1998, 85–86). The small, family-owned, and historic nature of most of the leather industry's businesses made for an entrenched concentration of business interests. These businesses could not easily move if services did not suit them; rather, they were invested in their community for the long-term. These dynamics affected León's water reforms.

Unlike most Mexican industries, which are located in industrial parks on the urban outskirts, León's tanneries developed in the city's downtown, where available water sources soon became exhausted. While drilling clandestine boreholes might be an option at suburban industrial parks, León's downtown tanneries had no choice but to rely on the city's utility for water services. By 2008, the utility had 2,165 industrial clients (see table A2). These industries formed the backbone of the reform process, as they were charged high-volume rates, essentially subsidizing the cost of delivering water to residential consumers. Finally, while most of these businesses were small,[8] their economic and political lobbying was conducted by CEOs of the few large leather companies.

The PAN ascended to power in León in 1989 after years of cultivating electoral networks with business elites and the middle class. Valencia García (1995, 87) writes that the city's demographic profile is characterized by "religiosity, the struggle against political centralism, the defense of private property, [and] an industrious spirit." The city has a relatively high level of literacy at 89 percent and a low level of economic marginalization, as unemployment is relatively low and most residents have access to public services (Santos Zavala 1996, 250–51). These are signs of a strong and increasingly politically mobilized middle-class base—one that has a higher level of religious attendance than all other PAN-controlled cities discussed in this book (Valencia García 1995, 87). High rates of literacy, religiosity, and rejections of an interventionist state have shaped the city's electoral support for the PAN. The party's vote share in the city grew by 376 percent from 1979 to 1994, and the party ruled the city with-

8. For a discussion of the high amount of informality in the sector, see Valencia García (1998, 85–97). Because of the number of businesses that are operating clandestinely, the number of companies that have industrial permits (forty-two) registered by the National Water Commission is likely far fewer than the number of companies actually operating in León (see table A4).

out interruption from 1988 to 2012. León's political landscape is "dynamic . . . characterized by conflictual relations between principal political actors from the government and the presence of a predominantly urban, demanding, and participatory society" (Santos Zavala 1996, 254). Programmatic reforms, while upsetting to popular sector groups, captured the support of the city's middle-class population.

Political Change and Broad Elite Incorporation

León's 1988 election of Medina marked the first time the PAN had taken control of a major city in Guanajuato and represented a significant breakthrough in the opposition's long and hard-fought struggle for political reform.[9] Ortiz García explains,

> [In León], the PAN has been the party in opposition, first [to the PRI's] anticlericalism, and later [to the] the government's interventionism in the economy. But the PAN also fomented in the citizenry [its gradual] historic successes, [creating] a collective memory [that] reached its climax in 1988 in the ballot box. (cited in Valencia García 1995, 90)

The PAN won by a two-to-one margin over the PRI in 1988, ushering in a twenty-three-year period of party control that completely altered the city.[10]

The PAN had chosen its 1988 mayoral candidate carefully. Medina was an engineer who had risen to the top of the leather exporting business. Not only the CEO of his company, he was also president of the national leather industry association (Valencia García 1995, 93). Nevertheless, he, like most other PAN leaders at the time, had virtually no governing experience. Medina's administration had to maneuver around a politically and socially hostile environment with limited resources and information and media that were still controlled by the PRI. His administration was marked by conflicts with the PRI governor, attempts by PRI city council members to block reforms, and a range of societal groups that belonged to the corporatist PRI structure, such as taxi drivers and

9. For a list of the first opposition mayoral candidates (most from the PAN) to win and be allowed to take office in Mexico, see Bassols Ricardez and Solano (1996, 109–10).

10. León's PAN mayors since the initial reform period of the late 1980s have been Carlos Medina Plascencia (1989–91), Facundo Castro Chávez (1991), Eliseo Martínez Pérez (1992–94), Luis M. Quiroz Echegaray (1995–97), Jorge Carlos Obregón Serrano (1998–2000), Luis Ernesto Ayala Torres (2000–2003), Ricardo Alaníz Posada (2003–6), Vicente Guerrero (2006–9), Ricardo Sheffield Padilla (2009–2), Héctor López Santillana (2015–).

market vendors (Valencia García 1995, 97–104; Cabrero Mendoza 1996, 59). Despite these conflicts, Medina began a period of municipal administration that was characterized by more institutional venues for citizen participation and a level of administrative efficiency derived more from the corporate than the political world.

Medina had championed fiscal independence for León during his election. Until the 1990s, León had depended on federal transfers administered by the state government despite the city's significant financial potential. For both fiscal and political reasons, Medina and subsequent PAN mayors supported raising internal revenue for the city to reduce dependence on federal transfers (Cabrero Mendoza 1996; Santos Zavala 1996, 247). As the first PAN mayor in a state still controlled by PRI governors, Medina was adamant that the governor not meddle in León's affairs.[11] Medina supported an effort to strengthen the city government's coffers and build first-class public services, a policy goal that continued through multiple PAN administrations (Santos Zavala 1996, 292–93).

Through the years, these changes were made by administrators who were well educated and had extensive private sector experience despite their lack of political experience.[12] Indeed, new PAN leaders hoped to make León into a "model municipality" (Valencia García 1995, 106) that was premised on replicating the efficiency and transparency of business-oriented practices rather than PRI-era governance practices, which the PAN leaders perceived as clientelistic-driven government. Medina, faced with a slew of conflicts with sectors that were accustomed to receiving material benefits in exchange for political support, moved to implement a new governing philosophy that would allow the "free market to accommodate each actor where they belong" (Valencia García 1995, 98).

However, Medina was determined to keep campaign promises and implement fiscal reforms by incorporating civil society groups into government decision making.[13] Medina insisted that increasing citizen participation was the "greatest legacy that could be left to citizens," and he often reiterated that the PAN should facilitate "as much society as possi-

11. "Urge acabar con la dependencia que León sufre con el Estado: Carlos Medina," *A.M.*, October 21, 1988.

12. One 1994 study found that 94 percent of León's municipal administrators were college graduates, 19 percent had master's degrees, and 42 percent had come from the private sector (Santos Zavala 1996, 299–300).

13. "Continuemos con el cambio: Ya es tiempo de conocer el trabajo de gobierno. Juntos podemos lograr: Difusión y divulgación continua de planes y programas del municipio y constitución de juntas participantes de colonos. Vota PAN, Carlos Medina," *El Sol de León*, November 8, 1988.

ble, and [only] as much government as necessary" (Valencia García 1995, 115, 123; Morales Garza and Contreras Ortiz 2000, 107).

Shortening the distance between citizens and government served a dual purpose for the PAN. Increasing participatory venues and access to government would underscore the party's brand that was centered on "authentic democracy" and "good government," both important alternatives to the PRI. But promoting individual citizens' participation rather than participation by sectors was a way to bypass the corporatist groups linked to the PRI. Over time, these participatory efforts could cultivate new networks of electoral support for the PAN. According to Valencia García, the PAN government intended to incorporate new types of citizen participation to break societal ties with the PRI:

> [These strategies] were not about incorporating the actors or social movements that already existed, with their prior political dynamics and demands. The PAN's idea, clearly expressed, was to achieve a "[re]organization [of the citizenry]," that would foment commitment from citizens toward the goals of the [PAN] administration. (1995, 115)

Medina was the first PAN mayor to incorporate new forums for citizen participation into León's municipal government. For example, he started the Department of Citizen Integration, with working groups in rural development, municipal education, neighborhood watch, and youth development (Valencia García 1995, 115; Morales Garza and Contreras Ortiz 2000, 106). The municipal education group created citizen working groups, service clubs, and citizen advisory committees (Morales Garza and Contreras Ortiz 2000, 106). The forums closest to the citizens were the newly created neighborhood councils, which Medina proposed should be independent from city hall so as to promote authentic pluralism (Valencia García 1995, 115).

Subsequent PAN mayors expanded the number of venues citizens could use to access government. The administration of Eliseo Martínez Pérez (1991–94) created a "complaints and suggestions" municipal hotline (SIMASTEL), a daily printing of citizens' complaints and opinions in the local newspaper, and public opinion surveys. These innovations were attempts to create government responsiveness to the citizen as client, a concept borrowed from business management and increasingly popular in León's PAN administrations (Cabrero Mendoza 1996, 59; Morales Garza and Contreras Ortiz 2000, 107). Under the Martínez admin-

istration, the number of participatory planning institutions expanded, and committees dealt with issues as wide ranging as public security, urban planning, education, and organizing the municipal fair (Cabrero Mendoza 1996, 73–79). Comités de Planeación para el Desarrollo Municipal (COPLADEMs), created throughout the country, were intended to assist local governments in identifying public investment priorities. The neighborhood councils also addressed citizens' needs and priorities and provided information for the work of the COPLADEMs (Montambeault 2011, 100).

A key participatory innovation under the administration of Luis Quiróz (1995–97) was the creation of "Citizen Wednesdays," where officials heard individual citizen demands in weekly open patio meetings at city hall and then relayed this information to participatory planning committees and COPLADEMs (Rodríguez Rodríguez 1999, 280–83; Morales Garza and Contreras Ortiz 2000, 108–13). Some have argued that this program was initiated to increase electoral support for the PAN, which had waned since the 1988 election (Morales Garza and Contreras Ortiz 2000, 115–17; Rodríguez Obregón 2000, 174). One former director of the program admitted that it "gave political dividends" (Morales Garza and Contreras Ortiz 2000, 109–10).[14] Some observers have also argued that these participatory experiments designed by public officials are not authentically democratic (Valencia García 1995, 115; Morales Garza and Contreras Ortiz 2000, 117). Others have noted that the PAN has been more successful at administrative innovations than increasing participation because citizen turnout can be low at meetings that do not focus on public works projects (Cabrero Mendoza 1996, 77–113). However, León's institutions have been more apolitical and autonomous than participatory experiments in other cities (Montambeault 2011, 114–15).

The relative autonomy of León's participatory experiments emerged in the citizen board of the water utility in the late 1980s. The PAN's participatory experiments extended to creating citizen boards designed to oversee public institutions or public services, such as the university, parks service, or water and sanitation delivery.[15] While the citizen board for León's water utility already existed, it achieved new autonomy in the early 1990s and soon became one of the city's most important reform-oriented citizen boards.

14. This program has been so popular that it has been adopted throughout the country by other PAN governments (Rodríguez Rodríguez 1999, 281–83).

15. Interviews #161, 166.

Initiating Reforms

Business elites had been economically and politically powerful in León for decades, yet not until the late 1980s did a group of business leaders become actively involved in the water and sanitation sector and begin to initiate reform. What key events led business leaders to take the reins of the city's citizen water board? First, important leadership changes occurred in the city's utility at around the time of Medina's mayoral inauguration in 1989. A leather industrialist, Mario Plascencia Saldaña, who had been on the citizen water board during the previous administration, was elected president of the utility's board.[16] Both Medina and Plascencia approached public administration with management strategies from the private sector. Now that the PRI no longer controlled city hall, the utility could implement revenue-generating strategies.

Second, a severe water shortage and the ongoing deterioration of water services underscored the need for drastic reforms. While members of the business community had diverse interests in the late 1980s and early 1990s, they agreed that the lack of reliable water services was a threat to their businesses and the local economy. During this time, the president of the national industrial association, CANACINTRA, called for immediate attention to the water shortages in León.[17] Industry was particularly concerned about *piperos*—the informal (or black) market in water tankers that fetched increasingly elevated prices as a consequence of the growing scarcity of water. Industrialists who depended on water service for their manufacturing were not the only ones concerned about the city's ongoing water shortages. Other business community members (such as restaurateurs) were concerned as well.[18] Plascencia helped to organize these grievances and channel them into action. One observer recalled,

> Mario Plascencia has people dispersed throughout different industries who are aware of the [vicious] cycle. . . . There is a lack of water in the city, it threatens industry, the development of the city is very slow—in León there were [few] hotels, restaurants, services.[19]

16. Mario Plasencia's family owns the FLEXI brand leather product line, one of the oldest and most profitable leather businesses in the country. "Con paso muy firme," *A.M.*, January 12, 2013; "Los hombres del presidente: El grave error de Carlos Medina Plascencia," *El Sol de León*, February 9, 1989.

17. "Preocupa a empresas la escasez de agua," *El Sol de León*, May 17, 1990.

18. "Falta agua a comerciantes del centro de la ciudad; se quejan," *El Sol de León*, October 12, 1991.

19. Interview #144.

Plascencia helped a group of local business elites focus their concern for water shortages into a reform agenda, effectively taking control of the citizen water board. While Medina and Plascencia had similar agendas of adopting business strategies for public services and making them more financially viable, Plascencia and his colleagues believed that reform was possible only if the citizen board remained outside of partisan politics. Business interests in León were powerful enough that the citizen board was able to craft bylaws that insulated it from direct mayoral intervention.

Institutional rules that inscribed de jure autonomy would have done little to create autonomy in practice had they not been backed by a strong business community that wielded clout with the mayor. One observer noted,

> City hall could [disband the citizen board] with one single act . . . take back the water utility and make it an office in city hall. They could do it. But they have not done it because on the board of directors there have always been opinion leaders. [Those board members] appear to be ordinary people but they are not. They do not come from just anywhere. Nine out of the eleven people on the board . . . are all opinion leaders, where they all have a particular authority [in the community]. Going against their policies would be more politically costly [in León] than confronting the mass public.[20]

As municipal administrations have come and gone in León, the citizen board has operated independently of mayoral pressure, particularly in its daily management decisions. The water utility has been so independent that it has even targeted the mayor's office in the campaign to eliminate clandestine connections and enforce strict collection practices.[21] Even with these tensions, León's mayors have found it necessary to coordinate with utility leaders to finance infrastructure projects of mutual interest.[22] City hall and the utility's citizen board have closely coordinated their efforts as a result of their shared stake in the city's economic development.

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20. Interview #135.

21. "Instala medidores en oficinas municipales," *El Sol de León*, February 23, 1988; "Adeuda la Presidencia $2 Mil 500 a SAPAL," *El Sol de León*, February 12, 1994; "Dividen a SAPAL y Municipio," *El Sol de León*, February 21, 1994.

22. Interviews #132, 144, 140.

The standing of these local elites and their ongoing interest in maintaining a direct influence in the water utility has allowed comprehensive reforms to occur. The utility began to implement dramatic tariff increases in 1988, against the wishes of PRI mayor Arturo Villegas, who worried that they would adversely affect PRI-affiliated neighborhoods.[23] City hall periodically approved tariff increases of 25 percent beginning in 1989, and in 1996 the rate was indexed to inflation, an unprecedented move in Mexico.[24] The utility aggressively worked to increase its bill collection rate, demanding payment even from government offices, city hall, and schools.[25] The utility suspended service for nonpayment for a wide range of consumers, even cutting off sewage disposal service for families who were behind on their payments.

Organized Protest, Negotiation, and Compensation

The water utility's new pricing and billing collection practices triggered intense reactions throughout León. In particular, PRI-affiliated popular sector neighborhoods viewed these new policies as unjust, with residents arguing that their zones were receiving water only every third day or were completely without water for weeks. In 1989 intense heat waves coupled with citywide water scarcity further angered citizens and led to increased complaints regarding price increases.[26] One citizen summed up the widespread frustration: "The utility's prices are now doubled but the service is not even half of what it was before."[27] Organized protest ensued in various forms.

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23. "Se actualizarán cada mes las tarifas de agua: MPS. Gestionará el alcalde que se reconsidere a gente sin recursos," *El Sol de León*, January 22, 1988.

24. "El aumento de 25% a cuotas de agua, previsto," *El Sol de León*, March 8, 1989; "20% más a las tarifas de agua: El cabildo devolvió autonomía al SAPAL," *El Sol de León*, January 24, 1990; "Aumenta al agua 19.5%: En Mayo aumentarán en vigor las tarifas; Sapal se justifica," *El Sol de León*, February 28, 1996; "SAPAL informa," *El Sol de León*, March 13, 1996; "Aumenta 15% pago por agua," *A.M.*, May 29, 2001; "Aumenta el agua 9.48% en 2003," *A.M.*, December 26, 2002.

25. "Busca SAPAL en '92 aumentar en 65% su facturación," *El Sol de León*, December 28, 1991; "Harán efectivo en Noviembre el aumento a tarifas de agua," *El Sol de León*, September 27, 1995; "Tarifa comercial de agua a las escuelas," *El Sol de León*, July 5, 1996.

26. "Sólo promesas al problema del agua: Escasez, angustia diaria de los Leoneses: Abasto terciado, por horas, en la zona centro y la Azteca," *El Sol de León*, February 5, 1989; "Más de 15 días sin agua ante un calor agobiante," *El Sol de León*, May 24, 1989; "Situación desesperada en barrios marginados por falta de agua: MV," *El Sol de León*, May 30, 1989; "5 meses sin agua en Jerez Infonavit," *El Sol de León*, November 15, 1989.

27. Más de 15 días sin agua ante un calor agobiante," *El Sol de León*, May 24, 1989.

In 1989, a workers' federation, the Confederación Obrera Revolucionaria, compiled a list of water-related grievances from residents of low-income neighborhoods on the periphery of the city. Grievances included receiving water only between midnight and five in the morning, not receiving water at all, and receiving insufficient quantities through water tankers rather than through piped supply. Nevertheless, citizens noted, water tariffs continued to increase.[28]

Dozens of families from the northern zone of León stormed municipal offices in 1990, petitioning for a solution to the ongoing water shortage and demanding that the utility stop issuing water bills.[29] In 1991, a popular sector association, the Unión de Usuarios, threatened payment strikes over excessive price increases, the introduction of metered consumption, and a new tiered tariff structure (or increasing block tariff). They rejected the doubling of water prices between the first and second consumption tiers, arguing that it was unjust that consumption under ten cubic meters cost forty-five hundred pesos, while consumers using eleven cubic meters saw their rates double.[30] Citizens complained that Mayor Medina failed to keep his campaign promises to improve water services, and others questioned the sincerity of the PAN's commitment to citizen participation. One resident of León asked, "How can the authorities ask for our cooperation if we don't have their support? We pay a lot for water, [but] when there is a drought, the bill continues to come."[31] In 1993, protesters organized a sit-in at the utility's offices, demanding the inclusion of five popular sector neighborhoods in the utility's service extension plans.[32]

The largest and best-organized group mobilizing against the PAN was the Movimiento Izquierda Revolucionaria (MIR), an urban popular sector movement founded through a land invasion of the Guaje estate and in the 1990s organized in twenty-eight neighborhoods throughout the city. The MIR became the PAN's most ardent challenger. The PAN re-

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28. "Presentará la COR paquete de quejas contra el SAPAL," *El Sol de León*, November 23, 1989.

29. "Exigen familias agua a la Presidencia Mpal," *El Sol de León*, August 20, 1990.

30. "Excesivos cobros en SAPAL: La DUU; analiza una huelga de pagos," *El Sol de León*, May 31, 1991; "Protesta la Unión de Usuarios por excesivos cobros de la CFE y Sapal," *El Sol de León*, October 2, 1991.

31. "Amagan con huelga de pagos si SAPAL encarece el agua," *El Sol de León*, July 3, 1990; "El sur de León sin agua durante 3 días," *El Sol de León*, May 31, 1993.

32. "Aportarán 50% de las obras para dotarlas de agua potable," *El Sol de León*, February 5, 1993.

sponded by jailing the MIR's leaders and cracking down on its supporters; indeed, the PAN's response to MIR protests demonstrated the party's difficulties in establishing dialogue and coordinating with popular sectors (Valencia García 1998, 157–58). The MIR protested the water utility's cost-recovery policies throughout the 1990s. MIR leader Adolfo Andrade Ibarra chastised the PAN for providing poor service and failing to repair leaks and address contamination and called for popular sectors to organize protests against the PAN.[33] In 1992, the water utility cut service to the Guaje estate, where the MIR had settled, for failure to pay its water bill, reducing service to more than fifty MIR families.[34] Failure to negotiate subsidized water prices with the MIR families evoked the ongoing ire of this powerful social group, which extended its activities in the late 1980s to Allende, San Francisco, Irapuato, Celaya, and other cities across Guanajuato (Valencia García 1998, 158).

As the citizen board approved cost-recovery practices, many sectors of society denounced it for serving the interests solely of industry and elites. Many complained that the leather tanning industry paid prices that were too low and received exemptions from payment, while many low-income residents lacked water service.[35] PRD leaders claimed that ex-mayors and leather industry magnates received uninterrupted water supply even at their second homes while poor neighborhoods were severely rationed.[36]

Conflict over water price increases and ongoing water shortages in low-income neighborhoods became a divisive partisan issue. A leader from the left-of-center PRD decried, "We are not going to allow the poorest citizens to pay more for water," declaring that the utility should reduce the "millionaire salaries" being paid to its management staff.[37] PRD leaders also brought attention to the contamination of the city's water supply and vowed to find proof of abuses committed by utility officials.[38] Local PRI leaders also alleged that the new sanitation fee was being used

33. "Es injusto el alza a las tarifas del agua: A. Andrade," *El Sol de León*, February 23, 1996.

34. "Reducen el suministro de agua a Miristas hasta que paguen adeudos," *El Sol de León*, October 7, 1992.

35. "Falta democratizar SAPAL; el empresario lo controla: FAT," *El Sol de León*, February 13, 1991; "Fugas en facturación de agua favorables a la curtiduría, acusa," *El Sol de León*, February 28, 1995.

36. "Sed en colonias y agua a potentados," *El Sol de León*, February 12, 1991.

37. "¿Cómo operaba Sapal con números negros antes y en elecciones?" *El Sol de León*, July 22, 1995.

38. "Se comprometió el PRD a presentar pruebas de irregularidades en SAPAL," *El Sol de León*, February 19, 1991.

to increase PAN bureaucrats' salaries, questioning the amount of money spent on new office space, and calling for price freezes.[39]

In 1995, in response to ongoing water price increases despite a national economic crisis, five political parties (including the PRI and PRD) organized a mass rally, publicized their case in television interviews, and attempted to file a motion with the municipal Administrative Law Tribunal to block price increases.[40] Opposition parties noted, "How is it possible that before, and during elections, [the PAN] claimed that their water utility operated in the black, and now, [to justify price increases], they say they are in the red."[41] A range of citizen organizations—including the Frente Cívico de Consumidores (FCC), the Unión de Usuarios y Contribuyentes, and the Unión Cívica Guanajuatense—joined opposition parties in protesting further price increases. They also called for the inclusion of citizens other than business elites in the utility's decision making, critiquing PAN mayor Quiróz for forgetting that "the mass citizenry [should be] the boss."[42] Through the Unión Cívica Guanajuatense, former legislators joined forces with politicians to denounce tariff increases and threatened to file motions with the state's human rights commission.[43] One opposition leader argued,

> PAN leaders do not care about the people. [Water service] is used as a [political tool] for the PAN during elections, then they care about protecting [poor people], but because now elections are over, they will authorize the highest price increases to those with the fewest [means].[44]

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39. "Se opondrá el PRI a más incrementos en servicios de agua potable: PLP," *El Sol de León*, January 28, 1998; "Reprueba el PRI aumento a tarifas del agua," *El Sol de León*, February 25, 1996; "Medina aseguró que tendríamos agua para 20 ó 25 años: PRI," *El Sol de León*, February 27, 1996; "Explicarán partidos las razones por las que no debe aumentar el agua," *El Sol de León*, July 21, 1995.

40. In Administrative Law Tribunals (Tribunal de lo Contencioso Administrativo), citizens can file complaints, petitions, and lawsuits against public officials and government practices. "Se ampararán contra el anunciado incremento a las tarifas de agua," *El Sol de León*, July 19, 1995; "Explicarán partidos las razones por las que no debe aumentar el agua," *El Sol de León*, July 21, 1995.

41. "¿Cómo operaba Sapal con números negros antes y en elecciones?" *El Sol de León*, July 22, 1995.

42. "Sapal obligado a dar servicio con cobros razonables y sensatos," *El Sol de León*, July 23, 1995.

43. "Proponen amparos contra aumentos a tarifas de agua," *El Sol de León*, July 15, 1995.

44. Ibid.

The FCC, whose members included former elected officials from the PRD and PRI, distributed ten thousand flyers with the slogan "Say no to water price increases" and called on the public to join a rally in front of city hall.[45]

While the PAN continued to implement cost-recovery strategies in water services, PAN leaders and citizen board members made a number of concessions to appease political opposition and curtail organized protest. For example, in response to the FCC's 1995 concerted attack against water price increases, Quiróz allowed the FCC to initiate an audit against the utility and form a commission to investigate allegations. In addition, he announced that he would be willing to consider revoking the proposal for increased water tariffs.[46]

PAN mayors worked with utility officials to defuse tensions over the speed and degree of cost-recovery implementation. For example, as part of the Citizen Wednesdays forums, "the utility received as many as 5,000 people a month requesting payment extensions and debt forgiveness, and as many as 50 percent were being exempted to some extent in 1995."[47] In other cases, SAPAL met consumers halfway, reinstating service when an initial portion of the debt was paid and devising individualized payment plans based on a consumer's ability to pay.[48] Amid intense protests, SAPAL negotiated with city hall and other societal groups to reduce the impact of price increases or other cost-recovery measures.[49] Even the PAN's local chapter in León occasionally suggested that price increases needed to be more measured—pleas that SAPAL would occasionally heed.[50] However, despite periodic negotiations with opposition party leaders who represented the urban poor, León's utility charged ahead with an unprecedented number of changes to service provision, many of them financed by user fees.

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45. "Demandará el Frente de Consumidores marcha atrás el aumento al agua," *El Sol de León*, July 26, 1995; "Presenta PRD propuestas para dar solución a problemas de Sapal," *El Sol de León*, July 25, 1995; "Sin base legal aún, la aprobación del incremento a tarifas de agua," *El Sol de León*, July 27, 1995.

46. "Forman comisiones para hacer auditoría a Sapal," *El Sol de León*, July 28, 1995; "Pide Frente de Consumidores cuentas claras a Sapal," *El Sol de León*, July 28, 1995; "Sapal dispuesto a nueva auditoría," *El Sol de León*, July 29, 1995; "Posibles modificaciones al porcentaje de incremento a las tarifas de agua," *El Sol de León*, July 29, 1995.

47. "5 mil usuarios al mes piden prórroga de pagos al SAPAL," *El Sol de León*, October 5, 1995.

48. Interview #137.

49. "No está de acuerdo el Frente de Consumidores con alza al agua," *El Sol de León*, August 26, 1995.

50. "Que Sapal de a conocer sus ineficacias y recursos: PAN," *El Sol de León*, August 27, 1995.

Branding Reform Success

Intense capital investment over a thirty-year period helped to dramatically transform water and sanitation delivery in León. These investments were financed by federal funds that required matching sums at the local level; the local contributions were generated by user fees. Over time, the resulting service extensions and improvements proved the biggest antidote to organized protests against price increases, although not all neighborhoods received the same quality of service from the beginning (informal settlements were especially neglected).

In 1989, León suffered from water shortages and unequal distribution among neighborhoods: official figures for water and sanitation coverage were 77 and 65 percent respectively, but in practice only 37 percent of the population received water daily, while 50 percent (low-income communities located mostly in the northern part of the city) received water only every third day.[51] Sewage occasionally flooded city streets, and untreated sewage polluted waterways because the city lacked a sewage treatment plant.[52] By 2010, the utility's conservative estimate of coverage was 95 percent for water and 99 percent for sanitation (CEAG 2011, 14). Finally, SAPAL has been treating a portion of the city's sewage since 1999, and today is one of the few utilities in Mexico that treats 100 percent of its residential sewage, operating eight sewage treatment plants with a total capacity of 2,860 liters per second of wastewater. The Villas de San Juan facility even treats sewage for reuse, and SAPAL has created a secondary market in treated sewage water for industrial use.[53]

Throughout this period, the utility attempted to eliminate discretion in fee collection practices. City council members and powerful industry leaders who did not pay found their service disconnected, and even industrial and commercial centers behind on payment found their sewage connections suspended.[54] As the utility grew, its collection practices became stronger and more transparent. New technologies reduced corruption: automated accounting systems made it difficult for staff to adjust how much consumers owed or pocket revenues collected.[55]

Much more than in any other reform case in this book, León's utility

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51. "Tendrá agua 90% de usuarios," *El Sol de León*, May 22, 1989; interview #131.

52. "Plan maestro hidráulico," *El Sol de León*, May 22, 1989.

53. "De agua residual a potable," *A.M.*, March 25, 2013; "Pone SAPAL ejemplo," *A.M.*, November 4, 2009; SAPAL (1997).

54. Interview #135.

55. Interview #144.

became singularly focused on treating consumers as clients. Officials created multiple payment centers throughout the city, including banks and supermarkets and twenty-four-hour payment machines in the utility office's lobby, and opened customer service centers that coordinated complaints with the sophistication of a multinational corporation.[56] The utility also innovated beyond punishing for nonpayment and began to reward timely payments by raffling cars and high-end household items (e.g., televisions, refrigerators, and stereo systems) to consumers who paid on time.[57]

As service improved, León's water utility began to attract widespread attention. In 2001, SAPAL received an award from Guanajuato's secretary of health for providing water suitable for human consumption, the first such award given in the state.[58] In 2002, the Organization of American States recognized León's utility for its "best practices" and invited it to participate in training other utilities in the region.[59] In 2005, Standard and Poor's gave SAPAL a high rating for fiscal and administrative excellence, and Fitch ranked SAPAL similarly in 2012.[60] SAPAL followed the quality and management standards of the International Organization for Standards throughout the 2000s.[61] In 2009, SAPAL was recognized at International Water Day in Turkey for excellence in hydraulic infrastructure and designing subsidies for residents of low-income housing.[62] In 2009 and 2010, the National Water Commission named SAPAL the best-performing water and sanitation utility among Mexico's twenty-nine largest utilities.[63]

The utility's "good government" reputation helped launch political careers. For example, local businessman Vicente Guerrero served as SA-

56. "Descentralización de servicios de Sapal," *El Sol de León*, May 22, 1992; "80% de quejas en SAPAL son por fugas de agua," *El Sol de León*, January 29, 1994; "La olla: SAPAL de fiesta," *A.M.*, April 5, 2009; "Garantiza SAPAL: No aumentarán tarifas de agua," *El Sol de León*, January 8, 2011; author observation.

57. Interview #139.

58. "Recibe primera certificación del agua," *A.M.*, March 26, 2001.

59. "Se interesa la OEA en llevar la experiencia de SAPAL a países latinoamericanos," *A.M.*, November 13, 2002.

60. "Standard & Poor's confirma calificación de 'mxAA' a SAPAL," *Standard & Poor's*, August 22, 2005; "Califica 'Fitch Ratings' al organismo con 'AA(MEX),'" *El Sol de León*, December 30, 2012.

61. "El Sistema de Agua Potable y Alcantarillado de León obtuvo la ISO 9001:2008, esto gracias a la implementación de un sistema de gestión integral en el organismo," *El Sol de León*, September 4, 2012.

62. "Gana SAPAL en Turquía," *A.M.*, March 20, 2009.

63. "Recibe SAPAL premio nacional," *A.M.*, February 19, 2010; "Exalta Conagua a SAPAL: Es el papa de los pollitos," *A.M.*, November 6, 2009.

PAL's president from 1992 to 1995 and then as the PAN mayor from 2006 to 2009. Another prominent businessman, Jorge Videgaray, was a mayoral candidate in 1997, SAPAL president from 2007 to 2012, and was elected to the state Congress in 2012. Videgaray's tenure as citizen water board president granted him access to mayors, legislators, and other public authorities, and he has claimed credit for major projects such as the El Zapotillo dam and the finishing of wastewater treatment plants.[64] These opportunities have created important professional and political contacts, public visibility, and public executive experience that are excellent fodder for electoral campaigns. One observer noted that to become mayor of León, one has to have been president or a board member of one of three important local institutions—one of them the city's water and sanitation utility.[65]

Extending the Policymaking Time Horizon

León's dramatic water reforms have been a product of the power of the city's business elites, who used their influence to create some autonomy from direct partisan intervention. This informal mechanism (business power) allowed reformers to create institutional mechanisms by which to extend the policy time horizons and create long-term management strategies that bypassed the short-term nature of municipal electoral politics. For example, business leaders created citizen board bylaws mandating that only two of the nine board members could be politicians, and the president could not be a politician. The remaining seven members were to be drawn from civil society, including one from each of Leon's main business associations.[66] Also, unlike the citizen board bylaws that governed utilities in the PRI-dominated Mexico State and Veracruz, the mayor was banned from sitting on León's citizen board. In addition, no board member could serve simultaneously in political party leadership positions. Board members and the board president could serve for two administrations, but the turnover of board members was staggered so that only 50 percent of the board would be replaced at once. This institutional structure ensured that the citizen board membership would be renewed periodically but not all at once and that membership renewals

64. "El Club Hídrico," *A.M.*, May 6, 2007.

65. Interview #161.

66. The key business associations were leather curers, footwear, commerce, construction, professional colleges, CANACINTRA, and Centro Patronal de León (SAPAL 2008).

would not coincide with the municipal electoral calendar, thereby reducing mayoral patronage appointments.

Freeing citizen board oversight from the three-year electoral calendar helped reformers engage in longer-term planning. The citizen board hired a utility director, Felipe Polo, in 1994 and retained him for sixteen years.[67] Polo, for his part, did not replace other managers or staff based on any electoral calendar. Consequently, programs continued and staff members developed expertise over time. While the citizen board oversaw the utility's long-term planning, it left technical decisions to the director and his team.[68] Polo and subsequent directors paid special attention to their relationships with influential members of the local community (largely from key business sectors and professional associations), incorporating them into the decision-making process. For example, the utility held forums open only to these leaders and circulated biweekly memos outlining operations and strategies to opinion leaders before disseminating the information to a wider audience.[69]

Another institutional mechanism that extended the policy time horizon was the role of the Guanajuato State government, although it played an even larger role in Irapuato. The differing levels of state support received by these two cities resulted from the timing of water reforms. The state water commission began to promote standardizing pricing practices in 2002, but León had done so six years earlier. By the time the state water commission developed programs to provide utilities with technical assistance in the mid-1990s, León's utility had already assembled an award-winning team of engineers to create master plans and develop projects. Similarly, by the time the state water law had been established in 2000, León was already so focused on cost recovery that the law had relatively little effect. However, factors such as the state government's focus on improving water governance and state-level PAN leaders' support for cost-recovery policies reinforced initiatives already under way in León. For example, during the uproar over the 1995 price increase, PAN governor Vicente Fox intervened directly and publicly supported León leaders' decision to raise prices, admonishing protesters as political opportunists.[70] Observers noted that León set an example for utilities

67. For more on personnel retention in the sector, see Pineda Pablos and Briseño Ramírez (2012).

68. Interviews #135, 136, 140, 144.

69. Interview #138.

70. "Justifica Fox el incremento a tarifas de agua potable," *El Sol de Leon*, July 28, 1995.

throughout the state and that the state water commission attempted to support the utility and disseminate its best practices to other cities.[71]

Broadening Participation after Initial Reform

How has big business's role in the reform process affected attempts to create more accountability and eliminate the politically motivated distribution of special favors in public services? Industrial firms have clearly received special favors in León as a consequence of business elites' control of the water board. This is most evident in the pollution of the Lerma River by the more than eight hundred tanneries whose wastewater contains highly toxic effluents.[72] Critics have suggested that the tanneries have polluted with impunity for decades because of sympathetic board members.

However, the makeup of the citizen water board has changed along with the composition of the city's power brokers. For example, the leather tannery industry was once the city's most powerful lobby, and it certainly controlled the citizen board for many years.[73] However, the small-scale companies that once dominated the industry have become less powerful than larger-scale companies. The CEOs of these large leather manufacturers became important statewide leaders, sitting on sector-wide industrial association boards and representing the interests of local opinion leaders and educated, middle-class consumers rather than the small-scale leather curers who were becoming increasingly obsolete in the global marketplace. In addition to these shifts within the industry, environmental regulatory pressures have forced the leather industry to restructure its processing methods (Pacheco-Vega and Dowlatabadi 2005). As the water board leadership has changed since the turn of the century and as the leather industry has become less monolithic, SAPAL's board approved "polluter fees" for wastewater treatment for these industries. Resistance against these fees has been intense, and

71. Interviews #117, 119.

72. "Es grave el daño ecológico caudaso por curtidores: PEM," *El Sol de León*, December 23, 1991; "Muy poco se ha hecho para la limpieza del Río Lerma en Gto," *El Sol de León*, January 9, 1994; "Ya no soportan vecinos la contaminación de tenerías," *El Sol de León*, February 23, 1998; see also Barkin (2011, 388).

73. "Un curtidor presidirá el consejo del SAPAL," *El Sol de León*, February 24, 1995; "Fugas en facturación de agua favorables a la curtiduría, acusa," *El Sol de León*, February 28, 1995; "Pidieron los curtidores el nombramiento del presidente del Sapal," *El Sol de León*, March 2, 1995; "Irregular el nombramiento del consejo del SAPAL: Se inconforma el Colegio de Ingenieros," *El Sol de León*, February 26, 1995.

while SAPAL has negotiated various accommodations with industries, businesses are now charged for the amount of industrial discharge they produce.[74] Despite the political conflict, León's efforts in creating policies to reduce river pollution levels stand in sharp contrast to other cases in this book.

Finally, the city's rich tradition of citizen participation may yet triumph over the more narrow business control of the citizen water board. In 2009, pleas from other sectors in the city for more influence on the board resulted in new board regulations. The board increased from nine to seventeen members, with the new spots reserved for members of professional associations (such as the engineering and lawyers' associations), university professors, and service sector leaders who are not members of business associations.[75] This arrangement will inevitably dilute the industrial manufacturing sector's control of the board, which previously had a majority of citizen board positions reserved for its members. Nevertheless, business elites will remain influential on the citizen water board as a consequence of their ongoing economic and political strength in the city, and it is unlikely the city's programmatic water and sanitation reform project will be drastically altered.

Reform Adoption in Irapuato

Politics and Public Services prior to the Democratic Transition

Irapuato has a population of 529,440, and is the second-largest city in Guanajuato after León, with a strong economy that produces 7 percent of the state's GDP in its four industrial parks, making it one of the four principal hubs in the state's industrial corridor (INEGI 2004; INEGI 2010). While some industrialization and urban modernization occurred prior to the 1970s, the contours of the city's development changed dramatically after 1973. During that year, a devastating flood destroyed much of the city; entire neighborhoods were lost, and dozens of people drowned (Cordero Domínguez 2009, 82–83). The flood was a double-

74. "Rechaza Canaco cuotas por saneamiento," *A.M.*, February 1, 2001; "Insisten industriales sea cobro escalonado," *A.M.*, February 10, 2001; "Asegura Canacintra se descarta 25% por saneamiento," *A.M.*, February 14, 2001; "Acuerda consejo de SAPAL tarifas para saneamiento," *A.M.*, February 10, 2001; Confían baje SAPAL saneamiento," *A.M.*, February 20, 2001.

75. "Excluyen ciudadanía," *A.M.*, November 18, 2009; "Nuevo reglamento para el SAPAL," *A.M.*, December 20, 2009; "Aumenta SAPAL consejo al doble," *A.M.*, December 21, 2009.

edged sword for Irapuato: on the one hand, the human toll was high, important infrastructure was destroyed, and the city's economy was paralyzed. But the extensiveness of the damage rapidly triggered investment from the state government for rebuilding infrastructure and residential communities as well as a parallel effort by the national government to develop infrastructure in the four principal cities within the state's industrial corridor (Valencia García 1998, 53).

As the city grew after the 1973 flood, so did fragmentation between middle-class and industrial areas on one side and lower-class settlements on the other. The first residential gated community, Villas de Irapuato, was developed in 1974 in the north at a considerable distance from the lower-income communities downtown. In addition, large agro-food companies began to settle in Irapuato in the 1980s, and by 2004 they comprised 84 percent of the city's economy (INEGI 2004; Cordero Domínguez 2009, 85). Beginning in the 1990s, PRI mayors focused on attracting commercial business to the center of the city, diversifying its economy (Cordero Domínguez 2009, 90–93). In the north and northeast, residential middle-class neighborhoods developed along with the city's expanding industrial and commercial hubs.

In contrast, in the city's southeast and east, land invasions and the illegal sale of collective (*ejidal*) land to real estate developers together resulted in the creation of numerous undocumented settlements (Cordero Domínguez 2009, 85). These informal settlements developed complex governance systems presided over by neighborhood association leaders, many of whom had been land invasion leaders.[76] These leaders petitioned municipal PRI officials for property titles, formalizing settlements as legally recognized neighborhoods that eventually received some public services, if often of poor quality. During this time, a number of neighborhood association leaders negotiated reduced water fees for their communities and paid themselves a commission for negotiating these subsidies.[77] In turn, PRI leaders extended special pricing arrangements for water services to low-income neighborhoods—as they did in many cities throughout the country—to help build electoral networks for the party. Recalled one utility worker, "Water was a currency [used] to obtain political benefits—votes."[78] These arrangements constituted major impediments to improving services.

76. Interviews #153, 155, 166.

77. Interview #128, 155; "Organizaciones deben contribuir a resolver problemas: JAPAMI," *El Sol de Irapuato*, May 12, 1998; Lara Ruiz (2008).

78. Interview #155.

In 1986, an urban popular sector association, Unión de Colonias Populares de Irapuato (UCOPI), was established with the sole purpose of creating pacts for subsidized water service with PRI authorities. While the movement eventually grew and broadened its demands to include environmental, educational, and health reforms (Valencia García 1998, 158), it remained a vocal advocate for subsidized water for the poor and became a major challenger to programmatic reform in the 2000s.

Prior to the 1990s, PRI governments directly controlled water services management in Irapuato—determining who received water services, what tariffs they were charged, and how revenues were spent. Even after a legally and fiscally independent water utility was created in the city in 1984, mayors continued to intervene in daily operations. Corruption was rampant. Insiders dubbed the last PRI mayor's luxury car the "submarine" because it had been purchased with revenues from water fees.[79]

Launching a Reform Project

The Economic and Demographic Landscape

Irapuato's high levels of urbanization and education made the city an ideal base of support for the PAN in the late 1990s (López Levi 2002). The expansion of the middle and upper middle classes could be seen in the development of neighborhoods such as Villas de Irapuato and Lomas de Pedregal—suburban, green "neighborhoods that became symbols of the city" (Cordero Domínguez 2009, 87, 166). The expansion of higher-end services at elite shopping centers (such as Plaza Cibeles, Plaza Jacarandas, and the Zona Dorada) and increased comfort, security, and exclusivity in neighborhoods such as Villas de Irapuato catered to upwardly mobile middle-class constituents. The PAN invested money into developing the historic downtown center and expanding urban infrastructure, hoping to increase the city's international appeal (Cordero Domínguez 2009, 166–87).

By the time came the PAN came to power in 1997, Irapuato had become a highly industrialized city, with manufacturing accounting for 60 percent of the local economy (INEGI 2004). As in León, local industry in Irapuato increasingly needed reliable water access for manufacturing. Eighty-four percent of Irapuato's industries were involved in food production, and the remainder were in textiles and mineral and metallic

79. Interviews #155, 161, 165, 167.

processing (INEGI 2004). Irapuato's manufacturing was less water-reliant than León's leather tanning industries, but it still depended on reliable water access. Also as in León, most of these industries do not have individual water extraction permits from the National Water Commission. Of the city's 1,223 registered industrial companies, only 48 have water extraction permits from the federal government (see tables A3 and A4), meaning that a large number of manufacturing companies either have illegal boreholes or rely on the local water utility. By 2008, the city's water utility had 411 registered industrial clients (see table A2). Several observers have noted that while dozens of the city's industrial businesses operate illegal boreholes in their industrial park, the largest and most well-known industries are registered with the utility and pay high-volume rates for water provision.[80] In this sense, the structural conditions existed in Irapuato for making cost-recovery reforms financially sustainable through cross-subsidies with high-volume industrial customers. However, unlike in León, Irapuato's business community was controlled by a smaller number of industrial and commercial businesses, and their support for cost-recovery reforms was less consolidated than it was in León. Business support for reforms was contingent on whether the particular business had access to a legally acquired water extraction permit from the federal government or used an illegal borehole or whether it depended on the utility. Overall, Irapuato's business interests were less involved in voluntary associations and the reform process than business interests in León.

The local PAN leadership has been tightly linked to the business sector, but in contrast to León, mayors in Irapuato were not frequently leaders of large corporations. In León, business leaders turned mayors attempted to revolutionize municipal governments through business-oriented administrative innovations, but in Irapuato, mayors tended to be former leaders of political movements rather than business leaders. These PAN mayors—with the limited direct participation of business elites—focused more on reducing the PRI's electoral networks and augmenting their own standing with primary constituencies such as the middle class and business groups. Therefore, reforms were mostly a mayor-led (and partisan) effort to reduce the PRI's clientelist linkages that threatened the young PAN. These reforms also allowed mayors to brand reform successes to bolster their own political careers.

80. Interviews #157, 159, 161, 167.

Political Change and Broad Elite Incorporation

The PAN came to power in Irapuato in 1997, nine years later than in León, as part of an electoral sweep of the state that left 70 percent of Guanajuato's population under PAN control.[81] This victory marked the beginning of six consecutive PAN mayoral administrations in Irapuato from 1997 to 2012.

As in León and the rest of Guanajuato, Irapuato's PAN had sold itself as the party of change, promising to increase citizens' venues for participating in policymaking. The new PAN mayor, Salvador Pérez (1997–2000), and the other architects of reform were gaining their first experience in governing. Although a PRI government had created a citizen water board in the mid-1980s, the new leaders sought to change its closed decision-making structure and open membership positions up to a wider group of citizens. As one interviewee explained, "Back then, the citizen boards were corporatized by the PRI. That is where . . . they invited businesspeople that were clearly PRI militants."[82] Pérez, however, advocated increasing participation, as one former board member noted: "With Salvador [Pérez], they tried to 'citizenize' [the boards]. When the PAN entered, they tried to make [the boards] more authentically representative. . . . [The citizen board members] came in with a 'clean chest.' . . . So did the mayor."[83] Pérez and his successor, Ricardo Ortiz (2000–2003) were influenced by the "participatory" rhetoric of PAN leaders in León and statewide, particularly the emphasis on creating participatory councils that Carlos Medina had promoted while serving as mayor of León and later as governor of Guanajuato (1991–95). Both Pérez and Ortiz supported the citizen water boards and allowed members to be drawn from civil society (as opposed to through corporatist groups or organizations).

Initiating Reforms

Backed by Pérez, Irapuato's citizen board began to authorize cost-recovery policies in the late 1990s, largely as a partisan measure to break historic clientelist ties between PRI officials and a variety of water users. The elimination of subsidies provoked much more contention in

81. "Mas cambios en la geografía política para el '98," *El Sol de Irapuato*, January 4, 1998.

82. Interview #161.

83. Ibid.

Irapuato than in León or in the other localities studied in this book. Land invasions had been especially pervasive in Irapuato under the PRI, and PRI mayors had agreed to *convenios* (special agreements) for greatly reduced water tariffs. When the PAN came to power, it discovered that the PRI-controlled water utility had made more than thirty different pacts with various groups.[84] According to the first PAN director,

> It wasn't just poor neighborhoods, although originally that is the vehicle neighborhood association leaders used to gain a following, it was also middle class, commercial properties, and several industries [that signed pacts]. These leaders would charge their subscribers the cost of inscription to the pact, so as to guarantee the reduced water agreement with authorities. (Lara Ruiz 2008, 323)

Under PRI control, party leaders from most sectors of society had negotiated special discounts as sitting board members for the groups they represented. The result, as one interviewee explained, was that "the poor didn't pay because they were poor, the rich didn't pay because they had millions of ways to evade [payment]. . . . The burden fell on the middle class."[85]

The backlash against the elimination of subsidies and price increases was thus quite severe. Between 1997 and 2003, the water utility began rejecting collective payments by neighborhood association leaders and began increasing prices and billing individual households, rather than accepting fees en masse from neighborhood groups.[86] One PAN mayor jailed two neighborhood association leaders for abusing their authority over their communities' water services.[87]

Eliminating subsidies was geared not only toward popular sector neighborhoods but also toward middle-class and industrial consumers, who had also enjoyed subsidized service. The utility threatened to cut services to industrial clients and began to publish the names of consum-

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84. "Convenios, tarifas, servicio medido, varios temas en compare," *El Sol de Irapuato*, January 31, 1998.

85. Interview #161.

86. "Organizaciones deben contribuir a resolver problemas: JAPAMI," *El Sol de Irapuato*, May 12, 1998; "De 10 a 12 millones de pesos la reducción del presupuesto de JAPAMI por convenios," *El Sol de Irapuato*, May 16, 1998; "Organizaciones deben contribuir a resolver problemas: JAPAMI: Habrá modificación en los convenios, señala Oscar Figueroa Hernández," *El Sol de Irapuato*, May 12, 1998; "A JAPAMI no le afecta huelga de pago," *El Sol de Irapuato*, January 16, 1998; Interviews #128, 155, 161, 167.

87. Interview #153.

ers with outstanding debts.[88] Such public-shaming strategies generated conflict: one business association demanded a public apology after the utility shut off service for nonpayment in 2000.[89]

The water utility nevertheless persisted. It implemented a program to eliminate clandestine connections and approved significant price increases for consumers whose homes were recategorized as higher-consuming connections.[90] Citizen board presidents also authorized sewage cutoffs to customers in high-income neighborhoods who were behind on payment.[91]

Organized Protest, Negotiation, and Compensation

The implementation of these cost-recovery policies generated extensive and well-organized mass protests. Neighborhood association leaders organized sit-ins and rallies and threatened payment strikes. Protest was so frequent and intense that it dominated the utility's agenda during the city's first two PAN administrations. The urban popular sector association UCOPI organized the majority of marches and sit-ins at the utility's headquarters during the early reform years.[92] In 2001 and 2002, 1,250 appeals against reforms were filed with the municipal Administrative Law Tribunal; they accounted for 86 percent of all complaints filed with the tribunal during this period.[93]

The extreme backlash against the utility's reform agenda became an explosive partisan issue that pitted lower-income neighborhoods, their leaders, and PRI party sympathizers against the PAN and the coalition that supported the reforms. One urban poor movement, the Coordinadora General de Colonias Unidas de Irapuato, demanded more repre-

88. "Suspendan servicio de agua potable a empresarios morosos," *El Sol de Irapuato*, August 29, 2000; interview #162.

89. "Empresarios exigen disculpa pública a JAPAMI," *El Sol de Irapuato*, August 11, 2000.

90. "Programa de JAPAMI cancelaría contratos por robo de agua," *El Sol de Irapuato*, April 13, 2001; "Suben tarifas del agua en 7 Colonias," *El Sol de Irapuato*, January 31, 2005.

91. Interview #164.

92. "A JAPAMI no le afecta huelga de pago," *El Sol de Irapuato*, January 16, 1998; "En el 'año del agua' sólo incrementaron los costos, señala la Unión de Usuarios," *El Sol de Irapuato*, March 20, 1998; "Ucopistas toman instalaciones de OO," *Correo*, May 15, 2002; "Convocan a usuarios a poner freno a JAPAMI," *Correo*, May 21, 2002; "El grupo disidente respaldo por JAPAMI cortaba el agua, aseguran Ucopistas," *Correo*, July 4, 2002; interview #161.

93. Author freedom of information request, Irapuato, Guanajuato, filed March 9, 2012.

sentation in water policymaking decisions: "By excluding neighborhood associations [the utility] is making it clear that [it wants] this process to be controlled by city hall and businesspeople."[94] In 2002, UCOPI accused the citizen board president of a "terrorism campaign" against the poor because of the utility's policies of suspending service for nonpaying customers as well as seizing consumer assets to force payment.[95] PRI and PRD city council members, supported by a large organized network of urban poor protesters, repeatedly attempted to either modify or deter PAN-led efforts to increase water prices, employing such strategies as public denunciations, petitions to state legislators urging them to vote against price increases, and organized marches and rallies.[96]

PAN leaders initiated a series of concessions designed to both appease the most vocal low-income protesters and to incorporate middle- and upper-income consumers into the reform coalition. In 2001, pensioners living in low-income neighborhoods received a 50 percent discount, while other pensioners received a 30 percent discount. Officials also invited low-income users to apply for a study to determine if their tariffs were appropriate for their income level or if they qualified for further subsidies.[97] As in León, these reform strategies emphasized the autonomy of the individual as a client.

One citizen water board president, Enrique Treviño (2008–12), understood the value of negotiation, noting, "You can't break with politics or social leaders, you have to work with them. . . . [Either you] open the door to [citizens], or [they] come in through the window."[98] Treviño negotiated with the leader of UCOPI regarding the design of the utility's projects, and UCOPI leaders mobilized citizens to contribute manual labor to help extend services to their households. He credits much of his

94. "Las colonias aún tienen el sartén de JAPAMI por el mango: Dr. García," *El Sol de Irapuato*, March 11, 1998; "A Japami no le afecta huelga de pago," *El Sol de Irapuato*, January 16, 1998.

95. "Falso que exista una campaña de terrorismo contra Irapuatenses," *El Sol de Irapuato*, May 15, 2002.

96. "JAPAMI necesita gente sana, honesta, y comprometida con las colonias: J. Arriaga," *El Sol de Irapuato*, March 13, 1998; "Comparece el titular de JAPAMI ante regidores," *El Sol de Irapuato*, January 17, 2001; "Preocupa a PRI posible incremento a predial y agua," *Hoy en Guanajuato*, October 29, 2002; "Se opondrán legisladores Priistas a incrementos en predial y agua en el estado," *Correo*, October 29, 2002; "Incremento del 6.16% anual; PRI y PRD en contra," *El Sol de Irapuato*, November 14, 2003; "Usuarios de 11 colonias se inconforman con JAPAMI," *El Sol de Irapuato*, February 21, 2004; "Informa JAPAMI sin refrendo del comisario," *El Sol de Irapuato*, February 27, 2004.

97. "Grupo de pensionados gestionaron descuento de 30% en pago de agua," *El Sol de Irapuato*, January 21, 2001.

98. Interview #164.

success in defusing conflict with UCOPI to "showing [neighborhood association] leaders that I also cut off water [for nonpayment] to the rich neighborhoods—because it's always the reverse."[99]

Neighborhood associations resented the exclusion of nonelites from the reform process. The Coordinadora General de Colonias Unidas de Irapuato, a movement representing the urban poor, argued that "even though [the urban poor] are the greatest user of potable water, [we are] the least represented and will always be [at a] disadvantage to business associations and other professional groups.[100] PRD leaders noted, "The PAN government is not fulfilling its promise of depoliticizing [the utility]. They are politicizing it . . . because they are scared of citizens, [they want to] avoid falling under the [control of] neighborhood associations." Leaders argued that representatives of unions for teachers, taxi drivers, and other sectors were deliberately being kept off of the citizen water board.[101] In 2003, to counter allegations that the utility lacked civil society influence, PAN leaders replaced one of the positions on the citizen board allotted to CANACINTRA, an industrial association, with a seat for a neighborhood association representative. However, the citizen board remained dominated by business and professional association members.[102]

Business leaders associated with the PRI who were accustomed to widespread subsidies initially supported the urban poor groups' protests against water reforms. Because these business groups owned the city's major newspapers, the citizen board received substantial negative press during the early years of reform, particularly because PAN officials refused to pay the traditional *chayote* payments to journalists for positive press coverage.[103] However, as PAN sympathizers gradually took seats on the citizen water board, they helped smooth over tensions with their associations. Business groups eventually began to offer more public support for cost-recovery reforms. In 2005, for example, the Consejo Coordinador Empresarial publicly praised the service improvements undertaken during Mario Turrent's tenure as citizen water board presi-

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99. Ibid.

100. "La sociedad civil sin representación en nuevo consejo de JAPAMI," *El Sol de Irapuato*, March 23, 1998.

101. "Politizan y partidizan a la JAPAMI; el PAN le tiene miedo a los grupos: PRD," *El Sol de Irapuato*, April 1, 1998.

102. "Se renovará en forma parcial, el consejo administrativo de JAPAMI," *El Sol de Irapuato*, January 7, 2003.

103. Interviews #155, 161, 167; "A JAPAMI no le afecta huelga de pago," *El Sol de Irapuato*, January 16, 1998.

dent.[104] During interviews in 2012, several former business leaders acknowledged the business community's increasing support for service improvements as well as measures taken to preserve water resources.[105] However, Irapuato's citizen board had much less autonomy than its counterpart in León.

Branding Reform Success

As in León, the PAN benefited politically when implementing cost-recovery policies in Irapuato because enforced collection payment undermined the PRI's mobilization networks. But generating more revenue also helped the PAN because it led to extensive service improvements[106] that were especially attractive to the party's higher-income base.

When the PAN came to office in Irapuato, considerable revenues were necessary to "rescue" the water utility. In 1997 it had an external debt of more than fifty million pesos and a consumer debt of more than thirteen million pesos.[107] Over the first decade of the twenty-first century, the utility increased its revenue stream via a range of cost-recovery measures. From 2003 until 2010, the utility increased its meter installation from 21.7 percent to 47 percent of its consumers. The amount of unbilled water (water lost through pipes or stolen) decreased from 54 to 33 percent, and the utility's billing collection rate grew to 65 percent by 2010 (CEAG 2008, 2011).

Increased revenues allowed for major service improvements, as one operations director remembered:

> Fifteen years ago, all of the measurements of water extraction, pressure, and all service repairs were entirely undertaken [with picks and shovels]. [By 2005], 70 percent of our measuring functions (measuring water extraction, energy use, water pressure) are automated and digitalized. There have been enormous changes.[108]

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104. "Distinguen a Turrent y JAPAMI como lo mejor," *El Sol de Irapuato*, April 9, 2005.

105. Interviews #161, 163, 165.

106. "En el '97, 9 millones 400 mil pesos vía APAZU: JAPAMI," *El Sol de Irapuato*, February 15, 1998.

107. "A JAPAMI no sólo le falta agua, también recursos económicos," *El Sol de Irapuato*, May 8, 1998.

108. Interview #129.

The utility's operations department undertook extensive service upgrades, decreasing the asbestos content in old pipes, eliminating leaks and clandestine connections, and replacing pipes. One citizen board president also admitted that when the utility was unable to eliminate clandestine connections (for political or technical reasons) or otherwise repair leaks in certain areas, it resorted to increasing the amount of water extracted from boreholes, "It was not always technically perfect, but we needed to show we were improving by increasing water quantity."[109] These strategies increased the amount of water consumers were receiving and improved water pressure throughout the city. In 2005, Irapuato received an award as the second-best-performing water utility in the state, trailing only León.[110]

The water utility's growing reputation provided board members with increasing political benefits. Several members who entered as business representatives went on to become presidents of their business associations, while others were appointed as electoral commissioners or to posts in state-level agencies.[111] The clearest example of political springboarding in Irapuato was the rise of Mario Turrent, who spent three years as a citizen water board member before becoming the board's president in 2003. He received high-profile press coverage during the first few years of reforms and in 2006 won election as the city's mayor.[112]

Extending the Policymaking Time Horizon

From 1997 to 2010, reformers in Irapuato worked through both institutional and noninstitutional mechanisms to insulate the policy process from political conflict and extend their policymaking window. For example, when PAN mayors first came to power in the city, they adopted citizen board institutional bylaws designed to insulate the utility's operational decisions from partisan intervention. These bylaws were copied from the best practices of other utilities such as Leon's, since the state's water law did not mandate a particular institutional configuration. In 1998, Irapuato's citizen board bylaws allowed only one municipal government official—the treasurer—to be a board member; the remaining board members were elected through a process open to anyone from

109. Interview #170.
110. "Distinguen a Turrent y JAPAMI como lo mejor," *El Sol de Irapuato*, April 9, 2005.
111. Interviews #161, 163, 165.
112. Interview #170.

civil society.[113] In 2002, the board's bylaws were amended to have nine citizen board members, including one president, one treasurer, one secretary, and six civil society members. The bylaws dictated that members be nominated through a range of civil society associations, with business and professional associations dominating.[114] Board members' terms of office were designed not to end at the same time as municipal elections.

Other institutional vehicles provided further resources to increase local reformers' effectiveness during the three-year administrations. For example, two utility directors had previously worked for state and federal water commissions and used their contacts to obtain resources from those higher levels of government.[115]

The state water commission also aided in justifying tariff increases. For example, in 1998, PAN governor Vicente Fox and state water commission president Vicente Guerrero publicly supported eliminating subsidies and increasing operational efficiency.[116] During the following decade, the state water commission acknowledged the intense political battles cost recovery was generating in Irapuato and publicly supported tariff increases.[117] It also provided funds for smaller infrastructure projects, such as updating commercial software and replacing sewage collection tanks.[118] When the commission began to standardize tariffs across the state in 2002, it provided Irapuato with administrative and organizational support to implement a tiered system.[119] In 2005, the state Congress, acting on the advice of the state water commission, mandated that all urban utilities peg their tariff increases to inflation, resulting in monthly increases of 0.5 percent. These state-level influences further aided Irapuato and other utilities that had initiated but not consolidated reform.

Irapuato's reform process also counted on noninstitutional forms of policy extension, although these informal networks were weaker than those in León. In contrast to León, where an organized business coali-

113. "Trece propuestas para el consejo de JAPAMI," *El Sol de Irapuato*, March 21, 1998.

114. The bylaws dictated that members be drawn from the local business association (the Consejo Coordinador Empresarial), the professional associations (e.g., lawyers, architects, and engineers), and four members from civil society broadly construed. Interview #161; "La sociedad civil sin representación en nuevo consejo de JAPAMI," *El Sol de Irapuato*, March 23, 1998; JAPAMI (2002).

115. Interviews #159, 167.

116. "Operadores de agua deben despolitizarse para que no sigan entrampados," *El Sol de Irapuato*, May 21, 1998.

117. Interview #167.

118. "Disminuyó 'golpeteo' político en JAPAMI," *El Sol de Irapuato*, September 3, 2001.

119. Interviews #117, 134, 145, 146.

tion provided political backing for the reform process, Irapuato's mayors directly undergirded the reform process. The first PAN mayor, Salvador Pérez Godínez (1997–2000), was a well-known PRI party leader who had switched his allegiance. Pérez was caught between the old and the new guard, and he allowed PAN city council members to push to eliminate PRI clientelist networks through tariff increases and to eliminate clandestine connections as a means of consolidating support for the young party. Pérez's successor, Ricardo Ortiz Gutiérrez (2000–2003), was a former congressman who was familiar with new federal guidelines promoting cost recovery and had worked on the new policy guidelines for water delivery in conjunction with the National Water Commission. He prioritized cost recovery and made sure that his right-hand man, Turrent, served on the citizen board. After Turrent became mayor in 2006, he helped to deepen and consolidate water reforms.

Narrowing Participation after Initial Reform

Over time, the success of the reform agenda threatened to undo the autonomy that the citizen board had achieved, because the utility's increasing revenues and reputation attracted mayoral intervention. After four PAN mayoral administrations had shared control of water and sanitation services with a citizen board, PAN mayor Jorge Estrada (2009–12) eliminated the board in 2010 and subsumed the utility under the municipal government. Supported by the state's PAN governor, Juan Manuel Oliva (2006–12), Estrada reduced the utility's independence quietly and with very little press coverage, so that many citizens did not even notice. The mayor retained the citizen board's institutional structure but filled each position with city council members: the board president also served as director of public works (JAPAMI 2011). Interviewees noted that the mayor viewed an autonomous citizen board as undermining his authority, and was concerned that an independent board president could run against his preferred candidate as mayor.[120] Observers describe Estrada's actions as a reflection of the waning of the PAN's pluralist agenda in Guanajuato:

> When [the PAN] felt completely comfortable in power, they turned into PRIistas. The citizen boards that had once been so important to the PAN, [Estrada and the governor] see them as a threat to their

120. Interviews #153, 167.

> power. [They] want citizen boards full of their [cronies] who only serve to validate their agenda.[121]

When Estrada eliminated the citizen water board, he deliberately excluded the business community from the closed-door negotiations. Though business and professional associations had failed to prevent the elimination of the citizen board, they petitioned Estrada's successor, twenty-eight-year-old Sixto Zetina Soto (2012–15), to reinstate it.[122] Future administrations may reinstate an autonomous citizen board, but it will take the backing of a mayor genuinely interested in sharing governance with societal leaders, making this participatory institution vulnerable to changes within municipal government and local partisan politics.

The success of Irapuato's programmatic reforms has nevertheless created positive returns, whereby consumers—especially elites and middle-class groups—expect a higher quality of service and are more accepting of higher prices than they were in the 1990s. Organized protest has subsided, as prices are indexed to inflation and increases are automated and incremental. Although Irapuato's programmatic reform agenda is now more susceptible to the narrower policymaking window of municipal administrations, the city still has a wide range of both formal resources and informal networks for water reform, including the support of a PAN state water commission. It is unlikely that new PAN mayors will undo programmatic water reforms, but the future of autonomous citizen participation in the sector's governance remains unclear.

Conclusion

Political leaders and civil society elites—mostly business and professional association members—made up the reform coalitions in León and Irapuato during the beginning of programmatic water and sanitation reforms. The strength and influence of civil society elites in both cases is most clearly evident in the construction and subsequent composition of the citizen water boards. These autonomous boards constituted an expression of PAN leaders' commitment to creating participatory venues immediately after local democratic transitions. These venues helped the PAN brand itself as an authentic democratic alternative to the PRI, but they also helped increase the influence of civil society elites, who were more likely

121. Interview #161.

122. Interviews #158, 161, 163, 165; "Ciudadanizar JAPAMI, la solución: Martínez Nava," *El Sol de Irapuato*, December 7, 2012.

to be associated with the programmatic and business-oriented projects of the young PAN. In both cities, augmenting participation in the water reform process was an elite project. Reform coalitions sought to insulate reforms from political conflict, which they saw as originating from interactions between the urban poor and the local PRI bosses who organized and directed popular sector frustration against the PAN. In both cases, programmatic water reforms became a referendum on the first PAN administrations, and reform leaders deftly negotiated and offered concessions to prevent the political derailment of the reform agenda.

In both cities, reformers used both noninstitutional and institutional mechanisms to extend the time horizon of local policymaking beyond the initial three-year administration when reforms were first initiated. Noninstitutional mechanisms included political and professional networks of party leaders and civil society elites that coalesced around the new PAN administrations' agendas. In León, business leaders' power and influence afforded them autonomy on the citizen water board, and they used this power (or informal mechanisms of influence) to create institutional bylaws that delinked the cycle of appointments for board members and water utility management positions from the municipal electoral calendar. León's citizen board then engaged in long-term planning and personnel retention, which was further augmented by occasional institutional and programmatic support from the state government.

In Irapuato, the citizen board was also institutionally delinked from the municipal electoral calendar, but citizen elites provided a weaker counterweight to partisan intervention. Irapuato's citizen boards shared governing responsibilities with the PAN mayors from 1997 to 2010, but Irapuato reformers' ability to extend the policymaking time horizon depended less on autonomy from mayoral interventions and more on a handful of reform leaders (such as Mayor Turrent) who remained influential in the reform process over time. In addition, the Guanajuato state water commission provided Irapuato with extensive legal, programmatic, administrative, and even fiscal support for reforms, helping to shorten local reform implementers' learning curve and providing continuity for reforms' more technical aspects.

León's business community was clearly much stronger than its counterpart in Irapuato. The same could be said for civil society networks, which were organized much earlier and much more forcefully in León than in Irapuato. Therefore, it is not surprising that after the initial reform period in León (1989–2010) and Irapuato (1997–2010), citizen leaders in León have opened up the participatory space in the water re-

form agenda to a wider group of citizens outside of business interests. In Irapuato, instead of a widening participatory space, new mayors have moved to narrow the influence even of business elites. New mayors not associated with the initial water reform agenda have viewed autonomous citizen boards as a threat to their power.

These dynamics underscore the double-edged sword of the reform process: public service reforms can bring political benefits for reformers, but if these reformers are civil society members instead of political leaders, political parties may see these reforms as a threat to their power, particularly in highly presidentialist systems where mayors are accustomed to ruling without countervailing pressure. New mayors in Irapuato have preferred to control the water and sanitation utility more directly and have found ways to circumvent the call for citizen board oversight (by higher levels of government and civil society groups) by installing a citizen board but not mandating that members be democratically elected or appointed outside of city hall. In the aftermath of the reform period, Irapuato's water reform program more closely resembles the cases of narrow elite incorporation in Naucalpan and Celaya discussed in chapter 5 than it resembles León, although that may change depending on the priorities of new mayors and the ability of civil society groups to demand more direct participation.

FIVE

Reform Adoption in Naucalpan and Celaya

Policy Insulation through Narrow Elite Incorporation

In the cities of Naucalpan (in Mexico State) and Celaya (in Guanajuato State), reformers undertook extensive reforms in water and sanitation services through narrow elite incorporation. In this strategy, political leaders not only excluded nonelites but also managed the participation of civil and economic elites without fully incorporating their interests. In both cities, reformers strived to appear democratic and participatory but resisted giving too many stakeholders a voice in the process. Unlike reform adoption in León and Irapuato, where societal elite participation was key to passing difficult reforms, officials in Naucalpan and Celaya saw participation as an obstacle to circumvent. In these cities, reformers avoided imbuing participatory institutions with real policymaking authority or resources. Because real decision-making authority was limited to a handful of political leaders and technocrats, reforms were fully insulated from political conflict.

However, the mechanisms by which political leaders insulated and then consolidated reforms differed in these two cities. In Naucalpan, reforms were primarily insulated and extended through noninstitutional mechanisms. In this case, a single architect initiated reforms as mayor and remained influential in the policymaking process after leaving office. Naucalpan's architect weaved together a series of informal strategies to protect his reform agenda, single-handedly overseeing policies and managing social conflict and then training his acolytes to do the same.

In Celaya, a single architect also initiated reforms and helped protect them through multiple municipal administrations, but the reform process did not depend entirely on this political patron. Rather, the State of Guanajuato provided a number of institutional support structures for local reforms. Reformers in Naucalpan lacked this type of comprehensive institutional support from the Mexico State government. While both cities enjoyed strong policy insulation through narrow incorporation, the organizational and institutional support infrastructure for reform was more comprehensive in Celaya than in Naucalpan. These differences underscore the fact that state governments may play an important intermediary role in local reforms.

These cases suggest that broad participation (described in chapter 4) may not be a necessary ingredient for policy reform; rather, to benefit politically from crafting programmatic provision, reformers may seek to limit widespread stakeholder participation. In some contexts, limiting participation may be instrumental to reform and may even improve reformers' ability to implement difficult reforms quickly.

Reform Adoption in Naucalpan

Politics and Public Services prior to the Democratic Transition

Naucalpan de Juaréz is a periurban area of Mexico City but is jurisdictionally a municipality within Mexico State. As one of Mexico City's closest neighbors, Naucalpan shares many of the capital city's urbanization challenges. It is one of the largest cities in Mexico State with a population of more than 830,000 (INEGI 2010) and is situated in an area where rapid industrialization in the 1950s drew migrants from surrounding states. This postwar manufacturing boom led to the creation of six industrial parks in Naucalpan's Ciudad Satélite, as the Mexico State government created tax havens to capture manufacturing opportunities that Mexico City was increasingly rejecting. The result was prolific urbanization in the 1960s and 1970s, along with increasing inequality (Conde Bonfil 1996a, 330). The wealth generated by the six industrial parks stood in sharp contrast to the influx of low-income migrant workers in irregular housing with limited services. Despite the importance the PRI placed on Naucalpan as a foundation of the nation's industrialization boom, the city government's failure to provide adequate public services and address mounting pollution exacerbated inequalities.

As the need for labor grew, irregular working-class settlements devel-

oped in the city's unstable, flood-prone highlands. Residents of these shantytowns petitioned the municipal government for public services, but extending services to locations at high elevations was difficult and expensive. Therefore, these working-class settlements' water services were built in an ad hoc manner and were of particularly poor quality. In contrast, middle-class residential neighborhoods were incorporated into the original municipal grid design and enjoyed higher-quality services.[1]

After Mexico State authorities decentralized water services to municipalities in 1992, PRI mayors were disinclined to implement cost-recovery strategies despite federal-level regulations promoting these changes. While PRI officials were unwilling to reform services through tariff increases, Naucalpan's PRI mayor, Enrique Jacob Rocha (1995–97), attempted to privatize the city's water utility. The concession contract stipulated that the private firm was to invest fifty million dollars in infrastructure updates.[2] Privatization would also spare the PRI from having to assume the unpopular task of implementing price increases. However, after the contract negotiations had progressed considerably, public protest halted the concession.[3] Public outcry was particularly intense because the contract omitted service improvements to working-class neighborhoods and because new tariffs would amount to increases between 322 and 585 percent (Conde Bonfil 1996a, 371). Following the protests, both PRI and PRD officials publicly denounced these privatization attempts, and PRI officials at both the city and state levels pulled back from the contract.[4] While Rocha brought a business-style management to government, he was unable to pass contentious reforms such as privatization of local services, including water provision and waste collection (Conde Bonfil 1996a, 365–68, 1996b, 104–9; Hernández Corrochano 2003, 448–52). The main roadblock was social backlash from the PRI's popular sector base.

However, by the time the PRI lost its first election in the city in 1996, the public perceived water services as one of the city's three top problems (Conde Bonfil 1996a, 364). By 1997, the water utility was bankrupt and had many clandestine connections, including to industrial consumers who were not formally incorporated as paying clients (*Gaceta Municipal* 1997).

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1. Interviews #75, 150, 151.
2. "Municipal Water and Sewer Projects Create New Opportunities for Mexican and Foreign Engineering & Construction Companies," *SourceMex*, March 23, 1994.
3. Interview #75.
4. "Suspenden concesión del agua," *Reforma*, February 12, 1996.

Launching a Reform Project

The Economic and Demographic Landscape

By the mid-1990s, Naucalpan was an important manufacturing hub with high-profile industries. A 1996 study noted that 16 of Naucalpan's 1,465 businesses were among the largest firms in Mexico and that the city also had the most export-oriented firms in the country (Conde Bonfil 1996a, 333–34). A majority of these industries relied heavily on water. Industries such as chemicals, paper/pulp processing, metals, clothing manufacturing, electronics, and food production accounted for 46 percent of the municipal economy and were generating approximately 32.2 million pesos per year in revenues (INEGI 2004). Yet in the early 1990s, the water utility was so underfunded that it asked industrialists to help finance efforts to diminish flooding in the industrial parks.[5]

Of the more than 1,000 businesses registered in Naucalpan, only 42 had federal licenses to drill water boreholes—the remainder had to either extract water clandestinely or rely on the local utility for services (see table A4). This critical mass of industries—many of which were international exporters that need services to comply with international certifications—became a key constituency for water reform. By 2008, 1,313 industrial companies had registered as clients of the water utility (see table A2). Although these companies did not participate directly in the reform process, their willingness to join the utility's consumer base provided crucial support for the reform project.

At the same time, the number of middle-class and educated residents in Naucalpan was on the rise. Census data showed that 51 percent of the city's workforce held middle-class jobs in 1990 and that 58 percent of the population was literate—indeed, Naucalpan had some of the highest socioeconomic indicators in the state (Conde Bonfil 1996a, 336; Hernández Corrochano 2003, 445–46). A pivotal component of the city's middle-class base developed in Ciudad Satélite, where people moved in the late 1960s and 1970s to escape Mexico City's urban sprawl and build a modern, middle-class, white-collar community (Ducci 1986, 64–65). This community formed a neighborhood association in 1960 and petitioned the government for better services (Tarrés 1986, 367). The city was unable to meet the demands, as one author explained: "This situation became difficult to resolve for local authorities, who not only re-

5. "Buscan empresarios mitigar inundaciones," *Reforma*, June 20, 1996; "Solicita OAPAS la ayuda de colonos e industriales," *Reforma*, August 1, 1996.

ceived complaints, but also highly complex solutions of a technical level by an educated population that had more professionals than the government" (Tarrés 1987, 142). The city responded by transferring the administration of services to the inhabitants of Ciudad Satélite, which led to fifteen years of self-governance by the community (Tarrés 1986, 1987). Ciudad Satélite's neighborhood association played a leadership role citywide, and in 1972, it joined nineteen other neighborhoods to protest for water services (Tarrés 1986, 373; Conde Bonfil 1996b, 55). Middle-class association members blocked popular sectors from participating, insisting that membership be extended to low-income residents only "once they had been educated" (Tarrés 1986, 383).

The independent Ciudad Satélite association became politicized after the PRI regime tried to co-opt it by nominating its leader for a congressional seat. The community responded by selecting a different, PAN-supported leader to run for Congress: "The community voted for a neighbor, for their equal and not for the party he represented" (Tarrés 1987, 143). In retaliation, the PRI discontinued Ciudad Satélite's self-governing arrangement. These actions helped consolidate support for the PAN in this middle-class community after the 1982 election (Ducci 1986, 69–70; Tarrés 1990, 142–43). The PAN won a congressional seat from this district in 1982—the party's first seat in the Mexico City metropolitan area—and the community was active in mobilizing votes for the PAN in 1988 (Tarrés 1990, 142–43, 365).

This expanding middle-class base comprised a critical mass of support not only for change in the quality of public services but also for political reform. One middle-class neighborhood association president noted, "The change between the PRI and the PAN was very healthy, because the PRI's moral degradation had become unsustainable" (Hernández Corrochano 2003, 464). Middle-class activism in Ciudad Satélite served as a model for other middle-class neighborhoods in the 1990s (Hernández Corrochano 2003, 459, 465), and those neighborhoods comprised a key electoral base for PAN candidate José Luis Durán Reveles in the 1996 mayoral race.

Political Change and Narrow Elite Incorporation

Durán's win marked the consolidation of a new middle-class electoral constituency mobilized in support of a political alternative. Durán became the first non-PRI mayor to take office in the city, coming to power after an election that was part of a PAN sweep of key cities in the state.

The PAN considered Naucalpan important because the city represented 2 percent of Mexico's GDP. Party leaders noted, "Our victories in Naucalpan and Tlalnepantla are the jewel in the crown. These are our country's most important communities from an economic standpoint."[6] Durán was a PAN militant well positioned to assume the role. His father, Raúl Luis Durán, had been one of the founders of the PAN's Mexico State branch, and the younger Durán had been the party's state president and a federal deputy prior to running for mayor.[7]

The PAN initially sought to create new participatory venues for citizens and rebrand ones previously associated with the PRI. These overtures were fundamental to establishing the PAN as the democratic alternative after the first transfer of power in the city. These participatory outlets were numerous: citizen councils (Consejos de Participación); municipal liaisons (Delegados Municipales); and the Comité de Planeación para el Desarrollo Municipal (COPLADEM), which organized three town hall forums and created eighty-seven neighborhood watch committees (Hernández Corrochano 2003, 453–54).

These venues were dominated by middle-class citizens—key PAN supporters. One study notes that of twenty-six key citizen venues surveyed, twenty-one were dominated by the middle class and only five by popular sectors (Hernández Corrochano 2003, 468–69). The PAN maneuvered to exclude the urban poor in Naucalpan from other participatory venues as well. For example, the PAN eliminated the open town hall meetings that the PRI had deftly administered, fearing that the PRI and PRD would manipulate the forums to incite popular sector opposition against the PAN government (Hernández Corrochano 2003, 470).[8]

However, the persistence of the PRI's political power worked against the adoption of a broader and more autonomous form of citizen participation. The PRI continued to control Mexico State's governorship and many of its municipalities. The state's water law, designed by PRI officials in the late 1990s, facilitated political intervention. The law stipulated that each municipal utility be governed by a citizen board but also man-

6. "Institutional Revolutionary Party Loses Several Key Races to Opposition Parties in Local Elections in November," *SourceMex*, November 13, 1996.

7. "Elecciones en el Estado de México: Un extraño en el PAN," *La Jornada*, June 20, 2005; "Cuadros desgastados, la mayoría de los candidatos en el Edomex," *La Jornada*, February 14, 2006; Peschard-Sverdrup and Grayson (2003).

8. Despite these participatory forums that helped differentiate the PAN from its PRI counterparts, the amount of independent citizen participation in the city was limited. In 2006 Durán noted that "the only time that citizens participate in municipal government is during elections" (Santillán, Graizbord, and Granados 2007, 728).

dated that the mayor serve as the board president and that city hall oversee the appointment of the remaining members. Therefore all utilities throughout the state, even those in cities no longer ruled by the PRI, were governed by institutional bylaws that encouraged partisan intervention. These utilities continued to be governed by partisan decision making and had little formal role for citizen leaders.

In addition, the PRI remained strong throughout the state, controlling the allocation of federal transfers and administrative resources that after decentralization were overseen by state governments. In this political landscape, the PAN feared the entry of PRI leaders and their constituents into participatory institutions. For example, the second PAN mayoral administration in Naucalpan, that of Eduardo Contreras (2000–2003), included board members from various parties, but Contreras's interest in promoting pluralism backfired as partisan conflict periodically interfered with policymaking.[9] For the most part, city hall exerted partisan control over citizen participation on water boards during PAN administrations in Naucalpan from 1997 to 2009.

Initiating Reforms

The first step in the reform process was to publicize the fact that the PRI administrations had left the city's water services both physically deficient and bankrupt. After taking office in 1997, Durán announced,

> [Prior] administrations' destructive management has generated an enormous debt from [Naucalpan's water utility] and the municipal treasury. This has resulted in the evident deterioration of equipment, the poor administration of [water services], and [limited] urban development.[10]

The utility reported that it had a debt of 83 million pesos and lacked funds for new hydraulic construction.[11] Utility director Armando Pérez Moreno stressed that the new administration would have to remedy its predecessors' sins:

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9. Interview #151.

10. "Cuestiona situación financiera," *Reforma*, December 31, 1996; *Gaceta Municipal* (1997).

11. "Reportan en 'quiebra técnica' al organismo de agua potable—afirma el director de OAPAS que tienen una deuda de $83 millones," *Reforma*, January 31, 1997.

> Supposedly decentralized water utilities generate income, but this [income] has become an easy form of funds, a personal account with liquid assets and with very poor systems of accountability, there is no way of knowing where the money went.[12]

Under these dire circumstances, the water utility announced its annual budget of 193 million pesos, more than 70 percent of which would need to come from user fees.[13]

Mayor Durán initiated extensive reforms, moving to eliminate subsidies implemented by PRI leaders (and thus lessening the PRI's resources for mobilization). The PAN eliminated Acuerdo 10, where PRI leaders had formalized a subsidy to popular sectors in the Ley de Hacienda Municipal of 1994.[14] Officials also began to eliminate clandestine connections and threaten service cutoffs for nonpayment. For working-class neighborhoods, these changes represented an overnight price increase of as much as 266 percent even though they continued to receive irregular, poor-quality water service.[15]

Organized Protest, Negotiation, and Compensation

Protest against the new measures was immediate and widespread. Leaders from working-class neighborhoods, spearheaded by PRI and PRD officials representing eighty-two neighborhoods and seventy-five thousand families, organized three demonstrations in 1998 that shut down major thoroughfares and threatened to continue the march to the state's capital city. A range of popular sector organizations joined the cause: Union Popular Revolucionario Emiliano Zapata, Coordinadora de Consejos y Delegados de Naucalpan, Union de Colonias Populares, and Tercer Mundo.[16] These protests culminated in a monthlong occupation of city hall that ended when police cleared the building and arrested some of the protesters.[17]

12. Ibid.

13. Ibid.

14. "Rechaza PAN bajar agua," *Reforma*, March 12, 1998.

15. "Rechazan aumento al agua—protestan mil vecinos de zonas populares por alza de hasta 266%; "Proponen pagar entre 15 y 30% más," *Reforma*, March 11, 1998.

16. "Rechazan aumento al agua—protestan mil vecinos de zonas populares por alza de hasta 266%," *Reforma*, March 11, 1998; "Proponen pagar entre 15 y 30% más," *Reforma*, March 12, 1998; "Rechaza PAN bajar agua," *Reforma*, March 18, 1998; "Bajan 20% cuota de agua," *Reforma*, March 19, 1998.

17. "Cuotas de agua, a referéndum," *Reforma*, March 13, 1998; "Rechazan rebaja en agua," *Reforma*, March 19, 1998; "Disuelve policía protesta . . . conforme a la ley," *Reforma*, April 15, 2008.

After several appeals to the PAN administration went unheeded, protest groups began to make widely publicized symbolic payments to city hall that suggested that consumers were willing to pay what they viewed as fair prices for water received.[18] One protester explained, "[We] are inclined to pay, but the amount being charged is disproportionate; we are suggesting an increase of 30 percent. . . . [W]e receive water every third day, for barely three or four hours, and sometimes it doesn't come until 11 p.m."[19] Opposition parties used water price increases as a referendum on the PAN administration, calling for Durán's resignation and characterizing these measures as reactionary policies hostile to the urban poor. Protesters claimed that "viewing citizens' payments as revenues for a business is totally absurd."[20] After extensive negotiations with neighborhood association leaders, officials lowered the initial price increases by 20 percent.[21] In 1999, the city council passed two subsidies geared toward helping low-income users.[22]

After Durán left office, subsequent mayors used similar pressure valves to mitigate social backlash. For example, in 2009, administrators reinstated a 10 percent discount for consumers paying in full at the beginning of the year and established substantial subsidies for consumers who had only intermittent service. In addition, bureaucrats chose to not install meters and did not increase tariffs in the city's irregular settlements.[23]

PAN leaders also used participatory venues to lessen the impact of price increases. Neighborhood association leaders were invited to attend two meetings with the utility (rather than a public forum open to the entire community) in 2001 and 2002 (*Gaceta* 2001, 2002). These meetings were part of a larger "Nueva Participation" initiative by Contreras's administration, which held at least five such forums (including the two meetings on water prices).[24] PAN leaders hoped these meetings would educate residents about the real costs of water service and facilitate a greater willingness to pay, but reactions were negative. One leader complained,

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18. "Pagan el agua ante tribunal—vecinos de Lomas del Cadete garantizan pago mínimo mientras sigue su demanda en contra de OAPAS," *Reforma*, May 12, 1998.

19. "Rechaza PAN bajar agua," *Reforma*, March 12, 1998.

20. "Bajan 20% cuota de agua," *Reforma*, March 18, 1998.

21. Ibid.

22. "Ofrecen descuentos para el pago de agua," *Reforma*, November 8, 1999.

23. "Rectifica OAPAS y ofrece descuentos," *Reforma*, September 4, 2009; "Mantendrá OAPAS de Naucalpan cuota anual en zonas populares," *Milenio*, February 1, 2009.

24. "Escuchan a sus colonos . . . del gobierno municipal," *Reforma*, March 27, 2002; interview #151.

> This forum is a simulated democratic exercise and a [false] consultation, since there is insufficient time for all neighborhood association leaders to consult their neighbors and counter [the government] with a more concrete proposal.[25]

While city hall viewed open forums as too disruptive given the contentious nature of tariff increases, even meetings planned for only neighborhood association leaders proved to be problematic, resulting in the cancellation of future meetings.[26] Although isolated instances of protest continued,[27] organized protest waned. Despite the PAN's original intention to standardize tariffs and collection practices for all users, reforms were possible only when accompanied by ad hoc and negotiated concessions to low-income groups.

Branding Reform Success

Naucalpan had great success in increasing revenues from user fees and reinvesting funds into service improvements. In 1997, Naucalpan pledged seventy-five million pesos in hydraulic construction,[28] starting a trend that continued through four consecutive PAN administrations, all of which received funds for infrastructure construction from the National Water Commission.[29] Naucalpan's utility was an excellent candidate for these federal programs because its commercialization policies had generated a significant surplus that could be used as the matching funds these programs required. Naucalpan's sizable number of industrial firms and Mayor Durán's reliance on businesses for political support permitted increased revenue generation from high-volume consumers who relied on water for industrial production. In addition, the utility focused on improving services in middle-class neighborhoods. In 2005, an 8.5-million-peso network expansion benefited 120,000 residents of

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25. "Buscan fijar tarifa de agua potable," *Reforma*, March 5, 2001.

26. "Escuchan a sus colonos . . . del gobierno municipal," *Reforma*, March 27, 2002; "Fracaso consulta agua," *Servicio Universal de Noticias*, March 12, 2001; interview #151.

27. "Protestas en 12 colonias de Naucalpan por el incremento en tarifas de agua," *La Jornada*, April 28, 2003; "Aumento del agua genera protestas en Naucalpan," *El Universal*, May 8, 2003; "Protestan vecinos de la zona popular por cuota anual del líquido," *Reforma*, April 15, 2004; "Inconforma tarifa de agua . . . a ningún acuerdo," *Reforma*, April 15, 2004; "Exigen no encarecer agua—comunidad. Protestan al menos 300 vecinos de la zona popular de Naucalpan por aumentos; ofrece OAPAS buscar solución," *Reforma*, May 9, 2004.

28. "Irán $75 millones a obra hidráulica," *Reforma*, November 5, 1997.

29. Interviews #36, 60, 75.

Ciudad Satélite,[30] and by 2008, it and other middle-class neighborhoods as well as the city's industrial parks received continuous service (OAPAS 2008a). PAN city council members continued to vote for price increases for residential and industrial consumers.[31]

Many aspects of service provision improved dramatically, including the introduction of meters for measuring water extraction from municipal boreholes (*macromedición*) and the updating of network infrastructure maps.[32] The utility initiated wide-scale pipe replacements and leak detection units to reduce the amount of lost water.[33] Explained one official, "We began to function like a *private company*, and we began to reinvest all of the revenues, absolutely all of the revenues, back into the water utility."[34]

Highly visible service improvements, when well publicized, provided important resources for the party's re-election. As part of its public relations campaign, the water utility developed a mascot, a logo, and pricing comparisons pitting water prices against the more expensive cost of common everyday items, including electricity and other public services (OAPAS 2008c). It developed memorabilia, its own bottled water service with the utility's logos, and extensive education programs for schoolchildren, linking bill payment to water conservation. Naucalpan's utility carefully labeled construction projects as funded by user fees and emphasized the connection between increased fees and new hydraulic infrastructure (OAPAS 2008b).[35]

The utility required workers to wear matching uniforms with the utility's logo and implemented training programs in which employees were drilled on how to provide excellent customer service. These professionalization initiatives reinforced the utility's brand as a business in which payment resulted in higher-quality service. The water utility also focused on improving aspects of service delivery that most affected consumers. For example, it reduced the response time for repairing a leak from several weeks to twenty-four hours, installed a customer hotline, and created a service center where employees tracked each complaint and called consumers back to see if they were satisfied. Officials also employed customer satisfaction surveys to obtain feedback on areas in need

30. "Amplían suministro de agua . . . el fraccionamiento de Satélite," *Reforma*, August 5, 2005.

31. "Aprueban alza a cobro de agua en Naucalpan," *El Universal*, November 8, 2007.

32. "Cambiarán medidores," *Reforma*, February 3, 2004.

33. Interview #62.

34. Interview #75.

35. Interview #57.

of improvement.[36] The utility widely publicized each new initiative and service improvement. Ads appeared using the signature blue color of the PAN party, as did the water utility's mascot, Aguita. The public relations department issued press releases and had general managers conduct field visits and neighborhood meetings. These campaigns were particularly apparent when the utility was run by Manuel Gomez Morin (2006–9), a close friend of Durán's who was rumored to be a potential PAN candidate for office in Naucalpan.

Extending the Policymaking Time Horizon

The Naucalpan reform process benefited from the presence of a key leader—Mayor Durán—who extended the policymaking process through informal networks and noninstitutional mechanisms. Although Durán could not run for immediate reelection, he ensured that his supporters remained in city hall during future administrations. And as a PAN party leader, he supported PAN mayoral candidates who would be sympathetic to his reform agenda. Contreras served as Durán's adviser from 1997 to 2000 before becoming mayor, and Contreras's successor, Angelica Moya Marin (2003–6), had also been part of Durán's inner circle. In fact, many city hall appointees during this time were PAN loyalists "recycled" from previous administrations.[37] For example, the water utility's director from 2006 to 2009, Manuel Gómez Morín, was a party loyalist (and the grandson of the PAN's founder by the same name) and had worked in Durán's first administration.[38] Durán returned to the mayor's office from 2006 to 2009 and continued the reforms he had started during his previous term. The institutional constraints endemic to municipal government were partially overcome by Durán's ability to remain influential in the policymaking process over time.

Naucalpan relied on few institutional resources from the state government. Despite state-level efforts to create some reform-oriented institutions,[39] Mexico State government policies (designed by PRI leaders), unlike programs designed by Guanajuato's state water com-

36. Ibid.

37. "Recicla PAN a funcionarios," *Reforma*, August 17, 2000; "Reciclan funcionarios: Gobierno, nuevos gabinetes, Naucalpan, recurre Moya a nueve elementos de la pasada administración para armar su gabinete," *Reforma*, August 27, 2003.

38. Interview #36.

39. These include a Mexico State Water Law (1999) that promoted cost-recovery policies and a working group on tariff standardization organized by the Mexico State Treasury Institute (Instituto Hacendario del Estado de México). Interviews #52, 63.

mission, failed to incorporate pluralism, participatory innovation, or transparency.

Mexico State's inability to provide meaningful resources for local reform stems from institutional arrangement of the water sector at the state level. The Mexico State water commission—run by the PRI—sells water in bulk to its municipalities, which since the late 1990s have often been run by different political parties. Because municipalities are often delinquent in their payments,[40] their relationship with the state water commission has become contentious in recent years. Municipalities—particularly PRD- and PAN-administered cities—accuse the PRI state government of cutting their water supply during elections,[41] and the state government accuses municipalities of withholding performance indicators and other fiscal information for partisan reasons.[42] These conflicts have prevented this state institution from acting as a source of regulation and institutional support for municipal water provision.

These conflicts as well as the PRI's corporatist traditions at the state level stymied reforms and preserved the status quo in Mexico State's water policies. While Naucalpan reformers could not rely on their state government for comprehensive support, their initial success in generating user fees and implementing performance-tracking initiatives made the utility eligible for several federal grants and pilot programs.[43]

Because Naucalpan achieved policy consolidation from 1997 to 2000 through largely noninstitutional (and partisan-driven) mechanisms, it remains to be seen how reforms will hold up when mayors come from different political parties. The PRI won the 2009 municipal elections, and the water utility replaced all PAN loyalists with PRI members even though many of them had no prior experience in the sector.[44] The new mayor, Azucena Olivares Villagomez (2009–12), claimed that the public was dissatisfied with water prices.[45] Alternation of power between political parties may jeopardize commercialization policies in Naucalpan.

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40. "Municipios mexiquenses heredan adeudo impagable," *La Jornada*, March 4, 2004; "Ayuntamientos adeudan por agua 110 MDP al mes," *El Universal*, February 2, 2009; "Ayuntamientos deben 935 MDP por agua," *El Universal*, May 2, 2010; "Adeudan 125 municipios más de 700 MDP por agua," *Diario DF*, May 8, 2013.

41. "Ayuntamientos y estado se acusan por falta de agua," *El Universal*, December 23, 2005; interview #53.

42. Interviews #39, 52, 66.

43. Interview #60.

44. Interview #151.

45. "Sería un retroceso bajar tarifas y regresar a subsidios: OAPAS," *Milenio*, March 19, 2009.

However, service quality has improved substantially, and middle-income and industrial consumers will likely continue to demand higher-quality public services. Consumer expectations about reliable water service will likely shape future attempts to reverse PAN policies. Further, if leaders from other political parties continue to respond to key urban residents' demands for investing in the water and sanitation sector, they likely will do so by rebranding improvements and service reliability with their political party or faction.

Reform Adoption in Celaya

Politics and Public Services surrounding the Democratic Transition

The city of Celaya, traditionally part of an agricultural region, industrialized rapidly in the second half of the twentieth century. Today Celaya is one of four cities in Guanajuato's industrial corridor, which generates 10.3 percent of the state's GDP (INEGI 2004). The city's growing manufacturing and commercial centers have generated fast-paced demographic growth; in 2010, Celaya was Guanajuato's third-largest city, with a population of more than 468,000 (INEGI 2010).

The PRI had a strong presence in Celaya during the second half of the twentieth century. The PRI's state chapter, the Confederación de Partidos Revolucionarios Guanajuatenses, was created in Celaya, and its leader, Agustín Arroyo, became governor in 1928. Arroyo's group was the most important faction in the PRI's early years (when the party was called the Partido Nacional Revolucionario). Celaya's chapter remains competitive, helping to organize and lead the party during state and local elections. The PRI in Celaya has retained its political power in large part as a consequence of its close relationship to the city's industrial giants and, like the city itself, remains controlled by a handful of political families.[46]

Celaya had PAN mayors and city council members beginning in the late 1990s, and they undertook extensive water reforms, but their implementation strategies reflected concerns about the PRI's entrenched political power. PAN-led water reforms in the first decade of the twenty-first century were designed to exclude citizen participation and prevent the PRI and PRD opposition from blocking reforms. This approach reflected lessons learned during the administration of the PAN's Carlos Aranda Portal, the city's first non-PRI mayor.

46. Interview #171. See also Rico Jordán (2000, 82 n. 6).

The PAN came to power in Celaya in a historic 1991 election in which the party took both the Guanajuato governorship and twelve of the state's cities (Valencia García 1998, 123–24). In this and several other contests, including in the governor's race, PRI leaders denied electoral returns and refused to leave office.[47] These battles—rife with fraud and corruption allegations—made the state a political laboratory that garnered international attention. Local PRI bosses were so reluctant to concede power that many opposition-party mayors were barred from entering city halls in Guanajuato and had to begin their administrations in improvised offices (Valencia García 1998, 116–25).

Immediately following the 1991 election, both the PRI and PAN candidates for Celaya's mayoralty declared themselves victors despite official tallies showing a PAN victory by 1,431 votes. As the PRI-controlled state electoral commission stalled in making a decision, the PRI mayoral candidate and his faction installed themselves at city hall. The commission finally granted all the state's contested elections (including Celaya's) to the PAN, after intense protests and threats by the party's legislators and federal deputies. Eight federal deputies on the state electoral commission resigned to protest the PAN victories (Rico Jordán 2000, 83–84).

One observer remembered the historic transfer of power in 1992 in Celaya:

> For the first time there was alternation of power, but before the new [PAN] mayor could enter office, [local PRI officials initiated] a public burning of municipal papers. . . . They burned so many papers. . . . They did not try to hide it. . . . They were so angry that the federal government had to intervene to allow the PAN to take office. [The PRI] did not want to leave.[48]

The conflict between PRI officials and Mayor Aranda spread to the water utility. Beginning in 1984, after the national-level decentralization of water services, Celaya managed services through a public works department in city hall. Because the department operated with some autonomy, 150 PRI officials connected to the party's former mayor, Francisco Javier Mendoza (1990–92), were transferred to the water department immediately before the new PAN mayor took office. During much of

47. In 1991, the PAN candidate for governor, Vicente Fox, won the election, but the PRI-controlled Congress awarded the position to the PRI candidate, Ramón Aguirre. After intense protests, the governorship was given to a PAN "interim governor" who was deemed more suitable for the office—León's mayor, Carlos Medina (Valencia García 1998, 116–23).

48. Interview #171.

Aranda's tenure, these PRI loyalists remained on the payroll as ghost employees; they were replaced only when Aranda created a legally independent water and sanitation utility with a citizen board structure to comply with federal regulations (Rico Jordán 2000, 87; interview #151).

Mayor Aranda repeatedly came under attack, not only from the PRI-controlled corporatist sectors but also from his own party. These conflicts arose when Aranda tried to keep campaign promises about reducing special favors to privileged groups, increasing transparency, and implementing government reform. He had promised to make these changes by augmenting citizen participation and creating a new democratic culture. Aranda created new participatory venues, such as a new department for citizen participation in city hall, new citizen boards, and neighborhood councils (Rico Jordán 2000, 85–88).

However, these participatory innovations were overshadowed by multiple conflicts with civil society groups and the PAN's dogmatic refusal to negotiate with the corporatist sectors of society that it had set out to dismantle. For example, outdoor market vendors resisted the PAN's attempts to relocate them and staged mass protests. PRI-controlled newspapers retaliated for the PAN's refusal to pay bribes for positive coverage, and organized labor went on strike to negotiate a pay increase. In these instances, the PAN mayor showed himself unwilling to bend to organized sectoral groups and inept at making political compromises. Aranda's commitment to political reform was severely undermined when he refused to distribute city government positions to PAN party organizers, leading to a split within the PAN that undermined the party's control of the city council (Rico Jordán 2000, 90–93). This first PAN administration, determined to replace PRI corporatism with a new form of authentic citizen participation and governmental reform, ended in failure. As a result, the PRI returned to power with the election of Mayor Leopoldo Almanza (1995–98). The PAN did not consolidate its control of Celaya until a series of mayoral victories beginning in 1998.

Launching a Reform Project

The Economic and Demographic Landscape

Celaya was an important industrial center by the mid-1990s, with manufacturing comprising 64 percent of the municipal economy (INEGI 2004). As in Naucalpan, Celaya's industries required large amounts of water for their manufacturing processes in food production, electronics, and automobile assembly (INEGI 2004; Pacific Institute 2007). Further-

more, only forty of Celaya's industrial companies had water extraction permits granted by the federal government (see table A4). The remainder relied on the local utility for water access or self-provision through clandestine boreholes. However, because most of these industrial firms were high-profile, legally incorporated companies, they were eager to reduce their use of clandestine connections.[49] As reforms began, industrial users counted on improved services and helped make reforms fiscally viable through cross-subsidies with residential consumers.

Celaya's industrial companies were located within one industrial park and were well organized under the leadership of Juan Manuel González Rostro. For thirty years, González had helped organize the industrial park into a real estate trust (or *fideicomiso*) with funds these companies provided. This well-organized group served as an important source of support for reforms. González, wanting to ensure improved water service, helped coordinate upgrades with the utility after reforms began, even contributing the trust's funds to help expand the number of boreholes in the industrial park. Utility managers made sure to charge industrialists less than it would cost them to finance their own boreholes, and González and the trust's association permitted the utility access to the industrial parks to examine clandestine connections and smoothed over conflicts when tariffs increased or when service suspensions for late payment were threatened.[50] As of 2008, the water utility had incorporated 81 industrial users and 6,318 commercial properties, with 94 percent of these clients metered (see table A2).

Celaya also had a growing middle class during this time. By 2010, 70 percent of the city's population was classified as having low levels of poverty (Consejo Nacional de Población 2010a). Census data show that the city's literacy rate was 99 percent for people between ages fifteen and twenty-four and 78 percent for people over the age of six (INEGI 2010). As the city's prosperity increased and the middle class expanded, the PAN came to power by building an electoral base around this changing demographic and held on to the mayoralty throughout the 2000s.

Political Change and Narrow Elite Incorporation

With the PRI still strong in Celaya, the stage was set for an intense partisan battle over water reforms when the PAN returned to power in 1998 under Mayor Ricardo Suárez Inda. Aranda had hoped to develop "qual-

49. Ibid.
50. Ibid.

ity public services based on economic principles and citizen participation" (Rico Jordán 2000, 85). However, that administration's failures led PAN leaders late in the decade to limit the influence of PRI leaders and their supporters in municipal government.

Early PAN mayors throughout Guanajuato State (including Celaya) sought to distinguish themselves from the PRI's corporatist legacy and to brand themselves as democratic and participatory. These goals were apparent from campaign promises to create citizen boards. However, PAN leaders in Celaya blocked the creation of an autonomous and democratic citizen board from 1998 to 2006, the height of the reform period. Reform advocates worried that if citizen board membership were determined through open elections, opposition party members would win positions and derail reforms. PAN leaders admitted that "the water utility was important politically. When the PAN won it was very clear that [the water utility] was the key institution to salvage . . . their last fortress."[51]

PAN leaders used different strategies to block the creation of a citizen board. In 1998, after Suárez (1998–2000) became mayor, the PAN refused to create a citizen board until its bylaws had been designed. A highly publicized and contentious process of consensus-seeking across different sectors ensued.[52] As industrial enterprises, commercial merchants, residents, and opposition leaders argued about who would have the most representation on the board, PAN leaders stalled. These leaders admitted that although they made overtures to invite citizen participation, they were adamant that the "municipal government could not lose control."[53] The PAN rejected repeated calls for immediate open elections from a wide range of water users, claiming that the board's bylaws remained under deliberation with societal groups and that the board could not be created without the bylaws. According to Suárez,

> We want to have a practical [board], with authentic representation from users. We want to do it correctly, realistically, with people who are very representative and the precise people who should be involved. A board that is aware of what they are doing and not full of people who only serve particular interests.[54]

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51. Ibid.

52. "Pedirán propuestas para reformas al reglamento [*sic*] de la Jumapa," *A.M.*, January 23, 1999; "Rechazan propuesta de convocar a elecciones de Jumapa," *A.M.*, January 16, 1999.

53. Interview #177.

54. "Podría privatizarse Jumapa: Alcalde," *A.M.*, January 12, 1999.

When the bylaws were finally determined, a key clause made the mayor the default decision maker until the board members were elected, enabling Suárez to initiate and control the reform process.[55]

Initiating Reforms

Celaya experienced extensive reforms in a short period, in large part as a consequence of the unilateral decision-making power bureaucrats enjoyed in the absence of citizen board oversight. Suárez supported technocrats when they moved to break agreements for subsidized water with a wide range of users. PAN leaders endeavored to reduce material exchanges within water services to weaken the mobilization and social networks that empowered the PRI across all income groups but particularly with the popular sectors. This was done during a time of great conflict surrounding the turnover of power in the mayor's office, and by a young PAN local chapter that was still developing political support.

When Suárez assumed office in 1998, the utility began suspending service for nonpaying customers from all income groups. One official remembered, "There were people in affluent neighborhoods that did not pay for service. In the press, people claimed that [they] were protected because they were friends of the government. We said no, if we are suspending service, we are suspending it for all [nonpayers]."[56] These policies extended to schools, an approach that was later supported by the state water commission.[57] Bureaucrats threatened to suspend services to thirty-seven schools for debts amounting to thirty-two million pesos: proclaimed one official, "[Debt] forgiveness is not permitted, not even the mayor is exempt from payment."[58] The utility also aggressively collected past due payments, hiring an external consultant to settle these accounts.[59]

After years without water tariff increases, PAN leaders authorized the utility to implement a 12 percent increase in 1998. The utility continued to raise tariffs and charge late fees.[60] Reclassifications of neighborhoods

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55. "Sustituye Alfredo Ramírez a Armando Mancera en Jumapa," *A.M.*, December 29, 1998.

56. Interview #143; "No paga la población el servicio de agua potable," *A.M.*, June 2, 1998.

57. "Dejarían sin agua a usuarios morosos," *A.M.*, January 24, 2001.

58. "Cortará Jumapa agua a escuelas," *A.M.*, August 26, 1998; "Busca JUMAPA paguen escuelas," *A.M.*, December 19, 2000.

59. Interview #143.

60. "Aumenta agua 12%," *A.M.*, December 8, 1998; "Aumentaría JUMAPA tarifas del agua," *A.M.*, August 3, 2000; "Aumentan las tarifas por cartera vencida," *A.M.*, August 10,

led to increases that in some cases topped 85 percent.[61] Celaya's tariff increases occurred so rapidly and were so extensive that Celaya had Guanajuato's second-highest tariffs in 2002.[62]

Organized Protest, Negotiation, and Compensation

The first tariff hikes in 1998 provoked an immediate backlash among citizens. Popular sector neighborhood association leaders affiliated with the PRI insisted that "implementing these price increases . . . would mean leaving . . . many people unable to afford" water. Protesters organized sit-ins, holding banners reading, "No more impositions."[63] In 1999, the Partido Alianza Social submitted thirty-five petitions against the water utility's price increases with the state government's Administrative Law Tribunal.[64]After increases of 200 percent, pensioners threatened to boycott payments in 2000.[65]

Water suspensions for nonpayment also generated community-wide outrage. Professional associations such as the lawyers' guild claimed that suspensions violated the national health law (Ley General de Salud) and that tariff increases were being illegally implemented.[66] Various actors, particularly political parties, fought over the legality of price increases.[67]

Many users challenged the utility's cost-recovery practices, claiming that the lack of a citizen board made these initiatives undemocratic and illegitimate. While many consumers in Celaya's industrial park supported the improvement of water services, they wanted to participate directly on

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2000; "El aumento a cuotas de agua autorizadas por ayuntamiento," *El Sol de Bajío*, January 11, 2001.

61. "Suben agua hasta 85%," *A.M.*, January 10, 2007.

62. "Es agua de Celaya segunda más cara," *A.M.*, March 18, 2002.

63. "Toman oficinas de comité de agua," *A.M.*, November 23, 1998; "Consideran injusto subir tarifas de agua," *A.M.*, December 11, 1998; "Desecha Jumapa propuesta de Fox," *A.M.*, February 20, 2001.

64. "Tramitan 35 demandas contra JUMAPA," *A.M.*, January 5, 1999.

65. "Piden pensionados 'Tarifa justa,'" *A.M.*, February 8, 2000.

66. "Viola Jumapa la ley," *A.M.*, September 22, 1999; "Sugiere abogado exigir cobro ilegal," *A.M.*, January 8, 2003; "Asesoran a usuarios inconformes por cobros excesivos de la Jumapa," *El Sol de Bajío*, October 9, 2009.

67. "Debe Jumapa devolver cobro indebido de agua," *A.M.*, May 7, 2002; "Cobró la Jumapa 3 MDP fuera de la ley," *A.M.*, January 3, 2003; "Enfrente a Panistas los cobros ilegales," *A.M.*, January 4, 2003; "Cobro Jumapa hasta 5 mil pesos de más," *A.M.*, January 14, 2003; "Defiende Canaco por cobro ilegal," *A.M.*, January 15, 2003; "Investigan jurídicos cobro 'ilegal' de agua," *A.M.*, January 15, 2003.

the board and resented the utility's unilateral decision making.[68] These reactions stood in stark contrast to the relatively quiet stance of the industrial sector in Naucalpan, which was operating under a different set of expectations about direct participation in PRI-controlled Mexico State. Given the utility's mounting revenue stream in Celaya, opposition parties called for audits to see how the money was being spent.[69] Popular sector neighborhoods resisted other cost-recovery measures, such as integration as formal customers and meter installations.[70]

Opposition parties centered many of their protests against the utility on the creation of a citizen board.[71] The most vocal proponent of establishing a board was the PRI, but both the PAN and PAN-PRD alliances voted against it in order to block PRI members from taking seats on the board.[72] With PRI backing, popular sector neighborhood association leaders staged protests throughout the city and threatened payment boycotts unless elections were held for the citizen board.[73] Reformers also required that all board candidates have no history of debt with the water utility.[74] This requirement disqualified most citizens, since most customers, even industrial companies and commercial businesses, had debts.[75]

Attempting to utilize the PAN's participatory brand, Mayor José Mendoza Marquez (2000–2003) campaigned by promising to create a citizen board.[76] The mayor organized a new round of citizen forums in 2002,[77] even hiring a consultant to solicit proposals for how much representation each societal group should have on the board.[78] But Mendoza's attempts failed.[79] The two warring PAN factions within city hall were un-

68. "Usa municipio agua para enriquecerse," *A.M.*, May 16, 2002; "Se manifiestan contra Jumapa," *A.M.*, March 1, 2007.

69. "Piden auditor JUMAPA," *A.M.*, January 13, 2000.

70. "Rechazan vecinos por pago por adherirse a Jumapa," *A.M.*, May 13, 2004; "Impiden a Jumapa instalar medidores," *A.M.*, June 25, 2004.

71. "Perdió autonomía JUMAPA: Mancera," *A.M.*, December 22, 1998.

72. "Rechazan propuesta de convocar a elecciones de Jumapa," *A.M.*, January 16, 1999.

73. "Dejarían de pagar agua en 39 Colonias," *A.M.*, January 11, 1999.

74. "Participan 4 personas para consejo," *A.M.*, July 2, 2002; "Canacintra 'al margen de proceso,'" *A.M.*, July 4, 2002; "Desprecian convocatoria de Jumapa," *A.M.*, June 22, 2002.

75. Interview #177; "Canacintra 'al margen de proceso,'" *A.M.*, July 4, 2002.

76. "Ciudadanizarán JUMAPA," *El Sol del Bajío*, March 30, 2001; interview #171.

77. "Citan a consejo del agua," *A.M.*, October 1, 2002.

78. "Realizarán foros de consulta para nuevo reglamento de la JUMAPA," *El Sol del Bajío*, April 25, 2001.

79. "Se complica cambiar reglamento de consejo,'" *A.M.*, October 4, 2002; "Incumple palabra alcalde de ciudadanizar Jumapa," *A.M.*, September 18, 2002; "Dejan consejo de agua para próximo gobierno," *A.M.*, October 18, 2002.

able to agree on the terms of the citizen board election process. Instead, a water oversight board staffed by city hall employees was created to appease groups calling for more regulation of the utility's activities.[80]

Periodic concessions, such as discounted service periods and subsidies to some low-income groups, helped lessen the impact of cost-recovery measures.[81] The major concession, however, was the 2006 creation of a citizen board, a move taken in part to appease protesters. Yet the process was far from open to all. PAN mayor Gerardo Hernández Gutiérrez (2006–9) "invited" candidates to apply for membership on a citizen board.[82] While the bylaws required the board to include representatives from neighborhood and residential committees,[83] membership skewed toward representatives of the middle class, upper class, and industry. Many were presidents of companies, country clubs, and universities who had been chosen to participate because they were PAN sympathizers and would not be in opposition.[84] PAN's control of city hall enabled the party to keep the board free of popular sector board members and PRI and PRD factions that it deemed hostile to the reform process. The board was unanimously reelected in 2009 through a process with little transparency and no public vote.

Branding Reform Success

The Celaya water utility had enormous success in implementing a range of cost-recovery policies, such as the widespread elimination of clandestine connections, collection of prior consumer debt, and periodic tariff increases that enabled rates to more closely approximate the cost of service provision by the late 2000s.[85] These efforts were complemented by a comprehensive campaign to install meters throughout the city: in 2000, the water utility owned twenty thousand meters, but only eight thousand functioned. By 2010, 77 percent of all connections were metered.[86] These

80. "Aprueban convenio para renovar Consejo Directivo," *El Sol del Bajío*, March 20, 2002; interview #171.

81. "Continuará JUMAPA con descuentos," *A.M.*, February 15, 2000; "Ofrecen a manifestantes pagar menos por agua," *A.M.*, July 24, 2003.

82. Interview #171.

83. "Aprueban al consejo de Jumapa," *A.M.*, November 30, 2006.

84. Interview #171.

85. For a time, these efforts included the controversial strategy of charging consumers for water treatment. See "Atribuye aumento a planta de agua," *A.M.*, October 27, 2006; "Extravía Jumapa 72 MDP para planta," *A.M.*, November 15, 2006; "Reprueban partidos cobro por tratamiento de agua," *A.M.*, November 16, 2006.

86. Interview #143; see also CEAG (2011).

strategies more than doubled the utility's revenue between 2000 and 2003 and led to continuing increase over the rest of the decade.[87]

Increased revenues allowed for important changes to the network infrastructure. The utility created a department dedicated to updating pipes, minimizing water loss, increasing water pressure, and reducing clandestine connections. By interconnecting pipes servicing different neighborhoods, the service teams attempted to minimize disruption to service. They also invested heavily in high-efficiency water extraction units, which lowered the utility's electric bills.[88]

In addition, the utility created a department for studies and projects, ensuring that it would not have to spend money contracting out blueprints for infrastructure projects. This strategy permitted bureaucrats to respond more effectively to technical issues that occur in daily operations as well as to access federal- and state-level public works resources that require blueprints. In March 2014, a sewage treatment plant designed and negotiated by the utility's director, Francisco González, to sell treated water to the national oil company PEMEX began operations. This sewage treatment plant was an unusually good deal for the city: because treated water would be sold for industrial processing uses, the city would be able to treat 100 percent of its sewage at no cost.[89]

The utility's dramatic service improvements led to numerous awards for technical development, level of consolidation, and energy efficiency.[90] The utility and state water commission publicized the awards, which helped protect the utility director's position when new mayors were elected.

Extending the Policymaking Time Horizon

Celaya's water utility counted on both institutional and noninstitutional means of policy extension. Formal support came from a professionalized and proactive state water commission governed by PAN-appointed technocrats. Celaya benefited from the state's help with various initiatives, such as undertaking consumer "ability to pay" tariff studies, pipe rehabilitation programs, and water conservation campaigns.[91] The utility also

87. Revenues from water bill payment rose from thirty million pesos in 2000 to sixty-seven million pesos in 2003 (JUMAPA 2008).

88. Interview #171.

89. Ibid.

90. "Recibirá premio JUMAPA," *A.M.*, December 10, 2005; interview #171.

91. Interview #143.

allowed several operational processes to be monitored so that they would earn certifications from the state water commission, helping to increase the utility's standing.[92] In 2005, the Guanajuato State Congress mandate that water tariffs be indexed to inflation further reinforced Celaya's cost-recovery agenda.

Informal means of policy extension, similar to those in Naucalpan, were a product of negotiations between elected officials and party leaders to protect reforms. Celaya's first PAN mayor, Suárez, was supported by a rising party leader, Alfredo Ramírez Valenzuela, who had worked in the water utility in the late 1990s and had seen water reforms as an opportunity to appeal to the PAN's primary base and build a reputation for good government. He encouraged Súarez to hire González, who became the primary architect of the reform process. Ramírez went on to become a city council member and eventually the president of the local PAN chapter, leading the most important party faction in the city for a decade. The Ramírez faction protected González during four different mayoral administrations, applying pressure that prevented incoming mayors from replacing him with a patronage appointee.[93] As the PAN grew in Celaya in the first decade of the twenty-first century, the number of factions within the party grew. Despite this internal conflict, the strength of the PAN faction that initiated reforms and protected its continuity for nearly a decade proved fundamental to the reform process. González singlehandedly oversaw a reform process without the oversight of a citizen board until the tail end of his tenure, and even then, the citizen board was controlled by city hall. By that time, the reform process was sufficiently under way that board members seldom challenged it. Because the party chose to not create a citizen board during the most contentious period of reform, fewer veto players tried to block reforms. This arrangement allowed expansive reforms to occur in a short period.

In 2009, the original PAN faction that had initiated reforms and protected González split into three groups, diluting its strength. PAN Mayor Rubí Laura López (2009–12) replaced González after a decade as water utility director. While new PAN factions may seek to rebrand the ongoing service improvements to benefit politically from them, it is unlikely that they will completely undo ten years of reform, particularly because the Guanajuato State government provides a well-developed set of support structures for programmatic water reforms.

92. Interview #171.
93. Interviews #171, 177.

Conclusion

In both Naucalpan and Celaya, water utility reform architects thought it politically expedient to limit the amount of direct societal influence in the reform process. Narrow elite incorporation entailed incorporating the interests of societal elites but restricting their direct participation in reforms as well as excluding popular sector participation. This strategy led to extensive insulation of policymaking, whereby only a handful of actors held information and made decisions about reforms. Strong policy insulation allowed for speedy implementation of difficult reforms in contexts with strong partisan opposition and where the power and political standing of reform leaders remained untested.

Democratic transitions were tumultuous in both Celaya and Naucalpan as a result of the power of the PRI opposition when PAN mayors first entered office. However, this opposition strength manifested itself differently in these two contexts. In Naucalpan, PAN mayors came to power while the governorship and many mayors' offices continued to be held by the PRI. The PRI's ongoing influence throughout Mexico State influenced the PAN's decision to pursue reforms through a narrow incorporation strategy. PRI governors, legislators, and state water commission technocrats continued to set state-level policies that re-created corporatist practices and stifled the creation of participatory institutions to support water reform. Furthermore, PRI leaders throughout the state paid lip service to cost-recovery policies but in reality derailed PAN efforts to increase water tariffs and eliminate clandestine connections. Against this conflict-ridden backdrop, Naucalpan's PAN leaders sought to limit societal elite participation in water reforms.

Similarly, Celaya's PAN mayors came to power in a city where the PRI continued to present a political threat to reform. The first PAN administration was derailed by PRI opposition leaders, leading subsequent PAN reform architects to limit the amount of societal participation in the water reform agenda. In both Naucalpan and Celaya, conflict surrounding water reforms threatened to become a referendum on PAN administrations. Amid these tensions, reformers worried that opposition party members would occupy positions in participatory institutions and derail reforms from within. However, limiting societal participation was more challenging for Celaya's political leaders than for their counterparts in Naucalpan because of the statewide influence of the PAN's participatory practices in Guanajuato. The PAN held both the governorship and 70 percent of the mayors' offices in Guanajuato, promoting models of par-

ticipatory local policymaking that Celaya's political leaders had to circumvent to achieve narrow incorporation. Expectations about the role of civil society participation in water reform were much higher in Celaya, strengthening the backlash against efforts to limit elite participation.

In addition, both cities had reform patrons who protected initiatives over multiple municipal administrations. Both Mayor Durán in Naucalpan and political insider Ramírez in Celaya were PAN leaders who remained politically powerful during the initial reform period. However, Durán managed to protect reforms primarily through ad hoc improvisations and by restricting power to a narrow group of political acolytes. In contrast, Ramírez initiated a process that flourished under the leadership of one key technocrat and with a myriad of state- level resources that together built more support for reform than was available in Naucalpan. While both cities pursued a narrow incorporation strategy that was well insulated from political opposition, Celaya's reform process relied on a wider range of support structures. The fiscal, administrative, operational, and sometimes political resources provided by Guanajuato State helped speed the pace of Celaya's reforms and ensure their success. Although it is unclear whether one approach will be more conducive to sustaining reforms in the future, the two models led to similar levels of water and sanitation delivery improvements in their cities.

SIX

Reform Failure in Toluca and Xalapa

Ad Hoc Solutions and Gradual Services Decay

Democratic transitions can produce better governance, but they can also generate new political dynamics that impede the task of improving government services. In contrast to the four cases of successful reform adoption examined in previous chapters, this chapter analyzes the first of two pathways toward reform failure. In the cities of Toluca (Mexico State) and Xalapa (pronounced *ha-la-pa*) (Veracruz State), the new political parties that came to power on the eve of democratization—the center-right PAN in Toluca and the center-left Convergencia in Xalapa—did not launch projects to reform public service provision, and dramatically different service provision strategies ensued. Despite the emergence of new political alternatives, the relative lack of water-intensive industries reliant on municipal water services and the small middle-class constituent bases made water sector reforms politically unattractive. The rejection of programmatic reforms was especially unexpected in Toluca, because of the PAN's commitment to programmatic reforms and market-oriented approach to urban government in other settings.

In Toluca and Xalapa, the new political parties were unwilling to undo clientelistic linkages in water provision, instead finding it politically useful to continue the PRI's mode of particularistic service provision. In these two cases, the cities' citizen water boards were directly controlled by party leaders and were not insulated from social groups' clientelistic demands.

However, in Toluca and Xalapa, exogenous shocks and resources meant that authorities could engage in problem solving that kept the water system functioning at a minimal level and led to gradual rather

than acute decay of water and sanitation services. The ways in which city officials approached these challenges varied. In Toluca, savvy lower-level technocrats accessed resources from the federal and city government, piecing together some revenue to keep the system afloat despite the utility's political inability to increase tariffs or enforce payment. In Xalapa, a canceled privatization contract for a sewage treatment plant left Convergencia leaders with a large debt obligation that created a sector-specific fiscal crisis that provided a temporary justification for minimal revenue collection. Xalapa's leaders did not engage in extensive reforms, yet some revenues were raised in a manner that circumvented contentious tariff increases, allowing the utility to avoid declaring bankruptcy and becoming recentralized back under the state government. In both cases, state governments did not pressure local governments to adopt programmatic reforms and did not provide these cities with significant resources for reform implementation.

These cases illustrate how the deleterious effects of repurposing clientelism for constituencies in newly competitive electoral environments may not immediately result in extreme decay in public services. A precipitating event or resource—a fiscal issue (e.g., debt crises from privatization programs), a sector-specific crisis (e.g., drought, flood, contamination), or an informational or material opportunity (e.g., technocratic or program-related resource)—may provide the impetus for an ad hoc, temporary, and fragmented response to public service provision.

Reform Failure in Toluca

Politics and Public Services prior to the Democratic Transition

Toluca de Lerdo (Toluca) is the capital of Mexico State. With a population of 820,000, it is not the most populous city in the state, unlike many of the country's other state capitals (INEGI 2010). Toluca's distance from Mexico City, forty-two kilometers, has kept Toluca from becoming a bedroom community that absorbs the federal capital's migrant community, and Toluca's urbanization and political development have unfolded independently of the Mexico City metropolitan region.

The city's downtown development has expanded in a bifurcated manner that has made improving public services challenging. The effects of rapid urban expansion and poor planning are evident: the city's population has expanded around former land collectives (*ejido* land) on one side of town, and a historic city center on the other side of town that

once housed local oligarchs is now a commercial center. The Toluca metropolitan area consists of ninety-seven townships (*localidades*), which house a range of urban, nonurban, metropolitan, and indigenous residents. Approximately 54 percent of the municipality's population is considered periurban, suburban, or rural, while the other cities in this book that border Mexico City are 100 percent urban (AYS 2008a). The dispersed nature of the city's population has added to the challenges of improving network infrastructure services.

Unlike other industrial hubs that became fertile grounds for programmatic water and sanitation reforms, Toluca's reforms have failed to take root. Although Toluca is a major industrial center, the city's industrial giants are physically and politically removed from the city's downtown politics. Toluca became a major manufacturing hub beginning in the 1970s, under the tax inducements generated by PRI governors, especially Jorge Jiménez Cantú (1975–81). As many as 1,147 industrial firms started operations in Toluca during this time, transforming the city and cementing its transition from an agricultural economy to an urban-industrial hub (Delgado Peña 1995, 16; Aranda Sánchez 2000, 234). However, local economic elites did not drive Toluca's industrialization. While industrial manufacturing makes up 66 percent of Toluca's economy (INEGI 2004), many of the city's industrial firms are operated by multinational corporations whose leaders are not embedded into the local community and whose service networks operate independently of the municipal government.

As the capital city of the most populous state in the country, Toluca was an important electoral bastion for the PRI in the second half of the twentieth century. The elite Grupo Atlacomulco controlled Toluca and made it a center of party organizing. This "Toluquensian oligarchy" came to state-level power under Mexico State governor Carlos Hank González (1969–75) and retained power within PRI circles under Carlos Salinas's presidency in the 1990s (Delgado Peña 1995, 321–22). The PRI prevented opposition parties from winning office in Toluca prior to 2000, despite pervasive allegations of electoral fraud.

As the PRI's electoral monopoly began to slip nationwide, the party created "participatory" institutions in Toluca that amounted to little more than corporatist institutions with participatory facades. Prior to 1991, seventy-nine participatory councils had been created, and under Mayor Enrique González Isunza (1991–93), 1,962 block leaders, 24 municipal delegates, and 26 municipal subdelegates were added, facilitating the distribution of conditional cash transfer benefits to popular sectors

(Delgado Peña 1995, 325). The PRI's promotion of participatory institutions was a politically useful investment: at a time when the PRI was facing numerous threats, it expanded its territorial base in Toluca and other important political enclaves. These participatory institutions not only mobilized the party base but also helped mediate social conflict, especially with popular sectors.

The PRI's reliance on electoral support from Toluca and the concentration of popular sector votes in the city made subsidized water an important material resource for the ruling party. Toluca's water and sanitation utility is one of the oldest in the country, created in 1981 during the FIFAPA pilot program as a precondition for a World Bank loan (World Bank 1992, 25) and officially decentralized from the municipality in 1992 as part of Mexico State's decentralization program (Gobierno del Estado 1997). Institutional changes intended to depoliticize water services in the city were introduced in 1981 and 1992, but they failed to prevent the PRI's intervention in water services.

Despite the election of PAN mayors starting in 2000, no reform coalition emerged to change Toluca's status quo. The new mayors allowed subsidized pacts to continue with low-income users and re-created particularism in services that served their immediate political interests. These mayors were primarily interested in retaining PAN control in a largely low- and low-middle-income community and in creating high-profile public works that would enhance the party's reputation. Some technical reforms occurred—bureaucrats accessed resources from higher levels of government and injected some revenue into efforts to improve the deteriorating water delivery network. However, these strategies sidestepped the socially contentious act of increasing tariffs and implementing stringent collection practices. Since these strategies were not part of a larger, politically motivated reform program, they failed to lead to service improvements.

Maintaining the Status Quo with Short-Term Fixes

The Economic and Demographic Landscape

Although Toluca is an important industrial center, the city lacked water-intensive industries and the middle-class base that could make programmatic reform adoption politically attractive to new mayors after local democratic transitions. Toluca's municipal economy centers on industrial production—in fact, the city produces more per capita revenue

from industrial production than the other cities examined in this book: in 2004, it grossed 58.7 million pesos in industrial production, which was 66 percent of Toluca's municipal economy (see table A3). However, as table A4 shows, a considerable percentage of the city's industrial firms have water extraction permits and do not rely on the public utility for water service. Compared to this book's four high-reform cases, Toluca's industrial enterprises have more than twice as many water access permits, and the volume of water these companies extract is nearly four times greater than the amount extracted by industries in the four high-reform cases in this book. Most of Toluca's industrial firms are multinationals; 51 percent of Toluca's total industrial production (and 34 percent of the overall local economy) comes from the multinational automobile assembly industry (INEGI 2004). Few of Toluca's industrial consumers rely on the city's water utility, and the business community is therefore unlikely to apply pressure for service upgrades.

Because these firms opt out of local water utility service, revenue is lost and possibilities for programmatic reform are limited; in addition, this arrangement has also compromised water supply quantity for residential consumers. One account estimates that industrial consumers with their own boreholes extract 30 percent of the local water supply, hastening the decline of the city's freshwater supply without any remuneration to the utility or municipal government.[1]

Toluca also has a high number of nonindustrial users that receive service from the water utility without paying. For example, Toluca provides free water service to as many as eleven hundred public institutions such as schools, hospitals, and government offices.[2] This arrangement shrinks the utility's revenue streams and exacerbates consumers' wasting of water, as officials contend that it is too costly to install and maintain meters for nonpaying customers. Furthermore, 30 percent of the city's freshwater supply is used by periurban and rural residents who reside in what is jurisdictionally the municipality but manage their own water supply as a consequence of preexisting legal arrangements with the state government (AYS 2008a, 2008b, 1). Power brokers outside of the urban grid run the water committees as local fiefdoms, and the utility occasionally must provide technical resources, construction assistance, and even water because they deliver votes for the mayor.[3]

1. "Cinco industrias consumen 30% del agua potable de Toluca," *Milenio*, May 4, 2007.

2. "No pagan agua potable mil 100 edificios públicos," *Milenio*, November 25, 2008.

3. "Preparan proyecto para regular a comités locales," *El Universal*, September 24, 2007; "Escasea y se encarece el agua potable," *Milenio*, November 15, 2008; interview #53.

These additional responsibilities increase the costs of service provision without increasing revenue.

Furthermore, Toluca has a large number of low-income residents. The percentage of residents living in either very high or high poverty is 40.6 percent, with only 16.7 percent of the population classified as living in low levels of poverty (Consejo Nacional de Población 2010b). Because of the city's large number of low-income residents, its limited middle-class base, the numerous nonbillable users of the city's water resources, and the low number of industrial consumers that rely on the water utility, programmatic service upgrades were less likely to be politically attractive to new mayors.

Political Change, Lip Service to Reforms, yet Business as Usual

The PAN came to power in 2000 under Mayor Juan Carlos Nuñéz Armas (2000–2003) and held the mayor's office for three consecutive administrations. During this time, however, the PRI maintained a much stronger hold in PAN-led Toluca than in nearby PAN-led Naucalpan—the three PAN mayoral wins in Toluca were much closer than the victories in Naucalpan. For example, in 2000, the PAN beat the PRI by eighteen thousand votes in Toluca versus ninety-four thousand votes in Naucalpan; Toluca's 2003 mayoral race was even closer, with the PAN beating the PRI by only three thousand votes.[4] The closeness of these races can be explained in part by the substantial concentration of rural voters in the Toluca district: in 2000, 400,165 of 732,699 residents lived in suburban, periurban, and rural areas (AYS 2008a). These nonurban residents tended to vote PRI and outnumbered the pockets of upwardly mobile middle-class communities in the urban center whose residents were more likely to support the PAN.

While all three of Toluca's PAN mayors paid lip service to water issues, they did not initiate sweeping programmatic reforms, choosing to sidestep the political sensitive issue of enforcing collection of water tariffs. The mayors publicly supported statewide PAN initiatives to increase water tariffs but chose to back high-profile construction projects rather than the less politically visible task of providing maintenance for existing infrastructure networks.

Nuñéz had water sector experience as former president of the state-level Aquifer and National Resources Commission and had participated

4. Figures compiled from the Instituto Electoral del Estado de México website, www.ieem.org.mx.

in the drafting of the Mexico State Water Law. During his term, Toluca began to participate in the state's water tariffs working group, and city hall supported the water utility through fiscal transfers for infrastructure construction at a much higher rate than the subsequent two mayors.[5] However, Mayor Nuñéz focused more on building large hydraulic works than on implementing politically sensitive programmatic reforms in the sector. The next two PAN mayors, Armando Enríquez Flores (2003–6) and Juan Rodolfo Sánchez Gómez (2006–9), also failed to adopt programmatic reforms in the water and sanitation sector. They focused instead on more general large public works projects in other sectors, with Sánchez famously beginning a series of expensive and high-profile modifications to the downtown historic area that were never completed.[6]

Unlike Naucalpan, where PAN leaders championed tariff increases immediately after coming to power in 1997, Toluca's utility did not update pricing structures until 2002, when it began to benefit from the Mexico State Treasury Institute's statewide coordination of tariffs.[7] PAN-dominated cities that were part of the water-tariff-setting group voted to increase water tariffs, but Toluca's city leaders avoided enforcing tariff collection as well as other politically sensitive policies.

Toluca's utility directors have been purposefully lax in their implementation of metering, bill collection, and suspension of services for nonpayment. Officials worried that the cost of meter installations would be unrecoverable in poor neighborhoods and reasoned that because most consumers were not high-volume industrial users, meter installation made little sense.[8] As of 2008, only 7.5 percent of Toluca's users had meters installed (AYS 2008c). Furthermore, while some service suspensions for nonpayment began in 2008, the PAN kept service suspension policies as lax as the PRI had, despite state-level water laws that permitted service suspensions for nonpayment. The utility has legal authority to seize delinquent consumers' property, but legal action against nonpaying customers did not start until 2008,[9] and future mayors may choose

5. Ramo 33 is a federal transfer to municipalities that can be used by the municipality for a large number of projects, according to priorities within city hall. During the Nuñéz's administration, the water utility received 41,853,524 pesos from Ramo 33, much higher than the 6,960,153 million pesos received during the Enríquez administration (2003–6) and the 7,826,086 million pesos received during the first two years of the Sanchez administration (2006–8) (AYS 2008d).

6. "Le recuerdan al alcalde cumplir sus compromisos," *Sol de Toluca*, April 19, 2008.

7. Interview #63.

8. Interviews #42, 43.

9. Interview #54.

not to pursue legal sanctions.[10] Third, Toluca has not pursued a strategy of extensive debt recuperation. As of 2009, 46 percent of residents owed the utility service fees totaling as much as six hundred million pesos. Payment evasion remains endemic, even under PAN leadership.[11]

Exogenous Resources Lead to Ad Hoc Solutions

Sidestepping the politically sensitive task of implementing cost-recovery policies, PAN leaders instead scavenged for ad hoc fiscal resources to keep the system afloat. Because of Toluca's importance as Mexico State's capital city and its proximity to Mexico City, resourceful engineers obtained some funds from agencies at different levels of government. Utility directors focused on obtaining revenue from the federal government for infrastructure development but also gained support from the municipal government under Ramo 33, a federal transfer program for municipal projects whose allocation is determined by city councils. These efforts were undertaken by career engineers working under utility director Mauricio Ramírez Rosaldo (2000–2006), a political appointee who was controlled by PAN mayors but who permitted some operational autonomy as long as the mayors' political commitments were respected.[12]

Generally speaking, Ramírez implemented some construction updates using funds from other levels of government but made sure to avoid socially controversial cost-recovery policies. For example, during the city's first two PAN administrations, engineers tracked performance indicators that made the utility eligible for federal financing for infrastructure updates.[13] As a result, the water utility's general construction budget increased by 400 percent between 2000 and 2008 (AYS 2008d). However, tracking performance indicators may not have improved service, because the utility has been more focused on constructing new public works than on updating existing infrastructure. In addition, bureaucrats have generated revenue via internal ad hoc measures, such as occasional debt forgiveness programs, that create uneven subsidies for consumers, especially the periurban and rural residents who have the highest debts yet represent reliable votes for the mayor.[14]

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10. "Escuadrón jurídico de la capital mexiquense, a cobrar el agua," *Milenio*, November 18, 2008.

11. "Debe agua 46 por ciento de los Toluqeños," *Milenio*, September 7, 2009; "Evaden pagar el agua 20% de los Toluqueños," *Milenio*, November 18, 2008; "Debe agua 46% de los Toluqueños," *Milenio*, September 7, 2009.

12. Interview #35.

13. Interview #35, 43.

14. "Eximen a colonos de multas por agua—otorgan en Toluca descuentos de hasta el 100 por ciento en multas y recargos a clientes morosos," *Reforma*, July 9, 2001.

These programs kept the network infrastructure afloat but did not substantially improve services. Toluca's network infrastructure remains antiquated; it is sixty years old in some areas, and approximately 75 percent of the network is in dire condition. The network infrastructure loses up to 45 percent of conducted water daily.[15] While Toluca's utility has found it difficult to increase its service coverage and service continuity, support from federal programs has led to some improvements. By 2013, Toluca's water utility was not yet treating any of its wastewater (Gobierno Municipal 2012).

Short-Termism and Ongoing Particularism

The politicized nature of water service in Toluca is written into the Mexico State Water Law. The mayor serves as president of the citizen water board, which also includes a city hall representative, a Mexico State Water Commission representative, and three citizen representatives (one each from residential, commercial and industrial users). The president has the tiebreaking vote and must authorize the appointment of all board members. Therefore, the question of reform sits squarely on the mayor's shoulders (Congreso del Estado de México, 1999).

Similar to PRI mayors in Xalapa, PAN mayors in Toluca intervene regularly in service delivery. Bureaucrats admit that despite PAN-led overtures toward reform (such as adopting tariff increases), political considerations continue to dictate policy implementation. During elections, for example, the utility's managers must consider how much the party's constituents can afford to pay,[16] and mayoral candidates promise water infrastructure construction for their constituencies and then pressure the utility to deliver on those promises.[17]

Politicians campaign on the issue of guaranteeing water for the future; for example Sánchez "guaranteed" water for the next twenty years.[18] All three mayors participated in photo opportunities advertising high-profile projects.[19] Officials suggested in interviews that Sánchez's

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15. "Podría colapsar red hidráulica," *Milenio*, March 20, 2009; "Acusan baja calidad en tuberías," *Reforma*, March 24, 2006; "Crecen las fugas de agua," *Reforma*, March 24, 2006; "Gastan diario 350 litros de agua por persona en Toluca," *El Universal*, November 16, 2003.

16. Interview #35.

17. Interviews #35, 41, 45.

18. "Quedaron inconclusos los trabajos para garantizar el abasto de agua en Toluca," *Milenio*, July 10, 2009.

19. "Entregó el alcalde de Toluca obras hidráulicas y de infraestructura escolar," *Sol de Toluca*, October 9, 2009; "Supervisó el alcalde de Toluca el entubamiento del canal la Vega," *Sol de Toluca*, May 15, 2008; "Más de 640 mil pesos para obras de drenaje y agua," *Sol*

twenty-year promise yet refusal to shoulder the political burden of increasing tariffs resembled the PRI's historic promise of free water.[20] Sánchez explained his rationale for refusing to enforce tariff increases: "Increases should not be excessive so that [city hall] does not generate a difficult situation for users."[21]

Even though the PAN maintained power for three mayoral administrations, water utility administrators frequently changed as a result of patronage appointments. Both city council members and mayors distributed positions to members of their inner circles or to campaign supporters. As one city official noted, "Here in local government, we say that we are born again every day. When I come to work, I have to check to see if there is someone else in my chair, if not . . . then I know I still have a job."[22] Bureaucrats admitted that projects stalled with administrative changes because employees were worried about losing their jobs.[23] By the time Toluca's PAN mayoralties ended in 2009, they were accused of mishandling public funds and increasing public debt to finance unnecessary—and unfinished—public works projects.[24]

Reform Failure in Xalapa

Politics and Public Services prior to the Democratic Transition

With a population of 457,928, Xalapa-Enríquez is the capital (and second-largest city) of the eastern coastal state of Veracruz, which is the second-most-populous state after Mexico State (INEGI 2010). Cities in Veracruz are relatively dispersed, and the state's geography has presented substantial governing challenges. The area's numerous rivers, wetlands, and mountains have historically complicated communication between the cities (Benitez Iturbe 2008, 76–78) and have been linked to Veracruz's underdevelopment within Mexico (World Bank 2003, 2).

Xalapa developed mostly as a commercial center that housed export goods on their way to the Port of Veracruz, a practice that dates back to the eighteenth century. In the twentieth century, the city's economy was dominated by tobacco and especially coffee processing. Xalapa remains

de Toluca, May 22, 2008; "Once obras hidráulicas para que no falte agua en 20 años: Alcalde," *Sol de Toluca*, October 17, 2008; interview #49.

20. Interviews #43, 53, 54.
21. "Consideran alcaldías repercusión en usuarios," *Reforma*, September 24, 2007.
22. Interview #35.
23. Ibid.
24. "Evaporó administración Panista $42 millones," *Sol de Toluca*, January 27, 2009.

one of the most important coffee export centers in Latin America. In addition, Xalapa is home to several universities, the most significant of which is the Universidad Veracruzana. The city's industrial sector is relatively small, and the economy retains its focus on small-scale commerce, coffee production, and state government administration.

Xalapa has a history of very limited political opposition, and its mayors have typically been controlled by the PRI governor. Unlike other cities, where political opposition emerged early in the democratization era and civil society organizations were at least present, alternatives to the PRI arrived late to Xalapa. Since the city was a PRI stronghold, political opposition was virtually nonexistent: neither the PAN nor the socialist party, the Partido Popular Socialista, mounted effective electoral opposition. Civil society organizations were also traditionally weak—university students represented the only potentially autonomous group, and they were not particularly activist (Fagen and Tuohy 1972, 50, 59–61).

Xalapa's history of urban water and sanitation services has been one of strong top-down control, even after decentralization.[25] When the federal government decentralized services beginning in 1980, the Veracruz government, unlike its counterparts in Guanajuato and Mexico State, centralized water networks at the state level and did not further decentralize control to municipalities. The Veracruz state government created a management system that aggregated all of the state's water networks into a single entity that administered water service to the state's municipalities through approximately eighteen "direct administration systems." These municipal systems were fully administered by the state government, in essence, re-creating the centralization schema that had once been concentrated at the federal level.[26]

The Veracruz state government modified this management system in the 1990s but retained its principal feature: direct service provision by the state water provider for all municipalities. In 1988, the Veracruz state government's Law 72 created a new state water commission, Comisión Estatal de Agua y Saneamiento, and thirty-nine local water and sanitation utilities. The state government financed and administered these utilities through its headquarters in the state capital.

This state-level centralization lasted for twenty years. In essence, the

25. The state's water networks were financed and operated by the federal government through federal juntas from the 1930s through 1980s. In the three most important ports (Veracruz City, Tuxpan, and Coatzacoalcos), another federal ministry administered water services and exercised tax authority over imports and exports (interviews #101, 107).

26. This organization was called Comisión Estatal del Agua Potable. Interview #107.

PRI-run state water commission was free to administer services in an unregulated manner, set pricing and collection practices as it saw fit, and use the revenues collected from user fees for any purpose. No other federal or state agency regulated this commission, and no municipality legally challenged the state's authority to provide water services despite the fact that in other states, municipal governments were directly providing this service for over a decade. During this time, the Veracruz state water commission was charged with distributing federal funds to local water utilities for infrastructure projects, but the state government still operated these utilities directly.

Xalapa's 2002 democratic transition changed the city's water institutions as opposition mayors moved to wrest control of public services away from the PRI state government and establish discretionary access to the water utility and its resources. In this case, opportunistic calculations led opposition mayors to incur acute debt obligations for the city, resulting in some revenue-generating strategies that helped keep the utility afloat in the immediate term, but did not lead to comprehensive, programmatic reforms.

Maintaining the Status Quo with Short-Term Fixes

The Economic and Demographic Landscape

Like Toluca, Xalapa lacked large industrial water users around which to build reforms. Xalapa's economy centered on commercial services, coffee processing, university and cultural centers, and state government offices. Only 14 percent of the economy is based on industrial manufacturing, with 5,444 employees working at 1,543 firms, indicating relatively low levels of industrial concentration (see table A3). Much of this manufacturing is metallics assembly and food production (INEGI 2004). While metallic manufacturing can be water-intensive, Xalapa's metallic industries are small-scale, employing just over 500 people across 272 businesses and registering merely 0.6 million pesos in sales annually (INEGI 2004). None of Xalapa's industrial clients has a water permit, a sharp contrast to this book's four other reform cases (see table A4).

Industrial cities in Veracruz, such as Córdoba and Orizaba, are known to have a more robust business community built on manufacturing. In Xalapa, business interests instead centered on commercial development, and the most important has been the Grupo Chedraui, which operates shopping centers and grocery stores and has exerted a great amount of

both economic and political clout (Amezcua Cardiel 1990, 49–55). All else being equal, commercial interests rarely push for programmatic water reforms in Mexico because they often have other sources of potable water in the small amounts necessary for drinking and washing dishes. Xalapa's commercial business resisted tariff increases proposed in the late 2010s; the city's business community did not support changes for programmatic water reforms.

As in Toluca, Xalapa has many more lower-income than middle-class residential consumers, but the majority of its citizens do not experience extreme poverty. Xalapa's population is evenly split between low-income and higher-income groups. One source shows that 29 percent of the city's population has either high or very high levels of poverty, 35 percent has medium levels of poverty, 36 percent has very low or low levels of poverty, and only 3 percent lives in extreme poverty (Consejo Nacional de Población 2010c).

Although Xalapa has a thriving cultural environment centered on its universities and commercial centers, among the Mexican capitals with the lowest levels of economic competitiveness, it ranks fifth. These figures are based on the city's weak infrastructure, low levels of entrepreneurial activity, increasing crime, weak administrative governments, and low levels of social development.[27]

Political Change, Drastic Policy Swings, yet Business as Usual

Alternatives to the PRI have emerged throughout the state of Veracruz, but in Xalapa, the opposition has had limited and disjointed successes, with left-of-center parties (the PRD and a coalition led by Convergencia) winning mayors' offices in 1997 and 2000, respectively, before the PRI reemerged in 2004. The opposition's inability to consolidate its power in the city and win multiple consecutive elections resulted in part from the entrenched strength of the PRI, which considers Xalapa its principal electoral and organizational hub in the state.

A PRD-led left-of-center opposition briefly emerged beginning in 1997. The Left's success in Xalapa resulted in part from the near victory by the leftist Frente Democrático Nacional presidential candidate Cuauhtémoc Cárdenas in 1988, who later went on to found the PRD. The PRD increased its vote share throughout Veracruz State by 181 percent in the 1991 elections and won a total of 13,206 votes in Xalapa, a record for

27. "Cae Xalapa en competitividad nacional: CONAPO," *Plumas Libres*, April 4, 2014.

the opposition (Amezcua Cardiel 1994, 233; Reyna Muñoz 2004). The PAN also increased its vote share throughout the state, especially in urban centers (Rivera Sánchez 1998, 186–87), but to a lesser degree than the PRD in Xalapa. As table 6 shows, the only Xalapa mayoral election the PAN came close to winning was in 2000, when the party came within 5,000 votes of the Convergencia-led coalition.

Despite the arrival of center-left mayors at Xalapa's city hall, the PRI remained a strong electoral force. The Left's rise caused the PRI to update its political image and reorganize its territorial electoral strategies to retain power, an approach that the PRI adopted throughout the state (Amezcua Cardiel 1994, 234). Table 6 shows how mayors from the PRD and Convergencia came to power in the city in 1997 and 2000, respectively, but both mayors won office as political outsiders rather than by mobilizing an electoral base for an opposition party. These parties chose to elect candidates who were well known in the community and were only tangentially associated with their political party (Amezcua Cardiel 1994, 234; Rivera Sánchez 1998, 186–87).

The two center-left opposition leaders who came to power from 1997 to 2003 made history in Xalapa for wresting control of the capital city

TABLE 6. Electoral Results and Mayoral Party Affiliations in Xalapa (1997–2010)

Election Year	Mayor	Electoral Results (# of votes)		
		PRI	PAN	PRD
1997	Rafael Hernández Villalpando (PRD)	37,381	23,123	52,088
2000	Reynaldo Escobar Pérez (Convergencia)[a]	20,923	25,814	16,588
2004	Ricardo Ahued Bardahuil (PRI)	78,260	30,792	53,670 (PRD-PT)
2007	David Velasco Chedraui (PRI)	72,898 (PRI, PVEM)	38,172	18,593 (PRD, PT, Convergencia)
2010	Elizabeth Morales García (PRI)	95,819 (PRI, PVEM, PRV)	46,547 (PAN, PANAL)	17,877 (PRD, PT, Convergencia)

Source: Instituto Electoral Veracruzano.

[a]This electoral coalition brought together six different political parties, including Convergencia, the Ecological Green Party (Partido Verde Ecologista de México), the Labor Party (Partido del Trabajo), the Social Democracy Party (Democracia Social), the Social Alliance Party (Partido Alianza Social), and candidates under the Common Candidate Alliances (Candidatura Común). This coalition, led by Convergencia, won the election with 26,346 votes.

away from one of the most deeply entrenched PRI electoral mobilization networks in the country. But the Left's governing practices were not distinguishable from the PRI: both the PRD and Convergencia preserved the patronage and clientelistic modes of governing that the PRI had employed, both cozied up to the PRI governor seeking special attention, and both swung from one extreme policy solution to another, unable to consolidate a governing platform or make substantive changes. When these two parties left office, a reinvigorated PRI came back to power.

Both opposition mayors were part of the same political clique—followers of former governor Dante Delgado, who broke ranks with the PRI to help create Convergencia por la Democracia, a left-of-center political party that has been active in local elections in some parts of the country. Aligned with Delgado, Rafael Hernández Villalpando (1997–2000) won office on the PRD ticket, then threw his support behind the Convergencia movement as soon as it was formed in 1999.[28] He was a well-known local public figure as former rector of the Universidad Veracruzano (Reyna Muñoz 2004). Hernández's tenure in office ended in personal scandal, however, and he was kept out of jail only as a result of the intervention of his acolyte, Mayor Reynaldo Escobar Pérez (2000–2003), who came to power under a Convergencia-led coalition of six small parties that united to beat the PRI in a tightly contested election.[29] Escobar's administration, which had initially signaled the creation of a political opposition, ultimately ended with an alliance with the PRI so that Escobar could advance into state-level politics.

Period 1: Decentralization and Privatization of Sanitation Treatment

In the water and sanitation sector, Escobar made unprecedented changes, but they led to personal and political benefits for him rather than to comprehensive reform. These changes—which included both decentralization and privatization—led to some ad hoc improvements by subsequent administrations that had to deal with the acute fiscal problems caused by Escobar's policy choices.

In 2001, the Veracruz state government passed Law 24, which allowed

28. "Veracruz: La Violencia apareció a tres días de las elecciones," *La Jornada*, September 1, 2000.

29. "Reaparece Rafael Hernández Villalpando," *Alcalorpolitico.com*, February 14, 2005; "Reynaldo Escobar; un político sin escrúpulos," *Lapolitica.com*, March 11, 2012; "El dantista Escobar Pérez es edil de Xalapa," *La Jornada*, September 8, 2000; "Chocan PAN y Convergencia en Veracruz," *El Universal*, September 1, 2000.

municipalities to request a transfer of public services to local jurisdiction (*Gaceta Oficial* 2001b). When Escobar came to power, he joined other opposition party mayors throughout the state in requesting the transfer of water and sanitation delivery (along with other services, such as transportation) from the state government.[30] These opposition leaders sought to wrest an important source of political and economic power away from the PRI.

In 2002, almost immediately after gaining control of the city's water and sanitation services, city leaders signed a contract with Aguas Tratadas de Xalapa, a local construction company, to construct and operate a plant to treat the city's sewage, which was being dumped untreated into waterways.[31] The firm had been hired to create a sixty-five-kilometer sewage network in fifty-eight neighborhoods and a treatment plant capable of treating 750 liters per second. The contract, worth nearly fifty-five million dollars,[32] was signed by Mayor Escobar, BANOBRAS, the National Water Commission, and the state water commission.

Although the sanitation treatment plant would be a boon to Xalapa's development plans, the privatization contract was founded on payment obligations for Xalapa's utility that would prove politically difficult to implement. The state-level regulatory body audited the contract and stipulated that to make its payment obligations, the utility would have to increase its physical efficiency from 58 to 80 percent and its commercial efficiency from 62 to 76 percent and would have to take on a series of reform measures overnight (Consejo del Sistema Veracruzano del Agua 2003). These changes would require tariff increases and drastic changes to tariff collection practices. Water tariffs would have to increase by 11.4 percent in the first year, and both administrative and operating costs would have to remain constant. The utility would also have to help pass state legislation to create a sanitation treatment fee for consumers and then find a way to collect those payments, which would amount to 10.8 percent increases over the original water bill (2003, 5).

Escobar, who has been called a political chameleon, benefited from the project, especially the sale of the land to Aguas Tratadas de Xalapa for approximately $ 220,000 (Convenio Gobierno del Estado–Banobras–CAEV 2002, 2:10). Escobar accessed those funds and left the challenge of

30. "Reynaldo Escobar; un político sin escrúpulos," *Lapolitica.com*, March 11, 2012.

31. The privatization contract was a build, operate, and transfer arrangement paid for in part by government programs that subsidized the private company's private capital investments. FINFRA, an infrastructure program administered by BANOBRAS, was to pay 40 percent of the grant (Convenio Gobierno del Estado–Banobras–CAEV 2002, 2:8).

32. "Xalapa Authorities Finally Terminate ATX Contract," *Business News America*, March 8, 2006; interviews #79, 87.

increasing tariffs to his successors. When Escobar left office, he had not implemented any water tariff increases to help fulfill repayment obligations stipulated in the privatization contract (CMAS 2005, 2).

Escobar found it politically expedient to get close to anyone in the higher levels of government, regardless of political party. First he declared himself PRI governor Miguel Alemán Velasco's (1998–2004) most ardent supporter.[33] Escobar amassed extensive political capital by aligning himself with local social leaders who could generate votes en masse, such as neighborhood association leaders, leaders of a land invasion group (Movimiento del los 400 Pueblos), and open-air market vendors. Escobar then offered his vote-generating strategies to PRI governor Fidel Herrera (2004–10) and threw his full support for the PRI gubernatorial and mayoral candidates.[34]

When Herrera later suggested that Escobar would have a seat in Herrera's cabinet, the PAN quickly noted that since the beginning of Escobar's tenure as mayor in 2000, he had acquired nineteen properties in his and his family's name, worth approximately $586,000, yet his annual mayor's salary was only roughly $50,000.[35] These accusations were ignored, and Herrera appointed Escobar to serve as chief of staff (*secretario de gobierno*) in 2004.

Period 2: Contract Cancellation and Ad Hoc Solutions to Raising Revenue

Once Escobar left office, two subsequent PRI mayors faced the problem of managing the social conflict stemming from the sanitation treatment plant contract. Ricardo Ahued Bardahuil (2005–7) and David Velasco Chedraui (2008–11) saw that the contract was in shambles: the firm had delayed construction, and the utility could not meet its financial obligations under the contract. When it came time to increasing water tariffs, it turned out that local leaders who had signed the contract had oversold the utility's fiscal health and that the city would have to increase tariffs by much more than originally anticipated—somewhere between 35 to 90 percent overnight (CMAS 2005, 2).

33. "Reynaldo Escobar; un político sin escrúpulos," *Lapolitica.com*, March 11, 2012.

34. "Se hace acompañar por el Secretario de Gobierno, Reynaldo Escobar Pérez, y de la policía intermunicipal de Xalapa," *Archive.vazquezchagoya.com*, n.d.; "Reynaldo Escobar; un político sin escrúpulos," *Lapolitica.com*, March 11, 2012; "Abuso de poder y vacío (convenido) de autoridad," *etcetera*, March 28, 2014.

35. "Veracruz: Objeta PAN designación de funcionario," *El Universal*, November 30, 2004.

Ahued listened to his technical advisers rather than party leaders and passed water tariff increases of 35 percent. However, these increases led to intense backlash from all sectors of the city. One social group, the Frente Cívico Republicano, delivered fifteen thousand signatures to the state Congress in support of rescinding tariff increases. PAN leaders also filed a suit against PRI officials in Xalapa.[36] Ahued initially opposed his party and attempted to hold his ground, arguing that he would not cancel or reduce the unpopular price increases as a result of political considerations.[37]Ahued then received death threats and was hounded by organized protests.[38]

Ahued's successor, Velasco, decided that increasing water tariffs and finishing the construction of the sanitation treatment plant through partnership with Aguas Tratadas de Xalapa would be politically costly. With the governor's support, Velasco canceled the privatization contract in 2009 and signed a new deal with BANOBRAS that was more favorable to the municipal government, with lower debt obligations and a longer repayment period (twenty-five years).[39] This politically popular move eased tensions with societal groups and distanced the PRI from tariff increases. After canceling the contract, Velasco ended tariff increases and the social protests abated.[40]

Exogenous Crisis Leads to Ad Hoc Solutions

The contract cancellation and the ensuing debt obligation prompted urgent calls from city officials to generate some revenue. Velasco

36. "Aprueban aumentar 35% tarifas de agua en Xalapa," *La Jornada*, October 29, 2005; "Protesta en Xalapa, por aumento a tarifas del servicio de agua," *Proceso.com.mx*, January 11, 2006; "Vigente la lucha por bajar tarifa de agua," *alcalorpolitico.com*, April 30, 2006; "Atiende el Congreso del Estado a inconformes por el aumento al agua," *Orizabaenred.com*, October 1, 2006.

37. "El costo—voto al PRI por agua y el pasaje urbano," *Pasillosdelpoder.com*, February 6, 2006; "Ahued 'intransigente': Colonos de Xalapa," *alcalorpolitico.com*, October 1, 2006.

38. "Suspenden aumento en tarifas del agua en Xalapa," *cronica.com.mx*, March 17, 2009.

39. "Suspenden pago del drenaje en Xalapa," *Pasillosdelpoder.com*, March 17, 2009; "Diputados aprobaron reestructurar la deuda de Xalapa," *Diario de Xalapa*, August 8, 2007; "Logra David bajar pagos de CMAS por el PIS: Se amplia el plazo para pagar en 25 años," *Diario de Xalapa*, July 7, 2009; interviews #79, 87.

40. "Suspenden aumento en tarifas del agua en Xalapa," *cronica.com.mx*, March 17, 2009; "Pedirá apoyo al Gobierno del Estado para bajar tarifas del agua," *Diario de Xalapa*, March 10, 2009; "No habrá aumentos a la tarifa del agua en Xalapa: Grayeb," *Diario de Xalapa*, November 26, 2008; "No se incrementarán tarifas de aguas este año: David Velasco," *Diario de Xalapa*, June 9, 2010.

sought to bring in fiscal resources for large public works projects.[41] Velasco allowed technocrats to generate some revenue to meet minimal debt obligations for the sanitation treatment plant yet was unwilling to implement comprehensive cost-recovery measures that would harm his political supporters. A consulting firm was hired to induce debt repayment, a less socially contentious strategy than tariff increases, especially because the changes were implemented by a private firm rather than politicians.[42] This measure largely succeeded, halving the number of consumers with overdue debt payments. These ad hoc revenue strategies have kept the utility afloat but have failed to improve services at pace with population growth.

Overall, however, the utility's fiscal management practices remain archaic. Consumers must still pay in person and wait in line for hours at a time, often in the hot sun. Electronic payment options are limited, and there is no customer service center that responds to tariff payment issues.[43] The utility's accounting staff remains ill equipped to analyze and monitor financial statistics, misunderstanding basic accounting practices and inaccurately reporting information.[44] Additional inaccuracies arise as a consequence of antiquated accounting software and billing systems, further angering consumers. In addition, despite a high rate of installed meters (estimated at 95 to 98 percent of total accounts), as many as half of the meters are not operational, and the remainder often generate faulty readings.[45]

Ad hoc revenue generation has fueled a few improvements. The focus has been on service coverage expansion through new public works construction rather than on improving existing networks. From 2004 to 2007, Xalapa's utility increased piped water coverage from 80 to 88 percent and sanitation coverage from 56 to 60 percent while adding eleven

41. "Substituye depósito a pago anual del agua," *Diario de Xalapa*, January 6, 2009; "Glosario del momento: Agua, asunto político," *Diario de Xalapa*, November 7, 2009; "No se perdonará a deudores de CMAS," *Diario de Xalapa*, June 25, 2008.

42. "Anuncia David estrategias para acabar con cartera vencida en CMAS," *Diario de Xalapa*, November 2, 1998; "Requerimientos y embargos a morosos, advierte CMAS," *Diario de Xalapa*, March 29, 2008; "CMAS ira contra morosos," *Diario de Xalapa*, March 29, 2008; "Deben años de agua y la siguen robando," *Diario de Xalapa*, February 22, 2010; "Rezago de $27 millones en CMAS por morosos," *Diario de Xalapa*, March 24, 2009; interviews #79, 85, 87.

43. "Retrasos, quejas, y confusiones en CMAS por el pago del agua," *Diario de Xalapa*, December 28, 2006; "Por el agua, casi dos horas bajo el sol," *Diario de Xalapa*, February 27, 2009.

44. Interview #104; author observation.

45. CMAS 2008; interviews #87, 94.

kilometers of potable water networks and thirty thousand meters of sewer pipes.[46] While these were important improvements, coverage of both water and sanitation remains low compared to other Mexican cities (Consejo del Sistema Veracruzano del Agua 2007).

Despite its location in a water-rich region, Xalapa struggles to provide continuous service.[47] Because the utility lacks an automated network, it is unable to stockpile reserves and therefore relies exclusively on extensive rainy seasons. However, the city experiences a three-month drought period each year, during which 40 percent of the population is put on a service rationing schedule, receiving water only a handful of days a week.[48] In addition, when rainfall is low or concentrated in one area of the city, or when temperatures are extremely high, water availability can become a huge problem.[49]

The most telling sign of the water utility's underdevelopment is the lack of an updated network infrastructure map. Network maps not only outline the piped system's complex physical network but also provide a record of connection. Without regulation of water access throughout the city, directors cannot control who accesses the municipal grid and whether employees sell water access directly to individual consumers. The discretionary nature of the physical grid has historically benefited the utility's operations workforce. A select few knew the ins and outs of the grid from personal experience and used this knowledge to both leverage power over their directors and make money on the side by selling water access. Known as the Dolphins (*Delfines*), members of the group held significant clout both in the utility and with city government.[50] It is likely that this practice of selling water access continues, although it is a sensitive topic. Reports have shown that by 2014, nearly 60 percent of the water that enters the networked infrastructure was lost in transport or otherwise not billed, up from 50 percent five years earlier.[51]

In addition, rapid urbanization has left many neighborhoods uncon-

46. Interview #87; Consejo del Sistema (2007).

47. "Xalapa, con agua suficiente en subsuelo para abastecerse," *Diario de Xalapa*, November 8, 2013.

48. Interview #87.

49. "Racionan el agua; tandeo en 29 colonias," *Diario de Xalapa*, April 27, 2007; "Venden el agua a colonos; llevan 2 meses sin el líquido," *Diario de Xalapa*, March 12, 2007; "Pelean por el agua en colonias," *Diario de Xalapa*, April 1, 2007; "Escasez de agua en Xalapa," *Diario de Xalapa*, June 6, 2009.

50. Interview #79.

51. "Se pierde 59% del agua," *Diario de Xalapa*, June 10, 2014; interview #92.

nected to the formal grid.[52] These problems have been aggravated by a failure to invest in maintaining the hydraulic infrastructure and by inadequate maintenance of the network grid.[53] The failure to extensively upgrade the network infrastructure has sometimes created social conflict as neighborhoods fight for limited water resources[54] and has exacerbated rent-seeking opportunities for third parties to profit by selling water access at exorbitant prices.[55] One operations manager admits the existence of a very large number of clandestine connections but also argues that "the political pressures are present. I have many bosses—all the city council people, the delegates . . . etc."[56]

The water utility's major operational improvement was the completion of the sanitation treatment plant in 2010, after years of stalled construction as a result of funding problems stemming from the contract cancellation.[57] The utility continues to occupy the politically unpopular position of imposing a sanitation treatment fee on consumers as a means of funding the operation of the treatment plant.[58] Resistance to a sanitation treatment plant has come from both low-income consumers and the business community. Demanding a government subsidy for sanitation treatment, one business leader noted, "How is it possible that the state and federal government offers [us] subsidies for gas and electricity, as well as credits for business development, and [Xalapa's utility] dares to charge [us] for sanitation treatment?"[59] The business community's resistance to paying for a larger share of the fee structure through cross-subsidies prompted Mayor Velasco to seek funds from the state government to reduce the business sector's obligations.[60]

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52. "Aumentó Xalapa en más de cien mil habitantes en cuatro años," *Diario de Xalapa*, July 12, 2009; "No dotarán de servicios a 15 colonias en Xalapa," *Diario de Xalapa*, June 22, 2007; "Los Lagos del Dique podrían quedarse sin agua," *Diario de Xalapa*, March 28, 2010.

53. "Más de 30 fugas de agua al día en Xalapa," *Diario de Xalapa*, May 14, 2008; "Se desperdicia 40% de agua por mala administración," *Diario de Xalapa*, April 2, 2007; "Gran rezago en atención a fugas de agua en CMAS," *Diario de Xalapa*, May 12, 2007.

54. "Bloqueo: Exigen agua," *Diario de Xalapa*, September 26, 2006; "Pelean por el agua en colonias," *Diario de Xalapa*, April 1, 2007.

55. "Lideres lucran con el agua: David Velasco," *Diario de Xalapa*, March 12, 2008; "Todo el peso de la ley contra quienes lucren con el agua," *Diario de Xalapa*, April 25, 2008.

56. Interview #92.

57. "Concluida, Planta de Tratamiento de Aguas Residuales de Xalapa," *Diario de Xalapa*, March 9, 2010.

58. "Aumentará el costo de saneamiento," *Diario de Xalapa*, September 27, 2006; "Viene otra vez el cobro por aguas negras," *Diario de Xalapa*, July 8, 2009.

59. "Empresarios se niegan a pagar por tratamiento de aguas residuales," *Diario de Xalapa*, January 24, 2009.

60. "Pedirá David apoyo al Gobierno del Estado para bajar tarifa del agua," *Diario de Xalapa*, March 10, 2009.

Short-Termism and Collusion across Two Levels of Government

Little changed in the city's particularistic use of water services when the opposition won office in 2000, but the PRI's comeback in 2004 and subsequent hold on the mayor's office cemented the business-as-usual style of public service provision in Xalapa. Short-termism in municipal administration helped exacerbate rent-seeking opportunities for each mayor that came to power as well as for utility managers and employees. In addition to an initial lack of coalitional support for programmatic reforms from civil society groups, political elites, and business leaders, a range of both institutional and noninstitutional factors impeded the creation of longer time horizons for implementing programmatic reforms.

As in Toluca, the politicized nature of Xalapa's water utility is written into state law. The Veracruz State Water Law dictated that the mayor serve as the president of the utility's board of directors, building direct mayoral control into service provision (*Gaceta Oficial* 2001a). All citizen board members are political appointees. None of Xalapa's mayors has taken an active role in the daily operations of the municipal water utility, but they have dictated all potentially political decisions, such as tariff increases and service suspensions for powerful allies.

It is not only mayors who intervene directly in the city's water provision process. The state government's shortsighted and politicized approach to water governance has also exacerbated short-termism in Xalapa. A reform-minded PRI governor, Miguel Alemán Velasco (1998–2004), helped create a regulatory agency to oversee water providers, the Veracruz Water System Council (Consejo del Sistema Veracruzano del Agua), which was the first of its kind in Mexico. However, the next PRI governor, Fidel Herrera (2004–10), disbanded the regulatory agency, which he perceived as undermining his authority as governor by regulating "his" state water commission.[61] As quickly as it had begun, the Veracruz Water System Council was disbanded in everything but name: its offices, personnel, and budget were dismantled, and the director of the state water commission became the council's director by 2006.[62]

Governor Herrera was known for his nonprogrammatic policy approach (Benitez Iturbe 2008, 112–13) and was besieged by corruption allegations.[63] Herrera directly intervened in the water and sanitation sector on numerous occasions. In addition to helping to rescind the

61. Interviews #77, 86, 95.
62. Ibid.
63. "The 10 Most Corrupt Mexicans of 2013," *Forbes*, December 16, 2013.

privatization contract and supporting tariff freezes, Herrera arranged for a childhood friend to retain his position as acting director of Xalapa's water utility when Mayor Velasco appointed a new permanent utility director in 2008. Frustrated with the governor's intervention but unable to cross him or his party, Velasco conceded to having two directors with the same salary and roles. Unqualified directors also usually hired cronies who lacked training or experience in the sector.

Conclusion

In Toluca and Xalapa, decentralization and electoral competition reinvigorated the particularistic use of water as a political resource. In a setting where water intensive industry and middle class constituents were either nonexistent or unconsolidated, both cities developed water provision strategies that maintained the status quo in service quality while simultaneously preserving the clientelistic provision of services. Mayors from both the right-of-center PAN (in Toluca) and the left-of-center Convergencia (in Xalapa) chose to circumvent the adoption of programmatic policies in water provision. In addition, the Mexico State and Veracruz State governments failed to provide support structures for reforms and further contributed to promoting particularistic service provision strategies, especially in Veracruz.

The first pathway toward reform failure—that of muddling through with ad hoc solutions—is exemplified in both Toluca and Xalapa, where local officials experienced similar sets of exogenous resources or opportunities. When political considerations prevented Toluca's water utility from increasing tariffs or changing in collection practices, resourceful engineers stitched together some fiscal resources that kept the system afloat, though services have gradually decayed. In Xalapa, the cancellation of the sanitation treatment plant left the city with an enormous debt obligation, which generated immediate pressures for some ad hoc revenue-generating solutions, such as collecting past-due debts.

Such ad hoc solutions are very common in young democracies throughout the Global South. Local officials in many developing countries face two competing imperatives. On the one hand, they are tempted to use public service provision to advance politically in an increasingly competitive electoral environment, utilizing strategies of clientelism, patronage, and corruption. On the other hand, they seek opportunities and resources that enable the provision of some minimal services for politically supportive groups. Despite the variation in the ways in which

officials in Toluca and Xalapa navigated these competing pressures, remarkable similarities existed in these cities' efforts to generate some income to keep the water utility systems afloat while maintaining the particularistic mode of service provision. In contrast, a second pathway toward reform failure emerged when the lack of an exogenous shock or resources prompted local leaders to repurpose clientelism for new constituencies with few checks or constraints, resulting in acute public service decay. Chapter 7 examines such cases.

SEVEN

Reform Failure in Neza and Veracruz

Repurposed Clientelism and Acute Services Decay

This chapter analyzes a secondary pathway to reform failure, one of rapid services decay under exacerbated clientelism following democratic transitions. Two metropolitan regions, Nezahualcóyotl (Neza) and Veracruz Port, decentralized services around the same time that the PRD and the PAN, respectively, were coming to power. Rather than generating reform in public service delivery, electoral competition in these two cities prompted new party leaders to expand particularistic provision of public services for personal and political gain. These cases underscore the dynamics of clientelism in a multiparty setting, explore the power vacuum that decentralization and local-level democratization can create, and explain local leaders' propensity to loot local government coffers in this new political setting.

The preconditions for water reform were absent in both cases. Neither metropolitan region had water-intensive industry or a strong middle-class base. Although new political parties entered office, their leaders experienced no impetus to alter the status quo and, as in the cases of Toluca and Xalapa in chapter 6, continued to offer subsidized services to certain groups in exchange for political support.

Rather than breaking the historic clientelist tendencies established by the PRI regime, new local parties in these two cities used water services to consolidate electoral support in an increasingly competitive political environment. They did so with impunity and little oversight from higher levels of government: in both cases, the cities were in conflict with

PRI-led state governments that provided little support for programmatic reforms (though support was stronger in Mexico State, where Neza is located, than in Veracruz State). These minimal efforts were further weakened by partisan differences between the state and municipal leaders in question. Unlike Toluca and Xalapa, where leaders did not engage in comprehensive reforms but generated small resources to muddle through, leaders in Neza and Veracruz failed to find even ad hoc solutions to mounting public service delivery crisis. In these two cases, decentralization and democratization produced public service delivery outcomes far worse than conditions under the previous centralized clientelist regime. The result has been extreme breakdown of water services and limited sewage treatment and disposal, resulting in public health crises and grave environmental damage.

Reform Failure in Neza

Politics and Public Services prior to the Democratic Transition

Ciudad Nezahualcóyotl (Neza), surrounds Mexico City on three sides and is a municipality within Mexico State that was formally incorporated in 1963. It is the state's second-largest city, with more than 1.1 million inhabitants (INEGI 2010). Neza began as a poor bedroom community when rural migrants flocking to work in Mexico City found more affordable housing there. The city's socioeconomic conditions stood in stark contrast to its richer capital city neighbor: in the mid-1970s, for example, Neza suffered from 50 percent unemployment, and 85 percent of its working population held jobs outside of the city (Rosa 1974, 14). When Neza's population more than doubled from the 1960s to the 1970s, most residents received no basic services. During that time, the city had only a handful of common urban amenities such as banks, post offices, and gas stations (Selee 2011, 133). Most residents settled without land titles, creating squatter settlements in abandoned lots and paying housing fees to squatter "landlords" (Rosa 1974, 19). These communities received no electricity, water, or sewage services and had an infant mortality rate twice as high as the rest of the state in the mid-1970s (Rosa 1974, 9).

The PRI's clientelistic networks dominated the city until the historic transfer of power to the PRD in 1997. Prior to democratization, the PRI maintained strict political control throughout Mexico State, relying on PRI power brokers such as the Grupo Atlacomulco that allocated resources and determined political opportunities for both businesses and

individuals (Hernández Rodríguez 1998). PRI state leaders distributed patronage appointments in Neza's government to politicians from outside the city, a practice that was more pervasive in Neza than in other PRI-controlled cities (Selee 2011, 136). Prior to the late 1990s, the city depended entirely on state support: the PRI state government had exclusive rights to grant land titles, provide basic infrastructure, and control funds, which local PRI leaders used to garner electoral support.

Neza's PRI leaders relied on a tightly knit network of social organizations to mediate citizen demands and provide a territorial base for voter mobilization. In particular, popular sectors, under the National Council of Popular Organizations, formed the backbone of PRI clientelist networks and material benefits distribution in Neza. This vertically integrated system of interest intermediation was dominated by local bosses who received benefits from the state capital (Selee 2011, 136–38).

Horizontal links between citizens were rare during PRI rule in Neza. Participatory councils existed but functioned as the hub of the mayor's political machine rather than providing citizens with an independent forum for citizen-led participation (Duhau and Schteingart 2001, 184; Arzaluz Solano 2003, 423). In the 1970s, the Movimiento Restaurador de Colonos and a handful of other independent groups organized to demand land titles and basic services. The Movimiento was particularly effective when it staged a 1971 payment strike, a move that helped win land rights and increase membership to seventy thousand. But what began as an independent movement quickly became controlled by the PRI, which silenced fourteen of the group's seventeen leaders by offering spoils such as government positions (Rosa 1974, 19). While the PRI eventually co-opted citizen pressure for land titles and basic services, citizen demands helped lead to the expansion of services in return for loyalty to the party (Vázquez Hernández 1999, 319–21; Selee 2011, 140).

Did democratic transitions in the 1997 election invigorate efforts to improve the city's public services, and water services in particular? On the surface it would seem so: by the late 2000s, 97 percent of Neza's residents were officially connected to water and sanitation (INEGI 2010). However, by the late 2000s, the city's utility was so financially strapped and poorly managed that only 50 percent of the city had registered connections, and those homes receive poor-quality and intermittent service (CISA 2007). Rather than prompting reform efforts, political change in Neza led to an unregulated looting of public coffers as the PRD endeavored to build a base of electoral support, using material exchanges such as water service for new political ends.

Repurposing Clientelism for New Constituencies

The Economic and Demographic Landscape

On the eve of Neza's first democratic transition, the city lacked the economic and demographic preconditions for reform. Industrial production was extremely limited—nearly twenty times less productive than the state's capital city, Toluca, and ten times less productive than the nearby city of Naucalpan (as measured by total gross income). Neza's economy constitutes only 1 percent of Mexico State's total economic production (see table A3).

Neza's industrial sector is composed of many small-scale, family-owned, and sometimes informal manufacturing activities whose products are geared toward sale for the urban or regional marketplace, such as small-scale consumer goods like processed foods, furniture, and clothing (INEGI 2004). Neza's manufacturing sector employs a relatively small percentage of the city's total population: just under fourteen thousand employees are dispersed across almost four thousand companies. In Naucalpan, by contrast, more than fifty thousand employees are concentrated in fewer but larger and more economically productive firms (see table A3). Moreover, since the turn of the twenty-first century, none of Neza's small-scale manufacturing firms has been heavily reliant on water, meaning that the city could not cross-subsidize residential consumers and make programmatic reforms through industrial-consumer-based revenue generation.

Revenue generation from residential consumers was equally unattractive—likely to lead to only a paltry amount of revenues for the water utility while generating mass social backlash. National census data indicate that only 6.3 percent of the population in Neza is "not poor or [otherwise] socioeconomically vulnerable" (Secretaría de Desarrollo Social 2010). The remainder of the population exhibits some form of socioeconomic vulnerability. As of 2010, 38.8 percent of residents lived in either moderate or extreme poverty. The remainder of the city's population is vulnerable because it either lacks access to social services, including health care and education (34.5 percent), or has uneven and low income (20.4 percent) (Secretaría de Desarrollo Social 2010). In addition, 26.1 percent of the population reports food insecurity and 56.8 percent is exposed to insecurity and violence (Secretaría de Desarrollo Social 2010).

Because most of Neza's residents are poor, officials have reasoned

that the city has less ability to pay increased water tariffs than cities with larger middle classes. One bureaucrat estimated that as much as 60 percent of the population makes less than fifteen dollars a day. "Charging for water at cost would be nice, but the problem here is [people's] salaries."[1] In addition, the high level of water coverage recorded in national census data—in 2010, Neza had 97 percent water and sanitation coverage (INEGI 2010)—results in large part from clandestine connections. Many users—the precise figure is unknown—access water services from the utility but are not formally registered clients. Stringent collection practices for services would be viewed as particularly punitive for low-income residents, who rely on clandestine connections.

The city's industrial and demographic characteristics were reflected in the political party that came to office in the first democratic transition. In sharp contrast to the middle-class and business support that buoyed PAN mayors to office in León, Irapuato, Celaya, and Naucalpan, Neza's population consolidated support for the entry of left-of-center PRD mayors in 1996.

Political Change and the Rise of the Opposition

In 1996, the PRI lost its stronghold in Neza when the left-of-center PRD both claimed a majority on the city council seats and became the first leftist party to win the mayoralty in a major Mexican city. The young PRD had formed as the result of a split between the PRI and the PRI's left-of-center factions after the 1988 national election.[2] In 1996, Cuauhtémoc Cárdenas ran for mayor of Mexico City; the PRD's mayoral candidate in Neza, Valentín González Bautista, likely benefited from the high-profile PRD candidacy next door (Selee 2011, 144). González was the leader of a small movement, the Unión General de Obreros y Campesinos del Estado de México, which had previously wielded influence by forcing the state to intervene against real estate developers in support of better living conditions for the urban poor (Arzaluz Solano 2003, 422). González's candidacy was supported by a loose network of social organizations with a history of community organizing for food and public services. These included his own organization, the Movimiento Vida Digna (MOVIDIG), the Unión Popular Revolucionario Emiliano Zapata, and the Mov-

1. Interview #71.
2. For more extensive treatments of the PRD, see Bruhn (1997); Hilgers (2008).

imiento de Liberación Nezahualcoyotlense, which together made up the majority of city council candidacies (Selee 2011, 144). The challenge for the new PRD administration was to turn this loose network of social organizations into an effective governing coalition.

Neza became a bastion of power for the PRD in Mexico State, in large part as a consequence of the Bautista family, who were politically active since the 1970s. The Bautistas stood at the helm of most of the PRD victories in Neza's mayoral races between 1996 and 2012. Valentín González Bautista (1997–2000), Héctor Miguel Bautista López (2000–2003), and Víctor Manuel Bautista López (2006–9) all served as mayors; other family members have been city council members, federal deputies, and federal legislators.[3] PRD rule concentrated power in the hands of a small number of party elites, yet mayors have come to represent different factions within the PRD, which has made consensus difficult and inhibited policymaking (Arzaluz Solano 2003, 427; Hilgers 2008). In Neza, the PRD's governing style was initially more participatory and open and later more closed and partisan, a practice not uncommon in first-time opposition parties searching for new vehicles of legitimacy and electoral support outside of traditional PRI networks.

González Bautista reached out to other parties to fill his cabinet, inviting PRI and PAN members with more technical training to top positions (Selee 2011, 149–50). However, the pluralism of the city council also made consensus difficult, as different parties and factions within the PRD moved to undermine the authority of the newly elected mayor (Duhau and Schteingart 2001, 212–13; Arzaluz Solano 2003, 422).

Subsequent PRD mayoral administrations were more narrowly partisan but still divided due to the party's growing number of factions. Both Hector Miguel Bautista and Victor Manuel Bautista had been from the MOVIDIG faction. These mayors distributed positions within municipal government to PRD members only and increasingly gave top positions to the key MOVIDIG faction. The group's leaders preferred top administrative positions in municipal government, which offered access to funds and resources, to city council seats (Selee 2011, 150–52).[4]

The PRD's management style has favored cronyism, corruption, and the appointment of unqualified party loyalists to important government positions. While divisions within the city council lessened after the first PRD administration, internal differences and conflicts within the party

3. "Políticos mexiquenses colocan a sus familiares en la administración publica," *La Jornada*, January 10, 2005.

4. Interview #73.

have grown. The PRD has not consolidated a well-organized governing coalition in Neza. As one former social leader and mayor notes, "Up to now, the PRD does not exist [as a] structure. . . . [T]hey are the movements" (Selee 2011, 151).

Repurposing Captured Civic Networks for New Political Ends

Attempts at autonomous organizing in Neza had historically been coopted by the PRI. After the PRD came to power, it pursued similar practices. Organizations such as the MOVIDIG became politically important by distributing food, supplying water to communities still affected by the 1985 earthquake, obtaining subsidized homes, and running food cooperatives for members (Selee 2011, 143). When the PRD came to office, MOVIDIG had an established network of on-the-ground popular support that easily enabled it to become the PRD's central vehicle for vote mobilization.

However, overtures toward citizen participation soon became eclipsed by the PRD's partisan agenda. The Consejo para el Desarrollo Municipal (CODEMUN) was created to oversee municipal expenditures of federal Ramo 33 funds for infrastructure spending. CODEMUN initially had some autonomy: different parties won elections within CODEMUN, its meetings were open to the public, and the organization increased transparency by disseminating news through its bulletin, Agenda 33. However, mayors made these institutions more narrowly partisan, negotiating with different PRD factions for CODEMUN seats before "official elections" were held (Selee 2011, 153–54). A second participatory institution, Consejos de Participación Ciudadana (COPACIS), was meant to mediate between the party and citizens at the neighborhood level. But COPACIS positions soon became negotiated exclusively between party elites, and positions were allocated to parties to reflect the composition of the city council (Montambeault 2011, 110). During the first PRD mayoral administration, Neza stood out among similar nearby cities as having an authentic participatory character (Arzaluz Solano 2003, 428). As PRD mayors won by larger margins, however, they became less responsive to the COPACIS—especially when the mayors were from MOVIDIG, which already had extensive neighborhood networks outside of COPACIS (Selee 2011, 157).

Similar to the partisan control over the participatory councils of COPACIS and CODEMUN, Neza's water utility citizen boards were also controlled tightly by a PRD partisan agenda in terms of both personnel ap-

pointments and policymaking. PRD mayors have single-handedly appointed the utility's directors, the majority of whom have been PRD loyalists with little education or administrative experience. For example, the director from 2006 to 2009 was a PRD loyalist from the MODIVIG faction who lacked a high school diploma, management experience, and prior knowledge of the sector.[5] Neza's citizen water board was little more than an instrument of PRD control. It was unclear whether the board carried out a deliberative process of policy formulation or even held regular meetings.

Fiscal Crises and Service Decay

The PRD had the misfortune of inheriting PRI-managed public utilities that faced a litany of administrative challenges and infrastructural deficiencies,[6] but the PRD has also struggled to manage revenues, and fiscal problems have abounded. The PRD has been unable to reconcile its left-of-center position that water is a resource that should not have an economic value with the need to raise some revenue to meet social welfare goals of equity and access in the sector. Neza's PRD leaders, especially those from MOVIDIG, cut their political teeth on neighborhood organizing around working class demands for government-sponsored benefits. One utility director, who was a PRD insider and former MOVIDIG organizer, explained that the PRD considers water to be a human right and therefore cannot suspend service for nonpayment.[7] Instead, local PRD party elites have retained the highly deficient but essentially free service arrangements that originated under PRI rule. The result has been severe fiscal crises and service decay.

City officials avoid the topic of the municipal debt. One bureaucrat noted that because administrative appointments follow the electoral cycle, the city does not even know how much debt it has.[8] In 2003, the city reported it was 134 million pesos in debt; in 2004, the city owed 17 million pesos to the electricity company; and in 2006, the city owed the state water commission 2.3 million pesos for bulk water payments.[9] Despite these fiscal constraints, PRD leaders have hesitated to implement tariff

5. Author observation.
6. "Neza: 33 años de olvido y corrupción," *La Jornada*, January 13, 1997.
7. Interview #68.
8. "Esconde Neza sus adeudos-gobierno. Afirman que es tema difícil," *Reforma*, May 23, 2006.
9. Ibid.

increases. Even after the state government passed some water price increases in 2002, billing and collection practices in Neza remained virtually nonexistent. Local leaders do not consider service suspension for nonpayment a politically viable option: according to one interviewee, "If you don't pay your phone bill, they turn off the switch. If you don't pay your light bill, they turn off the switch. If people don't pay us for water, . . . we have to keep giving them the service."[10]

Officials admit that since consumers are so reluctant to pay for the poor-quality water service they receive, the billing office has stopped issuing water bills and simply relies on consumers initiating payment if they are so inclined.[11] Neza's collection policies are deliberately casual: the utility does not spend time or effort issuing bills, tracking revenues, or demanding payment. To generate some operating revenue, the municipality offers bimonthly "debt forgiveness" programs that culminate in a large subsidy (often more than 50 percent) around the Christmas holidays. Mayors routinely create debt forgiveness programs for all municipal services.[12] In addition, all senior citizens receive 50 percent discounts, and consumers who pay during the first two months of the year receive further discounts. Because of these many subsidies, few consumers choose to pay their bills during nondiscounted months. Neza's poor population is not the only beneficiary of subsidies—small- and medium-sized businesses and higher-income users do not receive water bills or experience payment enforcement.[13]

Because of Neza's inability to generate internal revenues, infrastructure development has stalled, maintenance has been neglected, and the city's residents experience ever-worsening water service (CISA 2007, 24–28). Two commonly cited service problems are scarcity of potable water and ongoing flooding during the rainy season as a result of poor drainage systems. One engineer admits that at any given time, as many as half of the city's eight underground aquifers are down for rehabilitation, halving the amount of available freshwater.[14] The network infrastructure has received few upgrades since it was constructed in 1964.[15] More than half of the water that enters the network is lost through leaks and clandestine connections. Furthermore, toxic materials leach from the anti-

10. Interview #71.

11. Interview #70.

12. Interview #71; "Fija Neza descuento para agua y predial," *Reforma*, September 19, 2006.

13. Interview #70.

14. Interview #71.

15. "Neza: 33 años de olvido y corrupción," *La Jornada*, January 13, 1997.

quated pipes and routinely enter the water supply; it is common to see yellow sludge when turning on the tap. Between the large number of leaks and low water pressure throughout the grid, many consumers receive virtually no water despite being officially covered by the utility.[16] Because engineers do not have an updated map of the network infrastructure, they are unable to even create a service-rationing schedule (*tandeo*) that would provide service in hourly increments to different neighborhoods—a common practice throughout Mexico. The utility has had to resort to manual water provision: trucks with tanked water (*piperos*) respond to some of the thousands of daily complaints about water shortages.[17]

Such poor service delivery greatly affects residents. Periodically, portions of the city's water supply are shut down because of ruptures within the network or even the utility's failure to pay its electricity bill.[18] During the rainy season, the many high-flood zones are inundated with water or worse: because Neza's sewage disposal system runs on electricity but has no backup generators, power shortages and torrential rains make sewage flooding a recurring threat.[19]

Water service deficiencies are not only an inconvenience for residential users but also a public safety concern. Most important, the water utility cannot comply with its most fundamental responsibility: providing water for firefighting. Firefighters cannot count on water pressure from fire hydrants but instead they must fight fire using manual water tanks.[20]

In addition, ecological risks associated with poor water management continue to mount. The hydraulic river basin to which Neza belongs (La Región Hidrológica Administrativa XIII, Aguas del Valle de México), has high levels of overexploitation, ranking as having water availability of an extremely low 144 cubic meters per capita in 2005. Withdrawals that exceed the river basin's capacity to replenish itself may lead the basin to

16. Interviews #72, 68.

17. Interview #69.

18. "Cortarán agua 4 días a 38 colonias de Neza," *Reforma*, August 15, 1997; "Colonos de Neza dicen tener 15 días sin agua," *El Universal*, March 17, 2006; "Hoy se reanudaría suministro de agua en Nezahualcóyotl," *La Jornada*, July 12, 2007; "Sin agua, 200 mil habitantes de Neza, por ruptura en la red," *La Jornada*, March 5, 2008; "Colonos de Nezahualcóyotl protestan por falta de agua," *La Jornada*, February 10, 2010.

19. "Inundan aguas negras varias viviendas de Neza," *El Universal*, May 16, 2002; "Muerte y enfermedad por aguas negras," *El Universal*, July 11, 2003; "Persiste riesgo en Neza," *Reforma*, October 14, 2005; "Lluvia deja 100 casas inundadas en Neza," *El Universal*, April 24, 2006; interview #72.

20. "Combaten fuego y carencias—deben bomberos esperar la llegada de pipas para apagar incendio en basurero," *Reforma*, March 24, 2007.

become permanently unusable. Finally, the water source is increasingly compromised: 88 percent of all monitoring stations report the presence of contamination, with 56 percent reporting high rates of contamination (CISA 2007, 27).

Unresponsive Government and Lack of Social Mobilization

Service failures are socially disruptive and can induce intense dissatisfaction; consumers make between two thousand and three thousand complaints a day to Neza's water utility, with some even threatening violence.[21] In 2010, water mains were contaminated by sewage from a nearby river, requiring suspension of service. Two hundred fifty residents of seven neighborhoods set up traffic blockades complaining about exorbitant prices charged by private water vendors and demanding that their water service resume.[22]

But these types of isolated protests, while explosive, have not culminated in large-scale, organized mass mobilization. Rather, many customers have stopped trying to reach the water utility because they do not feel their complaints result in improved service.[23] Although poor service quality is not without political costs to mayors, price increases are more likely to generate an acute backlash, particularly given the delinquent services being provided.

Low levels of autonomous organizing and the partisan control of participatory councils leave citizens with few organizational resources to challenge the local political machine. Instead, clientelist networks remain the dominant form of interest intermediation between citizens, the PRD-dominated water utility, and city hall. Citizens receive partial responses to their complaints regarding deficient services, they continue to receive free or highly subsidized water, and PRD leaders respond by deflecting blame and shirking responsibility.

Short-Termism and the Benefits of Discretion

In Neza, local leaders have not extended their policymaking windows and invested in long-term planning, which has worsened the impact of short-termism. Furthermore, no acute or exogenous shock has prompted

21. Interview #69.

22. "Colonos de Nezahualcóyotl protestan por falta de agua," *La Jornada*, February 10, 2010.

23. Interview #69.

city officials to search for even short-term and ad hoc solutions, as in the cases examined in chapter 6. Instead, public services have rapidly decayed in Neza. Public officials have found many political benefits from discretionary service provision within this short-term and uncertain institutional environment.

State-level institutional supports for reform were absent in Neza. The Mexico State Water Law, written by PRI bureaucrats, mandates that mayors bear direct responsibility for appointing the president of the citizen water board (Congreso del Estado de Mexico 1999, Article 31). As a result of this rule and of Neza's history of captured civic networks, the utility's citizen board is neither autonomous nor representative of civil society interests. Renewal of board members' terms follows the electoral calendar, and positions are routinely used as patronage appointments for party loyalists. In this setting, undereducated and inexperienced civil servants abound, and effective bureaucrats have little chance of being retained if they do not belong to the new mayor's inner circle. Of Neza's last four appointed water utility directors, half have been replaced midway through their appointments. While two directors, Juan Herrera Moro (1997–2000) and Juan Martin (2003–6), were engineers, others have had only a primary or secondary education and no prior professional experience in the sector.

Despite some state-level efforts to create institutions to support local water reforms (see chapter 5), Mexico State has provided few meaningful resources for Neza's leaders to extend the policymaking time horizon or otherwise incentivize local leaders to invest in reform. In addition, Mexico State was encumbered by conflicts over cities' debts to the state for bulk water allotments as well as a high amount of partisan competition that was not observed in the other states examined in this book.

In this setting, where structural conditions were not prompting a change in the status quo and higher levels of government were not providing institutional support structures, influential actors within the service provision process have benefited from maintaining high levels of discretion. First, mayors and utility directors have received side payments from local shops for repairing parts (e.g., electricity generators).[24] Officials, therefore, are not interested in purchasing new equipment, since doing so would cut off a source of profits. Second, because Neza's utility has little control over its water supply and because workers are underpaid, operations workers often charge customers directly for wa-

24. Interview #73.

ter access or for repairs to the system, with no fear of recrimination.[25] Third, bill collectors frequently pocket some revenue from consumer payments because the process is not automated or regulated. Fourth, because the mayor directly controls the utility, water revenues may be diverted to other purposes. Finally, service suspension is discretionary: one utility director who initially insisted that service suspension was not viable because water was a human right later revealed that he orders service suspensions to punish those with whom he has personal or political disputes.[26]

Enforcing cost recovery has been politically unattractive for left-of-center PRD mayors presiding over large number of urban poor residents. Instead, PRD mayors have replicated the PRI practice of providing (increasingly) deficient but highly subsidized service in exchange for political support. Partially as a result of these types of practices, the PRD won five of Neza's six mayoral elections between 1997 and 2015.

While water services were also politicized during the period of state government control, the federal government often injected revenues into local systems in an ad hoc manner to keep them afloat, as local leaders managed to do in Toluca and Xalapa. However, Neza and other similarly situated cities have had difficulty circumventing the need for internal revenue generation. The result has been extreme decay in services, with profound health and environmental consequences.

Reform Failure in Veracruz

Politics and Public Services prior to the Democratic Transition

The Veracruz metropolitan area is made up of Veracruz Port City and Boca del Río, municipalities that, along with nearby Medellín, are served by the same water and sanitation utility. This metropolitan region, located in the center of Veracruz State near the Gulf of Mexico, is centered on Veracruz Port City, the state's most populous city and the oldest port in the country. In 1519, Hernán Cortés landed at Veracruz Port, which became the region's most militaristically and commercially strategic point under Spanish rule, a role it resumed when Mexico pursued export-oriented strategies in the late twentieth century (Archer 1971; Hiskey 2003).

25. "Señalan abusos por falta de agua en Neza," *El Universal*, June 13, 2005.
26. Interview #71.

Despite having the highest annual rainfall of any Mexican state, Veracruz has among the worst water and sanitation services in the country (World Bank 2003, 77). Clientelist practices have been pervasive for decades, with tariffs set according to political considerations (Amezcua Cardiel 1990, 101). Unsurprisingly, financing strategies for water sector investment do not rely on generating revenue from consumer payments (World Bank 2003, 80–83). These dynamics prevailed under PRI control both during the centralized era and after decentralization to state governments.

The Veracruz metropolitan region received water services from a federal service provider that was disbanded in 1980.[27] During the first wave of decentralization in the 1990s, the state water commission created a regional utility serving six municipalities.[28] Although the mayors of the cities covered were nominally responsible for decision making, the governor directly dictated policies through the state water commission. The lack of de facto decentralization in the 1980s and 1990s was unsurprising: most of the state was run by the same PRI politicians who had been in office for decades. When the federal government decentralized service provision to states and municipalities, the Veracruz state government recentralized provision at the state level rather than decentralizing further to municipalities as Guanajuato State did (see chapter 4).

However, in 2002, the PAN won municipal elections in Veracruz City, Boca del Río, and Medellín. The new mayors requested a transfer of the water and sanitation utility from state to local control, creating the Sistema de Agua y Saneamiento (SAS) utility to provide services for these three municipalities. Rather than spurring service improvements, however, the political transition worsened particularistic service provision and service quality.

Repurposing Clientelism for New Constituencies

The Economic and Demographic Landscape

Initial prospects for water reform in the Veracruz Port metropolitan area must be viewed in the context of the region's economic and demo-

27. The federal utility was the Junta Federal de Mejoras Materiales de Veracruz (1949–80).

28. The regional water utility, the Comisión Regional de Agua y Saneamiento, serviced the municipalities of Boca del Río, Medellín, Veracruz, Alvarado, Jamapa, and Manlio Fabio Altamarino from 1992 to 2004. The Veracruz state water commission in the 1980s was called the Comisión del Estado de Agua y Saneamiento. Interview #99.

graphic landscape. The three municipalities that make up the SAS consortium did not have a critical mass of water-intensive industries in the 2000s and therefore lacked a crucial base of support for changing the status quo.

Neither Boca del Río nor Medellín is a large manufacturing center. Boca del Río's manufacturing comprises only 3 percent of the municipal economy. While 60 percent of this manufacturing focuses on food production, these are small-scale operations (contributing only 2 percent to the municipal economy in 2003) rather than large agroproducers (INEGI 2004). Similarly, Medellín's manufacturing contributes only 0.2 percent to the state's economy and encompasses a relatively small number of employees and economic units (see table A3).

In Veracruz City, manufacturing makes up 24 percent of the municipal economy (INEGI 2004). Seventy percent of this manufacturing consists of metallic processing (which is water-intensive) and the assembly of prefabricated steel and iron machinery (which is not). Twenty percent involves food production, which is water-intensive (U.S. Geological Survey 2014). While Veracruz City does have some water needs for industrial production, many of these industrial enterprises have either illegal boreholes or registered licenses that permit them to extract and manage their own water supply. As of 2012, the city had thirty-nine such industrial permits with an allowable extraction rate of 14,783,479 cubic meters (see table A4), more than twice as much as is registered to industries in Celaya and Naucalpan.

The Veracruz metropolitan region is not as poor as Neza, but it does have a large segment of urban poor residents, especially relative to its business sector and middle-class groups. Thirty percent of Veracruz's population lives in poverty, and another 30 percent in both Veracruz Port and Boca del Río is classified as socially and economically "vulnerable." In Medellín, 44 percent of the population is classified as living under the poverty line, with another 32 percent otherwise vulnerable to social and economic shocks (Consejo Nacional de Evaluación 2010).

Veracruz's business community centers on tourism, small restaurants, and small-scale manufacturing. These businesses are not large-scale, export-oriented productions, like businesses in the north of the country and in Guanajuato, nor are they linked to oil production, like businesses in southern Veracruz or in northern Veracruz oil towns (Amezcua Cardiel 1990, 49–55). Business interests in Veracruz Port have historically been tied to the PRI's corporatist networks and even after democratic transitions have not served as a base for reform.

Political Change and the Rise of the Opposition

Political change has been slow throughout Veracruz State. The growth of the opposition has been hampered by PRI control of state government as well as major electoral fraud,[29] and opposition parties' electoral gains in the 1990s have been reversed with the resurgence of the PRI over the following decade. Still, the PRI's ability to distribute resources to key supporters was diminished by the implementation of market reforms throughout the state in the 1990s, and the opposition gained some strength during this time (Amezcua Cardiel 1994; Benitez Iturbe 2008, 83–87). The opposition parties that came to power in the state did so starting in the mid- to late 1990s. The 1997 mayoral elections in Veracruz state extended the opposition's 1994 gains, with the PAN and the PRD increasing their vote shares by 9.52 and 15.23 percent, respectively, while the PRI declined by 21.42 percent (Yáñez Gómez and Santiago Castillo 2001, 222). While the PRI continued to have the highest vote share throughout the state, the opposition won the mayoral races in fourteen of the state's twenty largest municipalities in 1997 (Yáñez Gómez and Santiago Castillo 2001, 223–24).

Amid this electoral sea change, the PAN emerged as a viable competitor to the PRI in key urban areas. In 1994, the PAN quadrupled its vote share statewide, from 106,383 to 422,656 (Olvera Rivera and Aguilar Sánchez 1997, 293). The opposition won mayoral elections in all three of the municipalities discussed here: the PAN won in Veracruz City and Boca del Río, while the PRD won in Medellín.[30]

The PAN controlled water provision in the Veracruz metropolitan region from 2002 to 2008, and the PRI regained control from 2008 to 2011, but both re-created particularistic service provision despite their partisan differences. The deterioration of service quality in the Veracruz metropolitan region reflects a myriad of political challenges in public services provision after decentralization and democratization. Table 7 outlines the political affiliations of the three municipalities in the Veracruz metropolitan region.

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29. For more on the widespread fraud in PRI elections in Veracruz, see Amezcua Cardiel (1990, 73–86); Olvera Rivera and Aguilar Sánchez (1997, 294–96); Benitez Iturbe (2008, 86).

30. The PAN has typically had greater electoral presence in Veracruz than the PRD, winning for the first time in Veracruz City in 1994 and making important progress in state legislative elections in the late 1990s (Benitez Iturbe 2008, 87–88).

Period 1: Decentralization and PAN Control

In 2001, the PAN won mayors' offices in Veracruz, Boca del Río, and Medellín and saw an opportunity to gain access to key public sector resources that had previously been controlled by the PRI state government. In 2001, the state government passed Law 24, which allowed municipalities to request a transfer of a public services that were constitutionally under municipal domain but had been centralized under first federal and later state auspices (*Gaceta Oficial* 2001b). Employing Law 24, PAN mayors in Veracruz City, Boca del Río, and Medellín requested the transfer of service responsibility and then created the SAS in 2002. In a state long characterized by PRI control of public resources, the PAN wanted to take control of water resources after winning a concentrated bloc of votes in the Veracruz metropolitan region.[31]

In creating the SAS utility, the PAN mayors followed the general guidelines outlined in the Veracruz State water law, whereby a citizen board oversees the utility.[32] However, despite the formal participation of

TABLE 7. Political Affiliations of SAS Municipalities

	Veracruz City	Mayor	Medellín	Mayor	Boca del Río	Mayor
1997–1999	PAN	Francisco Juan Ávila Camberos	PRD	Aquiles A. Rodríguez Exsome	PAN	Ángel Deschamps Falcón
2001–4	PAN	José Ramón Gutiérrez de Velazco Hoyos	PAN	José Maurilio Fernández Ovando	PAN	Adrián Sigfrido Ávila Estrada[a]
2005–7	PAN	Julen Rementería del Puerto	PT	Emilio Ramírez Quevedo	PAN	Francisco José Gutiérrez de Velasco
2008–10	PRI	Jon Gurutz Rementería Sempé	PRI	Rubén Darío Lagunes Rodríguez	PAN	Miguel Ángel Yunes Márquez

Source: Instituto Electoral Veracruzano; www.boca.gov.mx; http://www.veracruz-puerto.gob.mx/ayuntamiento/

[a]In 2000, Carlos Escalante Igual and Rafaela Montalvo Jimenez served as interim mayors in Boca del Río.

31. Interview #99.

32. Elizabeth Gutiérrez Castañeda, "Antecedentes Históricos de la Comisión Regional de Agua y Saneamiento del Puerto de Veracruz," July 2008, in possession of the author; interview #101.

citizen members, the mayors controlled the SAS's decision-making process, a situation facilitated by the rule that allowed mayors to serve as presidents of the citizen water boards (*Gaceta Oficial* 2001a, Article 40).

The water utility maintained low tariffs and particularistic enforcement of tariff payment. The PAN mayors were not interested in enacting far-reaching reforms. Many observers argued that the utility provided the mayors with a source of petty cash, a charge that mayors denied.[33] Either way, there was little fiscal accountability and transparency. One political consultant noted,

> SAS . . . was operated by PAN governments. They created it and then governed it for several years. It was the refuge of PAN party members who were unemployed. . . . They would put in their brothers-in-law, their cousins, their nephews. The number of people employed at SAS was extremely overinflated because of that. Because they were all from the same party, each mayor would take turns being the head of the board of directors . . . and each one managed it however they wanted.[34]

One director of SAS, Carlos Iñiguez, was directly appointed by the PAN party's national leader, Manuel Espino, as a form of patronage, even though Iñiguez had no professional or educational credentials other than a degree in cinematography.[35] Observers noted that the director suspended services arbitrarily for political or personal reasons. While patronage appointments abounded for upper management, organized labor, which was generally immune from patronage appointments, held a different position. The utility's union waged war on the PAN government, urging the resignation of the utility's director and the resolution of labor disputes as well as increased emphasis on technical expertise in the utility's management decisions.[36] Several labor disputes were resolved only through the governor's direct intervention.[37] Veracruz State regulatory audits and PAN mayor's own admission in the press confirmed

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33. "Desmiente Julen Quiebra de SAS," *Veracruzenred.com*, September 12, 2006.

34. Interview #80; "Julen Rementeria escupe para arriba en el tema de SAS," *La Jiribilla Jarocha*, October 29, 2014.

35. "SAS "caja chica" del PAN y de Carlos Iñiguez F . . . ," *Observadormra.blogspot.com*, June 23, 2006; "Sale Iñiguez Ferrer de SAS," *Alcalorpolitico.com*, January 9, 2006; "SAS, una bomba de tiempo . . . ," *Observadormra.blogspot.com*, May 3, 2006

36. "Exige sindicato de SAS la destitución del Director," *Alcalorpolitico.com*, October 7, 2006.

37. "Se termina la huelga del SAS," *Archive.vazquezchagoya.com*, July 13, 2006.

that failure to implement tariff increases and improve fiscal management quickly worsened service.[38]

Unable or unwilling to assume the political costs of implementing tariff increases, PAN mayors swung toward a drastically different policy solution. From 2004 to 2006, the PAN attempted to privatize the utility.[39] Mayors contracted with a consulting company to evaluate the utility's fiscal and physical condition and the viability of attracting private capital investment. The consulting company proposed raising water tariffs and instituting administrative changes to make the utility more attractive to investors (Mirana, Arana, y Velasco, S.C. 2005). After initial consultations, the PAN mayors decided not to move forward with these changes, and the privatization project stalled.

The mayors' refusal to absorb the political costs of tariff increases differs greatly from the PAN platform in the other municipalities examined in this book. The divergence in the party's strategy vis-à-vis programmatic reforms in different municipalities indicates that mayoral electoral constituencies in the Veracruz Port region may differ from the party's typical constituency in other regions or at the national level. The PAN administrations in Veracruz City, Medellín, and Boca del Río had a much more populist orientation than their counterparts in Guanajuato or Mexico State. In addition, the lack of reform pressure from the state government facilitated the perpetuation of discretionary service practices. While these practices remained the norm, the mayors coordinated their preferences and managed the water utility as a united front, at least during the first phase.

Period 2: PRI Control and Partisan Conflicts

After years of PAN hegemony in SAS, the PRI won crucial mayoral elections in Veracruz City and Medellín in 2008. PAN control of Boca del Río, meanwhile, remained so firmly established that the PRI did not even run a mayoral candidate in that city's 2008 election. With control of two of the water utility's three municipalities, the PRI governor of Veracruz State, Fidel Herrera (2004–10) intervened directly and installed his confidante, Yolanda Gutiérrez, as director of SAS. A PRI loyalist who had previously served as the director of the state water commission, Gutiérrez had the governor's complete support. Herrera was known for govern-

38. "El Pan y el agua!" *Notiver*, October 29, 2014; Springall (n.d.).

39. "Los alcaldes están decididos privatizar los sistemas de agua potable," *Alcalorpolitico.com*, February 9, 2006.

ing in a politicized manner, discretionarily distributing funds, especially for infrastructure construction, among PRI-controlled municipal governments (Benitez Iturbe 2008, 110–12).

One of Gutiérrez's first items of business was to rid the utility of any trace of the PAN, engaging in a full housecleaning of all nonunionized personnel that had been PAN patronage appointments. Describing Gutiérrez's position within SAS, one observer noted,

> This is an imminently political issue. [She] is . . . sent down here, at the request of the governor, not even the mayors, because . . . there is not sufficient water provision for development. In 2006 or 2007, there were several companies that were going to develop here but did not because of lack of water, because they needed a certain amount of liters per second. . . . But there was not enough water for them either in quantity nor quality.[40]

After the 2008 election, the PRI and the PAN struggled for control of SAS, with intense partisan conflict exacerbated by the governor's direct intervention in selecting the utility's director. Gutiérrez clearly was acting in accordance with the governor's wishes, and the PRI mayors of Veracruz and Medellín, who were bound by partisan ties to the governor, were not in a position to challenge Gutiérrez. Despite the existence on paper of a legally autonomous citizen board, decision making was politicized, as the governor's intervention shifted the balance of power strongly toward the PRI municipalities.

The PRI mayors of Veracruz Port and Medellín engaged in a protracted conflict with the PAN mayor of Boca del Río, Miguel Angel Yunes, over how to generate funds for the utility, how to implement infrastructure updates, and what constituent demands to prioritize. Yunes accused Gutiérrez of mishandling funds, ignoring the mayor's directives, and planning to implement a sanitation treatment fee that would hurt his constituents. In 2008, Yunes warned that Boca del Río would seek to secede from SAS to control its own finances.[41] Gutiérrez fought back, declaring that SAS was not mishandling funds and that the prior PAN administrations had left the utility in financial disrepair.[42] Furthermore,

40. Interview #94.

41. "Off the Record: Ocurrencia de Yunes Márquez," *Imagen*, June 11, 2008; "Podría Boca del Río abandonar el SAS," *Imagen*, June 11, 2008; "Chiqui-Yunes vs. SAS!" *Notiver*, June 11, 2008; "Truena titular del SAS contra Yunes," *Imagen*, June 12, 2008.

42. "SAS no será caja chica," *Política*, June 12, 2008; "Pedirá Boca del Río cuentas claras al SAS," *Dictamen*, June 24, 2008; interview #94.

Gutiérrez accused Yunes of refusing sanitation treatment fee increases to appeal to his constituents and position himself favorably for future elections.[43] While Yunes later agreed not to take Boca del Río out of SAS, partisan battles continued to plague the utility.

Fiscal Crises and Services Decay

Despite initial attempts by the state government (via the Veracruz Water System Council) to promote cost recovery in the mid-2000s, the SAS utility has been severely underfunded under both PAN and PRI leadership. The Veracruz Water System Council noted that SAS did little to assess the actual cost of providing services and failed to create and apply tariffs that could recuperate even a partial cost of service (Springall n.d.). Officials admitted that the utility subsidized consumers as the only viable means of providing service. "For example, in the lower income groups, we charge 1.17 pesos per cubic meter, when the real cost is 3.97 pesos, but it is subsidized because the other way is" not possible.[44]

Although Gutiérrez often argued publicly that the new PRI management was cleaning up the mess made by prior PAN governments, she remained unwilling to implement cost-recovery policies. Although she stressed that SAS needed to recuperate more fiscal resources, she also announced that despite increased costs of production, water tariffs would not be increased. Instead, the utility would tighten its belt and be more efficient in its water production and administrative practices. Gutiérrez ultimately chose not to implement programmatic reforms that would be politically unpopular.[45]

SAS has maintained largely discretionary tariff collection practices. In 2008, the meter installation rate remained at 8.8 percent, indicating that most consumers were paying annual block payments rather than tariffs based on consumption levels. Service suspensions for nonpayment remain politically infeasible, and officials have claimed that they lack the infrastructural capacity to suspend service.[46] Moreover, a large number of clandestine connections have been identified. One observer notes,

> There are [many housing] developments that are being given water service, and SAS is not charging them . . . about a minimum of 14,000

43. "Refutan postura de Yunes sobre SAS," *Imagen*, June 12, 2008.
44. Interview #94.
45. "No sube el agua!" *Notiver*, August 17, 2009.
46. Interview #102.

> homes . . . and [we] keep finding new [ones]. When developers create these homes . . . there are processes that must be [legally] adhered to . . . but because the developer did not undertake proper procedures or because of the complicity of SAS, [these new developers do not pay]. These homes are receiving water from SAS . . . and [SAS] had not pressured the developer to pay for the water . . . for political reasons.[47]

Fourth, the SAS is owed an astronomical amount of money from past due accounts—485 million pesos in 2008. The utility claims that as much as 160 million pesos is uncollectable (e.g., because it is owed by businesses that have closed or moved away) and is pursuing legal means to eliminate portions of the debt while attempting to identify accounts where it can push for collection.[48] SAS also provides a 50 percent subsidy for the elderly and occasionally waives late fees through debt forgiveness programs.[49]

The utility's fiscal crises have accelerated the decline in service quality. SAS's physical infrastructure is outdated and poorly maintained, leading to problems that have proven difficult to correct. For example, officials have found major water pipes that feed potable water directly into the ocean, likely a long-term phenomenon.[50]

Discretionary practices were evident in many components of service delivery, and the PRI-controlled management wanted to expose some of these issues associated with the previous PAN administration. According to one official,

> There are 485 million pesos in consumer debt, yes, [but I wanted to make it public] because I didn't steal the money. It wasn't my fault. That the unionized workers get drunk and crash our vans, yes, it happened, but I fired them. That the director of operations was bottling our water and selling it for dollars in the Bahia, yes, but it wasn't my side business. Here they have [had] political support . . . the [staff] was not accustomed to working . . . but we have fired drunk workers,

47. Interview #94.

48. "Deben 360 millones a SAS," *Notiver*, August 19, 2009; "No pagarán a SAS cartera vencida de $160 MDP es incobrable," *Imagen de Veracruz*, December 13, 2009; "SAS va contra los morosos!" *Notiver*, August 22, 2009; interviews #94, 102.

49. "Concluirá SAS apoyo para jubilados," *Imagen de Veracruz*, November 18, 2009; interview #102.

50. Interview #94.

> ones who steal things, who show up late, with the support of the union. . . . We have to go against the inertia.[51]

PRI-affiliated managers claimed that PAN officials had manipulated many indicators and performance figures and that it was difficult to accurately determine how many consumers the utility has or how much water was being extracted and delivered. The official figures are 96 percent water coverage, 75 percent sanitation coverage, and 45 percent physical efficiency (SAS 2007).

One ongoing issue is beach contamination by sewage in the periurban areas of Veracruz City. The problem has received a lot of attention, prompting the state government to team up with the National Water Commission to construct sanitation treatment plants for SAS. Officially, 54 percent of the SAS's sewage was treated as of 2008, leaving a significant amount of sewage directly deposited on beaches or in other water sources throughout the region. Lack of sewage treatment has led to numerous battles with the federal environmental ministry as well as other groups (e.g., Greenpeace) and political parties. While SAS continues to work on increasing sanitation treatment coverage (though without implementing consumer fees), it is also waging a public relations battle over contaminated beaches that has significantly harmed its image.[52]

Finally, coordination between the three municipalities and the water utility has been disastrous, and SAS has struggled to provide service to new housing and commercial developments. One report notes, "The metropolitan region has suffered an enormous and disorganized population growth that severely impacts the environment and will soon contaminate the water supply source or create saltwater contamination of the freshwater supply."[53] At the same time, half of Veracruz City's four hundred low-income neighborhoods lack sanitation services, and many new residences receive water but are not registered as customers.[54]

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51. Ibid.

52. "Choriqueso desconfía de las playas!" *Notiver*, March 20, 2010; "SAS vs. Greenpeace!" *Notiver*, July 9, 2009; "SAS podría ser responsable del derrame de aguas negras!" *Notiver*, March 20, 2010; "SAS se deslinda," *Notiver*, March 19, 2010; "Que las playas no están cochinonas!" *Notiver*, June 16, 2009; "Yolanda defiende sus plantas!" *Notiver*, April 4, 2010.

53. "Sobrepoblados Veracruz y Boca: Imposible dar servicios a nuevos asentamientos," *Imagen de Veracruz*, October 14, 2009; "Veracruz atraviesa una 'severa crisis ambiental' biólogos," *Cronica Veracruz*, June 27, 2014.

54. "Vivir sin servicios en 40% de colonias," *Imagen de Veracruz*, November 15, 2009; interview #94.

Poorly planned developments, unregulated licensing of developers, and illicit agreements for service provision have further challenged SAS's ability to measure and regulate the water supply.

The result of water service mismanagement under both the PAN and the PRI has been extreme fiscal crisis. In 2013, SAS was declared fiscally insolvent, unable to pay even its electricity bills. Proposed solutions have included privatization, reabsorption by the state water commission, and breaking up the agency into separate utilities run by individual cities.[55] In the face of current institutional arrangements and partisan conflicts, water security in the metropolitan region is at extreme risk.

Short-Termism and Partisan Pillaging Pacts

The Veracruz utility has been plagued by some of the worst potential outcomes after decentralization and democratization: governing styles premised on clientelism, rampant patronage, and pillaging of government coffers. These political misuses of public sector resources have been undertaken not only by PRI mayors, who were historically associated with these types of practices, but also by the center-right PAN mayors. The SAS metropolitan region lacked the water-intensive industries and middle- and upper-class constituent base to make programmatic reforms politically attractive. Instead of informal elite reform coalitions, partisan networks have developed and sought to profit as much as possible.

In addition, the Veracruz metropolitan area lacked longer-term state-level institutional support structures that have helped extend short-term municipal policymaking in other cities. The Veracruz State government's water policymaking agenda has been top-down, particularistic, ad hoc, and ultimately partisan. When Governor Herrera took office and disbanded the Veracruz Water System Council, its years of technical expertise, data tracking, and resources for fiscal and operational oversight—and the model it set for the country—were lost overnight.

The state water commission, itself a service provider for a number of cities throughout the state, has offered very little support to decentralized urban utilities. The commission does not routinely supply munici-

55. "Desaparece el SAS," *Jarochosonline.com*, March 16, 2013; "CFE corta luz al SAS; 65% de Veracruz sin agua," *Imagen del Golfo*, June 24, 2014; "Reconoce Ruiz Carmona que SAS enfrente una difícil crisis financiera," *El Demócrata*, October 21, 2013; "Migoni, Arévalo, García, entre los deudores del SAS," *El Mercurio de Veracruz*, May 14, 2014; "Acepta Veracruz auxilio de Gobierno del Estado para rescatar el SAS," *Noticias Radiover*, May 23, 2014.

pal service providers with technical assistance, training and certification, or operational assistance. Instead, it manages its own water utilities under its norms and practices and expects the municipal water utilities to be independent. The Veracruz Water System Council offered some assistance, mostly in the form of best practices literature and tracking performance indicators, but again, this support ended when the agency was dismantled. The state water commission's support for decentralized municipal water utilities is so poor that the federal government has created a few technical advising and certification programs through the National Water Commission's regional Veracruz office.[56] Rather than invest in long-term planning, the SAS utility has been crippled by short-termism and the re-creation of particularistic service provision.

Conclusion

The looting of public coffers in these two cases is nothing new. The PRI, like many autocratic political parties, has a long history of corruption and misuse of public funds. What was new in Neza and Veracruz, however, was the unregulated nature of the looting, made possible by the complete absence of a political hegemon at the central government level or controlling regulation at the state level. The period of water services centralization in Mexico coincided with a period of autocratic one-party rule, where party leaders at three levels of government were aligned and where local leaders took orders from the top. Although corruption was pervasive, local leaders' rent-seeking activities were regulated, either formally or informally, by the PRI's overall project of managing social conflict throughout the country and providing some basic social welfare benefits to its citizens. In addition, the federal government periodically injected revenues into local utilities to keep water networks afloat. This occasional if paltry and uneven injection of revenue for hydraulic works and maintenance resembled the revenue injections that some cities managed to generate to keep their water utility systems afloat, as discussed in chapter 6.

But Neza and the Veracruz metropolitan region have not received any impetus to change the status quo from the three drivers emphasized in this book (the business community, middle-class consumers, or reform-oriented mayors) or from other actors such as neighborhood associations, higher tiers of government, or political opposition. Injections

56. Interview #91.

of revenue from higher levels of government have also been missing, as have other ad hoc measures taken to slow service decline. In the face of an overwhelming decay in service quality, political leaders have accelerated rather than slowed their looting.

The federal level no longer possesses a political hegemon to control the personal and political misuse of government funds and public services in the postdemocratization political setting. In a sense, municipal authorities are operating in a political vacuum. The lack of a political hegemon, a regulatory body with teeth, and strong citizen elites who oppose these actions, combined with extreme short-termism by policymakers, has given local leaders incentives to take as much as quickly as possible before their administration is over. Even when one party remains in power at the local level over a significant period of time, officials seem incapable of resisting the temptations of short-termism and the propensity to loot public coffers. As a result, particularistic practices are exacerbated for the short-term political benefit of elected officials and their cronies. The speed at which services have decayed in Neza and the Veracruz metropolitan region has had high human and environmental costs.

EIGHT

Politics, Time Horizons, and the Global Water Crisis

Clientelism involves a set of practices that cross the divide between private and public goods. One specific form of clientelism—on display in the particularistic provision of public services—can take many forms. For example, politicians can orchestrate the timing of electricity access or pardon electricity theft to coincide with elections (e.g., Min 2015). Officials can distribute water tanks before elections or make electoral campaign promises to deliver piped services such as water for free.[1] Party brokers can engage in long-term network building to supply their communities with infrastructure-based public services such as roads, piped water, and health clinics in exchange for an ongoing, reciprocal show of political support.

In these scenarios, politicians use control of public services for political gain. Politicians do so by perpetuating service delivery systems where party-affiliated administrators decide who gets access, when they get it, and how much they get. When providers manipulate public service provision for political gain, they engage in clientelism, patronage, and often corruption. Some aspects of particularistic service provision can provide a temporary and ad hoc social safety net for the poorest residents. But more often than not, these practices exacerbate inequality and fail to

1. "Comida, agua, tinacos, autos, pisos, techos: Lo que sea por el voto en la Ciudad de México," *Sinembargo.mx*, May 16, 2015; "Revolt against Corruption Triumphs in Delhi," *Newsweek*, February 16, 2015; "El agua, mínimo vital en las promesas de los candidatos," *colombia.com*, October 17, 2015; "Uruguay: Prometen agua caliente gratis en las calles para tomar mate," April 9, 2015; "AAP Promises Free Water, 50% Power Bill Reduction," December 15, 2014, *NDTV.COM* .

improve the material well-being of the urban poor over the long term. In addition, these practices deplete public service delivery systems of the revenue and managerial autonomy needed to provide residents with what many citizens want: a government that delivers. These types of public service delivery systems are not only bad for consumers but also contribute to an eroded trust in government and low political legitimacy. Indeed, if citizens in new democracies are so poorly served by low-quality government services, what are the real, tangible benefits of living under electoral competition?

Yet despite the pervasiveness of these practices, meaningful reforms do sometimes occur. Programmatic reforms can occur even in weak institutional environments where dismantling clientelism and creating long-term policymaking seems particularly unlikely. Previous studies have focused on documenting the persistence of clientelism and weak government institutions or on how citizen activism can promote democratic practices following democratization and decentralization. But these studies leave us without a framework for understanding the conditions under which reforms take place or the societal forces that shape escapes from clientelism. For reforms to take root, society must demand not only service improvements but also greater accountability from public service providers. In addition, politicians who meet these demands can benefit politically. These dynamics present two fundamental questions: (1) What types of politicians and consumers support programmatic service provision? (2) How does support for reforming public service delivery translate into more accountable and better-functioning government services? I have provided an analytical framework to answer these questions that focuses on class, industrialization, and electoral strategies.

This chapter revisits the argument made in this book about political parties' courting of votes through promoting programmatic water and sanitation reforms in Mexican cities, and then examines whether these reforms promote greater equity and social justice for the poor. After discussing how my framework may be used to examine reforms in other sectors, I extend my analysis to focus on two main insights from this research that apply to contexts well beyond urban Mexico: (1) the complicated role of citizen participation in promoting more accountable government, and (2) the importance of government performance to democratic legitimacy. I conclude by revisiting water provision as a global and distinctly political problem.

Class, Industrialization, and Public Services: Summarizing the Argument

In the developing world's middle-income cities, demand for more accountable public services is likely to come from middle-class consumers, while businesses may also support reforms to public service delivery systems. This book showcases the importance of class and industrialization as key analytical categories for explaining the success or failure of public service delivery reforms. These are classic categories in political and economic development, but they have been less emphasized in recent decades. This book documented escapes from clientelism and the establishment of programmatic water and sanitation provision in cities with strong middle-class bases and water-intensive industries after the introduction of electoral competition. In these cities, new political parties seeking to create electoral constituencies used reform as a means to both reduce the opposition's mobilizing power and appeal to nonpoor (e.g., middle-class and business-owning) voters. In contrast, in cities without strong middle class bases or many water-intensive industries, new political parties entering office re-created clientelistic service provision in a newly competitive electoral environment.

Public service reforms are political projects: rooting out clientelistic service practices requires political negotiation, and politicians will only invest in reform if they believe that they will benefit politically from programmatic service provision. When the clientelistic system of exchange is eliminated, it is replaced by a new system in which politicians receive electoral rewards for programmatic service practices and better government performance. Politicians and their appointees are unlikely to create reform projects that will be politically disadvantageous. As such, political processes were important to the service delivery outcomes, but only when influenced by structural conditions such as socioeconomic class composition and levels of industrialization.

Two key points emerge from these findings. First, the middle class and urban elites are most likely to demand these types of changes in government practice in general and public service quality in particular. In contrast to prior studies on clientelism, I find that a strong connection exists between the nonpoor's rejection of clientelistic public service delivery practices and their impatience with poor government performance. Examining networked public services and clientelistic practices permits an analysis of how clientelism erodes government performance and docu-

ments how these processes often lead to services that perform poorly at best. Politicians who provide particularistic infrastructure-based services do so over system grids that are not automated but are instead managed through many manually controlled levers and entry points. These systems leave a lot of room for discretion. Particularistic service delivery systems offer dozens more decision nodes than do programmatic systems. Because of the high number of decision nodes and the large number of people making decisions at the operational level, nonautomated service delivery processes are slower-moving, more prone to more mistakes, and require more resources to provide less frequent (and often ad hoc) service access. For example, consumers wait in long lines to pay bills, and new connections take several months to establish. These particularistic service delivery systems tend to deliver poor-quality public services. So, to the extent that the middle class wants better performance in networked public services, it will reject clientelism and patronage, and to the extent that business and industry need better service quality for their bottom lines, they are also likely to reject these types of government practices.

In addition to the role of the middle class in demanding reform, cities that are more industrialized are also more likely to provide fertile ground for reforms as a consequence of industrial elites' potential support for the reform process, greater revenues from higher-volume industrial consumers, and the potential for high-volume industrial consumption to cross-subsidize residential consumers. That is not to say that cities without strong middle classes or high levels of industrialization cannot transform public services, but ongoing demand for high-quality public services must come from some nonpolitical source. Public service reform projects can be partially funded by federal transfers and international aid, but they are likely to need customer-generated revenue sources to sustain decent service levels, a situation that likely will require middle-class and business accounts as part of the client base. In addition, cities with these types of socioeconomic factors can reward political leaders who provide public service reforms, creating policy insulation for reform efforts. Ultimately, adjusting public service reform design to align with local socioeconomic and electoral conditions increases the likelihood that reforms will succeed.

Implications for Equity: How Do Programmatic Reforms Affect the Poor?

The middle class and business elites are relatively privileged interests. Reforms premised on their presence raise issues of equity and social jus-

tice for the urban poor, who are the group most likely to engage in and benefit if temporarily, from clientelistic practices. For the poor, escapes from clientelism and the establishment of programmatic reforms can be a double-edged sword. The extensive collective action and mass protests against Mexico's programmatic water reforms were largely based in the working class. Organized popular sector groups were the most vocal opponents of these reforms in all four of this book's reform cases (León, Irapuato, Naucalpan, and Celaya), especially at the beginning of the process. However, these four cities gradually increased coverage, provided more consistent service, and improved water potability to a far greater extent than the four cities that did not implement major reforms (Toluca, Xalapa, Neza, and Veracruz). In the reform cases, service improvements reached many working-class neighborhoods on the primary infrastructure grid and on many secondary grids. However, pockets of weak and intermittent service remained even in the high-reform cities, and those pockets were concentrated in working-class neighborhoods. Given the dramatic growth of many Mexican cities, it remains unclear whether formal grid expansion will ever keep pace with population growth, especially in informal squatter settlements.

While popular sector neighborhoods generally were much better served in the high-reform cities than in the low-reform cities, achieving greater equity will require more comprehensive implementation of systematic targeted subsidies than what has already occurred. Reform leaders instead negotiated ad hoc subsidies for low-income users, which had the benefit of creating flexible payment arrangements and lower prices for qualifying users. Perhaps the ad hoc nature of these subsidies made them politically manageable and helped make reforms occur relatively quickly. But ensuring greater equity and coverage would require guaranteed (rather than negotiated) subsidies. Targeted subsidies for the poor should be determined by clear and accessible rules, may need to be organized at a higher level of government, and ideally would not overlap with the electoral calendar. Future research should focus on better understanding the institutional changes that will enable targeted subsidies to facilitate better coverage and equity for the poor. In addition, researchers could examine the rule changes and informal support structures that facilitate local-level escapes from clientelistic government practices as well as the short-term compensations that losers receive to make reforms politically viable. Evaluating the variation in types of compensation packages that reform losers receive across different policy arenas would generate important insights into how escapes from clientelistic practices occur.

How should we think about reform prospects for cities without strong middle classes and high levels of industrialization? Can these cities improve public services and escape from clientelistic service practices in middle-income countries? Reform architects in cities with low-income majorities and low levels of industrialization will have to think creatively and craft reform options that fit their particular environments. In particular, two key challenges will need to be considered. First, reformers serving consumer bases with limited financial resources will need to consider alternative sources of funding. Improving efficiency in service provision is one way of reducing costs to consumers, but major infrastructural upgrades to make physical networks more reliable or technological changes to reduce personnel budgets often require significant up-front and ongoing maintenance costs. Without greater revenue from customers or a significant local tax base, utilities may have difficulty financing operations. More appropriate immediate-term options for these communities include smaller-scale, less bulky, more adaptable physical technologies and more flexible financing arrangements for low-income users. In many cities in the Global South, low-income users currently pay astronomically high prices for bottled water—much higher prices than what they would pay if a public utility provided quality water at tariffs that recuperated full or partial costs of service (Kjellen and McGranahan 2006, 17–18). Therefore, many low-income urban water consumers likely would pay for good-quality service if financing arrangements for formal supply were as flexible as they are for purchases from street vendors and if other payments such as connection fees and metering were not financially prohibitive.

In addition, programmatic reform adoption requires societal support for reducing clientelistic and patronage-based services. Low-income users in some settings may be in a position to do this,[2] but it will more likely require the presence of an expanding higher-income working class (or above-subsistence residents) willing to eschew exchanging their vote for a onetime material benefit. Perhaps other support factors—such as actions by higher levels of government, international observers, or public educational campaigns—can stimulate demand for more accountable public services, and could be investigated in future research.

2. For example, Díaz-Cayeros, Magaloni, and Ruiz-Euler (2014) found that traditional governance structures (usos y costumbres) in poor, rural communities provided better local goods by circumventing local partisan and elite capture.

The Role of Sectors

This book has utilized a one sector, many places approach, employing a subnational comparative method to examine the politics of water and sanitation services across eight Mexican metropolitan regions. The benefit of this research strategy is that focusing on a single sector holds constant key variables within that sector (such as the actors, technologies, economics, and institutions), allowing a clear analysis of the political factors and processes necessary for reform. In addition, a systematic comparison of different combinations of socioeconomic class, industrialization, and political conditions helps us understand the varying dynamics of public service strategies in cities throughout the Global South. Indeed, these eight cities reflect a wide range of urban realities that can be found well beyond Mexico—high or low concentrations of poor residents, varying degrees of industrialization, and political parties from both the left and the right that are strongly institutionalized in some cases and less so in others.

Kramon and Posner (2013) have noted that "the outcome one studies affects the answer one gets," particularly when examining distributive politics. Focusing on a single sector has limitations. This book does not address how public service provision strategies may vary across different types of service provision. Do the factors that I hypothesize to be important for promoting programmatic reforms differ depending on the public service in question? In particular, what role might the middle class and industrialization play in reforming other types of public service delivery systems?

To think about how my argument might apply to different sectors, it helps to consider the characteristics of the water and sanitation sector that made middle classes and industries supporters of reform in urban Mexico. Some of these factors include (1) physical characteristics of the service that created a multiclass demand for it, (2) characteristics of the service that made benefits from upgrades apply across the socioeconomic spectrum, and (3) the sector's political salience.

First, does the sector have characteristics that generate a demand from a wide range of socioeconomic classes (e.g., poor, middle class, elites) and user types (e.g., residential and industrial consumers)? Or is the demand for the public service more fragmented across class and user types—functioning, for example, as a social policy targeted only at the poor or a special privilege only for the wealthy? Another way to think about this question is whether some consumers fail to pressure

for service improvements in a particular sector because they have easy access to adequate substitutes.[3] For example, in water and sanitation, the middle class may have access to easy substitutes for drinking water but not bathing water. In addition, industrial firms may have access to water through illegal boreholes but they may find them inadequate. For example, firms may prefer legal access if they require compliance with international standards or if the borehole is expensive to maintain. Conversely, public transportation reforms may receive less middle-class or business support because these groups have access to private vehicles, while the working class depends primarily on public transportation. The extent to which the middle class and industry support reform will depend on how much they use the public service in question, whether they have adequate substitutes, and what barriers they face in opting out. These types of physical characteristics will determine the level of multiclass demand for the service.

Another factor is whether improvements to the public service affect all users or whether benefits are concentrated to select groups. It is tempting to think that upgrades for infrastructure-based public services such as water and sanitation or roads and bridges automatically benefit all users of the service. In contrast, in public services that do not rely on network infrastructure—"endpoint" public services like education and health care (Frank and Martínez-Vázquez 2015, 3)—service upgrades can be more easily concentrated by class. For example, wealthier neighborhoods typically have better schools, and the benefits of education system reform may thus accrue only to residents of those neighborhoods. But even in a service such as water, where users are often linked together through a singular network, benefits to various users were negotiated and arranged through compromise and compensation. In Mexico's water and sanitation sector, demands from the urban poor (through organized protest) often created favorable arrangements such as new extensions and tariff subsidies. These developments suggest that to disperse benefits, social groups may have to come together to demand that benefits of upgrades reach them.

Finally, whether the public service is a "low vote" or "high vote" policy arena is likely to affect its political salience to politicians. In other words, is the number of voters affected by the policy high, or is the policy arena specific to a smaller segment of the population? Water and sanita-

3. For an example of this phenomenon for sewage provision, see Winters, Karim, and Martawardaya (2014).

tion is typically a high-vote arena, affecting most residents as well as public and private organizations. As such, it tends to have a high political salience, and politicians are therefore likely to pay special attention to this sector, whether by contributing to its particularistic practices or by capitalizing on high-profile changes that can improve services and burnish political reputations. Electricity has a similar level of political valence (Kale 2014; Min 2015). This raises questions about how public service reforms may operate in low-vote policy arenas, especially if the technical complexity involved in the reforms is high. In those settings, consumers may be less aware of the sector, and reform proponents may be able to create policy insulation more quickly and with less public deliberation. Alternatively, the low-vote nature of the sector may exacerbate corruption and government malfeasance if transparency and accountability are low. The political salience of a sector may also be context-specific—that is, a sector's political salience may increase if there is a sector-specific crisis, such as an extreme weather event that affects service and demands immediate attention from policymakers (Murillo and Foulon 2006). These types of questions should be considered when designing future research on high- and low-vote public service sectors.

The Complicated Role of Citizen Participation

The book's findings about the process of reform have surprising implications for the role of citizen participation in the reform of public service provision. In these cases, successful reform entailed the creation of policy insulation, where reformers successfully managed political conflict by controlling the amount and type of participation in the reform process.

In the highly clientelist context of urban Mexico, the most prominent reform detractors included opposition-party leaders and their party operatives, whose primary relationship with voters relied on clientelist exchange organized collectively through territorial networks. The party brokers mobilized low-income water consumers against reforms, as these consumers had benefited from clientelist exchanges organized by brokers collectively at the group level. Low-income consumers showed their dissatisfaction with the rupturing of these subsidized public service delivery pacts by attending mass rallies, strikes, and sit-ins and organizing payment boycotts. Reformers sought to protect improvements to public utilities by insulating the process from the influence of these detractors via limiting or blocking participation on citizen water boards.

While policy insulation typically means limiting societal influence,

the policy insulation inherent to the public utility reform process did entail incorporating reform supporters such as middle-class neighborhood association leaders, leaders from professional associations, and business elites, primarily by allowing members of these groups to sit on or lead the citizen water boards. In some cases, these leaders created autonomous citizen water boards with little political oversight. Therefore, reforms were insulated from detractors and political conflict but they were not devoid of citizen participation. In some reform cases, reform leaders endeavored to incorporate civil society leaders supportive of reforms and to give them a voice in the decision-making process. Paradoxically, these findings suggest that incorporating supporters can lead to more insulated outcomes. It was surprising to observe incorporation as the handmaiden of policy insulation.

These findings should encourage researchers to further unpack concepts that are too often thrown together and assumed to be good in their own right: citizen participation, incorporation, and democratic outcomes. For example, citizen participation and incorporation can lead to undemocratic outcomes or outcomes that support patronage, clientelism, and unequal and abusive distribution of public services. Surprisingly, limited and managed participation can support outcomes that create more accountability and equity in how public services are distributed.

One school of thought in planning and public administration believes in the normative value of citizen participation but questions its practical benefits. These scholars argue that normative theories of citizen participation fail to understand the dilemmas that arise on the ground because these theories are too far removed from the practical, logistical, and implementation-related issues facing local public administration (Thomas 1995, 25–27; Olivo 1998, 250; Moynihan 2003). Potential costs of citizen participation in local policymaking include excessive administrative delays, slower decision making and policy implementation, neglect of complex and technical issues, and emphasis on shortsighted goals (Irvin and Stansbury 2003, 173; 2004, 58). Others have noted that setting up venues for participation can be expensive and take away from funds for implementing the policy in question (Crosby, Kelly, and Schaefer 1986, 172; Fiorina 2004, 401–2; Irvin and Stansbury 2004, 58). Other political issues may arise, such as partisan opponents using participatory venues to champion their positions and interests (Irvin and Stansbury 2004, 58–59). Participatory venues may also embolden demands that go against long-term public interests, such as environmental protections or policies that ensure more services or benefits for a

larger number of people (Innes and Booher 2004, 425–26; Irvin and Stansbury 2004).

The water and sanitation reform cases in this book suggest that in some policymaking contexts, more participation may conflict with improving government performance, or "system effectiveness." Future research might better determine the relationship between citizen participation and government performance and when direct citizen participation in a policymaking process leads to material welfare improvements for citizens. In particular, new studies could help bridge the gap between studies of participatory processes after democratic transitions and studies of local government performance after these same transitions.[4] Some studies of newly decentralized settings find mixed outcomes stemming from increased civic participation on government performance,[5] but the assumption is that citizen participation should itself be the goal rather than a means of attaining material welfare improvements.

Under what conditions might direct citizen participation conflict with local policymakers' efforts to generate material welfare improvements? A policy issue may have structural or physical properties that can complicate or limit the utility of direct participation. For example, scale is an important dimension: as the number of people in a polity increases, the ability of citizens to effectively influence government may decrease (Dahl 1994, 29–30). In a similar vein, local stakeholders' ability to effectively manage a shared resource has been presented as more viable in small systems (e.g., Ostrom 1990). Although decentralization advocates promoted local service provision as a means to improve service quality via more citizen influence in local policymaking, this idea has proven difficult to implement in large, urban systems.

Another characteristic to consider is the technical complexity of an issue. Given enough time and resources, a wide range of people may understand technically complex issues with enough precision to make informed decisions. It is not clear, however, that this objective is reasonable for organizations with limited resources. Some policy arenas may have such high levels of technical complexity that direct citizen participation—especially in open town hall meetings or forums—may not be conducive to generating informed policymaking decisions. In managing local issues with high levels of technical complexity, direct citizen participation may promote interest articulation based on incom-

4. Faguet (2012) has contributed to this line of research.
5. For a review, see Herrera (2014, 17).

plete or misinterpreted information or empower only those individuals with the time and resources to learn about the issues.

Finally, some local policymaking issues may benefit from longer-term perspectives and may come into conflict with citizens' more shortsighted, immediate demands. For example, reducing environmental pollution may pit an individual's or firms' interest in avoiding short-term costs of environmental clean up against a more disperse and longer-term interest in guaranteeing a future benefit for a larger number of people. In these cases, direct citizen participation may work against policymakers' ability to distribute costs among citizens and over time.

Studying Programmatic Policymaking and Government Performance

Programmatic policymaking and government performance in developing countries has received insufficient scholarly attention. Topics that have received much more study include clientelism, corruption, and bad government. Judith Tendler (1997, 1) notes, "We actually know more about bad governance in these places, and stories about it are by now a familiar litany." Why is this? Is it because good government practices are so ubiquitous or expected that they have a dog-bites-man quality (Stokes et al. 2013, 9)? Or is it because good government practices are so rare or short-lived in developing countries that they are difficult to measure and study? Does the dearth of studies about improved government performance mean that we have become too cynical—or worse, that we have just given up on trying to better understand the relationship between government performance and development?

Good government practices are indeed difficult to identify and measure, but political scientists ignore determinants and consequences of these practices at our peril.[6] Programmatic policymaking matters for democratic stability. Rothstein (2011, 80) argues that "political legitimacy is created, maintained, and destroyed" based on the quality of government and that trust in government depends more on government performance than on quality of elections or political representation. When governments perform poorly, citizens are unable to access legal, social, and citizenship rights. There are a number of ways to move for-

6. For a discussion of the relationship between the relevance of political science and good government studies, see Holmberg and Rothstein (2014, chapter 1).

ward in researching programmatic policymaking and public sector performance in the developing-country context.

Literature on escapes from clientelism from advanced industrial countries provides some initial guidance. Authors have linked modernization to reductions in clientelism in countries such as the United States, Great Britain, Denmark, and Sweden (Erie 1988; Kitschelt and Wilkinson 2007b; Rothstein 2011; Stokes et al. 2013). In these studies, scholars trace the macrolevel changes that prodded escapes from clientelism, such as industrialization, the rise of wealthier electorates, electoral law changes, and the creation of insulated bureaucracies.

Programmatic parties are linked to good government performance. Kitschelt (2000, 859–60) notes that linkages between programmatic parties and citizens are supported by electoral rules that discourage the personalization of candidate competition, weak executive-legislative balance, and strong presidential systems. Programmatic parties are more likely to have developed organizational structures that limit free riding, promote collective action, and enforce constraints on leaders (Cruz and Keefer 2013). Cruz and Keefer (2013, 2) argue that politicians from programmatic parties are likely to be more sensitive to the quality of public administration, obliging party leaders to implement financial controls and meritocratic employment.

More research is needed on the microlevel changes that undergird these larger changes and on the small pockets of change that occur—with great variation—within countries. A handful of studies have pointed to pockets of good government and what facilitates them. Some examples include Evans's (1995) work on autonomous agencies that are insulated yet embedded in society; Tendler's (1997) focus on the importance of a dedicated workforce, a hospitable work environment, and trust; Grindle's (2007) emphasis on good leadership; and Tsai's (2007) research on the role of socially embedded local solidarity groups.

A singular emphasis on variables that promote change misses close analysis of the process of change, which is often iterative, negotiated, and learned. Abers and Keck's (2013) study on Brazilian water governance institutions and Andrews's (2013) focus on local reforms driven by international financial institutions emphasize the role of experimentation and iterative learning for reform success. This book focuses on the process of change as one where reform agents create ad hoc and experimentation-driven pockets of policy insulation around contentious reforms. Leadership, partisanship, and institutional supports differed

across the reform cases, but they all shared this multifaceted construction of policy insulation as well as political support.

The process of constructing policy insulation is not easy to measure because it often involves iterative processes of negotiation, compensation, and informal mechanisms. Rethinking how we conceptualize and measure programmatic policymaking is a first step. This suggests that we should look for insulated policymaking and insulated outcomes in unexpected places. This insulation may not happen in formal institutions but may nonetheless constitute insulation from political conflict. In some settings, informal policy insulation (such as the protection of reforms by influential political or societal leaders) may be more powerful and flexible than formal policy insulation (such as rule changes), making reforms more adaptable and likely to endure.

In the developing world, scholars often encounter pockets of good government performance coexisting with broader national levels of poor performance, inefficiency, and corruption.[7] In fact, this kind of variation is probably the most common scenario in developing countries, and studying these contradictions—and the ways in which they persist—would be a fruitful line of future research. Or in cases where the effects of small reforms do not remain isolated to the initial reform context, researchers could examine the causes of spillover effects—where policy insulation and reform-promoting elements in one sector spill over into another sector in the same local setting, potentially creating a domino effect for broader positive forms of change.

Finally, researchers should consider how programmatic policymaking can overcome the obstacles of short time horizons in government. When comprehensively adopted and politically protected, programmatic reforms have policy feedback effects that help sustain them over time. The idea of policy entrenchment has been applied to many types of political and social changes, often to explain macrolevel historical transformations such as party system changes and regime transitions (e.g., Mahoney 2001; Collier and Collier 2002). While scholars have various definitions of path dependence,[8] here I refer to path dependence as describing a policy program that remains on the same path and accrues positive benefits and thus becomes difficult to reverse. As part of path dependence in the complex and multifaceted process of creating programmatic service provision, initial detractors are reoriented toward re-

7. For an excellent review of studies that document this phenomenon, see Leonard (2010). See also Grindle (1997, 2004); Roll (2014).

8. For a discussion of the concept of path dependence, see Pierson (2004, 20–54).

alizing the benefits of better-functioning services, and citizens begin to change their expectations about service quality and the costs of providing such services. There are increasing returns or positive feedback from initial successes, which reinforce the underlying process of reform.

One political science method that might be useful in analyzing programmatic reforms is sequential process tracing, which is more commonly used in comparative historical analysis of broad, macrolevel transformations. Nevertheless, it is a useful tool for understanding policy transformations over medium lengths of time, such as the construction of pockets of effective government over ten- or twenty-year periods. In this book, when programmatic reforms were successfully adopted and maintained, they underwent a process of self-amplification, where original events were reproduced and the underlying process under examination—reform implementation and its benefits—was reinforced. As Falleti and Mahoney (2015, 221) explain, "With a *self-amplifying process*, the initial events move the sequence in a particular direction, such that it becomes more and more likely that it will be expanded, increased, strengthened or otherwise enhanced." Self-amplification stands in contrast to events that self-reproduce but remain stable and are not otherwise expanded or events that self-erode (Falleti and Mahoney 2015, 222).

This is not to say that self-amplifying reforms can never be reversed or that incoming politicians may not attempt to reverse them. If public reform projects have been politically insulated and comprehensively applied for multiple administrations, however, a wider infrastructure of support combined with changed consumer expectations poses important challenges to the reversal of reform. In the face of consolidated and deeply entrenched programmatic public service provision, a political administration will have great difficulty overturning reforms since programmatic provision has become the new status quo. Further research emphasizing sequential analysis of change toward programmatic reforms will help scholars and policymakers understand the wide and varied factors that facilitate escapes from clientelism, the societal and economic forces that support these changes, and how reformers protect them over time.

Politics, Time Horizons, and the Global Water Crisis

In Delhi, India, the maintenance crew works quickly in the middle of the night. Members peel back the plastic covers covering hastily dug boreholes, fill their tankers with water, and drive off to distribute their bounty throughout the city. Their business is illegal: neither the boreholes nor

the trucks have permits, and the water sold is neither tested nor treated. As one observer explained, "Bosses arrange buyers, labor fills tankers, the police look the other way, and the muscle makes sure that no one says nothing."[9] When a local politician orchestrated a police raid on borehole operators in 2014, crowds gathered in protest; one resident threw a brick through the politician's office, insisting that the party either supply water or let the tankers operate.

In the poor suburb of Iztapalapa, Mexico City, water tanker drivers hired by the public utility travel long distances to deliver water to homes that the network grid fails to reach. One driver was hijacked by an angry mob in 2015: "They put a gun to my head and told me I had to do what they said or I would die," he remembered. "They were desperate and angry, and they blamed me because I had water." The driver estimated that such hijackings occur five or six times a year.[10]

In the slums of Nairobi, Kenya, water vending is a lucrative business, run by a tight-knit "mafia" that aggressively guards its turf. Vendors sell their illegally acquired water to desperate communities at twenty-five times what the water utility would charge. One official admitted, "Many people were arrested but there are cartels. . . . [Y]ou [crack down] today and tomorrow, a week later they are back. . . . [T]hey know what they are doing."[11]

International organizations estimate that more than half a billion people lack access to potable water around the world and that 2.4 billion people lack sanitation service (Joint Monitoring Program 2015). These estimates overstate the quality of service access: many people counted by international monitors as having "improved water sources" have poor and unreliable coverage, and much of this water is not potable. Furthermore, global water demand is projected to increase by 55 percent by 2050 as a consequence of growing demands in manufacturing, thermal-power generation, agriculture, and domestic use (World Water Assessment Programme 2014).

In cities throughout the Global South, the problem of delivering water to millions of residents is increasingly fraught with inequality, corruption, and social conflict. These tensions are likely to worsen: 90 percent of the three billion people to be added to the global population by 2050 are likely to be born in regions already experiencing water stress and

9. Aman Sethi, "At the Mercy of the Water Mafia," *Foreign Policy*, July 17, 2015.

10. Jonathan Watts, "Mexico City's Water Crisis—From Source to Sewer," *The Guardian*, November 12, 2015.

11. "Feature—Kenyan Women Pay the Price for Slum Water 'Mafias,'" *Reuters*, November 26, 2014.

limited access to drinking water (World Water Assessment Programme 2009). While the global water crisis affects both rich and poor countries (see, for example, the water crisis in the western United States), its impacts are the greatest in fast-growing cities in water-scarce environments in the developing world.

Scientific assessments of the global water crisis emphasize problems stemming from the lack of coordination between government agencies, lack of financial investments, and biophysical scarcity (e.g., McDonald et al. 2014). This book provides an alternative view: the root of the global water crisis is political. It is not enough to say that countries lack the political will to resolve the problem. *Political will* is an ambiguous and analytically unhelpful term. How can we tell the difference between *political will* and ineffective efforts at reform? And what factors contribute to the emergence of *political will*? More specifically, the central political problem is a time-inconsistency problem—that is, a disjuncture between the short-term and acute costs of reform and its long-term and dispersed benefits. In developing-country cities around the world, politicians routinely follow electoral considerations regarding tariff setting and bill collection, preferring to avoid the problem by preserving the status quo. As a result, most of these cities engage in short-term fixes or perpetuate a low-level equilibrium with low-cost and low-quality water services. Depletion of water sources, social conflicts, violent upheavals, public health crises, and even mass migration seem to many politicians to be tomorrow's problems, cans to be kicked down the road.

Under certain conditions, however, politicians do overcome the short-termism of the electoral calendar and engage in long-term policymaking. In the Mexican postdemocratization context, the middle class and water-intensive industries played an important role in creating supportive environments for reforms.

These specific factors are not magic bullets. They may not apply to all contexts, or they may operate differently in different empirical settings. Solutions for the global water crisis should be context-specific and consider the societal, economic, and political forces that promote long-term policymaking. In addressing the global water crisis, policymakers should consider the institutional and noninstitutional arrangements that can protect socially costly reforms until they become entrenched. Especially important are negotiations and compensation that can be provided to reluctant groups that would otherwise impede reforms. Political negotiations can help losers lose less badly or turn them into winners.

When launching reforms, policymakers must consider the local so-

cioeconomic context (urban industrial production profiles, the mix of socioeconomic classes among residents, and so forth). Yet the glue that binds these reforms together is politicians' electoral calculations—about how providing quality water services with greater transparency and accountability can be exchanged with voters for political support. Addressing the global water crisis requires not only suitable institutional and governance arrangements but also the electoral viability of proposed reforms in young democracies. There is a need for local action on global environmental problems, and these solutions cannot afford to ignore politics.

Appendix A

Measurement Discussion and Additional Data

Conceptualization and Measurement of Programmatic Service Reform

This book conceptualizes programmatic reform of local public services as containing three key dimensions: fiscal, operational, and institutional changes. To measure these three dimensions, I evaluate the performance of each city's water and sanitation provision using twenty performance indicators that correspond to one of these three categories, as seen in table 1 in chapter 2. For each indicator, each city received a score of 0, 0.5, or 1, corresponding, unless otherwise noted, to 0 = no, 0.5 = mixed, 1 = yes. To arrive at a score for each indicator, I triangulate data from multiple sources gathered during field research. These twenty indicators were chosen based on extended field research and consultation with experts in the sector. I code these indicators using both qualitative data (e.g., in-depth interviews, internal government sources) and quantitative data (including utility performance indicators). I use the most reliable source when confronted with contradictory information. Reliability of sources was gauged in terms of who provided the information (for example, someone with close knowledge of the indicator, which in all cases involved selecting data gathered from the local operator as opposed to using National Water Commission reported figures), and my own knowledge of the sector.

I chose to strongly emphasize fiscal changes because service quality improvements depended so heavily on generating revenue from water

service and beginning to better align tariffs with volume consumed. While the goal of partial or full cost recovery in the public sector makes these reforms market oriented, these fiscal changes sought not to privatize or even fully corporatize the utility but rather to generate some revenues from users, better account for how revenues are spent, and reduce discretionary decision making regarding water tariffs and connection fees. Because generating some revenue from user fees is so important to the reform process, that factor comprises 50 percent of the total weight in the index (ten of twenty indicators).[1] In the second category, operational changes, I chose indicators that would reflect improvements in service provision quality, quantity, and reliability. I identify five indicators that capture the primary operational improvements in the sector, focusing on the overall health of the network infrastructure grid. In the third category, institutional changes, I focused on indicators that would reflect improvements in bureaucratic administration, government responsiveness, and transparency with consumers. These components provide the glue that binds together the fiscal and operational practices but are not small tasks. The Mexican municipal environment has no formal civil service training and suffers from endemic rotation of staff with each new municipal administration. Utilities that have institutionalized practices have less volatility in the human resources and organizational component of service provision. In chapter 2, table 1 lists the twenty performance indicators; table A1 provides the disaggregated scores for each case across the indicators.

How do the measures I constructed compare to standard measures used in the water and sanitation sector more broadly? International benchmarking indicators for the sector measure performance by core indicators such as coverage, physical efficiency of the network (volume consumed/volume produced and volume billed/volume produced), and fiscal indicators such as commercial efficiency (revenue collected/revenue billed) and percent metering (see International Benchmarking Network n.d.). Additional measures, such as service intermittency and water quality/potability, help provide a fuller picture of service quality. The specific types of indicators used in each country vary, but water and sanitation performance indicators have recently converged along these types of measures throughout the developing world, and the National Water Commission in Mexico has adopted these indicators, as have most

1. However, an index with an equal weight among the three categories of fiscal, operational, and institutional indicators produces the same ordinal ranking for the eight cases.

state and municipal utilities. While coverage numbers have increased over time in Mexico, service quality as measured by other indicators has not. I have gathered as many of these noncoverage data measures as possible for each case; however, concerns about reliability and the difficulty of acquiring accurate performance indicators for all measures from utilities with poor record keeping (typically the low-reform cases) led me to use these indicators as one of several measures that are triangulated with other evidence to score each of the five indicators on the operational dimension of reform as well as two indicators for cost recovery (commercial efficiency and metering) and one for institutional dimension of reform (employees per 1,000 employees). I exclude coverage data altogether. Coverage data in Mexico is taken from census data, which measures whether consumers report having a water connection and sewage service in their home, which is a misleading proxy for improved service provision or government performance. For example, consumers could have water connections that are so intermittent and low pressure that they barely receive service. Or consumers could have water connections derived from clandestine connections rather than from public utility connections. In these scenarios, coverage data would be a poor proxy for measuring water quality or government performance.

TABLE A1. Measuring Reform Initiatives in Research Cities

	Leon	Irapuato	Naucalpan	Celaya	Xalapa	Toluca	Veracruz	Neza
Fiscal Indicators								
1	1	1	1	1	1	1	1	1
2	1	1	1	1	1	1	1	1
3	1	1	0.5	1	1	0.5	0	0.5
4	1	1	0.5	1	0.5	0.5	0	0
5	1	1	1	1	1	0.5	0.5	0.5
6	1	0.5	1	1	1	0	0	0.5
7	1	1	1	1	0	0	0	0
8	1	0.5	1	1	0.5	0.5	0	0
9	1	1	1	0.5	0	0.5	0	0
10	1	1	1	0.5	0	0	0	0
Operational Indicators								
1	1	1	1	1	0.5	1	0	0
2	1	1	1	1	1	1	0	0
3	1	1	0.5	0.5	0	0	0.5	0
4	1	1	0.5	1	0.5	0.5	0.5	0
5	1	1	0.5	1	1	0.5	0	0
Institutional Indicators								
1	1	1	1	1	0	0.5	0	0
2	1	0.5	0.5	0.5	0.5	0.5	0	0
3	1	0.5	0	0.5	0	1	0.5	0
4	1	1	1	0.5	0	0	0	1
5	1	1	1	0	0.5	0	1	0
Total Reform Score	20	18	16	16	10	9.5	5	4.5

TABLE A2. Number of Nonresidential Customers for Eight Water Utilities

	Industrial (Total #)	Commercial (Total #)	Industrial & Commercial (Total #)	Industrial & Commercial (as % of all Users)	All Registered Users (residential + nonresidential) (Total #)	Metered Industrial & Commercial (%)
León	2,165	15,134	17,299	5	337,303	100
Irapuato	411	5,075	5,897	7	84,604	62
Celaya	81	6,318	6,399	6	105,217	88
Naucalpan	1,313	6,833	8,146	6	144,052	92
Toluca	N/A	N/A	8,459	6	135,469	23
Neza	0	1,343	1,343	1	199,907	0
Xalapa	1,094	12,772	13,866	12	118,570	92
Veracruz	230	9,860	10,090	5	187,979	42

Source: CEAG 2011; internal documents.
Note: Figures from 2008.

TABLE A3. Industrial Activity in Research Cities

	Economic Units (#)	Industrial Gross Income (pesos)	# Persons Employed	Industrial Productivity (as % of Municipal Economy)	Industrial Productivity (as % of State Economy)	State Total Gross Income (pesos)
Guanajuato State						270,219,910
León	6,637	30,366,009	90,754	44.6%	11.2%	
Irapuato	1,223	11,526,668	18,303	60.2%	4.3%	
Celaya	1,372	17,866,802	23,320	63.9%	6.6%	
Mexico State						531,334,595
Naucalpan	1,919	39,251,049	54,839	56.5%	7.4%	
Toluca	2,297	58,712,738	38,883	66.0%	11.1%	
Neza	3,729	3,300,707	13,618	31.5%	0.6%	
Veracruz State						271,787,398
Xalapa	1,543	1,512,840	5,444	14.4%	0.6%	
Veracruz	1,196	14,616,027	9,910	24.4%	5.4%	
Medellín	64	565,248	671	69.7%	0.2%	
Boca del Río	356	235,096	1,774	2.9%	0.1%	

Source: INEGI 2004. Accessed March 2010.

TABLE A4. Water Extraction Permits for Industry in Research Cities

	Industrial Permits (#)	Volume of Allowable Extraction by Industry (m3)
León	42	2,997,525
Irapuato	48	4,862,544
Celaya	40	7,760,771
Naucalpan	42	6,529,894
Toluca	110	22,412,870
Neza	0	0
Xalapa	0	0
Veracruz	39	14,783,479
Boca del Río	2	250,000
Medellín	10	128,538,740

Source: Registro Público de Derechos de Agua, Comisión Nacional del Agua. Accessed February 2012.

Appendix B

List of Interviews

Note: All interviews were conducted by the author and took place in Mexico unless otherwise noted.

Interviewee	City	State	Date
1	Montreal	Quebec, Canada	September 11, 2007
2	Distrito Federal		October 8, 2007
3	Distrito Federal		October 16, 2007
4	Distrito Federal		October 16, 2007
5	Distrito Federal		October 18, 2007
6	Distrito Federal		October 19, 2007
7	Distrito Federal		October 20, 2007
8	Distrito Federal		October 22, 2007
9	Distrito Federal		October 23, 2007
10	Xochimilco	Estado de México	October 25, 2007
11	Distrito Federal		February 19, 2008
12	Distrito Federal		February 22, 2008
13	Distrito Federal		February 22, 2008
14	Distrito Federal		February 25, 2008
15	Distrito Federal		March 16, 2008
16	Distrito Federal		April 14, 2008
17	Distrito Federal		April 14, 2008
18	Distrito Federal		April 15, 2008
19	Distrito Federal		April 15, 2008
20	Distrito Federal		April 15, 2008
21	Distrito Federal		April 15, 2008
22	Distrito Federal		April 17, 2008
23	Distrito Federal		April 22, 2008
24	Distrito Federal		April 22, 2008
25	Distrito Federal		April 22, 2008
26	Distrito Federal		April 24, 2008
27	Distrito Federal		April 24, 2008
28	Distrito Federal		April 24, 2008
29	Distrito Federal		April 25, 2008

Interviewee	City	State	Date
30	Distrito Federal		April 28, 2008
31	Distrito Federal		April 29, 2008
32	Distrito Federal		May 2, 2008
33	Distrito Federal		May 8, 2008
34	Atlacomulco	Estado de México	May 15, 2008
35	Toluca	Estado de México	May 15, 2008
36	Naucalpan	Estado de México	May 19, 2008
37	Naucalpan	Estado de México	May 21, 2008
38	Naucalpan	Estado de México	May 21, 2008
39	Naucalpan	Estado de México	May 21, 2008
40	Toluca	Estado de México	June 2, 2008
41	Toluca	Estado de México	June 4, 2008
42	Toluca	Estado de México	June 4, 2008
43	Toluca	Estado de México	June 4, 2008
44	Toluca	Estado de México	June 5, 2008
45	Toluca	Estado de México	June 5, 2008
46	Toluca	Estado de México	June 5, 2008
47	Toluca	Estado de México	June 5, 2008
48	Toluca	Estado de México	June 6, 2008
49	Toluca	Estado de México	June 6, 2008
50	Toluca	Estado de México	June 6, 2008
51	Naucalpan	Estado de México	June 9, 2008
52	Naucalpan	Estado de México	June 9, 2008
53	Toluca	Estado de México	June 10, 2008
54	Toluca	Estado de México	June 10, 2008
55	Metepec	Estado de México	June 10, 2008
56	Naucalpan	Estado de México	June 11, 2008
57	Naucalpan	Estado de México	June 11, 2008
58	Toluca	Estado de México	June 11, 2008
59	Naucalpan	Estado de México	June 11, 2008
60	Naucalpan	Estado de México	June 12, 2008
61	Naucalpan	Estado de México	June 15, 2008
62	Naucalpan	Estado de México	June 15, 2008
63	Tlaxomulco	Estado de México	June 16, 2008
64	Toluca	Estado de México	June 16, 2008
65	Toluca	Estado de México	June 16, 2008
66	Metepec	Estado de México	June 16, 2008
67	Nezahualcoyotl	Estado de México	June 17, 2008
68	Nezahualcoyotl	Estado de México	June 17, 2008
69	Nezahualcoyotl	Estado de México	June 17, 2008
70	Nezahualcoyotl	Estado de México	June 17, 2008
71	Nezahualcoyotl	Estado de México	June 17, 2008
72	Nezahualcoyotl	Estado de México	June 18, 2008
73	Nezahualcoyotl	Estado de México	June 18, 2008
74	Distrito Federal	Distrito Federal	June 19, 2008
75	Naucalpan	Estado de México	June 20, 2008
76	Naucalpan	Estado de México	June 20, 2008
77	Xalapa	Veracruz	June 23, 2008
78	Xalapa	Veracruz	June 25, 2008
79	Xalapa	Veracruz	June 26, 2008
80	Xalapa	Veracruz	June 27, 2008
81	Xalapa	Veracruz	June 30, 2008
82	Xalapa	Veracruz	June 30, 2008

Interviewee	City	State	Date
83	Xalapa	Veracruz	June 30, 2008
84	Xalapa	Veracruz	June 30, 2008
85	Xalapa	Veracruz	July 1, 2008
86	Xalapa	Veracruz	July 1, 2008
87	Xalapa	Veracruz	July 3, 2008
88	Xalapa	Veracruz	July 3, 2008
89	Xalapa	Veracruz	July 3, 2008
90	Xalapa	Veracruz	July 4, 2008
91	Xalapa	Veracruz	July 4, 2008
92	Xalapa	Veracruz	July 4, 2008
93	Xalapa	Veracruz	July 4, 2008
94	Veracruz	Veracruz	July 7, 2008
95	Veracruz	Veracruz	July 8, 2008
96	Veracruz	Veracruz	July 8, 2008
97	Veracruz	Veracruz	July 9, 2008
98	Veracruz	Veracruz	July 9, 2008
99	Veracruz	Veracruz	July 9, 2008
100	Veracruz	Veracruz	July 9, 2008
101	Veracruz	Veracruz	July 9, 2008
102	Veracruz	Veracruz	July 9, 2008
103	Xalapa	Veracruz	September 25, 2008
104	Xalapa	Veracruz	September 29, 2008
105	Xalapa	Veracruz	September 25, 2008
106	Xalapa	Veracruz	September 29, 2008
107	Xalapa	Veracruz	September 29, 2008
108	Xalapa	Veracruz	September 30, 2008
109	Xalapa	Veracruz	September 30, 2008
110	Poza Rica	Veracruz	October 2, 2008
111	Poza Rica	Veracruz	October 2, 2008
112	Poza Rica	Veracruz	October 2, 2008
113	Poza Rica	Veracruz	October 2, 2008
114	Poza Rica	Veracruz	October 3, 2008
115	Poza Rica	Veracruz	October 3, 2008
116	Poza Rica	Veracruz	October 3, 2008
117	Guanajuato	Guanajuato	October 13, 2008
118	Guanajuato	Guanajuato	October 13, 2008
119	Guanajuato	Guanajuato	October 14, 2008
120	Guanajuato	Guanajuato	October 14, 2008
121	Guanajuato	Guanajuato	October 14, 2008
122	Guanajuato	Guanajuato	October 15, 2008
123	Guanajuato	Guanajuato	October 15, 2008
124	Guanajuato	Guanajuato	October 15, 2008
125	Irapuato	Guanajuato	October 16, 2008
126	Irapuato	Guanajuato	October 20, 2008
127	Irapuato	Guanajuato	October 20, 2008
128	Irapuato	Guanajuato	October 20, 2008
129	Irapuato	Guanajuato	October 20, 2008
130	Irapuato	Guanajuato	October 20, 2008
131	León	Guanajuato	October 22, 2008
132	León	Guanajuato	October 22, 2008
133	León	Guanajuato	October 22, 2008
134	Guanajuato	Guanajuato	October 23, 2008
135	León	Guanajuato	October 23, 2008

Interviewee	City	State	Date
136	León	Guanajuato	October 23, 2008
137	León	Guanajuato	October 27, 2008
138	León	Guanajuato	October 27, 2008
139	León	Guanajuato	October 27, 2008
140	León	Guanajuato	October 27, 2008
141	Celaya	Guanajuato	October 28, 2008
142	Celaya	Guanajuato	October 28, 2008
143	Celaya	Guanajuato	October 28, 2008
144	León	Guanajuato	October 28, 2008
145	Guanajuato	Guanajuato	October 30, 2008
146	Guanajuato	Guanajuato	October 30, 2008
147	Distrito Federal		November 13, 2008
148	Berkeley	California, USA	April 22, 2010
149	Berkeley	California, USA	April 27, 2010
150	Phone Interview		February 2, 2012
151	Phone Interview		February 6, 2012
152	Phone Interview		February 27, 2012
153	Phone Interview		March 19, 2012
154	Silao	Guanajuato	May 1, 2012
155	Irapuato	Guanajuato	May 2, 2012
156	Irapuato	Guanajuato	May 2, 2012
157	Irapuato	Guanajuato	May 2, 2012
158	Irapuato	Guanajuato	May 2, 2012
159	Irapuato	Guanajuato	May 2, 2012
160	Irapuato	Guanajuato	May 3, 2012
161	Irapuato	Guanajuato	May 3, 2012
162	Irapuato	Guanajuato	May 3, 2012
163	Irapuato	Guanajuato	May 4, 2012
164	Irapuato	Guanajuato	May 4, 2012
165	Irapuato	Guanajuato	May 4, 2012
166	Irapuato	Guanajuato	May 4, 2012
167	Irapuato	Guanajuato	May 5, 2012
168	Silao	Guanajuato	May 5, 2012
169	Silao	Guanajuato	May 5, 2012
170	Irapuato	Guanajuato	May 7, 2012
171	Celaya	Guanajuato	May 8, 2012
172	San Miguel de Allende	Guanajuato	May 8, 2012
173	San Miguel de Allende	Guanajuato	May 8, 2012
174	San Miguel de Allende	Guanajuato	May 8, 2012
175	San Miguel de Allende	Guanajuato	May 9, 2012
176	San Miguel de Allende	Guanajuato	May 9, 2012
177	Celaya	Guanajuato	May 9, 2012
178	Guanajuato	Guanajuato	May 10, 2012
179	Guanajuato	Guanajuato	May 11, 2012
180	Guanajuato	Guanajuato	May 11, 2012

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