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UNIVERSITY OF CALIFORNIA
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Decentralization of Water Service Delivery in Mexico: The Effects of
Party Politics, Intergovernmental Dynamics, and Municipal Capacity

A Dissertation submitted in partial satisfaction
of the requirements for the degree of

Doctor of Philosophy

in

Political Science

by

Cameron Jones Hastings

June 2011

Dissertation Committee:

Dr. John Cioffi, Co- Chairperson
Dr. David Pion-Berlin, Co- Chairperson
Dr. William Barndt

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The Dissertation of Cameron Jones Hastings is approved:

Committee Co-Chairperson

Committee Co-Chairperson

University of California, Riverside

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ABSTRACT OF THE DISSERTATION

Decentralization of Water Service Delivery in Mexico: The Effects of
Party Politics, Intergovernmental Dynamics, and Municipal Capacity

by

Cameron Jones Hastings

Doctor of Philosophy, Graduate Program in Political Science
University of California, Riverside, June 2011
Dr. John Cioffi, Chairperson

This project examines the impact of intergovernmental relations and municipal capacity on the process of decentralization of water services through a subnational examination of water service delivery in central Mexico. Conventional thinking is that local governments must have already developed an institutional and administrative capacity in order to provide adequate public services. Others argue that capacities will be developed through the process of giving local governments authority over service provision. Additionally the unique political history of Mexico, a one-party dominant federal government until 2000, provides an interesting opportunity to examine the effects of intergovernmental relations on the provision of public services. Mexico's decentralization reforms have been both hailed as a move in the right direction by international lending institutions and criticized by academics and political observers as an attempt by the historically centralized government to retain control by decentralizing without delegating

the necessary authority. The primary research question of this study is: how do intergovernmental relations and municipal capacity influence the process of decentralizing water services, the form that decentralization takes, and the quality of the services provided? Related to this question is whether local governments need to have already developed capacity in order to adequately provide public services or whether this capacity can be acquired “on the job”, what impacts political affiliations at the local and state level make, and how various federal and state institutions related to water have shaped the process of decentralization and ultimately the quality and coverage of local water services. These questions and considerations will be addressed through an examination of water services at the municipal and state level in the Mexican states of Guanajuato, San Luis Potosí, and Zacatecas, Mexico.

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CHAPTER 1: INTRODUCTION

1.1 The Global Water Crisis

The topic of water provision has become increasingly more important over the last two decades for a variety of reasons. Approximately 1.2 billion people, roughly 20% of the world's population, lack regular access to safe drinking water. Regional water supplies are receding due to over-use and heightened demand, drought, contamination, and inefficient practices.

Compounding these factors, especially in developing regions of the world, are higher rates of urbanization. By 2007, over half of the world's population was located in urban centers with urban poor the most severely impacted by the lack of clean water. The percentage of the global population moving to urban centers is expected to grow to 60% by 2025.¹ Not only do these factors increase the potential for conflict over water resources, they have devastating effects on the health and livelihood of populations in the developing world. Water borne illness poses a growing health risk; each year an estimated 1.3 million children (most of whom are under the age of five) and 1 million adults die from acute infectious diarrhea related to contaminated water while other diarrheal diseases affect an additional 2 million people.² These illnesses and deaths also have significant economic impacts in developing regions where they can account for economic costs of 1% of a country's gross domestic product due to lost productivity and up to 1.4% of gross domestic product when combined with economic losses due to wastewater pollution.³

¹ United Nations (2006). The Joint Monitoring Programme, a coordinated program between the World Health Organization and the United Nations International Children's Fund that assesses water access, provides the following data for urban Mexico: 1990- 86% household coverage, 1995- 90% household coverage, 2000- 94% household coverage, 2004- 96% household coverage.

² World Health Organization (2003).

³ The World Bank (2004).

1.2 The Development Agenda and Water

Facing such sobering statistics regarding lack of access to water and the impacts on the lives of the world's poor, the international community has undertaken a serious commitment to try and improve the situation. The 1960's and 1970's emphasized a basic needs approach that attempted to expand water coverage with large-scale infrastructure projects in order to meet the most basic needs of the poorest segment of the world's population. This was followed by a series of major international conferences that saw various trends related to water: the establishment of an individual right to water in 1977 at the Mar del Plata United Nations Conference on Water, a growing emphasis on efficiency and the economic value of water at the International Conference on Water and the Environment in Dublin, Ireland in 1992, and most recently a growing divide between advocates of privatization and public management of water resources has played itself out at the tri-annual World Water Forums.

As the international community has grappled with finding solutions to inadequate water services, debate over the appropriate course of action has taken shape and the development agenda has attempted to keep step with these trends. Recent proposals have ranged from privatizing services to improving performance using output-based aid to strengthening existing public services. Privatization has been advocated by multilateral and bilateral financial institutions⁴, the multinational water industry⁵ and governments alike but its acceptance by the general public, consumer oriented non-governmental organizations, and many subnational

⁴ Examples include the World Bank, the International Monetary Fund, the Asian Development Bank, the Inter-American Development Bank, and the European Bank for Reconstruction and Development.

⁵ For information on private sector initiatives by the water industry, see the Global Water Partnership and the World Water Council websites: <http://www.gwpforum.org/servlet/PSP> and <http://www.worldwatercouncil.org/> respectively. Additionally, websites for the three largest multinational water corporations provide information on existing privatization projects: French companies Suez (<http://www.suez-environnement.com>) and Veolia (<http://www.veoliawater.com>), and German company RWE (www.rwe.com).

governments has ranged from less than enthusiastic to outright hostile⁶. Consequently, governments have been keen to experiment with alternative methods for improving public water services.⁷

The development agenda began to shift to decentralization in the 1980's fueled, at least in part, by international lending practices that encouraged it while many governments utilized it to satisfy the needs of the public while maintaining their power. A growing trend over the last three decades has been to shift responsibility from highly centralized government agencies to local governments in the hopes of improving service and reducing the burdens of service provision on higher levels of government. The trend of decentralizing services can be seen globally but nowhere has it been stronger than in Latin America where many governments have attempted to institute democratic reforms through decentralization after decades of authoritarian rule.⁸ Additionally, there has been an increase in decentralization motivated by incentives such as reducing the fiscal burden of local services and tailoring services to local demand. The increased decentralization of services in general has provided many examples of both success and failure reflecting the fact that the decision to decentralize does not occur in a vacuum. Instead, shifting responsibility for services downward requires careful consideration of both the ability of local governments to shoulder new responsibilities and the structural and institutional factors necessary to make them successful.

⁶ For an overview of privatization trends since 1980, see Hall and Lobina (2002) and in Mexico, see Schmidt (2005). Public Citizen, Food and Water Watch, Corporate Europe Observatory, and Public Services International are all examples of anti-privatization groups that are critical of water privatization initiatives.

⁷ Though privatization of water services continues to be one option pursued by governments, evidence suggests that the potential for poor service delivery and political fallout from unpopular or unsuccessful ventures is pushing governments to look for alternatives.

⁸ The term decentralization will be used in this project. The distinction between decentralization, devolution, and deconcentration will be examined more closely in section two.

1.3 The Water Situation in Mexico

Like many other countries in Latin America, Mexico is not immune to the water-related problems facing the developing world and has made significant attempts in the last thirty years to deal with them. While rates of coverage have continued to rise in the country, they are still far below those found in highly developed countries. In Mexico, the World Health Organization/United Nations International Children's Fund' Joint Monitoring Programme found that urban coverage in the country increased from 95% to 98% between 1990 and 2005; however, this is based on those with an "improved source" and not a household connection.⁹ When this number is adjusted for those who have a household connection to a water network, this number drops to only 93% in 2005. Additionally, when rural access is taken into account, the rate of coverage for those with access to an improved source jumps from 72% to 85% between 1995 and 2005 but only 66% of the rural population had a household connection by 2005. This is an important consideration since one quarter of Mexico's population lived in rural communities in 2005, which translates into a significant portion of the population without an adequate water source. While coverage rates in Mexico appear to be improving, it should also be noted that these numbers do not address issues such as intermittent service or poor water quality. A 2005 World Bank study found that though coverage rates are growing, in 2000 only 45% of those households connected to a water network received continuous service. Additionally, issues with reporting and data collection mean that many of these numbers may be inaccurate and are likely to be over-reported suggesting that even more of Mexico's population lacks access to high quality water services.

⁹ The WHO/UNICEF Joint Monitoring Programme (JMP) for Water Supply and Sanitation defines an improved drinking-water source as "one that, by nature of its construction or through active intervention, is protected from outside contamination, in particular from contamination with faecal matter." This includes sources such as piped water to the dwelling or property, community standpipes, protected wells but not sources such as unprotected springs or wells, trucked water, hand-carts, or bottled water. The Joint Monitoring Programme defines a household connection as piped water into a dwelling where a water service pipe is connected with in-house plumbing to one or more taps (e.g. in the kitchen and bathroom).

It is vital to understand the true impact of these numbers in Mexico. Even in 2005, over 1.5 million people lacked access to an improved source of water while over 5 million people lacked a household connection. Among rural dwellers in Mexico, over 8.5 million, or just under 10% of the population, lack a household connection to local water supplies.¹⁰ These numbers suggest that while the situation may be improving in Mexico, there is much work still to be done.

1.4 Overview of the Study

Mexico, like many of its neighbors in Latin America, has advocated for decentralization as one way to improve its water services. The motivations for doing so will be discussed in Chapter 2. In order to understand the impact of these external and internal factors on the implementation of decentralized water service delivery a cross-state local level analysis of municipalities in Mexico from 1995 to 2005 was conducted. This is a time during which significant municipal reform and decentralization policies were implemented throughout the country. It examines the impact that state-local government relations, partisanship, and ideology as well as variations in the ability of local government to provide services have had on the process of decentralization in Mexico and the effects of these factors on the form that decentralization takes. The primary research question of this project is how do intergovernmental relations and municipal capacity influence the process of decentralizing water services, the form that decentralization takes, and the quality of the services provided?

In the end, changes in the quality of water services provided and the percentage of the population with access to water will indicate whether decentralization has made a difference. The focus of this project was to determine why decentralization occurs, what makes water service

¹⁰ Author's calculation based on percentages of access according to the WHO/ UNICEF Joint Monitoring Programme and 2005 census data from INEGI.

decentralization successful, and how successful decentralization can be replicated in future instances both in Mexico and beyond.

CHAPTER 2. LITERATURE REVIEW

2.1 Decentralization

A useful definition of decentralization presented by Rondinelli et al. describes it as the “transfer of planning, decision-making, or administrative authority from the central government to its field organizations, local administrative units, semi-autonomous and parastatal organizations, local governments, or non-governmental organizations.”¹¹ While rather broad in scope, this description of the concept demonstrates the wide-ranging application of the term and the multitude of situations in which it has been employed as a conceptual tool to achieve particular ends. This has been quite evident in the recent history of the interaction between less developed regions and the international financial institutions that both fund development projects and directly loan money within a prescribed framework that has increasingly required some form of decentralization. Institutionally, decentralization has been viewed as a necessary step for governments to take in order to both receive assistance and, from the perspective of these institutions, improve their economic situation. A recent World Bank evaluation of decentralization in twenty countries examined 203 lending activities which had \$22 billion of associated financial commitments of which \$7.4 billion was specifically for decentralization related activities.¹²

Decentralization has grown substantially both in prescription and in practice though it varies considerably from case to case. Because of the widespread implementation of decentralization since the 1980s, the debate over whether it is good or bad has become less relevant while instead the focus has shifted to address what constitutes successful decentralization against a backdrop of numerous failures. Conditions of success such as institutional context or

¹¹ Rondinelli and Cheema (1983:18).

¹² World Bank Independent Evaluation Group (2008:vx).

the specific history of a case must be further examined in order to understand in what ways decentralization can be effectively instituted (IBRD 2000; World Bank 1999).¹³

2.1.1 Arguments for Decentralization

Decentralization, or what Snyder (2001) calls the “devolution revolution” has been advocated for many reasons by governments, international institutions, and members of civil society. Some of the reasons include the ability to entertain and fulfill local preferences (Hayek 1948; World Bank 1994; UNDP 1993), improve accountability (Francis et al. 2003), reduce the dominance of particular regions in central planning (Besley and Coate 2000; Weingast 1979), and improve the management of local resources (Briscoe et al. 1998; Thobani 1997). Though there are variations in how and why decentralization is selected as a policy choice, objectives can be categorized generally into: local empowerment, administrative efficiency and effectiveness, the maintenance of national cohesion and central control, and the desire to reduce public expenditures.¹⁴

Advocates of decentralization often cite the ability of the local population to be more involved in the planning, implementation, and monitoring of service provision in their immediate area, which leads to empowerment. Additionally, reducing the bureaucratic aspect of decision-making and generating decisions that are more responsive to citizen needs improves efficiency and effectiveness. Wallis and Oates (1988) suggest that decentralization allows government to be more responsive to the public’s demands by “tailoring levels of consumption to the preferences of

¹³ For useful overviews of recent experiences in decentralization efforts see Crook and Manor (1998); Burki, Perry, and Dillinger (1999); Manor (1999); Angell, Lowden, and Thorp (2001); Eaton (2004); Montero and Samuels (2004); Oxhorn, Tulchin, and Selee (2004).

¹⁴ Conyers (1999: 3-7).

smaller, more homogeneous groups” instead of relying on “uniform levels of consumption that circumscribe the diversity of outputs needed to accommodate different tastes.”¹⁵

Downsizing the public sector and/ or opting for privatization is often a prescription for countries as part of a broader attempt to reduce public expenditures. This is often associated with structural reforms or other recommendations made by the development community. Briscoe et al. (1998) specifically point to the benefit of integrating lower levels of government in decision-making and resource allocation with regards to water due to the complex nature of its management. Thobani (1997) points to the advantages of localizing water rights and the management of these rights in order to create markets for water use that improve efficiency and reduce consumption. Both Mexico and Chile have established formal markets for water rights in order to shift control of the water sector from the state level to the local level and in an attempt to maximize the “advantages” associated with decentralizing water services. Several studies indicate that decentralization has led to quality improvement and cost savings (World Development Report 1994), reductions in per-capita water costs (World Bank (1999, 2000), and improved maintenance of water supply projects (Ostrom1990.)

A study of public investment in education by Faguet and Sanchez (2006) finds that decentralization produced policies and investment that were more responsive to local needs and where policy making and finance were freest of central control, produced the best outcomes. Additionally, they emphasize that decentralization is a process rather than a program that “relocates power and resources from the officials at the center to others at the periphery” and whose “effects depend very much on the character of the central decision-making -on how the center used its power and resources- before reform began.”¹⁶ In addition to the role that central governments play in promoting or hindering decentralization, decentralization itself may be the

¹⁵ Wallis and Oates (1988:5).

¹⁶ Faguet and Sanchez (2006:34).

means to an end for the governing party. Where governments face the possibility of secession or challenges to national power, distributing power to subnational governments can reduce this threat and maintain cohesion. As will be discussed later in this chapter, this was likely the case in Mexico during the mid-1990's when the PRI saw its historical dominance seriously challenged for the first time.

2.1.2 Arguments against Decentralization

Opponents contend that decentralization is problematic because local governments lack the capacity and resources to be effective and provide services that are varied, efficient, and responsive to local demand (Crook and Sverrisson 1999; Prud'homme 1995; Samoff 1990; Smith 1985; Tanzi 1995). Prud'homme (1995) points out that the promises of decentralization often do not materialize in developing countries because local officials rarely attempt to meet local demands nor do they have the resources to do so. If local officials do make this decision and resources are available, they are unlikely to be able to persuade the local bureaucracy to assist them. Prud'homme also questions the ability of local or regional governments to develop the institutions necessary to respond to public demands.

Institutional constraints often prevent successful decentralization. The 1994 World Development Report finds that constraints such as corruption, weak public management systems, high administrative costs, and local capture have consequences for service delivery.¹⁷ Wunsch (2001) finds that decentralization is challenged by central or local actors who have an interest in preventing resources and authority from reaching local governments and by the flawed design of local institutions and processes. Crook and Manor (1998) point out that effective priority setting, choices, and management at the local level are nearly impossible due to the "often chaotic state"

¹⁷ United Nations (2004).

of budgeting and accounting procedures at the subnational level.¹⁸ Thus, while gains may be possible through decentralization, subnational governments must overcome quite significant hurdles to see improvements. Bardhan (2002) argues that while services delivered by local governments may be more tailored to the needs of the public, these same governments often generate outcomes resulting in a disproportionate amount of resources going to elites at the expense of non-elites precisely due to the fact that the elites have a much more magnified presence at the local level than at the central government level. In order to overcome this potential for elite capture, local accountability mechanisms must be incorporated into the decentralization process. Likewise, Wunsch (1998) suggests that decentralization is a valuable process but that it is highly dependent on a “viable local political process.”¹⁹ While local governments are often the source of problems related to decentralization, other actors can also hinder its implementation. One potential problem with decentralization is the variation of commitment to the process by central governments in theory and in practice. While central governments may openly commit to decentralization, they may resist transferring appropriate power and sufficient resources to subnational governments for fear of losing both control and resources (USAID 2000). Until these potential problems with both local level inadequacies and political power wrangling can be overcome, opponents of decentralization are relatively pessimistic about its professed potential.

2.1.3 Decentralization of the Water Sector

Similar to the broad debate over decentralization in which no clear argument in favor of or against the process exists, there is no consensus over whether decentralization specifically related to service delivery is good or bad. In the thirty years since the first United Nations

¹⁸ Crook and Manor (1998:241).

¹⁹ Wunsch (1998:1).

Conference on Water held in Mar del Plata, Argentina global norms in water management policy have taken shape (Kemper et al. 2003, OECD 1998, Dublin Principles 1992.) These norms include, among other things, decision-making across multiple levels and incorporating local users, especially rural communities. The Dublin Principles crafted at the 1992 International Conference on Water and the Environment included actions on decentralization, specifically principle number two, which stated “water development and management should be based on a participatory approach, involving users, planners and policy-makers at all levels.” These principles encouraged an enhanced role for local communities in all aspects of water services including the construction, ownership, and management of networks.

Though water decentralization faces the same issues that decentralization in general must overcome, some issues are unique to water services. One specific issue is the distrust of governments by civil society and many local constituencies who believe that decentralization is a euphemism for privatization. Barreda (2005) points out that Mexico’s decentralization of water services allows large multi-national water corporations to negotiate with local governments instead of central governments giving them an advantage both in terms of negotiation and in reducing political fallout from poor service since potential problems are localized. Other examples of this view that decentralization is tantamount to, or the predecessor of, privatization abound. Amenga-Etego (2003) presents a similar scenario for Ghana in which decentralization is driven by World Bank policies to reduce central government expenditures and provide opportunities for multi-national water corporations to “cherry pick” or “cream skim” the few profitable local networks. 2007 protests in El Salvador challenged a water decentralization plan that was viewed by the public and civil society as a thinly veiled attempt by President Elías Antonio Saca to privatize water services in accordance with stipulations attached to a 1998 World Bank loan. Unlike decentralization of other services such as garbage collection or telephone

service which when unsuccessful are, at worst, frustrating for consumers, the failure of water decentralization can have devastating consequences for a public with no access to clean drinking water. In this case, when decentralization fails, central governments face a difficult decision. An IRC International Water and Sanitation Centre study (2009) found that decentralization is being seriously reconsidered in South Africa after several municipalities were found to be incapable of providing services to the local community. The Centre concluded that without active civil society pressure on the local government and improved capacity, the services would need to be re-centralized.

An additional complication faced by decentralization of water services is that water often operates as a transboundary resource. Discussions of the advantages and disadvantages of decentralization often hinge on the local government's ability to deliver services within its jurisdiction but the fact that water resources are often managed beyond a single jurisdiction make this problematic. Water may be managed, legally and in practice, at the basin, watershed, or river level; therefore, any attempts to decentralize the service must incorporate considerations of where the water for each local network comes from and whether local governments have the proper authority to allocate the resource. Brannstrom (2002) finds that when multiple levels of stakeholders are involved in decision making regarding water allocation, a key component of creating downward accountability is a strong and vibrant civil society. Brannstrom also acknowledges that local governments may have shorter horizons regarding policymaking, which may be in-conducive to dealing with water related issues that require long term planning.

2.1.4 Different Forms of Decentralization

The broad literature on decentralization provides many different definitions of the term but most emphasize the transfer of authority from a central government to lower levels but what

this process exactly entails varies quite substantially both in design and intention (Rondinelli 1981; Smith 1985; Campbell et al. 1991).

As Garman et al. (2001) point out, the extent of decentralization cannot be based solely on the existence of local elections or formal decision-making authority. Instead the actual division of power and responsibility, as well as financial relations, between different levels of government provides insight into how decentralized a system really is. Distinctions can be drawn between three forms of decentralization:

- 1) devolution- the transfer of responsibility and authority to local governments
- 2) deconcentration- placing resources and staff at lower levels within the same administrative structure ie: regional offices of a national water company
- 3) delegation- assigning responsibility to a third party²⁰

For the purpose of this study, three aspects of water service delivery will be analyzed to determine which form of decentralization has taken place: administrative responsibility, fiscal authority and discretion, and regulatory authority. It is quite possible that all or none of these aspects have been decentralized or that each has been decentralized differently depending on the state and municipal context.

It is important to determine which type of decentralization is taking place; what is often labeled as decentralization may be nothing more than technical deconcentration of centralized power to regional units or delegation to a third party. If the merits of decentralization are to be fully examined it is important to make these distinctions and clearly identify what kind of policy has been prescribed. While delegation and deconcentration may help overcome some of the problems associated with centralized control they do not necessarily provide the same benefits that decentralization advocates are looking for because fiscal and administrative authority is not

²⁰ Foster and Rosenzweig (2001).

transferred to subnational entities. In these cases, decision-making may be shifted downwards but no closer to local governments and their constituents who are the key stakeholders in the delivery of basic services such as water. Devolution is likely to achieve the actual objectives of decentralization advocates such as greater political accountability (Rondinelli 1989), checks and balances between levels of government (Elazar 1976), improved efficiency (Shah 1994; Garman et al. 1996) and competition between subnational units to devise innovative policies and practices (Tiebout 1956; Weingast 1995; Campbell et al. 1991) but it may also pose a potentially greater risk of falling prey to the incapacity of local governments to fulfill their mandated responsibility. Litvak et al. (1998) advocate for what they call “asymmetrical decentralization” in which different units are treated distinctly in order to achieve similar outcomes.²¹ They specifically discuss this in relation to water services, arguing that some responsibilities may feasibly be decentralized to large urban areas while capacity variation might mean decentralizing responsibility to only some regions. It may also make more sense to decentralize from the central government to the private sector instead of giving responsibility for services to local governments. This suggests that the success of decentralization relies quite heavily on recognizing that a uniform application between, and even within, countries is a poor approach. This is especially true in a highly technical sector like water services. In this study, devolution of administrative and regulatory power over water services along with the corresponding and necessary fiscal authority indicate valid decentralization and every attempt was made to understand *why* variations in policy implementation occurred.

²¹ Litvak et al. (1998:23).

2.2 Decentralization in Mexico

Three key reform efforts to decentralize Mexico will be discussed. Two emphasize the decentralization of government authority to the municipal level in general and one is specific to water. They will be dealt with chronologically.

Throughout the 1980s many Latin American governments, faced with fiscal crisis and increased political demands for urban public services, began to adopt administrative decentralization policies in order to reduce financial pressures on the central government and to increase the efficiency of public service provision. They adhered to the mantra that devolving responsibility to lower levels of government would result in greater efficiency and improve the quality of governance since local governments need to be more responsive to the demands of their constituents and could be held more accountable for the decisions they made (Nickson 1995).

Reasons for decentralization in Latin American countries varied considerably. While some governments decentralized rapidly in order to maintain control and shore up their support once faced with extreme crises of political legitimacy (Bolivia and Venezuela), other governments promoted decentralization reforms as part of broader constitutional reforms while transitioning to democracy (Brazil and Colombia). Finally, some governments moved toward decentralization while negotiating an end to civil war (El Salvador and Guatemala).²² Unlike its Latin American neighbors, Mexico's decentralization occurred at much the same pace as democratization, and decentralization policies took shape within a negotiated process to determine what the modern Mexican democracy would look like. While the process resulted in a gradual and orderly transfer of authority to subnational governments, unlike the immediate and halting changes taking place elsewhere in the region, it also meant that the changes taking place

²² A wide literature exists on the motivations for decentralization in Latin American countries. See Montero and Samuels eds. (2004), Tulchin and Selee eds. (2004), and Willis et al. (1999).

were viewed as part of a zero sum game in which the reforms would benefit one actor at the expense of another and each broker would seek to ensure its own advantage rather than advancing democratic governance.

Mexico, despite a formally federal structure, has historically been one of the most politically and economically centralized of all Latin American countries due to the constitutional powers of the president and three features of the party system: a dominant one- party system that gave the ruling party political and electoral dominance at all levels of government, strong party discipline, and the powers the president enjoys as party leader (Weldon 1997). Mexico's central state historically controlled most sectors of the economy and civil society and utilized a top down approach with appropriations and power creating what former president Vicente Fox called "one of the most powerful and interventionist [countries] in Latin America".²³

Migdal (1988) argues that from 1857 to 1980, Mexico saw a gradual extension of the resources, functions, and responsibilities of the central government while, simultaneously, state and local governments lost ground. This was compounded by the development of both formal and informal institutions and mechanisms devised by the central government to control subnational governments and intervene in their internal affairs. While centralization did help Mexico avoid fragmentation and enjoy decades of economic growth, the most significant result was weakened state and local governments and low levels of public expenditures.

²³ Wilder and Romero-Lankao (2006:1977). Also see (Garman et al. 2001) for a discussion of power in Mexico's political system.

The 1910 overthrow of Porfirio Díaz led to a long period of instability with constant conflict between the national administration in Mexico City and the regional elites. The collapse of the old regime presented opportunities to grab power and

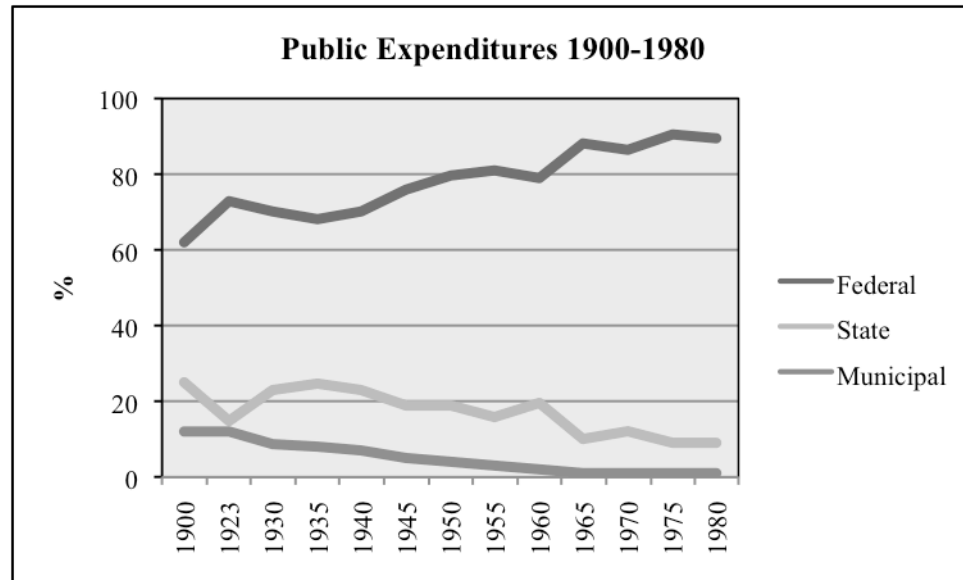
“[i]nto the power vacuum moved the regional, state, and local caudillos who arose to challenge the central government. Between 1910 and 1930 central rule was not accepted as legitimate by the local bosses. The country was torn apart by violence, uprisings, and civil war. Power was acquired by force, as physical control became the only successful means to obtain and keep power. Peasant and labor leaders and self-proclaimed generals easily took over the states, collected taxes, decreed laws and put down dissent.”²⁴

The 1917 constitution, approved by factions central to the revolutionary movement, forbade the establishment of authority outside of the formal state and municipal entities; however, it failed to grant any specific powers to municipalities instead leaving their role to be defined within state constitutions. The central government slowly began to consolidate its resources, eventually managing close to 90% in the public sector, while reducing public expenditures by states to only 9.4% and municipalities to just 1.1%.²⁵ Chart 2.1 shows the trend in public expenditures at the federal, state, and municipal level between the years of 1900 and 1980. Two conclusions can be drawn from this chart: first, federal expenditures are much higher than the other two levels of government and secondly, municipal expenditures which are consistently low declined steadily throughout the eighty years proceeding municipal reforms in Mexico.

²⁴ Anderson (1971:29).

²⁵ Diaz-Cayeros (1995:65).

Chart 2.1: Percentage of Public Expenditures by Level of Government



Source: Diaz-Cayeros (1995:65).

Just as the central government would come to dominate the states, the states would do the same to municipalities by eliminating responsibilities and failing to provide adequate resources and authority. By 1980, Mexico was extremely centralized with fiscal powers and resources concentrated at the federal level. Additionally, the municipalities had few roles in government and, just as the central government could remove governors, state governors could remove municipal presidents. The lack of autonomy that subnational governments endured, coupled with the lack of resources and potential for political backlash from higher levels of government entrenched in a one party political system, reinforced the centralization, both formally and in public perception, that had emerged at the national level.

2.2.1 1983 Municipal Reforms

Decentralization reforms in Mexico were introduced in the 1980's after the onset of a debt crisis and reflected a growing awareness that the extreme centralization practiced in Mexico

was not sustainable during times of acute financial hardship. In 1983, President Miguel de la Madrid (1982-1988) introduced the first phase of municipal reform with amendments to Article 115 of the Mexican constitution.²⁶ Three main goals were clarified with the hope that shared responsibility would increase efficiency and, simultaneously, decrease the central government's accountability by reducing its bureaucratic responsibilities. These goals included: 1) to decentralize, both administratively and geographically, all federal agencies; 2) to strengthen federalism by increasing the power of states and local governments; and 3) to promote regional economic development (Rodriguez 1987).

These changes were intended to improve social and economic development and revitalize local government but there were several problems with the initiatives proposed under de la Madrid. The reforms granted local government broader responsibilities in areas that they were ill equipped to manage. Prior to this, states often took control of these areas because local government lacked the financial and administrative ability to do so (Nickson 1995). Local governments had, for their part, learned to rely on upper levels of government to provide infrastructure and basic services including water and sewage. An additional problem with the decentralization proposed in 1983 was that many agencies were merely deconcentrated, localizing the center instead of actually handing responsibility over to local agencies. Critics have pointed out that this served more to bolster the legitimacy and waning power of the center rather than actually devolve responsibility for policy and service provision to local government (Cornelius et al. 1994; Rodriguez 1998).

²⁶ Mexico's municipal governments, generally consisting of a county seat and the surrounding communities, are composed of a mayor and council who are each elected to a single three-year term without the opportunity for reelection. The composition of the municipal government is determined by proportional representation and voting is based on party lists. The mayor, referred to as the *presidente municipal*, typically establishes the agenda for the local government and the council is given responsibility for public departments. Local governments are currently responsible for basic municipal services including water and sewage, garbage, urban transport, garbage, public markets, roads and highways, public security, and slaughterhouses.

Rodriguez (1997) points out that the 1983 reforms provided mixed results mainly because the efforts to decentralize services were not accompanied by similar efforts to strengthen municipal capacity and ensure they had the ability to provide services; therefore, municipalities succeeded to varying degrees. Likewise, the existing inequitable financing mechanisms remained in place leaving many municipalities inadequately funded. Decentralization under the 1983 reforms failed to make much significant difference because though power shifted away from the central government, most of it ended up in the hands of state governments who retained sole discretion for the redistribution of resources.

Since 1989, national water policy in Mexico has paradoxically emphasized decentralization of services to nearly 2,500 local governments while simultaneously centralizing control of the sector under the jurisdiction of the National Water Commission (*Comisión Nacional del Agua*, hereafter, CNA). Under Article 27 of the federal constitution virtually all water in Mexico is the property of the nation giving the Commission authority to manage all ground and surface water sources. The agency was given a broad mandate that included managing the nation's resources, maintaining records of national water supply and quality, and ensuring the functioning of local agencies charged with managing services.²⁷ The 1983 reforms instituted under the de la Madrid administration shifted responsibility for water management from central government ministries to local level agencies but did little to support local efforts.

²⁷ Barkin and Klooster (2006).

Table 2.1. Decentralization of Water Supply and Sanitation Services in 1988

<i>Service in charge of state government</i>	Baja California Chihuahua Coahuila Campeche Federal District Durango Guerrero	Hidalgo Jalisco Morelos Nuevo León Oaxaca Querétaro Quintana Roo	San Luis Potosí Sonora Tabasco Tamaulipas Veracruz Yucatán Zacatecas
<i>Service in charge of municipal governments</i>	Aguascalientes Baja California Sur Colima Chiapas	Guanajuato Estado de México Michoacán Nayarit	Puebla Sinaloa Tlaxcala

Source: Derived from CNA (1989).

By 1988, only eleven out of Mexico's thirty-one states had put water supply and sanitation services in the charge of municipal governments while twenty states and the federal district maintained these services at the state level. To counter the inconsistent implementation of water reforms after 1983 the national government, through the CNA, began to centrally administer the water sector more actively and advocate for less centralized control. Barkin and Klooster (2006) suggest that the push by the CNA for decentralization of water services, which began in 1989, was intended to modernize the public sector and improve on the unaccountable local agents of the federal government that had little incentive or interest in providing adequate services to local constituents. Motivated by a desire to reduce the fiscal burden of water services on the central government and improve the sector as a whole, the CNA worked to shift services to local agencies and private sector operators. This was to be carried out by "autonomous, business-oriented municipal agencies to manage the water supply" and new state legislation that would improve efficiency by establishing water tariff reform and encouraging the collection of payments.²⁸ The CNA's recommendations regarding how to structure their legal framework

²⁸ Pineda (2002).

regarding water services encouraged states to implement the following instruments to improve service delivery:

- *consolidating the decentralization process*: the creation of public enterprises in the municipal public sector (with legal capacity and their own assets) to manage the water supply and sewage service
- *establishing tariff autonomy*: tariffs were to be authorized by a directive board instead of by state legislatures
- *permitting service suspension*: the ability of management units to suspend or cut off service due to lack of timely payment
- *establishing a payment catalog*: local legislatures should establish payment for consumption ranges, types of use, and service charges for meter installation and connection (among other services provided)
- *earmarking revenue*: utilizing revenue generated by water management units for the improvement and maintenance of water services
- *providing fiscal character to debts*: recovering debts related to water service by the local treasury in order to improve payment rates

As before, inconsistent implementation and oversight meant states complied with these recommendations to varying degrees. Water decentralization in Mexico has been inconsistent, at least in part, because of the inability of the CNA to enforce its mandate. Since 2001 the CNA has attempted to promote decentralization and privatization of services by tying funding to efforts by states and municipalities to make changes.²⁹

2.2.2 1999 Municipal Reforms

Municipal governments in Mexico differ considerably in capacity in part because of the varying degree of power and authority granted to them by state governments, different levels of

²⁹ The PROMAGUA (Modernización de Organismos Operadores de Agua) program began in 2001 with the objective of improving service coverage and quality and to promote the involvement of private capital. See the National Water Commission website (www.cna.gob.mx) for more information on the objectives of the PROMAGUA program.

financial support, and their historical position in the country relative to other regions or cities.³⁰

This can be seen, for example, in the disparate forms of modernization that municipal governments have undertaken, the variation in services provided by local governments, and the differences in revenue generated by municipalities (Campbell 2003; Grindle 2006; Rodriguez 1997).³¹ The variation in municipal capacity present in Mexico, if it is in fact a precursor to successful decentralization and/ or influences the decision to decentralize, must be considered in order to fully understand the dynamics of the decentralization process that followed the implementation of the 1999 Municipal Reform.

Following the 1994 peso crisis and prior to the 1997 election, which gave the opposition parties control of the legislative Chamber of Deputies for the first time, President Ernesto Zedillo (1994-2000) had little choice but to institute further reforms to decentralize power and strengthen local municipalities to counter the political shift that was taking place. In 1999, a group of federal deputies from three opposition parties introduced another amendment to Article 115 of the Mexican constitution that established municipalities as autonomous entities that were required to provide services as defined in the Article.

The 1999 Municipal Reform followed Zedillo's introduction of his *Nuevo Federalismo*, which attempted to distribute power through decentralization by strengthening the autonomy and capacity of state and local governments financially and politically. It attempted to do so by increasing federal fiscal transfers to subnational governments, encouraging subnational revenue generation, and clearly identifying the administrative functions and responsibilities of each level of government. Though a great deal of power remained in the hands of the central government the changes coincided with increased electoral competition and a significant number of victories

³⁰ Historically, regional differentiation, proximity to the center, and strategic value have all been determinants of support in Mexico.

³¹ For an overview of variation in municipal modernization in Mexico, see Grindle (2006).

by candidates from opposition parties throughout Mexico. The 1999 Municipal Reform was the most significant attempt to decentralize to date (Edmonds-Poli 2006).

By the end of the 1990s, state and local governments in Mexico had more resources and autonomy than at any other time in the post-revolutionary era; yet, they still lacked complete control over their economic resources or discretion over spending decisions. The 1999 Municipal Reform attempted to overcome the weaknesses of the 1983 reforms by empowering municipal governments to request that services be transferred. Though states retained discretion to decentralize services, local governments were given the ability to request services and, if not granted, appeal to the state legislature and ultimately the National Supreme Court of Justice to uphold their request. The 1999 Municipal Reform will serve as the basis for determining how successful decentralization efforts have been in Mexico since they are the most recent attempt by the central government to encourage structural changes to comply with constitutional obligations to empower subnational government. The most important aspects of this reform included:

- amending the constitution in order to identify municipalities as independent entities instead of subunits of the states
- expanding the number of public services exclusively in the municipal government's domain
- allowing municipalities to associate with those of other states to provide services
- providing for stronger financial autonomy³²

These reforms, despite having critics, were widely accepted by the Chamber of Deputies of whom 90 percent voted in favor.³³

In 2000, after eighty years of rule by the *Partido Revolucionario Institucional* (Institutional Revolutionary Party, hereafter, PRI) the *Partido Acción Nacional* (National Action Party, hereafter, PAN) candidate Vicente Fox became the first non-PRI party candidate to be

³² *Diario Oficial de la Federacion* (1999).

³³ *Gaceta Parlamentaria* (1999).

elected president of Mexico. Based on the PAN's demonstrated ideological and strategic commitment to decentralization, as well as Fox's own decentralization efforts as governor of Guanajuato, it was widely expected that the new President would pursue similar policies at the national level. Edmonds-Poli (2006) argues that Fox did in fact attempt to decentralize Mexico even more during his time as president but this did not lead to much change. The lack of success is not for a lack of trying. Fox was successful in decentralizing some of the functions between the three branches of government at the national level but less successful at the subnational level. Edmonds-Poli argues that this has less to do with efforts on the president's part and more to do with a resistance on the part of state and local officials to assume greater responsibility, as well as the possible financial and political risks that corresponded with that responsibility.³⁴

It could be concluded that by the end of Fox's term as president of Mexico, little had changed regarding the distribution of power between the central and subnational governments. In fact, though transfers as a percentage of the federal budget did increase roughly one percent annually over the course of Fox's term, Edmonds-Poli suggests that this increase in financial resources was not coupled with the capacity and incentives to exercise independent authority and little has changed since the end of the 1990's. Whether there has indeed been significant change in municipal power in general, and in water service delivery specifically, will be an important question that this project seeks to answer.

2.3 Municipal Capacity

Studies of decentralization efforts by Litvak et al. (1998) and Burki et al. (1999) suggest that there is often a mismatch of expectations with institutional design. Local governments are

³⁴ While local governments have some fiscal tools such as property tax collection at their disposal, their preferred course of action (as with state governors) is to demand more transfers from the federal government with fewer strings attached. This relationship will be further elaborated on in Chapters 4 and 5.

expected to assume new responsibilities but they lack the resources and authority to effectively do so. Furthermore, they may lack what many advocates of decentralization feel is an important determinant in success: capacity. The development of successful decentralization programs globally has often centred on the need for strong municipal capacity. Capacity will be defined in this study as “the overall ability of an organization or a broader system to perform” based on the capabilities and competencies present.³⁵ The capability of individuals, groups, or organizations to use their skills or abilities to perform a function or create a public value (in this case provide water services) will be the key to understanding local capacity but it must be considered within the appropriate context. Understanding and measuring the capacity of municipal government requires “an examination of the factors that condition its ability to perform its functions effectively.”³⁶ The World Bank (2005) finds that the most common failure of decentralization efforts is lack of capacity at the municipal level. A variety of capacities are identified as necessary for success. Bird (1994) argues that local governments need to have adequate administrative and technical capacity to carry out new functions especially when responsibility for social and economic infrastructure investments are decentralized. A study of municipal capacity and crime prevention in Mexico by Rowland (2003) finds that in addition to the factors cited by Bird, the ability to respond to citizen participation and public preferences and the ability to overcome sector specific deficiencies are important for local success. Ultimately, success will be based on whether local institutions are, as North (1990) puts it, up to the job.³⁷

³⁵ Morgan et al. (2005:7).

³⁶ Gillespie (2005:14).

³⁷ The argument that strong municipal capacity is necessary to make decentralization successful should lead state governments to be more likely to decentralize only if they think the local government can manage new responsibilities. Additionally, there will be more incentive to transfer powers to those municipalities that are more likely to succeed so that it reflects positively on the state party. Conversely, there would be less incentive to decentralize to a stronger municipality represented by a competing party for fear that it might improve the image of the other side. These notions will be discussed in Chapter 3.

Though much of the literature related to decentralization argues that municipal capacity is an important determinant of whether decentralization programs and policies succeed, there are some conflicting perspectives. Litvak et al. (1998) present two competing theories regarding decentralization and capacity: one from a top-down, supply-driven framework in which capacity should precede decentralization and a competing hypothesis based on a demand-driven relationship suggesting that a shift in responsibility to subnational governments “may provide the incentive for public officials to invest in capacity building or seek creative ways to tap into existing sources of capacity”.³⁸ Likewise, Fiszbein (1997) presents multiple examples that reinforce the need to consider the demand-driven proposition in which municipal capacity is the objective of, not a necessary condition for, decentralization. Galan’s (1990) study of decentralization in Colombia supports Fiszbein’s theory by suggesting that local governments would develop capacities only once fiscal resources and responsibility for service delivery were decentralized.

It is clear that municipalities in Mexico are making tremendous strides. Cabrero (2002) suggests that many municipalities have been key in institutionalizing the alternation of political power between parties and have generated new strategies for public action; however, he also noted in his study of Mexico’s 2,429 municipalities that less than 50% of them had regulations regarding public services, only 46% of municipalities had regulations related to public works, and only 22% had zoning and land use regulations. Furthermore, only 55% of municipalities in Mexico had put in place processes for evaluating projects, only 46% had some type of system to administer resources and manage inventory, and in a municipal study from 1995, 60% of the municipalities in the country did not have computers.³⁹ While it is unclear whether capacity is necessary for successful decentralization, statistics such as those presented by Cabrero indicate

³⁸ Litvack et al. (1998:28).

³⁹ Cabrero (2002:2).

that many municipalities in Mexico have much to overcome before they can adequately fulfill the roles designated for them under the 1999 Municipal Reforms.

2.4 Partisanship and Decentralization

Decentralization as a policy prescription is widely advocated but the decision to decentralize is subject to the internal political dynamics of each country. Decentralization, as it is presented in this study, will be examined as a top-down approach that is mandated by the central government but subject to subnational governments accepting and implementing the changes. Existing literature on decentralization has focused extensively on national level actors and treated subnational actors as part of a homogenous group (Falleti 2005). The variation in subnational governmental preference toward decentralization policy has largely gone unexamined and as Wibbels (2005) points out, variation in their behavior is poorly understood. As Harbers and Faust (2007) find in their examination of decentralization in Ecuador, optional decentralization that does not call for a uniform process to be followed by all subnational governments provides a good opportunity to examine the politics of decentralization. Though Mexico's 1999 Municipal Reform directed states to implement decentralization, a significant amount of discretion was given to state governments to determine when and how they would go about decentralizing to municipalities. Additionally the 1999 Municipal Reform, introduced to remedy some of the flaws in the 1983 reforms, enabled municipalities to request that services be transferred to them. Thus, state and local governments have had a variety of opportunities to pursue decentralization or maintain the status quo. It is the variation in decisions to decentralize by both the state and local governments that will be examined in this project in order to understand the effects of this variation on water services.

Unlike other policies implemented from above where there may be resistance by subnational governments and specifically by opposition parties, in the case of decentralization one might expect a different outcome because of the opportunity for more control and authority to be divested from the central government. This is precisely the argument behind what Barracca (2005) calls the *partisan priority thesis* in which decentralization reform will be embraced in state and municipal governments governed by the opposition party because it potentially offers them more authority. Additionally, Barracca presents the *partisan conflict thesis* that suggests relations between local and state governments, and consequently the decision to decentralize, will be less cooperative when the two are from different parties because ceding power weakens the higher level of government. Political parties in general will have both ideological and strategic reasons for supporting or opposing decentralization policies mandated by the central government. Mexican political parties are no different; each has had unique motivations for pursuing decentralization and these will be discussed below after a brief overview of the evolution of party competition in the country and the effects of partisanship within the government. Likewise, the influence that partisan competition has on decentralization will be explored as well.

2.4.1 Party Politics and Decentralization in Mexico

Mexico's traditional one-party system became more competitive in the 1980's when opposition parties began to challenge the hold of the PRI at the local level using electoral reform and increasing the involvement of civil society. Over the next two decades, the PAN and the Party of the Democratic Revolution or *Partido de la Revolución Democrática* (hereafter, PRD) began to regularly win elections at the local level and by the beginning of the 1990's, these parties began to win state gubernatorial races.

Between the de la Madrid reforms of the 1980s and the first opposition victory at the presidential level in 2000, many municipalities in Mexico became increasingly democratic. This included competitive multi-party elections, increased participation by the citizenry, and an improvement in the responsiveness and efficiency of local government; however, these changes did not occur evenly across the country or even across states. Instead some local governments made significant strides toward democratization, others made modest changes, while still others made no changes at all.

Increased partisan competition in Mexico since the early 1990s has had many effects on government relations at all levels. Unlike the PRI dominated era where party elites made most of the decisions and lower level politicians saw every action as a potential for career advancement, the increased competition has changed the dynamics considerably and the situation has been compounded by structural elements present in the system. Naturally, competing parties will work to promote their own agendas and successes while pointing out the failures of the other side. In Mexico the responsibilities of the state and local governments have not been clearly delineated leading to an increased level of finger pointing and the inability to hold anyone accountable. Term limits at all levels also increase the potential for partisan conflict because there is a short amount of time to accomplish political objectives, there is no opportunity to run for reelection based on previous successes, and there is no desire to allow the political competition to take credit for the policies and programs undertaken by the previous administration.

Ward (1995) points out that in the 1980's municipal politicians from the opposition PAN party in Chihuahua undertook short term, quick fix, highly visible projects instead of pursuing long term programs because successes might benefit their successors more than, or instead of, themselves. Additionally, Ward suggests that PAN governments also avoided larger projects that required federal funding that might potentially benefit the PRI- controlled state government.

Fagen and Tuohy (1972) argue that the history of PRI party discipline and structural elements such as term limits and the centralization of resources and power undermined long-term planning and reduced the incentives for politicians to be responsive public servants. This led to short-term policies and programs with high visibility that were easy to claim credit for but did little to address pressing local needs. Accountability for the lack of effective improvements, especially in infrastructure and public services, was difficult because of the short term in office and the lack of connection between local politicians and their constituents. Any progress in efforts to decentralize must be understood within this political structure since it bears heavily on the actions taken by both politicians and parties at all levels of government.

2.4.2 Party Support for Decentralization in Mexico

Decentralization originated as a policy decision by the ruling PRI to reconstitute its control, what Rodriguez (1998) calls letting go in order to hold on to power. This tactic is consistent with top-down forms of decentralization promoted in other countries where ruling parties have attempted to maintain their control by building up subnational or regional power bases when faced with electoral challenges (O'Neill 2003, 2005; Dickovick 2007). The PRI had no long-term commitment to decentralization but would benefit from it by reducing the central government's financial burden and legitimizing its power by appearing to embrace democratic reforms. The party would also benefit if PRI- controlled state and local governments successfully provided decentralized services. The benefits of decentralization would only materialize for opposition parties if administrative and fiscal authority was given to subnational governments that the opposition parties controlled and the possibility for successfully carrying out the mandated charge was realistic and appropriate for lower levels of government to fulfill. Though originally promoted by the PRI, by 1996, all three parties began to publicly state their support for

decentralization: the PRI promoted its *Nuevo Federalismo* (New Federalism), the PAN pushed for *Auténtico Federalismo* (Genuine Federalism) and the PRD advocated *Federalismo Democrático* (Democratic Federalism) (Rodriguez 1997).

Compared to the other two major parties in Mexico, the PAN has long made decentralization and municipal reform one of three main planks in its platform (Davis 1994). The party has promoted federalism, defined here as the autonomy of municipal governments, and has argued in favor of empowering the smallest unit of government capable of performing a task to do so. This notion of subsidiarity, the strengthening of the municipality, was key to the PAN's definition of good government and was promoted strongly by founder Manuel Gómez Morín who was influenced by American progressivism. Subsidiarity was seen as the "building block of responsible government and as a means to exercise genuine political liberty".⁴⁰

For Gómez Morín and other founders of the party, federalism was an important component of the PAN's public philosophy and they sought to "realize the principles of decentralized authority inherent in the Mexican constitution" and restore authority to the municipality.⁴¹ Ard (2003) points to the PAN's earliest pamphlet entitled "*La Ciudad: Necesidad del Municipio Libre*" (The City: The Necessity of the Free Municipality) as evidence that the party believed that federalism and decentralized power were to be a defense against arbitrary power and an opportunity to resolve national problems at the local level. As early as its 1939 platform, the PAN supported autonomous municipal governments that were permanently subjected to the will of the governed and in 1952 the party ran its first presidential candidate, Efraín González Luna, who advocated heavily for decentralization and municipal power influenced, at least in part, by the platforms of Christian Democratic movements in Europe (Ard 2003). By 1964, the party was advocating for municipal political autonomy with control of

⁴⁰ Ard (2003:12-13).

⁴¹ Ard (2003:73).

economic resources sufficient to fulfill their aims and the 1965 platform argued for constitutional recognition of basic municipal functions. The 1985 PAN platform argued that “the free municipality should have economic autonomy and political freedom” emphasizing that “the road to democracy... run[s] through the free municipality.”⁴² By 2000, the party platform began to make demands related to decentralization with its notion of authentic federalism (*auténtico federalismo*) that “fortifies the sovereignty and competitiveness of states and the municipalities so that they are the levels of government that are in direct contact with the demands of their citizens and can promote their true development.”⁴³

The party pursued its rhetoric within the political process as well. A strong showing in state elections after 1990 brought the PAN’s demands for federalism national attention and, facing the potential strength of the party’s agenda, the PRI responded with its *Nuevo Federalismo* (New Federalism) plan in 1997 (Ard 2003). Though president Zedillo and the PRI promoted their own version of federalism, the federal government still retained strong budgetary and allocative authority as well as 80% of public expenditures with only 16% going to states and 4% to municipalities.⁴⁴ After electoral success in 1997, at which point the ruling PRI lost its majority in the Chamber of Deputies, the PAN gained the political strength to counteract the dominance of the PRI and it used this newfound power twice to obtain concessions from the national government to transfer resources to states and municipalities and decentralize public finances. These negotiations with President Zedillo and the opposition-controlled Congress in 1997 led to several new federal funds earmarked for municipalities and, in exchange for the PAN’s support of Zedillo’s 1998 budget, the opposition party was able to get \$800 million (USD) moved into new municipal funds (Dillon 1997; Preston 1997).

⁴² See the PAN platforms of 1939, 1965, 1985.

⁴³ Author’s translation of 2000 PAN party platform.

⁴⁴ Ard (2003:169).

Additionally, state governors in strong PAN states such as Baja California and Guanajuato began to demand more responsibility for their own affairs and to change the federal revenue sharing system. In Guanajuato, Governor Vicente Fox was the most active by passing programs and funds previously managed by the federal government directly on to the municipalities including control of property taxes and infrastructure maintenance. To promote decentralization he put a three-step program into effect: relinquish regional affairs to state governments, devolve power from states to municipal governments, and empower citizens (Reding 1997). In Baja California, Governor Ernesto Ruffo went so far as to threaten to sue the federal government in the Supreme Court if it did not allow the state to retain more of the revenue it collected. Though Ruffo did not succeed in his attempts to give the state and its local governments more fiscal power and resources, the party did win the next election making it the first state with consecutive opposition governments and propelling the PAN's federalist agenda to the national stage (Ard 2003). It is also worth noting Fox's advocacy for decentralization and federalism in Guanajuato since he would go on to win the 2000 presidential election and be posed to promote these ideas nationally from a far more powerful position if he chose to do so.

A 2000 analysis by the Mexican Chamber of Deputies related to the major Mexican political parties' views on public finances and fiscal reform presents the PAN's argument for significant decentralization of finances to states and municipalities through a new federal pact in order to modernize the federal public administration. Additionally, the party called for changes to the budget that included the decentralization of the assignment of transferred funds to state governments and municipalities. Both the PRI and PRD called for more moderate changes related to fiscal federalism including the gradual shift of funds to states and municipalities.⁴⁵

⁴⁵ Chamber of Deputies (2000).

While the PAN's commitment to federalism appears to historically stem from its ideological and anti-corporatist sentiments the PRD has promoted federalism and the subsequent strengthening of local government, what Massolo (2001) calls the "new municipalization of the left", for different reasons.⁴⁶ This shift of the Mexican left away from privileging the central state began in the 1980s as the PRD worked to strengthen the municipality and support functional federalism in order to attain true democratization (Barracca 2005). The party openly criticized the government of President Carlos Salinas (1988-1994) for violating the notion of federalism as it was presented in the constitution and demanded the protection of regional autonomy.⁴⁷ Additionally, as it became more active and successful in local and state elections, the party began to actively advance subnational interests such as increasing monetary resources and authority over policy at the national level.⁴⁸

The PRD's 2000 platform argued that Mexican federalism had been "harmed by a political regime that does not consider the necessities of the regions, violates the sovereignty of the states, and debilitates the municipalities," whereas a genuine federal regime should "try to develop the autonomy of municipalities and the administration of their resources".⁴⁹ An example of the PRD's advocacy for decentralization is party founder Cuauhtémoc Cárdenas' decentralization of the Federal District from 1997-2000 where, as mayor, he strengthened the capacity and responsiveness of delegations (subunits of the federal district) and decentralized the functions of the government (Ward and Durden 2002). Ward and Durden point out that the principle of subsidiarity, shifting activities to the lowest possible appropriate level, guided the mayoral administration during this time and was moderate to highly successful. Cárdenas'

⁴⁶ Massolo, Alejandra (1991:46).

⁴⁷ Examples of these actions include the PRD organizing public demonstrations after state elections in Tabasco (1990) and in Michoacán (1992).

⁴⁸ An example of this includes the challenge the party posed to the PRI-led central government over the Chamber of Deputies decision to reduce the budget of the PRD-controlled federal district in 1999.

⁴⁹ Author's translation of PRD Platform 2000.

support for decentralization in the federal district is reflective of the party's attitudes because of his position as founder and political face of the party.

It is important to note that the PRD became a full member of the Socialist International in September 1996, therefore identifying itself as a social democratic party. This alignment with the French Socialists and the British New Labor represented the pragmatic approach and redefined mission of the PRD and a willingness to embrace such ideas as market economics and decentralization. Support for these ideas, however, was not without stipulations: market mechanisms should serve the greater public good and decentralization of power was to be used to reduce regional disparities such as the poverty that afflicts southern Mexico (Reding 1997b). PRD support for decentralization, therefore, places primacy on a redistributive and egalitarian ideology. Conversely, the PAN's position emphasizes devolving power for the purpose of improving government and creating more accountable, efficient delivery of services.

Like the PAN, the PRD has taken advantage of the potential for decentralization to benefit the opposition. Ironically the PRI also began to embrace the practical aspects of decentralizing the Mexican system after its loss to the PAN in the 2000 presidential election. In July 2002, governors from PRI and PRD states formed the *Conferencia Nacional de Gobernadores* (National Conference of Governor's Association, CONAGO) and pushed for a conference to reevaluate and recalculate the rules of fiscal federalism (Edmonds-Poli 2006).⁵⁰

⁵⁰ The organization remains active and their agenda and objectives can be seen on their website (<http://www.conago.org.mx/>). Edmonds-Poli (2006) provides an interesting discussion of how the formation of CONAGO and their interaction with Vicente Fox from 2002-2004 over the federal funding structure has represented a shift in power away from the party apparatus, returning power to governors. Edmonds-Poli points to the fact that all three presidential candidates in the 2000 election were former governors instead of party members who were hand-picked by the parties as they had been in the past as an important indicator of the changes taking place.

Though PAN governors initially refused to join the organization, they relented and attended the 2004 conference. One scholar noted the shift in party perspectives relating to decentralization prior to the conference:

“The greatest paradox of the 2004 national convention will be that the PAN, which nowadays controls the national executive, and for many years has fought for a greater decentralization of resources as an opposition party, will have to behave as a conservative agent in charge of keeping in the hands of the federation enough power and resources to build a national project. In contrast the PRI, a party that developed its political hegemony through the centralization of all sorts of resources, will seek to shift the balance of power and resources to the entities [states]”.⁵¹

Though all three parties demonstrated varying degrees of willingness to decentralize, their motivations appear to be different. The PRI clearly intended to maintain its centralized control by decentralizing while the PAN had an ideological commitment, as well as a strategic interest, in giving state and local governments more power. The PRD shifted in its ideological commitment to a qualified support of decentralization that required a commitment to poverty alleviation after it began to successfully challenge PRI dominance. Each party's agenda varied which suggests that the actions taken on the part of each to decentralize may in fact produce unique outcomes. If these preferences held following the 1999 reforms, the PAN is likely to have actively pursued an agenda of decentralization and alternatives to central funding and corporatism. The limits of this ideological commitment to decentralization, if they do exist, would become evident following the 2000 presidential election once the PAN had control of centralized political and fiscal resources. Likewise, the PRI would be expected to advocate for a limited decentralization that remained highly reliant both politically and fiscally on the centralized party machine for direction and resources. This qualified commitment changed after the 2000 election, as is evidenced by the pursuit of alternative funding by PRI state governors,

⁵¹ De Remes (2003).

once the party no longer had control of the coffers at the national level. Because there has been no change in the PRD's status as an opposition party, it is likely to have continued to pursue a strategic, limited or gradual decentralization policy coupled with poverty alleviation and general calls for increased equality.

While it appears initially that decentralization was pursued in Mexico by the PRI to divert political conflict from the national stage to the local arena, opposition parties soon sought these same policy changes in order to shore up their own base of support just as they were gaining a foothold at the local level. The reforms would serve two purposes for opposition parties: improve democracy, a reform they had advocated for repeatedly, and open up the political process.

CHAPTER 3: RESEARCH DESIGN

3.1 Overview of the Project

This study utilizes a subnational approach to analyze efforts to decentralize water service provision in Mexico between 1995 and 2005. It examines the relationships between decentralization, intergovernmental relations, and municipal capacity using comparative case studies within three central Mexican states- Guanajuato, San Luis Potosí, and Zacatecas- and across municipalities within these states. Qualitative fieldwork was conducted within selected municipalities to determine if and how decentralization occurred and what impacts, if any, it had on water services.

3.2 Subnational Justification

Because this project relies on one country for its analysis, it is important to clarify the advantages of using a single country with multiple, subnational, case studies. As Snyder (2001) points out, a subnational study provides an effective way to increase the number of observations, a potential problem in single case studies. Additionally, and perhaps most importantly, because of the nature of decentralization, a study that takes only national level policies and politics into consideration is likely to miss the important dynamics that occur at both the state and local level in relation to national level decision-making. A subnational study provides a more accurate examination of decentralization at the local level, avoiding what Rokkan (1970) refers to as whole-nation bias, and provides better insight into the variation that takes place within states and countries. This is especially important because decentralization is a complex internal process, which by definition necessitates a discussion of multiple levels of government. A subnational

study potentially exposes both successes and failures of policy implementation and provides a more accurate assessment of why each has occurred.

3.3 Establishing Variables and Case Selection

This study asserts that the decision to decentralize and the form that decentralization takes are dependent on the political context in which the process occurs and the perceived ability of a municipality to effectively provide for the public. Two independent variables were examined in order to determine their relationship to decentralization and water service delivery. Figure 3.1 below provides an overview of the relationship studied.

Figure 3.1: Relationship of Variables



3.3.1 Intergovernmental Relations

This variable was further broken down into two categories: political and financial. The first of these two categories, political was an attempt to understand how party affiliation and the dynamics between the three levels of government in Mexico's federal system influence the process of decentralization. Chapter 2 presented an overview of the political party system in Mexico and both the ideological and strategic motivations for supporting or opposing

decentralization. It was important to attempt to understand the relationships that the municipalities in the three states had with state government and where partisanship played a role. Election results provided by the Center of Research for Development (CIDAC), the National Institute of Statistics and Geography (INEGI), and state election commissions were used to determine the partisanship of the state governor and the municipal president during the period under investigation.

The 1983 and 1999 Municipal Reforms put into place provided expectations for states to decentralize duties to the municipalities but offered little in the way of guidance for how to do so. The dynamic interplay between states and municipalities needed to be examined in order to assess where there is variation in how decentralization occurred and to understand whether this was due to partisanship. This aspect of intergovernmental relations was ascertained first by reviewing the expectations for decentralization established in both federal and state law related to water service delivery and then by using qualitative fieldwork to determine whether the legal expectations were met. A survey of both local and state actors was administered (the details of which will be discussed later in this chapter) and then interviews were conducted in order to better understand the interaction between the various levels of government, political parties, and the water services sector.

Additionally, the dynamics of intergovernmental relations were likely to be apparent in how the states and central government provided funding to the municipalities to carry out their expanded duties. This aspect of intergovernmental relations was examined both quantitatively and qualitatively. First, the origin of municipal resources was reviewed. Historically, municipalities in Mexico had few ways to generate substantial revenue to use at the local level. Transfers from the federal governments to the states, and more recently to municipalities, had been an established practice in Mexico and since the 1980's, subnational governments had largely

foregone their ability to collect and retain revenue in exchange for these transfers. After an assessment of how much funding municipalities received and how much revenue they were able to generate themselves, attempts were made to determine how much control they had over these resources based on qualitative fieldwork. Data related to state and municipal finances was collected from INEGI and each state's department of finance for the years included in this project.

3.3.2 Municipal Capacity

Chapter 2 presented the arguments surrounding decentralization and municipal capacity. For the purpose of this study, municipal capacity was measured using the Human Development Indicator scores assigned to municipalities in 2000 by the National Population Program (*El Programa Nacional de Población*), a program coordinated by the *Consejo de Población* (CONAPO) in Mexico.⁵² The Human Development Indicator (HDI) served as a proxy measurement for local government capacity based on its conception as an “output” of government performance (ADB 2008). The outputs calculated in the HDI score (life expectancy, literacy and school attendance, and per capita income) are all an “immediate step in the chain and therefore a good proxy indicator of capacity”.⁵³ It should be noted that this is not to say that other factors do not influence the context in which the relationship between capacity and these outputs operate. While an HDI score offers some insight into relative municipal capacity based on the assumption that higher capacity local governments will be better able to provide for their population, qualitative fieldwork provided a more complete picture of the actual capacity of local

⁵² HDI scores from 2000 were used for initial case selection. In 2005, CONAPO created a score for each Mexican municipality to determine their Risk of Marginalization but did not update municipal or state HDI scores. Risk of Marginalization scores are based on the following factors: education levels, standard of living, employment income, and percentage of the population living in rural communities. Risk of Marginalization scores were used in order to assess how much or little change in capacity there had been in municipalities between 2000 and 2005 and will be presented and analyzed in Chapters 4 and 5.

⁵³ Asian Development Bank (2008:5).

governments in Mexico to perform duties and provide services for their citizens relative to other municipalities.

HDI scores are calculated using three basic parameters of human development identified by the United Nations Development Programme and replicated by CONAPO:

1. Life expectancy: the capacity to enjoy a long and healthful life.
2. Degree of adult literacy and joint level of scholastic attendance of children, adolescents and young people (from 6 to 24 years): the capacity to acquire knowledge.
3. GNP per capita fit to the spending power of the dollar in the United States: the capacity to access resources that allow for a decent standard of living.

Capacity was also measured by the amount of resources a municipality was able to generate and use at the local level. The previous discussion about intergovernmental relations makes it clear that there are many reasons a municipality may be deterred or prevented from generating revenue but if the local government can and does, it suggests that they have a greater capacity than one that does not once the effects of other limitations are controlled for. This was measured by looking at local revenue generation data provided by INEGI.

Finally, as discussed in Chapter 2, the 1999 Municipal Reforms provided an opportunity for municipalities to request that states transfer to them the responsibility for water services. One would expect that a municipality with greater capacity would request that these services be transferred to them because they are confident in their ability to deliver the service. It is however possible that there are strategic reasons for requesting the transfer of services which will be discussed in Section 3.4. Table 3.1 provides an overview of the independent variables included in this study. Note that there are two independent variables which each have multiple indicators. The presence of and degree to which these indicators impact decentralization was compared using the identified measurements collected from a variety of sources including fieldwork, archival research, and data gathering.

Table 3.1: Independent Variables

Variables	Indicators	Measurement
X_1 Intergovernmental Relations	A. Political- Influence of partisanship on local decision making related to water services B. Financial- Distribution of funding to local governments through transfers from state and federal government C. Absence of obstructionist behavior by states to local revenue generation	A. Survey and Interview with <ul style="list-style-type: none">• municipal presidents• local water agency directors• state water agency directors B. Review of <ul style="list-style-type: none">• municipal revenue data• federal and state revenue transfer data C. Interviews with municipal presidents
X_2 Municipal Capacity	A. Effects of perceived municipal capacity on decision to decentralize power B. Demands for services to be decentralized made by a municipality in accordance with the 1999 Municipal Reform.	A. Resources generated by municipality and Human Development Indicator for each municipality B. Review of transfer requests in state and Interviews with Municipal Presidents

Chapter 2 established the various forms that decentralization can take: devolution, deconcentration, and delegation.⁵⁴ The intention of the various municipal reforms put into place by the Mexican government over the last three decades was to devolve responsibility to local governments. This is not to say that the other two forms of decentralization did not occur but the language of the changes made to Article 115 specifically established new responsibilities for the municipal government to provide water services. Thus, decentralization in accordance with the Municipal Reforms should be based on the transfer of responsibility and authority from the federal and state governments to the municipalities. A municipality to which responsibility was decentralized should have had proper authority and the autonomy to exercise this authority.

⁵⁴ The following definitions will be used in this study: devolution- the transfer of responsibility and authority to local governments, deconcentration- placing resources and staff at lower levels within the same administrative structure i.e.: regional offices of a national water company, and delegation- assigning responsibility to a third party.

Table 3.2 presents the dependent variables used for this study. The first independent variable is the broad process of decentralization. The process of decentralization was differentiated based on the degree to which it was perceived to occur using the indicators of administrative, fiscal, and regulatory authority. The other two dependent variables, water network coverage and water quality are outcomes utilized in order to determine whether decentralization, if in fact it occurred, improved water service delivery to the public in the municipal case studies. While decentralization in and of itself may be important, if it did not improve access to a reliable source of clean water for the public, then its implementation may not matter in terms of improving the human condition. Network expansion is an important consideration related to water service delivery because many small municipalities in Mexico have historically lacked broad access to water for households. Clean water has similarly been elusive for much of small town Mexico so any improvements that can be in some way linked to decentralization are important to analyze for the purpose of increasing future access.

Table 3.2: Dependent Variables

Variables	Indicators	How Measured
Y_1 Decentralization	<p>A. Administrative Authority</p> <ul style="list-style-type: none"> - local control of assessing and collecting user fees <p>B. Fiscal Authority</p> <ul style="list-style-type: none"> - water services budget and expenditures are locally controlled⁵⁵ - local control over network expansion <p>C. Regulatory Authority</p> <ul style="list-style-type: none"> - water quality assessment is locally controlled 	<p>Review of state laws related to water services</p> <p>Review of state and federal budget related to water services</p> <p>Review data provided by local and state water agencies</p> <p>Review of public expenditure data</p> <p>Interviews with Municipal Presidents and water agency officials</p>
Y_2 Network Coverage	Increased access to water for municipal residents	<p>Percent of the population with water services (% with piped water) based on the INEGI's census data between 1995 and 2005.</p> <p>Review of data provided by local and state water agencies</p>
Y_3 Water Quality	Improvements in municipal water quality and performance of utilities	Changes in quality and agency performance between 1995 and 2005 based on state and municipal agency data.

3.3.3 States Selected

The three states selected for this project- Guanajuato, San Luis Potosí, and Zacatecas- were chosen based on their similarities and key differences. All three states share a central Mexican location and similar levels of human development; however, each has followed a distinct political course during the period under study (1995-2005) and implemented CNA recommendations for water reform differently.⁵⁶

⁵⁵ Local control in this project will mean under the jurisdiction of either the municipal government and/or the municipal water agency; however, these will be differentiated in Chapters 4 and 5 to determine the extent of decentralization from government in general.

⁵⁶ The Human Development Indicator utilized by CONAPO is a composite based on three criteria discussed earlier in this section. Scores are on a 0-1.0 scale, 1.0 being the highest. Human Development rankings for 2000 by state:

Figure 3.2: Map with Selected States



Table 3.3 presents the gubernatorial election results for each state between 1991 and 2009. While San Luis Potosí continued to be controlled by the historically dominant PRI at the state level throughout the 1990's and even the early 2000's, Guanajuato's state politics shifted to the opposition PAN by 1995 and it has maintained a strong foothold since. Zacatecas had strong PRI control until 1998 when the secondary opposition party, the PRD, took control of the governor's office and has remained in power since. These three states presented an opportunity to study variation in the effects of partisanship at that state level and how this influences decentralization policies at the local level.

Guanajuato- .761 (rank 24th), San Luis Potosí- .767 (rank 22nd), Zacatecas- .754 (rank 27th). These rankings indicate the relative development of each state compared to other states in Mexico (there are 31 total states and one federal district). For perspective, Mexico as a whole had a Human Development Ranking of .814 in 2000 which placed it 52nd in the world between Bulgaria (.800) and Latvia (.817).

Table 3.3: States with Gubernatorial Governing Party

<u><i>Guanajuato</i></u>	<u><i>San Luis Potosí</i></u>	<u><i>Zacatecas</i></u>
1991- PAN	1991- PRI	1992- PRI
1995- PAN	1997- PRI	1998- PRD
2000- PAN	2003- PAN	2004- PRD
2006- PAN	2009- PRI	

Besides their political differences, these three states responded differently to the recommendations made by the CNA related to water service decentralization. By 1988, water supply and sanitation services in Guanajuato were under the administration of municipalities while in San Luis Potosí and Zacatecas the state maintained this responsibility. By 1996, all three states had technically transferred their water services to the municipal level; however, this was not done the same way in each state and some municipalities remained highly dependent on states. The Table 3.4 demonstrates the differences:

Table 3.4: Provisions for Management of Water Services in State Laws

Creation of Decentralized Agencies

	Autonomous ⁵⁷ Municipal Level	Dependent Municipal	Autonomous State Level	Dependent State
Guanajuato	X	X	X	X
San Luis Potosí	X		X	
Zacatecas	X	X	X	

Source: Pineda (1999)

⁵⁷ Autonomous agencies at the municipal and state level refer to agencies that are operated at either the state or municipal level but are independent of government and “Dependent Municipal” or “Dependent State” refers to offices directly dependent on the level of government (not autonomous agencies).

All three states created autonomous municipal or state level entities, which were to serve as independent actors responsible for implementing water policy. The states created state water commissions (the *Comisión Estatal del Agua de San Luis Potosí*, the *Comisión de Agua Potable y Alcantarillado del Estado de Zacatecas*, and in Guanajuato, the *Comisión Estatal del Agua*) with varying degrees of authority and responsibility. Though all of the agencies in San Luis Potosí were categorized as autonomous of the local or state government, in Guanajuato and Zacatecas, some municipalities retained direct responsibility for the provision of water.⁵⁸ The interaction between the agencies at the state and local level was also examined to help inform the discussion of decentralization since the authority and responsibility divided between the two is different in each state. Much of this was assessed using qualitative fieldwork to get a clear understanding of how power is distributed between the agencies and how the agencies interact with government.

The three states also responded differently to the CNA's recommendations regarding how to structure their legal framework related to water services. States were encouraged to consolidate the decentralization process, establish tariff autonomy, permit service suspension, establish a payment catalog, earmark revenue, and provide a fiscal character to debts.⁵⁹ Table 3.5 presents the legal framework in each state compared to the recommendations made by the CNA.

⁵⁸ Though the agencies in San Luis Potosí are all classified as technically "autonomous", in practice, this is clearly not the case and one of the case studies, Ahualulco which falls into this category, will be examined in Chapter 5.

⁵⁹ These recommendations by the CNA are expanded in Chapters 4 and 5 as they play out in the various state contexts.

Table 3.5: Conditions for the Operation of Water Services in State Laws

State	Tariff Autonomy		Service Suspension		Payment Catalog		Earmark Revenue		Fiscal Debt	
	Directive Board	Local Congress	Yes	No	Yes	No	Yes	No	Yes	No
Guanajuato	X		X		X			X	X	
San Luis Potosí		X	X			X	X			X
Zacatecas	X		X		X		X		X	

Source: Pineda (1999).⁶⁰

Though services in Guanajuato, San Luis Potosí and Zacatecas were all legally transferred to municipalities by 1996 in accordance with the CNA's directive there are considerable differences in how the implementation of decentralized services took place and whether municipal provision was autonomous or remained dependent on the local or state government. These and other variations in the decentralization process across and within each state, which were examined in fieldwork, will be analyzed in Chapters 4 and 5.

3.3.4 Municipalities Selected

Within each of the three states, municipalities were selected that vary based on their capacity and partisan affiliation. Capacity is represented by a proxy indicator, the HDI score that measures human development of the population relative to other municipalities in the state and throughout Mexico.⁶¹ Partisanship has been established using the partisan affiliation of the elected municipal president who acts as the head of local government. Selection of municipal cases within the three states is based on the following criteria: First, only municipalities with

⁶⁰ Tariffs are set by either an independent board or local congress instead of the state legislature. Payments related to water services were to be used for water sector purposes. Guanajuato was one of only three states that did not comply with this requirement. Debts related to water user fees were to be collected in order to improve payment rates. San Luis Potosí was one of only two states that did not comply with this requirement.

⁶¹ See Hasegawa (2001) and UNDP (2000) for discussions of the relationship between human development and municipal capacity.

populations of less than 32,000 people at the 2000 census were considered. This was done for practical considerations such as the ability to contact local government officials and water commission representatives in order to conduct surveys and interviews. Additionally, a comparison of small municipalities in Mexico helps prevent a comparison of “unlike” cases. This is especially important in Mexico because of the practice of preferencing larger, urban centers, what Barracca (2005) calls the priority city thesis. According to this view historically important and/or large urban centers, especially state capitals, receive a disproportionate amount of state and federal resources. Because of this, a comparison that incorporates these municipalities without accounting for these historical practices paints an inaccurate picture of how other municipalities in Mexico are treated by other levels of government and given authority over municipal services.

Second, all municipalities were divided into two categories, low capacity and high capacity, based on the HDI scores assigned to them in 2000 by CONAPO. All three states selected had overall HDI scores that place them in the medium-high range and the municipalities identified for this study range from medium-low to medium-high.⁶² This classification was used as guidance for the initial selection of a group of cases from which to draw from. Though the divide between high and low capacity in the cases is closer than the original classifications used by CONAPO, compromising somewhat on this aspect will ensure that the selected cases are relatively the same size and will improve the comparison of partisanship. In 2000, the municipal HDI scores in Zacatecas are, overall, much higher and only one municipality was considered below average in the entire state; therefore, the lower capacity municipality (Cuauhtémoc) is slightly higher than the lower capacity municipalities in the other two states.

⁶² HDI scores range from 0-1.0 (1.0 is the highest level of capacity). The classifications established by the CONAPO consider municipalities with a score of 0.50- 0.649 to have a medium-low (*medio bajo*) HDI while those with a score of 0.650- 0.799 had medium-high (*medio alto*) HDI. Ultimately, all low capacity municipalities included in this study had scores below 0.702 and high capacity municipalities had scores above 0.725. Across the three states, Santa Catarina, San Luis Potosí has the lowest score of 0.552 and Luis Moya, Zacatecas has the highest score of 0.776 on the 1.0 scale.

Third, municipalities were then sorted based on election returns between 1994 and 2007. This was done in order to assess whether the municipal administration was controlled by the same party as the state government or an opposition party. Primary emphasis was placed on the 1997 and 2000 election outcomes since these determine the partisanship of the local government before and during the implementation of the 1999 Municipal Reform and the changes proposed by the CNA. Partisanship is labeled as either majority (controlled by the same party as the state governor) or opposition (controlled by any party besides that of the state governor). Every attempt was made, within the confines of population and HDI scores, to find municipalities that had clear patterns of control by either the majority party or the opposition; however, as with HDI scores, some purity in partisanship was sacrificed in order to maintain a closer approximation between like cases. As previously discussed at length, partisanship is an important factor for case selection but here it was balanced with two other considerations: size and development level. Examination of the cases was then broken down into a two-part study:

Part A. Examines the influence of intergovernmental relations and capacity on the process of decentralization by looking at the performance of municipalities governed by different parties in one state.

Part B. Examines the influence of intergovernmental relations and capacity on the process of decentralization by looking at the performance of municipalities of one party in states governed by difference parties.

Part A- Four municipalities were selected in the state of Guanajuato, a state that has had a heavy PAN presence at both the state and local level since the early 1990's. Both the governor's office and the state's unicameral legislature were controlled by the PAN throughout the time period covered in this study. The 2000 presidential election of Vicente Fox, the PAN candidate, allowed for the control of partisanship at the federal level and the state level while examining for the interplay of partisanship between the state and local government. The following table presents the levels of government with the municipal level highlighted to emphasize the level of analysis.

Table 3.6: Level of Analysis- Part A

PAN Federal		
PAN State		
PAN Municipality	PRI Municipality	PRD Municipality

The state of Guanajuato has 46 municipalities. Of these municipalities, the PAN has been a strong contender at the local level since 2000, the year following the 1999 Municipal Reforms. Twelve of 46 municipalities had remained in the PAN's control in all three municipal elections since the year 2000. In thirty-two municipalities, the PAN had won two out of three of these elections demonstrating both the staying power of the party as well as the relatively competitive nature of politics in the state; however, even with a PAN victory at the state and federal level in 2000, eighteen municipalities were won by other parties the same year.⁶³ The municipalities in Guanajuato were selected because of their partisanship and their capacity. Table 3.7 shows the cases and how they are categorized.

Table 3.7: Municipal Cases- Guanajuato, Mexico

	High Capacity	Low Capacity
PAN Municipality	Jaral del Progreso	Ocampo
Non-PAN Municipality	Tarandacuaao	Xichú

⁶³ Author's calculations based on CIDAC election data.

Statistics for the case study municipalities in Guanajuato are presented in Table 3.8. These cases provided an opportunity to study the impact of municipal capacity and intergovernmental relations on decentralization efforts while keeping the state and federal governing party constant.

Table 3.8: Selected Statistics for Municipalities in Guanajuato, Mexico

	PAN % in 2000 Election	PAN % in 2003 Election	PAN % in 2006 Election	HDI in 2000	Population in 2000
Jaral del Progreso	46.4%	39.9%	52.7%	0.727	31,000
Ocampo	40.4%	56.8%	62.2%	0.667	20,000
Tarandacuao	22.9%	38.9%	52.6%	0.749	10,000
Xichú	21.2%	47.6%	48.0%	0.659	10,000

Sources: Compiled with data from CIDAC, INEGI, and CONAPO.

Note- Light gray shading indicates PAN win and dark gray shading indicates PRI.⁶⁴

Part B- This section of the project compared decentralization in PAN municipalities across all three states. Two municipalities with PAN governments in each state were selected as case studies, one with a low HDI score and one with a higher HDI score. The variation in this part of the project was the state government since variation of partisanship at the federal and local level was controlled for. This provided an opportunity to look more closely at the interaction between the state and the municipality based on their capacity. It was also done in order to provide some insight into the intergovernmental dynamics between the PAN municipalities and PRI and PRD governed states. The Table 3.9 presents the three levels of government with the state level highlighted to demonstrate the partisan differences in this part of the research.

⁶⁴ Note that there is an absence of PRD municipalities. In Guanajuato, only 6 municipalities were controlled by the PRD during the three elections cycles from 2000-2006 and none of them could be utilized as case studies due to their size or level of capacity.

Table 3.9: Level of Analysis, Part B

PAN Federal		
PAN State	PRI State	PRD State
PAN Municipality		

Table 3.10 presents the case study municipalities and their capacity. Note that there is one high and one low capacity municipality in each state.

Table 3.10: Municipalities in Three States with Capacity Indicated

	Guanajuato (PAN)	San Luis Potosí (PRI)	Zacatecas (PRD)
Hi Capacity PAN	Jaral del Progreso	Cerritos	Juchipila
Low Capacity PAN	Ocampo	Ahualulco	Cuauhtémoc

Table 3.11 presents selected statistics for the municipalities, which were included in this part of the research. While there is variation on the level of capacity, population and PAN control of the municipal government are similar. Though some municipalities were governed by the PRI at one point or another, the PAN governed all of the municipalities just after the implementation of the 1999 Municipal Reforms.

Table 3.11: Selected Statistics for Municipalities in Three States

Municipality	HDI 2000	Population 2000	PAN % in 00/01 Election	PAN % in 03/04 Election	PAN % in 06/07 Election
Jaral del Progreso, GTO	0.727	31,635	46.4%	39.9%	52.7%
Ocampo, GTO	0.667	20,848	40.4%	56.8%	62.2%
Ahualulco, SLP	0.669	19,134	52.6%	56.19%	35.5%
Cerritos, SLP	0.752	20,571	55.0%	53.07%	34.7% ^a
Cuauhtémoc, ZAC	0.709	10,796	34.4%	8.5%	9.2%
Juchipila, ZAC	0.754	12,589	31.5%	44.59%	17.3%

Sources: Election data from CIDAC, HDI data from CONAPO, and population data from INEGI.

^a PAN losses are shaded grey

Two municipalities were selected of roughly the same size in each state to mitigate any differences within a state based on population. Controlling for the effects of party and capacity are the most important factors so they were given the greatest weight in terms of allowing for a wider variation in population. Additionally, though some municipalities had a non-PAN government elected during one of the later elections, each municipality had a PAN government after the 2000 or 2001 election, which was the closest election to the implementation of the 1999 Municipal Reform.

3.3.5 Participants Selected

Because of the subnational nature of this project, fieldwork was imperative in order to facilitate interaction with the relevant actors at each level of government. In each municipality,

attempts were made to make contact with individuals that would have the greatest knowledge and insight into the process of water decentralization and the effects this process has had on water service delivery. The following individuals either participated in a survey and/ or were interviewed:

- current and former municipal presidents
- current and former local water agency officials
- state water agency officials
- federal water agency officials

This project utilized two forms of information gathering. The first stage involved a survey that was administered both electronically and on paper to three categories of individuals: municipal presidents, local water agency officials, and state water agency officials. Each group received a survey with questions relevant to their experiences with decentralization.⁶⁵ Individuals were then interviewed multiple times to better understand both their responses to the survey and their overall experiences with decentralization in their respective state or municipality.

Additional fieldwork involved interviews with additional individuals at the local level and members of civil society who had been engaged in the decentralization process.

3.4 Hypothesis Discussion

The following hypotheses were tested to explain 1) how intergovernmental relations and municipal capacity influence the implementation of decentralization policy and 2) once implemented, whether municipal capacity affects the success of water service decentralization.

H₁: State governments controlled by a neoliberal party will be more likely to decentralize water services.

H₂: State governments controlled by an opposition party will be more likely to decentralize water services.

H₃: State governments will be less likely to decentralize water services in municipalities that lack the ability to effectively provide for their citizens.

H₄: State governments will be less likely to decentralize water services to municipalities of a different political party.

H₅: Municipalities with greater capacity will be more likely to request that responsibility for water services be devolved to the local level.

H₆: Decentralization of water services will be more successful where municipalities have greater capacity.

H₇: Decentralization of water services will be more successful when the municipal and state governments are from the same political party.

If in fact these hypotheses are correct, one would expect to see more decentralization take place in states controlled by neoliberal and opposition parties and in municipalities that share the same political affiliation as the state's governor. Once states committed to decentralizing, they would look at municipalities to determine which have the capacity to deliver the services. If the municipality demonstrated it has the capacity to deliver services, decentralization would occur. Additionally, it was important to note in which cases the different forms of decentralization discussed in Chapter 2 emerge. As stated in Chapter 2, devolution is the form most likely to promote the goals of decentralization: greater political accountability, checks and balances between different levels of government, improved efficiency, and competition between

subnational units to devise innovative policies and practices. Based on these hypotheses, we would expect to see the following pattern related to the decision to decentralize emerge:

Table 3.12: Expectations Based on Hypotheses (Municipalities Indicated)

		<i>Capacity of Municipality</i>	
		High Capacity	Low Capacity
<i>State and Municipal Government Control</i>	Same Party	Decentralization most likely: Jaral del Progreso, GTO	Decentralization less likely: Ocampo, GTO
	Different Party	Decentralization less likely: Cerritos, SLP Juchipila, ZAC Tarandacua, GTO	Decentralization least likely: Ahualulco, SLP Cuauhtémoc, ZAC Xichú, GTO

Per the expectations presented in Table 3.12, one would expect to see the highest rate of decentralization taking place in high capacity municipalities governed by the same party as the state government. Conversely, one should expect to see the least amount of decentralization taking place in low capacity municipalities that are governed by a different party than the state government. The other two combinations of variables would most likely lead to potential implementation of decentralization that is highly contingent on the context. The following discussion about each hypothesis will clarify why each of these outcomes were expected to emerge.

H₁: State governments controlled by a neoliberal party will be more likely to decentralize water services.

Based on the ideological commitment to decentralization that the PAN party has demonstrated in both their electoral platforms and their advocacy, the expectation was to see the most decentralization pursued in states controlled by the PAN. In this study, this means that the most active support for decentralization of water services would be taking place in Guanajuato because of the PAN's historical strength in the state at both the gubernatorial and local level. This would be consistent with their placement right of center on the ideological spectrum, a position that often advocates for subnational empowerment (Bruhn and Greene 2007). The shift in power with the 2000 election of PAN candidate Vicente Fox should have yielded no change. The PAN was likely to continue to advocate most actively for decentralization while the PRI and PRD remained ideologically less supportive of decentralization. Table 3.13 presents the outcomes that were expected based on the assumptions made in *H₁*.

Table 3.13: Expected Outcomes Based on Ideology

	<i>Neoliberal State</i>	<i>Non-Neoliberal State</i>
<i>Neoliberal Municipal Government</i>	Decentralization Most Likely: Jaral del Progreso, GTO	Decentralization Less Likely: Cerritos, SLP
<i>Non-Neoliberal Municipal Government</i>	Decentralization Likely: Tarandacuaao, GTO	Decentralization Least Likely: No case studies

It could also be assumed that this model would lead to an increase in decentralization in Ocampo, the other PAN municipality in the PAN state because of the party's ideological commitment to

decentralization at both the state and the municipal level; however, when coupled with the assumptions made regarding municipal capacity, decentralization should have been less likely in Ocampo because it has a lower municipal capacity. A similar situation would also be likely in Xichú because though it is also in a PAN state, it has a lower capacity and while the state government of Guanajuato might be ideologically inclined to decentralize water supplies to the municipality, Xichú's low capacity would be seen by the PAN as threatening to its ideological advocacy if it failed.

H₂: State governments controlled by an opposition party will be more likely to decentralize water services.

This hypothesis is based on the notion that decentralization will distribute power through the transfer of resources and other responsibilities away from central control. It has already been stated that Mexico has historically been a highly centralized system and that the PRI party controlled that system from 1929 until the 1990's; therefore, decentralization directly challenges the control of the dominant party in power. Prior to electoral victories opposition parties fought on the periphery, with little success, or access to resources and power. Decentralization would seem to serve opposition interests of acquiring power and control significantly more than those of the party in power.

This notion of strategic implementation should have led to moderate support for decentralization in PRD controlled Zacatecas. This is because of the PRD's relatively recent shift in positions to support decentralization and the fairly limited support for the policy in both electoral platforms and direct action which suggests that the purpose of decentralizing in Zacatecas had more to do with shifting power away from the central government and less to do with ideology. Any support for decentralization by PRI states, including San Luis Potosí, was apt to be strategically based on reconstituting control at the center by legitimizing the corporatist

party's power at the subnational level since the party has demonstrated little if any ideological commitment to decentralization.

Restated, we would expect to see the PAN and the PRD advocate for more decentralization of federal resources to the state than the PRI in order to take power away from the center. State governments in Guanajuato and Zacatecas should have been more actively advocating for decentralization compared to the government of San Luis Potosí. Conversely, it is possible that the dominant party would advocate for decentralization in San Luis Potosí if it reduced their fiscal and administrative burden or put control of services in the hands of incapable opposition municipalities that would be perceived as failures. This "sabotage" by decentralization will be further elaborated on in *H₄*. In summary, parties in opposition typically have more to gain by decentralizing services since it gives them greater access to power in the form of financial and administrative resources.

It should also be noted that the political picture changed substantially between 1995-2005 and the historical category of "opposition" in Mexico is based on PRI control and the one-party dominant system it entrenched in the seventy years preceding the 2000 presidential election. In 2000, the PAN candidate Vicente Fox won the presidency taking control of the central government and its significant power structure away from the PRI. This technically made the PRI and PRD the opposition parties to the PAN's dominant position so whether this hypothesis held after 2000 will in some way determine whether advocacy of decentralization has more to do with the role of a party in the greater political context (opposition vs. dominant or majority party) or is a reflection of ideological preferences (local control vs. a strong central state).

H₃: State governments will be less likely to decentralize water services in municipalities that lack the ability to effectively provide for their citizens.

The argument behind this hypothesis, which reflects Barracca's "fiscal capacity thesis", is twofold: first, as discussed in the literature review, most advocates of decentralization also strongly argue that its success is based on the ability of local governments to carry out their increased responsibilities.⁶⁶ The majority of the literature argues that municipal capacity matters; therefore, in order to have successful decentralization, it is logical to assume that states will focus on those municipalities that they feel can adequately provide services. Perhaps this has less to do with their desire to fundamentally see decentralization succeed (since it is a depletion of state authority and resources) and instead it is based on how the success or failure of decentralization will reflect on the state government. Mexican states were given discretion in a multi-level government agreement, published in the *Diario Oficial de la Federación* (September 26, 1983), to determine which municipalities would receive control over water services. One might suspect that states would intentionally sabotage decentralization in order to reconstitute their power by pointing out the failings of policies that shift power to lower levels but this could also be countered with the position that if parties do decentralize more frequently to municipalities controlled by their own party (see *H₃*), the failure of the local government is a reflection on the party as a whole, something neither the state nor the local government want. If this hypothesis is correct, we would observe states decentralizing water service delivery to municipalities with higher HDI scores as this denotes their ability to provide for their citizens.

If strategic decentralization was taking place, after the 2000 election, strategic decentralization with the objective of sabotaging local governments should have shifted from PAN states to PRI states that hoped to see the municipality fail and reflect poorly on the federal

⁶⁶ Barracca (2005).

government (PAN after 2000). Thus one would expect to see more strategic decentralization to low capacity municipalities in San Luis Potosí and Zacatecas, less in Guanajuato.

H₄: State governments will be less likely to decentralize water services to municipalities of a different political party.

This hypothesis is built on Barracca's (2005) "partisan conflict thesis". Based on this thesis, parties will not want to give up power to subnational governments controlled by other parties; therefore, they will choose not to decentralize because to do so would give the other party more power and potentially more success in governing which might present a threat to the party in control at the state level. If the hypothesis was correct, one would expect to see each party decentralizing to its own municipal governments more frequently than to those controlled by other parties. This means that there should have been more decentralization in PAN municipalities in Guanajuato, more PRI decentralization in San Luis Potosí, and more PRD municipalities in Zacatecas with decentralized water services. Conversely, it is possible that states might strategically decentralize to weaker municipalities controlled by a different party in order to generate poor or failed service provision that reflects negatively on the other party. There is even less of an incentive to decentralize to high capacity municipalities governed by another party which may successfully deliver services, positively reflecting on the other party, especially if that other party is in power at the federal level. If this is true, from 1995-2000, PAN and PRD states would be very unlikely to decentralize services to high performing PRI municipalities and from 2000-2005 the PRI and PRD would resist doing so. This would prevent the federal government from garnering any strength from successful decentralization.

The previous four hypotheses focused on the top-down decision to decentralize made by the state. Table 3.14 displays a breakdown of the two main motivations states had to decentralize

and the plausibility that each was utilized based on the partisanship of the state and municipality in addition to municipal capacity. Each outcome is broken down into one of two motivations that the state has to decentralize: strategic and ideological. The chance that decentralization occurred is based on a range of likeliness (unlikely → possible → likely) as well as one outcome where decentralization is unnecessary. It should be clarified that the outcomes in Table 3.14 are dependent on the general likeliness of decentralization occurring that are established in Table 3.12. For example, in the unlikely case (based on the prediction of Table 3.12) that decentralization occurs in a low capacity municipality controlled by an opposition party, the motivations of the state are indicated in Table 3.14. Table 3.14 does not suggest that decentralization is more likely in this case but simply that in the rare instance that it occurs, the motivations of the state were possibly ideological but more likely strategic.

Table 3.14: Expected Outcomes Based on Motivation of State

		<i>Capacity of Municipality</i>	
		High Capacity	Low Capacity
<i>State and Municipal Government Control</i>	Same Party	Strategic decentralization unnecessary Ideological decentralization likely	Strategic decentralization unnecessary Ideological decentralization possible
	Different Party	Strategic decentralization unlikely Ideological decentralization possible	Strategic decentralization likely Ideological decentralization possible

The following hypotheses address the behavior of municipalities and the success of decentralization implementation.

H₅: Municipalities with greater capacity will be more likely to request services from the state.

The 1999 Municipal Reform was implemented to improve municipal government and to overcome the deficiencies of the reforms introduced in 1983. One aspect of this reform included the ability of municipal governments to request that services be transferred to them. Because these requests were voluntary one would expect variation in implementation at the subnational level. Though states had been directed to decentralize under both sets of municipal reforms, and the CNA's directive specifically related to water, they had been slow to change. Pressure to decentralize by the central government had not existed because true decentralization had not been a priority of presidential administrations prior to 2000 and states were likely to resist giving away their authority and limited resources. Pressure is more likely to be exerted upward by municipalities that desire the opportunity to assume responsibility for service delivery but not by those that felt inadequately prepared. In Harber and Faust's (2007) study of Ecuador, under conditions of voluntary decentralization similar to that taking place in Mexico, municipal governments with greater capacity were more likely to demand decentralization of services than those without. If this hypothesis is correct similar outcomes would be expected in Mexico.

Low capacity municipalities would be less likely to request a transfer of services because they could not fulfill the additional responsibilities associated with water service delivery (see Chapter 2). The question is whether the incentives changed when the PAN party took control at the federal level and this overrode concerns about their capabilities to perform new expanded duties like water service delivery. From 1995 to 2000, higher capacity PRI municipalities should have been even more likely to request service transfers than PAN and PRD high capacity municipalities because they had added support from the federal government. Between 2000 and 2005, higher capacity PAN municipalities should have been even more likely to request service

transfers than PRI and PRD high capacity municipalities because their party was now in control of the presidency and the political and fiscal resources that accompanied it. Additionally, the use of federal transfers that circumvented the discretion of state governments would reinforce this. It is also possible that during both of these time periods, low capacity municipalities governed by the president's party were also more willing to request transfers because of the perception that "their" party would assist them because it had control of the federal government. This would, perhaps, override their practical concerns over performance.

H₆: Decentralization of water services will be more successful where municipalities had greater capacity.

This hypothesis is based on a key assumption made by many in regards to decentralization: municipal capacity matters. If municipal governments are given decision-making authority, have the ability to properly administer policies, and have control over fiscal resources, they would be better suited to take responsibility for service delivery; however, having these duties alone does not mean that they would be successful. Municipalities in Mexico were granted many more responsibilities since decentralization began in 1983 but this formal ceding of powers to the local level did not always result in greater capacity. Within the limitations established by other levels of government and institutions, some municipalities were better able to carry out their fiscal, administrative, and regulatory duties. Because of the difference between the formal and practical ability of local governments, it was important to assess what they had done with the powers granted to them. If they were effective in carrying out the fiscal, administrative, and regulatory responsibilities granted to them in other areas, it was likely that the municipal government was capable of doing so with water services too. Hence the logic for selecting the human development indicator as a proxy for municipal capacity: if the local government could

adequately carry out its responsibilities in the areas measured by the indicator (education, healthcare, and economic activities), it was more likely that it would be able to provide adequate water services. In municipalities with high HDI scores, local governments were likely to be successfully fulfilling some of these duties related to water service delivery including:

- build/ operate and maintain water networks
- bill users and collect fees
- monitor water quality
- budget water services

The use of the HDI supports the most commonly promoted theory regarding decentralization: it should be preceded by capacity, what Litvak et al (1998) call a top-down, supply-driven framework. If this hypothesis was correct, those municipalities that demonstrated stronger capacity would be more successful in providing water to the public. While it is possible that, as Fiszbein (1997) points out, municipal capacity can be the objective of decentralization instead of a necessary precondition, a majority of the literature suggests that this is not the case and documented failures of decentralization are often attributed to the inability of local governments to adequately carry out the responsibilities delegated to them.⁶⁷

If this hypothesis was correct, decentralization would be pursued in municipalities with higher levels of human development and one would observe an improvement in water service delivery, demonstrated by an increase in the percentage of the population with piped water to their home or onto their property after water service delivery is decentralized by the state. Furthermore, due to the expected support of the federal government both fiscally and politically, efforts to decentralize should have been even more successful between 1995 and 2000 in PRI controlled municipalities while PAN controlled municipalities would exhibit greater success

⁶⁷ As pointed out previously in this chapter municipalities might also improve their capacity, under conditions of decentralization, as they undertake their job to provide services. This demand-driven argument suggests that municipal governments would live up to the expectations established for them if given the opportunity.

between 2000 and 2005. This “success”, defined in terms of expanded network coverage and improved water quality, should have been greater compared to other high capacity municipalities that lacked the support of the federal government during each time frame.

H₇: Decentralization of water services will be more successful when the municipal and state governments are from the same political party.

Similarly to the partisan conflict thesis presented by Barracca (2005), this hypothesis assumes that subnational governments from the same party will have a greater incentive to work together to make decentralization successful. While states may not be naturally inclined to give up their power to municipal governments, the ability of municipal governments to request decentralization under the 1999 Municipal Reform and ultimately appeal a state’s decision up to the highest court may have reduced their resistance. Instead, since they had to decentralize, states would be likely to assist municipalities of the same party by directing resources and support to them in order for them to succeed. This should be evident in resource transfers from the state to municipalities of the same party and in an absence of obstructionist behavior on the part of the state after 1999. As in *H₆*, successful decentralization is demonstrated by an increase in the percentage of the population with piped water to their home or onto their property after water service delivery is decentralized by the state.

One potential challenge to this hypothesis is the involvement of the federal government. The federal government in Mexico has significant discretion and power in terms of fiscal authority. Revenue sharing has defined the relationship between the federal government and subnational entities and it is a heavily top-down process (Edmonds-Poli 1997). Thus, there is the potential for the federal government to actively support decentralization or actively impede it. This hypothesis presupposes that state and local governments will work together but the

partisanship of the federal government will also determine the relative success of decentralization efforts. One can assume that states and local governments of the same party will work together and a federal government of the same party will compliment their efforts but if the federal government is controlled by another party there is the potential for obstructionist behavior. Thus, partisanship at the federal level matters and may determine the success of state and local efforts. Between 1995 and 2000, one would expect the PRI controlled federal government to support the efforts of PRI states and municipalities while impeding efforts in PAN and PRD states and municipalities. Conversely, between 2000 and 2005, the PAN presidency is likely to have worked against the PRI and PRD decentralization efforts while supporting its own subnational governments but active obstruction by the PAN would be tempered by the party's ideological commitment to decentralization.

3.5 Case Study Placement Based on Hypotheses

The following table indicates the placement of the municipal cases based on the projected outcomes established in the hypotheses:

Table 3.15: Outcomes Based on Hypotheses (Municipal Cases Indicated)

		<i>Capacity of Municipality</i>	
		High Capacity	Low Capacity
<i>State and Local Government Control</i>	Same Party	Decentralization most likely Strategic decentralization by state unnecessary Ideological decentralization by state and municipality likely • Jaral del Progreso, GTO	Decentralization less likely Strategic decentralization by state unnecessary Ideological decentralization by state and municipality possible • Ocampo, GTO
	Different Party	Decentralization less likely Strategic decentralization by state likely • Tarandacuaao, GTO • Cerritos, SLP • Juchipila, ZAC Ideological pursuit of decentralization by municipality possible • Tarandacuaao, GTO	Decentralization least likely Strategic decentralization by state likely • Xichú, GTO • Ahualulco,, SLP • Cuauhtémoc, ZAC Ideological pursuit of decentralization by municipality less likely • Xichú, GTO

Chapter 4 and 5 will present an overview of the fieldwork undertaken in order to determine whether the expected outcomes occurred or not.

CHAPTER 4: GUANAJUATO SINGLE CASE STUDY

4.1 Overview of Part A:

Purpose: Examine the impact of intergovernmental relations and municipal capacity on decentralization by looking at municipalities governed by different parties in one state.

Four municipalities in the state of Guanajuato, a state that has had a heavy *Partido Acción Nacional* (PAN) presence at both the state and local level since the early 1990's, were selected for this part of the study. The PAN controlled the governor's office and the state's unicameral legislature throughout the time period covered in this study. The 2000 and 2006 presidential elections of PAN candidates Vicente Fox and Felipe Calderon allowed for the control of the influence of partisanship at the federal and state level while emphasizing the interplay of partisanship between the state and local government. Additionally, two of the municipalities selected have a high level of municipal capacity while two have lower levels of capacity allowing for an examination of the influence of capacity while controlling for partisanship. Guanajuato also presents a good case for examining decentralization because it has a long history of moving in the direction of giving municipalities more control, even before the federal government began advocating for it in the late 1990's under President Zedillo. In 1992, in keeping with the pro-subsidiarity ideology of the PAN, discussed at length in Chapter 2, Governor Carlos Medina Plascencia (1991-1995) began decentralizing services, revenue generation, and planning to the municipal level. As the former municipal president of Guanajuato's largest city Leon, Governor Medina had experienced the impotency of local government in Mexico and argued instead for an ideology of more citizen participation and less government. In addition to this ideological commitment, practically speaking, the federal government was offering incentives of funding credits to decentralized municipalities which would provide municipalities with financial

assistance for water projects and reduce the state government's fiscal obligation to support water services at the local level. Guanajuato provides an opportunity to look at the process of decentralization as it has evolved since these early adopters initiated it two decades ago.⁶⁸

The following table presents the levels of government with the municipal level highlighted to emphasize the level of analysis.

Table 4.1: Guanajuato Subnational Analysis

	PAN Federal	
	PAN State	
PAN Municipality	PRI Municipality	PRD Municipality

The state of Guanajuato has 46 municipalities. The PAN has been a strong contender at the local level since 2000, the year following the 1999 Municipal Reforms. After the 2006 election twelve of 46 municipalities had remained under PAN control in all three municipal elections since the year 2000. In thirty-two municipalities, the PAN had won two out of three of these elections demonstrating both the staying power of the party but also an increase in the relatively competitive nature of politics in the state. Even with a PAN victory at the state and federal level in 2000, other parties won eighteen municipalities the same year.⁶⁹ The municipalities in Guanajuato were selected for this study because of their variation in partisanship and capacity. Table 4.2 presents the selected case studies and how they are organized.

⁶⁸ Guanajuato is considered an early adopter of decentralization. This can be compared with water services which in the decentralization process in Guanajuato began under Medina in the early 1990s but was only initiated in San Luis Potosí after 2000.

⁶⁹ Author's calculations based on CIDAC election data. Though not included in the time period of this study, the 2009 election resulted in 28 PAN municipalities, 13 PRI municipalities, and 5 municipalities governed by other parties.

Table 4.2: Municipal Cases- Guanajuato, Mexico

	High Capacity	Low Capacity
PAN Municipality	Jaral del Progreso	Ocampo
Non-PAN Municipality	Tarandacuao	Xichú

These cases present both variation in partisanship and capacity as well as representing the various geographic regions of Guanajuato. The following table presents statistics for the case study municipalities in Guanajuato.

Table 4.3: Selected Statistics for Municipalities in Guanajuato, Mexico

	Population in 2000	PAN % in 2000 Election	PAN % in 2003 Election	PAN % in 2006 Election	Human Development Indicator 2000
Jaral del Progreso	31,635	46.4%	39.9%	52.7%	0.727
Ocampo	20,848	40.4%	56.8%	62.2%	0.667
Tarandacuao	11,459	22.9%	38.9%	52.6%	0.749
Xichú	11,283	21.2%	47.6%	48.0%	0.659

Sources: Compiled with data from INEGI, CIDAC, and the IEEG.

Note- Shaded cells indicate PRI win.⁷⁰

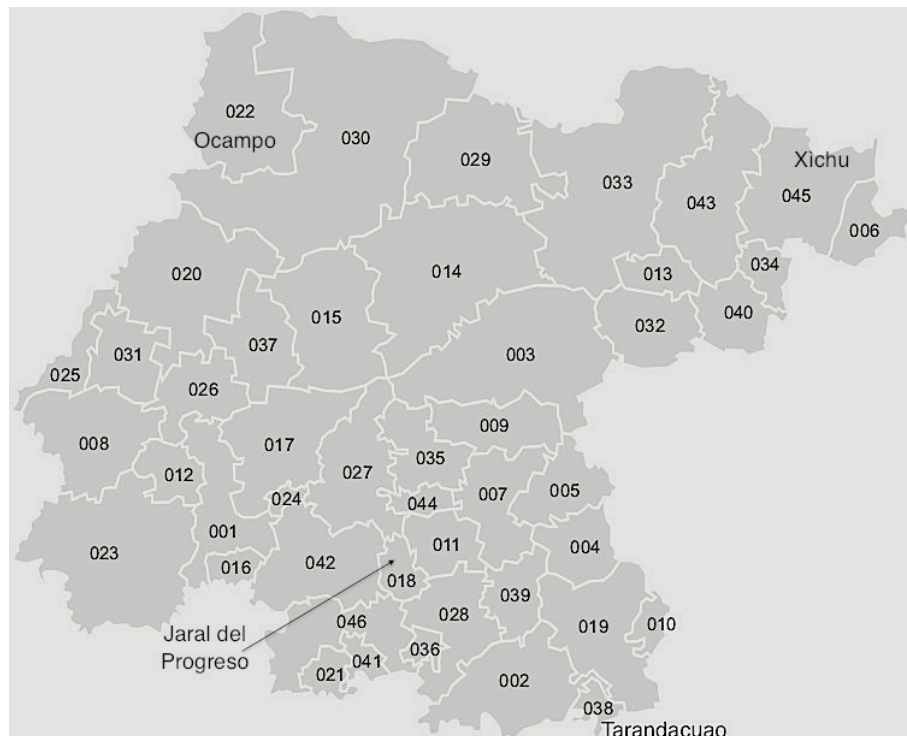
4.2 Case Study Overview

The four case study municipalities are located throughout the state of Guanajuato. The state is situated in the geographic center of the country bordered by the arid states of the north and the lush, wetter states of the south. It has tremendous importance in the broader Mexican economy because of its proximity to both coasts and as a major byway for commerce crossing the

⁷⁰ There is an absence of PRD municipalities. In Guanajuato, only 6 municipalities were controlled by the PRD at one point or another during the three elections cycles from 2000-2006.

country. Guanajuato is the sixth most populous state, has the sixth largest economy, and the fourth highest per capita income in Mexico. Unlike other states in Mexico, the major indigenous empires never dominated Guanajuato and though the Spanish eventually entered the state after discovering minerals in the early 16th century, it was never heavily colonized. Mining became the dominant industry in the state and agriculture increased in order to support it. The fertile center of the state became a major agricultural region for the Spanish leading to a population boom due to the influx of the Spanish, creoles, mestizos, and some slaves to work the mines and fields. Guanajuato is divided into five geographic regions, four of which are represented by the case study municipalities.

Figure 4.1: State of Guanajuato with Case Study Municipalities Indicated



Jaral del Progreso- A strong PAN, high capacity municipality, Jaral del Progreso is located in the southern agricultural region of the state. It is set among fields of soybeans, wheat, and corn. Agriculture is both a source of great prosperity for the residents but also a tremendously water intensive industry. Jaral del Progreso began as a small village in 1590 and was established as a municipality by the state legislature in 1912. Jaral del Progreso has a mild climate and receives an average of 647.9mm/ year of rainfall. It covers .57% of the state and is located in El Bajío, the geographic region of the state known for its agriculture and the heart of Guanajuato's industrial sector.

Ocampo- The municipality of Ocampo was established in 1845. The PAN has had success in the municipality, though it recently elected a PRI municipal president, and it has a lower level of capacity. It is located in the northwestern part of Guanajuato and is bordered by the states of Jalisco and San Luis Potosí and is situated in the geographic region known as Los Altos. This region of Guanajuato is known for its dry climate and land that yields relatively little. It is categorized as a semi-dry temperate climate with an average rainfall of 433 mm/year. Ocampo has a larger indigenous population than the other cases with over 21% of the population speaking an indigenous language and only about one-third of the population lives in the urban portions of the municipality. It is the largest of the case studies, covering 3.36% of the entire state of Guanajuato and is the seventh largest municipality in the state in terms of area.

Tarandacuao- A weak PAN, high capacity municipality, Tarandacuao is located in the southeastern portion of the state close to the border of the state of Michoacán. The name means “place where the water enters” most likely due to the presence of large springs to the east of the municipality or because the Lerma River enters Guanajuato in the region. The town was founded

by Tarasco Indians in 1612 and was established in its present municipal form by the state Congress in 1861. Tarandacuao has a mild, temperate climate, receives an average of 866 mm/year, and is located in the geographic region known as Los Valles del Sur which, though similar to El Bajío, is richer in natural resources, has more fertile soil, and an abundant supply of water.

Xichú- The most isolated of the four municipalities, Xichú is an opposition municipality with low capacity. It is located approximately fifty kilometers off of the main highway in the far northeastern part of the state, tucked in a deep ravine in the eastern Sierra Madre mountain range bordered by the state of San Luis Potosí in the north. During the pre-hispanic era, Xichú was inhabited by Chichimeca Indians and was originally founded as a town in 1585 by the Indian chief of Temazcaltepec. It was established as a municipality in 1914. The municipality is located completely within the geographic region of the Sierra Gorda, a biosphere reserve established by presidential decree in 1997 and managed by the Ministry of the Environment. Xichú's climate varies from warm-subtropical to temperate because of the vast differences in altitude located in the municipality and its average rainfall is 617mm/year. Like Ocampo, Xichú is vast, covering 3.01% of the state of Guanajuato, though only small pockets of the municipality are populated due to the mountainous terrain.

Table 4.4 presents additional information about each case study municipality for comparative purposes.

Table 4.4: Selected Statistics for Case Study Municipalities- 2000

	Homes Without Piped Water	Economy Devoted to Agriculture	Annual Rainfall (mm/year)	Population 15 or Over Illiterate	Per Capita Income (pesos)	Infant Mortality Rate (per 1,000 births)
Jaral del Progreso	2.3%	82.2%	647.9	11.9%	46,758	25.2
Ocampo	9.1%	43.1%	433	15.8%	26,272	31.4
Tarandacuao	2.9%	76.0%	866	11.8%	36,194	25.6
Xichú	40.4%	4.8%	617	23.6%	13,257	39.5

Source: CONAPO (income, literacy, % of piped water) INEGI (rainfall, agriculture, infant mortality). % of Agriculture calculated using INEGI data on land coverage; Información Nacional por Entidad Federativa y Municipios.

Fieldwork was conducted in Guanajuato between January and December 2010. Multiple interviews with federal, state, and local officials provided qualitative support for the evidence gathered from various statistics bureaus and government offices related to decentralization and water service provision. According to Guanajuato's state water commission (*Comisión Estatal del Agua de Guanajuato*) both Jaral del Progreso and Tarandacuao were decentralized while neither Ocampo nor Xichú were. In all, 10 out of 46 municipalities were not decentralized as of 2010.⁷¹

The following sections will provide a description of the general context of water services in the state, an analysis of the decentralization process focusing on an examination of administrative responsibilities and fiscal and regulatory authority, state and municipal

⁷¹ 2008 was the last date at which the Comisión Estatal del Agua de Guanajuato. published a full report on the status of all municipal water agencies: "*Diagnóstico Sectorial de Agua Potable y Saneamiento 2008*"

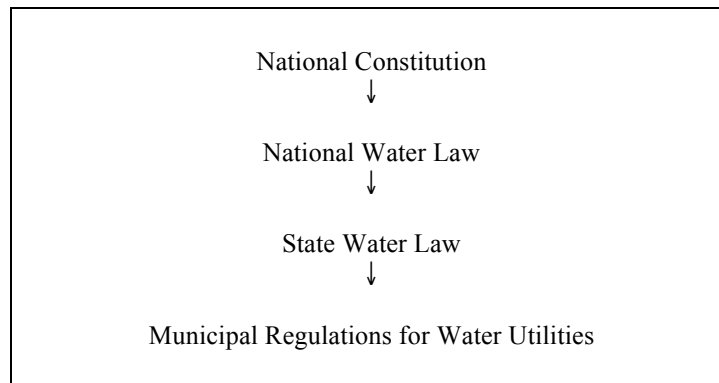
observations of the process, and finally an analysis of the assumptions made regarding the impacts of intergovernmental relations and capacity on water service quality.

4.3 Legal and Institutional Structure of Water Services in Guanajuato

As in other states, there are a variety of institutions and actors that influence water services in Guanajuato. From the highest levels of the federal government down to the local agencies that provide the water each has a role that ranges from constitutionally or legally defined to informal based on the practical needs associated with providing water to the local population.

Figure 4.2 demonstrates the hierarchy of the legal framework in Guanajuato.

Figure 4.2: Legal Framework for the Provision of Water Services in Guanajuato, Mexico



The following is an overview of the main legal and institutional elements that have an impact on municipal water services in Guanajuato.

4.3.1 Federal Level Actors

La Presidencia- The Mexican President has the authority to propose laws related to water and regulate the extraction and use of the nation's water according to Article 27 of the national

constitution which defines water as a resource owned by the government. The president can also influence water policy through appointments to such positions as ministers and agency directors and endorsements of programs related to water. It is also worth noting that, as discussed in Chapter 2, Mexico's political system has been structured to give the president unequalled power in both proposing and carrying out laws particularly in the pre-2000 one party dominate political environment. Though the presidency has been weakened to some degree by the recent transition to competitive democracy, the office of the president retains appointment powers and agenda setting powers that have important implications for water services at the state and local level.

La Cámara de Diputados- The Chamber of Deputies also exercises influence at the federal level over water policy and legislation and several legislative committees deal with water related issues. Additionally, the Chamber approves the federal budget from which resources are drawn for programs supported by the CNA.

La Secretaría de Medio Ambiente y Recursos Naturales (SEMARNAT)- The Ministry of Environment and Natural Resources. This federal department is responsible for promoting the protection, restoration, and conservation of ecosystems and natural resources and to promote their sustainable development.⁷² As part of SEMARNAT the Comisión Nacional del Agua (CNA) is the most significant actor in developing federal water policy, allocating resources, and monitoring state and local service provision.⁷³ The Commission is deconcentrated with thirteen basin level offices (*organismos de cuenca*) and nineteen state level representatives that administer programs

⁷² SEMARNAT's responsibility is "to promote the protection, restoration, and conservation of the ecosystem and natural resources, and environmental goods and services with the aim to promote sustainable development." Author's translation from Ley Orgánica de la Administración Pública, Artículo 32 bis reformada en el DOF del 25 de febrero de 2003.

⁷³ The National Water Commission officially changed its acronym from CNA to CONAGUA on January 14, 2009 in the Diario Oficial de la Federación. For the purposes of this study, the acronym CNA will be used because throughout the period examined, that is what the commission was called.

and support state and municipal agencies.

The Commission's responsibilities related to water service provision include:

- Propose the national water policy to the President;
- Establish norms relating to the quantity and quality of water use;
- Support the development of water supply and sanitation systems at the subnational level;
- Issue concessions for the abstraction of water resources and the discharge of effluents;
- Issue and monitor water rights;
- Monitor the application of the National Water Law.

La Secretaría de Salud- The Ministry of Health establishes standards for drinking water quality and monitors compliance through testing and mandating reporting.

Banco Nacional de Obras y Servicios Públicos (BANOBRAS)- This development bank invests in both state and municipal public infrastructure projects. It has been very active in providing funding for water infrastructure projects such as network expansion, treatment plants, aqueducts, and desalination plants through the federal fiscal pact and various water specific programs.

4.3.2 State Level Actors

In 2000, Guanajuato published its state water law (*Ley de Aguas Para El Estado de Guanajuato*) developed by CEAG and the CNA. The law reiterates the federal constitution's Article 115 that calls for municipal responsibility of water services and specifically the creation of autonomous public agencies to manage the resource.⁷⁴ The state water law stipulates that local service providers should charge tariffs that are adequate for covering the cost of delivering services and it clarifies the responsibilities and obligations of both the state and municipalities. Additionally, the state law on municipal organizations (*Ley Organica Municipal Para el Estado de Guanajuato*) provides guidance to municipalities related to their role of being in charge of

⁷⁴ See Chapter 2 for a broad discussion of the new responsibilities set forth for municipalities in Article 115 and by the CNA.

“drinking water, drainage, sewage collection, treatment and discharge.”⁷⁵ Though the state law is less than specific in what water related duties the municipality is to carry out it does point to decentralized agencies (*organismos descentralizados*) as the preferred organization structure of the water agency. The structure of local water agencies will be discussed below.

El Gobierno Estatal- The state government plays a relatively minimal role in water service provision. Limited by Article 115 of the federal constitution as well as constrained by its own state water law, the state government’s main influence, historically, has been through its control over access to fiscal resources that municipalities need to expand, improve, and maintain their networks or legislation that impacts water services. In Mexico, state governments can provide loan guarantees for municipalities to access capital for infrastructure projects, exert budgetary and political influence over the state water commission, and the legislature approves tariff proposals. Though fiscal authority has been a historical tool of the state to leverage policies as it sees fit, the ever-changing dynamics of fiscal federalism in Mexico have more recently reduced this power by establishing formulaic distribution criteria for states to follow. The fiscal levers of control at the state’s disposal will be discussed in depth below.

La Comisión Estatal del Agua de Guanajuato (CEAG)- The state water commission was created as a decentralized organization in the state water law approved in 2000. According to the law, the commission is responsible for proposing an annual water plan, managing the state’s water, supporting the municipal water providers, and generally enforcing laws and policies related to

⁷⁵ Article 141 and 146 of the Guanajuato State Law on Municipal Organizations (*Ley Organica Municipal Para el Estado de Guanajuato*) point to the municipality’s duties related to these services. It is worth noting that the language in Article 115, the state water law, and the law on municipal organizations lack specificity, which has led to conflicts over responsibilities at the same time that it has provided “cover” for those wishing to abdicate their duties.

water in the state.⁷⁶ The commission is governed by an advisory board that is composed of the state governor (or his or her representative), various heads of state government offices related to water management, six representatives of the municipalities, representatives of water users groups, and the director of the state water agency (who is nominated by the state governor).⁷⁷ Like the state government itself, the commission is limited in its influence by federal law that gives responsibility to municipalities to provide water services. It relies primarily on its discretion over the allocation of resources though this is also limited due to the fact that most of the money for water services flows to municipalities through the federal fiscal pact or federal programs managed by the CNA.

4.3.3 Municipal Level Actors

El Gobierno Municipal- The state water law gives municipal governments ownership of the local water supply and sanitation utility. Article 13 of the law gives them responsibility for the legal creation of the utility and subsequent water programs, approving tariffs, prevention of water contamination and pollution, and coordination of inter-municipal water services where necessary. Though the structure of local agencies varies, often the municipal president sits on the governing board and is also responsible for appointing the director of the agency. Depending on the autonomy of the agency, this gives the municipal president influence over the actions of the agency and how it interprets its role.

Organismos Operadores- Local agencies are given responsibility for the following: determining appropriate tariff levels, proposing municipal water programs, working with federal and state

⁷⁶ Article 6 of the 2000 state water law (*Ley de Aguas Para El Estado de Guanajuato*) outlines the specific responsibilities of the commission.

⁷⁷ The law specifies the Secretary of Urban Development and Public Works, Economic Development, Health, Farming and Rural Development, and Planning and Finances; the head of the State Institute of Ecology and the Office of the State Environmental Agency.

authorities to assess the current water system, promoting a “culture of water” in order to conserve water, promoting social participation in water services, and promoting technical and scientific developments in relation to water.⁷⁸ The structure of municipal agencies is only specified in the state law on municipal organizations as one of an “autonomous agency”. Thus, in Guanajuato, the structure of the organization is specified in local statutes and implemented by the municipal government.⁷⁹

What emerges from a brief examination of the different levels of government in Mexico and how they are involved in water service provision is a complex environment in which local agencies are attempting to deliver water to the local population but are reliant on the state and federal government for the financial resources and political support to do so. Additionally, there have been attempts by both the state government and the CNA to restructure the administration of water services so that it is managed at the basin level; however, most municipal agencies included in this study felt that this shift had not been successfully implemented at either the state or federal level.⁸⁰

⁷⁸ Article 14 of the state water law outlines these responsibilities.

⁷⁹ This is in stark contrast to the state water law of San Luis Potosí and Zacatecas where the structure of the municipal agency is specifically established. Additionally it is worth noting, and discussing more fully in this and the following chapter, that the federal government has used its water programs to promote structural changes to municipal agencies by tying funding eligibility to requirements for specific agency design.

⁸⁰ In Guanajuato, the state water law establishes management at the local level known. In 1992, the National Water Commission began promoting technical groundwater committees known as *Consejos Técnicos de Aguas* (COTAS) that are civil society organizations charged with helping to address the challenge of groundwater resource management in the country. COTAS have been supported by the state government in Guanajuato since 1998 when it established a trust fund known as FIPASMA to provide monetary assistance to fourteen users associations in an effort to coordinate management of the state’s depleted aquifers. The COTAS are constituted solely of local groundwater users but work in conjunction with the state water commission (CEAG), the national water commission (CNA), and local technical experts where appropriate. See Foster et al. (2004) for an overview of the COTAS’ activities.

4.4 Decentralization in Guanajuato

This section will provide an overview of what decentralization looks like in Guanajuato and its municipalities by analyzing the relationship between the three levels of government and the distribution of administrative, fiscal, and regulatory authority.

4.4.1 Administrative Decentralization

The state of Guanajuato has provided administrative guidelines to municipalities regarding water management; however, unlike other states, Guanajuato has left much of the discretion over implementation to municipalities. What has resulted is a variety of different administrative structures employed by municipalities to provide water services. A basic delineation can be made between those municipalities that are decentralized and those that are not. Between 1983 and 1996, twenty-six municipalities created decentralized *organismos operadores* with legal standing. With the exception of the ten that remained centralized as of 2010, all other municipalities decentralized their water services after 1996. All of the centralized municipalities that remain part of the municipal government and more heavily rely on the state commission to help provide water services have small populations and low per capita income levels. These municipalities are, in the eyes of the state water commission and in the opinion of those located in the municipalities, unlikely to be decentralized.⁸¹ Both Ocampo and Xichú remain centralized and do not have an independent water agency. Like the other centralized municipalities, they have a director of potable water operating from within the administration of the municipal government. In addition to this division between decentralized and centralized agencies, there are also differences between those that are wholly independent and those that are not. Jaral del Progreso falls into the category of autonomous water provider while Tarandacuao is dependent on the municipal government and

⁸¹ During fieldwork, this opinion was expressed by both those working directly with local water operators at the state water commission (CEAG) and by those working in the municipal governments.

lacks complete autonomy though it is technically decentralized. Because the state water law in Guanajuato does not mandate how municipalities are to decentralize, municipal governments have the power to determine what the process will look like. The implications of this latitude will be discussed below.

There is much debate about the motivations for and consequences of decentralizing water services to municipalities by way of the federal constitution. Prior to the federal decentralization of water to municipalities, states were largely responsible for providing all aspects of water services. While succeeding to varying degrees in the largest urban centers, coverage in smaller municipalities and rural regions was extremely low and much of the funding for expanding and improving water services was tied in to the corporatist political environment established by the dominant PRI. The call for decentralization by the federal government, at least administratively, restricts states' ability to interfere with the management of water at the local level. Discussions with employees of CEAG suggest that the commission defers to the municipalities because Article 115 of the constitution requires them to do so; however, it appears that the commissions, like the state government itself, has had its ability to leverage and influence severely restricted by the centralization of resources. While states and water commissions could choose to intervene more actively in local water services there are potential legal consequences of doing so, which have so far not been played out in Mexico's court system.⁸² In Guanajuato, administration of local water services has been almost exclusively devolved to the municipal level giving them both authority and discretion over a wide range of administrative duties.

Administratively, Guanajuato's state water law explicitly states that the local governments have the responsibility to operate the public water, drainage, sewage, and treatment systems.⁸³

⁸² Some states have attempted to challenge Article 115 of the federal constitution by passing new water laws (the State of Mexico has recently done so) but without more clarity in what the role of states should be, municipalities can contest state involvement in areas, such as regulation, that are currently under local control.

⁸³ Article 14 and Article 32 of the Ley de Aguas para el Estado de Guanajuato (2000).

Analysis of the ten municipalities that remain under the state water agency's authority finds that they are lower in capacity and, in most cases, much smaller and more remote than those that are decentralized. Table 4.5 provides an overview of relevant information to analyze the differences between those municipalities that are decentralized and those that are not.

Table 4.5: Centralized Municipalities in Guanajuato, Selected Indicators

Municipality	Population served 2005	Partisanship			2000 HDI Score	2005 Risk of Marginalization
		2000	2003	2006		
Artajea	420 ^a	PRI	PRI	PAN	.627 Med Low	.92 High
Doctor Mora	7185	PRI	PRD	PAN	.677 Med High	1.78 High
Huanímaro	8010	PRI	PAN	PAN	.686 Med High	-.363 Med
Ocampo	16245	PAN	PAN	PAN	.667 Med High	.008 High
Pueblo Nuevo	5330	PAN	PRI	PAN	.680 Med High	-.329 Med
Santa Catarina	2160	PRI	PRI	PAN	.664 Med High	.784 High
Santiago Maravatío	7110	PRI	PRI	PRD	.687 Med High	-.390 Med
Tierra Blanca	3450	PAN	PRD	PRI	.640 Med Low	.711 High
Victoria	4505	PRI	PAN	PRI	.655 Med High	.586 High
Xichú	1360	PRI	PRI	PRI	.659 Med Low	.987 High

Source: INEGI (2000), CONAPO (2000; 2005), CIDAC and Guanajuato State Election Commission. Xichú population served in 2007.⁸⁴

⁸⁴ CONAPO's Risk of Marginalization score in 2005 is based on the following factors: education levels, standard of living, employment income, and percentage of the population living in rural communities. High risk of marginalization scores range from -.07 to 1.06 and medium risk scores range from -.649 to -.077. HDI labels of Med High runs from .650-.799, Medio Low runs from .500-.649. Note that municipalities in Guanajuato are almost exclusively ranked medium high (two municipalities listed in the chart above are the sole exceptions). Therefore, to fully understand the distinctions in capacity, those falling into the medium high category need to be assessed as to whether they are at the top or bottom of that category. None of the municipalities listed have an HDI score above .687, which while this qualifies them as medium high capacity, all are at the low end of the range and in fact, all of the municipalities that are centralized are far below the top of the medium high range of .799.

From looking at the data provided in Table 4.5 one could conclude that the municipalities that remain under the centralized control in Guanajuato have lower capacities than those that have been decentralized.⁸⁵ Additionally, most of these municipalities are smaller in size and located far from large urban centers, many kilometers from main highways, which makes them far less accessible. The municipality of Xichú, for example, only received a paved road from the main highway into the town in the last two years while much of Ocampo's population is located outside of the small urban center. In both cases, establishing a local agency that can adequately overcome the geographic and financial challenges of delivering water to a poorer population living beyond an urban core is, potentially, very challenging. The description of those municipalities that remain centralized supports the basic notion that capacity is an important determinant in both the ability to provide services and whether responsibilities will be decentralized or not.

This was reinforced by interviews held with employees of CEAG in which it was consistently stated that the commission was limited by Article 115 of the federal constitution in relation to what it could do to control or influence services at the local level and that the decision to decentralize was based solely on requests made by municipalities to move in that direction.⁸⁶ Discussions with local officials and water agency employees supported this notion that the centralized municipalities are content with the status quo and, for the most part, cannot provide adequate services themselves.⁸⁷

⁸⁵ There are a limited number of exceptions to this assumption. Coroneo (population 5890), San Diego de la Unión (population 15,735), and Tarandacuao (population 10,235) are small but are decentralized. Likewise, there are two municipalities that are at high risk for marginalization, San Diego de la Unión (risk score of .323) and San Felipe (risk score of .203), but are decentralized.

⁸⁶ Personal communication, April 2010.

⁸⁷ It is possible for a lower capacity municipality to request that services be transferred to the control of a local public agency since this is an explicit part of the 1999 Municipal Reforms; however, those at the commission charged with overseeing the *organismo operadores* believe that the more likely scenario is one in which some municipalities that are centralized and have the ability to be decentralized but do not want to do so remain centralized since, from a legal standpoint, there is little the commission can do besides providing incentives to push them to decentralize. This approach is contrasted with that of San Luis Potosí in which the governor decided to decentralize municipal water

The administrative aspect of decentralization appears to be more devolved than either fiscal or regulatory decentralization in regards to water services. Interviews with both local and state water sector employees and government officials throughout Guanajuato suggest that municipal governments and water agencies have been given control over most administrative responsibilities. These generally include:

- Decision-making regarding how to structure the agency at the local level including personnel decisions;
- Determining which water projects are necessary in relation to network improvement and expansion;
- Assessing and collecting user tariffs and establishing policies regarding payment and service shutoff;
- Applying to CNA programs for federal support;
- Determining the day-to-day operations of the agency.

Agency Structure- Article 32 of the state water law states that the municipalities shall “create, preferably, a public decentralized agency or whatever form is established in municipal laws.”

There is very little guidance provided by the state and, therefore, municipalities have formed a variety of types of water agencies. Legally, decentralized simply means disbursing power or taking authority away from the center; however, the degree of autonomy they wish to instill in their agencies is left to the municipality to determine. In 2002, Jaral del Progreso established a “typical” autonomous agency, the Municipal Potable Water and Sewage System (*Sistema Municipal de Agua Potable y Alcantarillado de Jaral del Progreso*), composed of a director and a seven member advisory council (*consejo*) that is representative of the community and local government. Tarandacuao, on the other hand, established a water committee, the Municipal Potable Water and Sewage Committee (*Junta Municipal de Agua Potable y Alcantarillado de*

services in order to access additional water project funding from the federal government. In choosing to do so, the state government and state water commission have had to provide significant support to some of the lowest capacity municipalities that under other circumstances, probably would not have chosen to decentralize and take control of their own services.

Tarandacuaao), which operates separately from the local government but has much less autonomy from the municipality than the agency in Jaral del Progreso.

Municipalities that remain centralized and maintain a reliance on the state and local government typically have a department or water office within the municipal government. In Xichú this is known as the Office of Ecology, Potable Water, Sewage, and Sanitation (*Dirección de Ecología, Agua Potable, Alcantarillado y Saneamiento del Municipio de Xichú*) whose general director is the municipal president while in Ocampo, the Potable Water and Sewage Committee (*Comité de Agua Potable y Alcantarillado de Ocampo*) has a director that works from within the municipal government. Neither has administrative autonomy beyond that which is approved by the municipal government.

Though the state is vague in the language it uses regarding municipal agencies, the federal government is not. Some federal programs actually incentivize restructuring the agency in order to qualify for additional project funding or make project applications contingent on having a particular type of decentralized agency that is promoted by the CNA. Two federal programs, APAZU (Program for Drinking Water, Sewage and Sanitation in Urban Zones) and PROMAGUA (Water Utility Modernization Project), provide municipal governments with more money for projects if they establish an agency with a citizen's council for water (*consejo ciudadano*) that is elected to five or six year staggered terms.

While this discussion has pointed to the differences among decentralized municipalities, it is important to point out that regardless of whether the agency is completely autonomous as in Jaral del Progreso or has less independence as the committee in Tarandacuaao does, in decentralized municipalities, most administrative authority is retained at the local level and its interaction with the state is based mainly on technical assistance, funding needs, or data reporting. Centralized municipalities make almost all of their decisions in collaboration with the municipal

and state government because of their reliance on state resources, expertise, and in some cases, the physical expansion and maintenance of the local network.

Network Decisions- Decentralized municipal agencies are given considerable latitude in determining which water projects are needed. Article 14 of the state water law stipulates that they are responsible for determining projects and proposing them to the municipal government and then carrying them out. These projects can vary from updating networks or digging new wells to expanding the existing network to provide services to outlying regions of the municipality. In Tarandacuaio these decisions are made under the direct supervision of the municipality and the *ayuntamiento* (the broader government that represents all of the communities in the municipality). In contrast, the agency in Jaral del Progreso has the ability to make these decisions on their own with the municipality and state only being involved when they are required to contribute money.⁸⁸ Regardless of the structure of decentralization chosen by the municipal government, they still retain most of the authority related to network decisions.

User Tariffs- Local control of assessing and collecting user fees is also established in the state water law. Articles 13 and 14 obligate water agencies to conduct tariff studies to determine their tariff rate proposal which is then approved by the *ayuntamiento*, published in the proposed municipal income law (*Propuesta de Ley de Ingresos Municipal*), and sent to the state congress to analyze and publish. The tariffs are then instituted in the next fiscal year. While state law indicates that the role of the state legislature is one of oversight, many municipal officials and agency employees believe that state level politicians are hesitant to increase the rates that users

⁸⁸ Discussions with the director of the water agency in Jaral del Progreso suggested that because the decentralized agencies are increasingly encouraged to become self sufficient through tariff collection and other forms of own revenue generation, the role of the local government is likely to recede even more since the fiscal reliance of agencies will continue to diminish.

have to pay if doing so will have negative political consequences.⁸⁹ This is ironic because the state water law clearly states that tariffs must be sufficient to cover the costs of network operation and maintenance, the administration of services, the rehabilitation and improvement of infrastructure, and the cost of investments made to improve the system yet many agency directors stated that their tariffs did not adequately cover their operations or provide them with the ability to invest in their systems.⁹⁰

In addition to analyzing and assessing tariffs, agencies have a legal obligation to meter water usage and base their billing on meter readings.⁹¹ This is one way that agencies have attempted to remedy the lack of equilibrium between use and payment. The state has also given municipalities the legal power to cut off services for non-payment, which both Jaral del Progreso and Tarandacuao have implemented. Meter usage is not without problems. A 2002 study found that 63% of users statewide had water meters but of these, only 37% of users had functional meters; therefore, only 37% of users were billed based on their actual water consumption while the other 63% were billed using fixed rates.⁹² While the state water law encourages volumetric tariffs that are based on usage, if meters are broken or not installed, there is no way for agencies to fairly or accurately determine use and their revenue often suffers due to the inability to accurately price water consumption.

⁸⁹ Personal communication January 2010, April 2010, December 2010.

⁹⁰ These requirements are established in Article 56 of the *Ley de Aguas Para El Estado de Guanajuato*. This point regarding appropriate pricing of water is important because almost everyone interviewed at the state, local, and federal level acknowledged the cultural phenomenon in Mexico of taking water for granted and wasting it. This has been a hotly debated issue in Mexico as the country moves in the direction of pricing water based on its true value. There is a circular phenomenon that many individuals interviewed referred to: users do not want to pay increased rates for water services that they perceive as inadequate however without the increase in tariffs, there are insufficient funds for improving or maintaining the existing water network. There are both cultural and practical issues that local agencies face in trying to fairly and efficiently price water and fund their endeavors that go beyond the simple legal prescription established in state or federal law.

⁹¹ Article 42 of the *Ley de Aguas Para El Estado de Guanajuato*.

⁹² Guzman (2008).

Federal Programs- Administratively, responsibility for applying to programs sponsored by the CNA falls to local governments but practically speaking, states are involved in two ways: first, some federal programs require states to contribute funding to projects so they take on some administrative oversight of the application process and second, additional funding for water projects is attractive because it offsets their own financial contribution to projects. Municipal agencies are able to apply to the CNA for funds from specific programs such as APAZU, PRODDER, and PROMAGUA (Program to Modernize Water Agencies). Though the process gives municipalities the authority to decide which programs they will apply for, three factors are important to consider. First, states have an incentive to push municipalities toward these programs because of the opportunity for non-state funding. In Guanajuato, the state has historically encouraged municipalities to apply for these programs and, subsequently, adopt water agency models that were in line with that which was required by the program; namely decentralized, autonomous agencies to qualify for program funding. Second, if states attempt to prevent municipalities from applying to the CNA programs, the municipalities can ask the federal agency for assistance. One CNA official confirmed that the federal commission has often stepped in to help municipalities when states are interfering with municipal attempts to access a federal program, though this is only feasible when there is no financial commitment necessary on the part of the state. Third, CEAG employees in Guanajuato seemed to feel that the more organized (and likely higher capacity) municipalities are better suited to apply for these programs and so they get the funding over those municipalities that might need it more but are less likely to apply for it.⁹³

The decentralization of the authority to determine projects and make requests from the federal government is often contingent on whether the state supports the endeavor. The capacity

⁹³ Personal communication with representatives of CNA and CEAG, April 2010.

of the municipality to be organized enough to make the request or seek redress from the federal government to go above the head of the state government in the case that the state does not support their request also appears to be an important factor.

Day-to-Day Operations- Municipal governments have considerable authority in determining how their agencies operate because the state water law says very little about day-to-day operations. Local governments and/ or agencies have discretion over appointing and removing the head of the agency as well as most of the staff. One exception to this authority is the employment of the *sindicato* that is a protected union worker under Article 123 of the Mexican Constitution and the Federal Labor Law. Other administrative workers as well as the agency director serve at the discretion of the municipal government. One consequence of this discretion is high rates of turnover at the head of the agency, a position that is often changed with every new municipal administration. Three of the four case study municipalities replace the director of either the water agency or the department of water with every new municipal administration. Even Jaral del Progreso, which has established a decentralized autonomous local public agency, changes directors with every new municipal administration even when the same party remains in charge. Tarandacuao, on the other hand, has a less autonomous agency than Jaral del Progreso, but has maintained the same agency director since 1998 even with partisan changes in the municipal administration. This turnover, which is far more common than the maintenance of a director like that found in Tarandacuao, is especially problematic since municipal presidents only serve three-year terms and is compounded by the fact that Guanajuato's state water law establishes no requirements for agency directors regarding education and experience. The implications of the short tenure of potentially inexperienced water agency employees will be discussed later in this chapter and in the cross-state comparison in Chapter 5.

Conclusion- As stated at the outset of this discussion, administrative authority is the most clearly decentralized part of water services in Guanajuato. It is important to keep in mind that while the municipalities retain some authority in different administrative realms, they do not do so with complete autonomy. The federal and state levels are often in a position to review or even negate the responsibilities assigned to municipalities through their own ability to leverage resources or political capital. Both federal and state agencies are in a position to veto prospective projects and, to varying degrees, manipulate funding. Additionally, application requirements often increase the likelihood that higher capacity municipalities will have the ability and know-how to apply for projects as well as generate the necessary matching funds required by some federal and state water project programs. These requirements mean that low capacity municipalities with the need to improve or expand their services may be shut out of the competitive process.⁹⁴ The reality of administrative decentralization will be further analyzed as it has taken place in the case study municipalities in the next section.

4.4.2 Fiscal Decentralization

This section will examine the fiscal relationship of the levels of government in two respects: those related to general funding and that which is specifically directed toward water related projects such as network expansion or improvement. Most federal systems adopt a system of fiscal federalism because of the belief that it is the best method for providing services that are competitive, efficient, and equitable in a large, diverse country. This improved provision occurs while simultaneously respecting diversity in local identities and preferences (Benton 2010).⁹⁵ In

⁹⁴ Again, this points to the Mexican bias in favor of larger cities and capitals at the expense of other municipal populations cited by Barracca (2005).

⁹⁵ Benton (2010).

1980, Mexico instituted its current intergovernmental fiscal arrangement in order to coordinate taxation and revenue distribution. States voluntarily joined the system, giving up most of their own ability to tax in exchange for a share of the revenue-sharing grants allocated by the federal government. Many states had an incentive to join the coordinated arrangement because it was not contingent on their own fiscal effort (Diaz Cayeros 1997). This severely weakened state and municipal governments' ability to generate their own revenue and increased their dependency on the federal government. Unlike most federal systems, where the central government collects an average of 60.2% of the revenue, Mexico's federal government collects 95% of all revenue (Diaz-Cayeros 2003).

Both local governments and their constituent water agencies rely almost exclusively on funding from the federal government's general allocations and specific water related programs to support their activities.⁹⁶ Initially, the federal fiscal pact in Mexico provided minimal direction for states on how to allocate funding to local populations; however, the federal government has increasingly sought to formalize the process and reduce political influences on the distribution of federal funding. Though it is the states' responsibility to distribute funds to the municipalities, both the federal fiscal coordination law (*Ley de Coordinación Fiscal*) and Guanajuato's state fiscal coordination law (*Ley de Coordinación Fiscal del Estado*) establish formulas by which the funding is allocated. This formulaic method seems to reduce the amount of discretion state governments have to reward and punish municipal actors.⁹⁷

⁹⁶ Diaz-Cayeros (2003:8) suggests that Guanajuato is doing a better job than most states in Mexico at generating its own revenue because of its ability to draw industries to the state following the passage of the North American Free Trade Agreement; however, its rate of own revenue generation is still less than 15% in any given year. San Luis Potosí and Zacatecas generate an average of 5-7% annually, relying on the federal government to make up the more than 90% of additional revenue that makes up their budget.

⁹⁷ See Pérez (2007) for a discussion on how federal funding formulas have reduced political influence by states in Mexico.

The federal transfers that constitute the revenue sharing are divided into two different types: *participaciones* (unconditional transfers) and *aportaciones* (conditional transfers).⁹⁸ *Participaciones* are composed of two main revenue sharing funds: the General Fund (FGP) and the Municipal Development Fund (FFM). Most of the funds are allocated through the FGP and have unrestricted use.⁹⁹ A third type of *participaciones*, the Diversified Federal Participation (PFD) is composed of undefined taxes. A portion of each fund goes directly to municipalities, earmarked for specific expenditures. A study by Diaz Cayeros and Martinez- Uriarte (1997) found that *participaciones* account for between 50% and 100% of municipal budgets and are the largest source of funding for municipalities. Current levels of funding mirror this earlier finding, suggesting that municipalities rely almost exclusively on state and federal contributions to make up their budgets though the rate of conditional funding has steadily outpaced the allocation of *participaciones* since their introduction in 1998.¹⁰⁰

States' own revenues come mainly from payroll taxes and automobile registration but only account for an average of 9.2% of their total revenue due to the revenue sharing agreement. This number is reduced to 2.7% when the costs of administering the tax are taken into account.¹⁰¹ Diaz-Cayeros et al. (2002) point out that "the main source of own municipal revenues is the real estate property tax comprising 13% of total net revenue and 74.2% of municipal own revenues."¹⁰² The current revenue sharing model has created a situation in which states rely almost exclusively on the federal government for funds and municipalities in-turn rely on the state's allocation of federal funding for financial support.

⁹⁸ These two terms are literally translated to "participations" and "contributions."

⁹⁹ Guanajuato's state formula for the General Fund, like the federal formula, allocates money to municipalities in a ratio of 50% based on their tax effort the previous year, 40% based on their relative population according to INEGI, and 10% based on the inverse of the tax effort and population calculations (which helps those municipalities that are either unable to make a significant tax effort or have a small population. The Municipal Development Fund is allocated exclusively based on population with 50% of their allocation based on their relative population and 50% based on the inverse of their relative population strength.

¹⁰⁰ As an example, the four case study municipalities from Guanajuato only contribute 0.3-5.2% to their own budgets.

¹⁰¹ Diaz-Cayeros et al. (2002:27).

¹⁰² Diaz-Cayeros et al. (2002:28).

In 2000, Guanajuato's allocation of *participaciones* from the federal fiscal pact constituted 43.8% of the money it received from the federal government while funding from the other major funding source, conditional transfers (*aportaciones*), constituted the other 56.16%. These two categories of funding from the federal government accounted for 90.63% of Guanajuato's state budget while only 9.37% of the budget was generated by the state itself.¹⁰³ Guanajuato's situation is not unique, nor had it changed substantially by 2005 when 89.32% of the state's total budget came from federal transfers.¹⁰⁴ A majority of the money that states have to spend is from the federal government and is allocated formulaically which has greatly diminished their autonomy and ability to influence through resource allocation.

Unconditional Transfers- Table 4.6 presents the distribution of unconditional transfers to the state of Guanajuato and the case study municipalities between 1995 and 2005.

Table 4.6: Percentage Change in Unconditional Transfers (Participaciones), 1995-2005

	% Increase 1995-2000	% Increase 2000-2005
Guanajuato	240.7%	55.3%
Jaral del Progreso	271.8%	48.5%
Ocampo	229.2%	72.6%
Tarandacuaao	314.8%	23.7%
Xichú	247.9%	62.0%

Source: INEGI el Sistema Estatal y Municipal de Bases de Datos.

Guanajuato, like all states, saw significant jumps in its federal allocation of unconditional transfers between 1995 and 2005. States increased their unconditional transfers an average of 278% between 1995 and 2000 with Guanajuato's allocation increasing 240% during this period. Guanajuato's share of *participaciones* increased 55.3% from 2000 to 2005, which is in keeping

¹⁰³ Guanajuato Cuenta Publica.

¹⁰⁴ Guanajuato Cuenta Publica.

with the average increase of 61% across states during that same period.¹⁰⁵ The relatively modest gains between 2000 and 2005 compared to the five year period prior are likely due to the shifting of resources from unconditional transfers into the conditional transfers bundled into *Ramo* 33 (to be discussed below).¹⁰⁶ Needless to say, all states continued to see a significant increase in their unconditional transfers.

Likewise, the case study municipalities saw similar percentage gains in unconditional transfers to what was seen at the state level. They ranged from 229% to 314% between 1995 and 2000 and 23% to 72% between 2000 and 2005. Between 1995 and 2000, the highest capacity municipalities, Jaral del Progreso and Tarandacuaio saw the largest increases in their allocation of *participaciones* but this trend is reversed between 2000 and 2005 when the low capacity municipalities of Ocampo and Xichú receive a higher percentage in transfers.¹⁰⁷

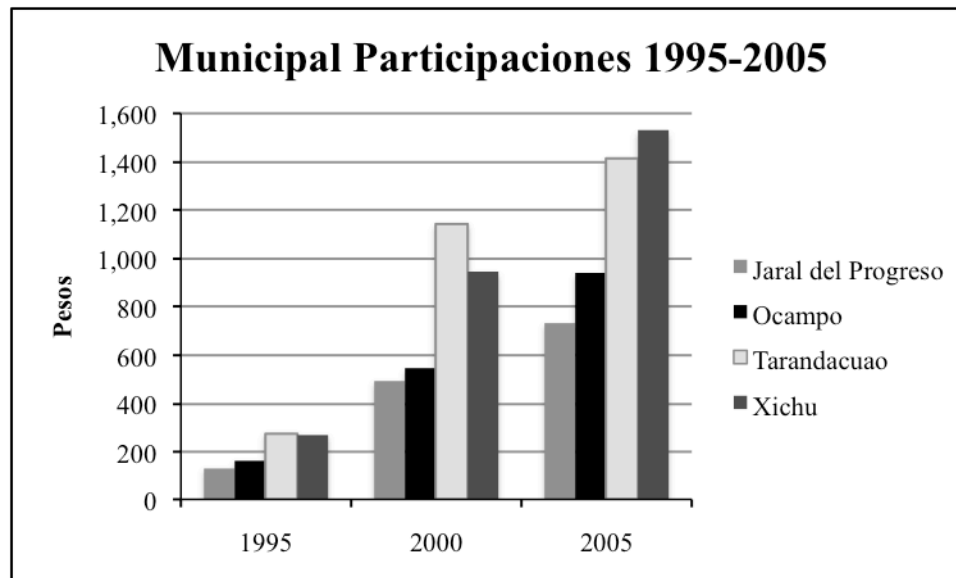
While these percentage gains seem fairly consistent with what is happening at the state level, they do cover up a wide discrepancy with regards to per capita distribution by the state among the municipalities. Chart 4.1 provides the per capita distribution of unconditional transfers from the state of Guanajuato from 1995-2005.

¹⁰⁵ Author's calculation based on INEGI's *Sistema Estatal y Municipal de Bases de Datos*.

¹⁰⁶ As more of the federal fiscal pact is shifted into the conditional funding category, for which larger and higher capacity municipalities will have higher allocations because of funding formulas, the unconditional transfers appear to provide a "backfill" for those municipalities that do not receive as much conditional funding.

¹⁰⁷ The low capacity municipalities may have seen a greater increase in their allocation because of the calculation for distributing *participaciones*. Xichú was the only municipality that actually grew in size between 2000 and 2005. Since 40% of the calculation for allocations is based on population, this may account for the higher gains the municipality saw relative to the others since their populations were either stable or actually in decline. 50% of the unconditional allocation is based on municipal tax effort. Xichú saw a doubling of its tax effort between 2000 and 2005 while Ocampo, which also benefitted more from the unconditional allocation between 2000 and 2005 also saw a large jump in its tax effort (1.1%) which is actually greater than that of the high capacity municipality of Jaral del Progreso.

Chart 4.1: Per Capita Unconditional Transfers- Case Study Municipalities 1995-2005



Source: Author's calculation using data from INEGI's *Sistema Estatal y Municipal de Bases de Datos*.

Both Tarandacuao and Xichú appear to have benefited the most from the increases in unconditional funding once their actual population is taken into consideration. While it is true that all of the case study municipalities are below 32,000 people, Tarandacuao and Xichú are one-third the size of Jaral del Progreso and half of the size of Ocampo. Though population is controlled for in this study by selecting very small municipalities in relation to the entire Mexican context, even these small population variations end up making a difference since the unconditional transfers utilize population as a factor for determining allocation. As stated above, Xichú has observed both population growth and an increase in its ability to generate own revenue which makes it a stronger contender under the formula used to distribute *participaciones* but it still has a relatively small population which translates into a higher per capita distribution. Likewise, Tarandacuao's increase in unconditional funding due, at least in part, to its stronger generation of own revenue (5.2% which is the largest of the case studies) is also distributed

across a population that is one half the size of Ocampo and one-third the size of Jaral del Progreso.¹⁰⁸

Participaciones are a good example of both the strengths and weaknesses of fiscal federalism and its relationship to decentralization. They allow the government to redistribute funding across states to address needs and building in factors such as population and tax effort allows the government to address municipal variation and incentivize behavior such as revenue generation. Funding has been decentralized in the sense that it is put in the hands of the local government to spend with minimal restrictions but authority over allocation still remains in the hands of first, the federal government, and then the states which essentially maintains the same line of authority that existed under the highly centralized government prior to its efforts to decentralize.

Conditional Transfers- Aportaciones are conditional transfers that are composed of funds for tasks that were originally carried out by the federal government but have been transferred in some manner to lower levels of government and provide matching grants to finance public works. These funds, presented in Table 4.7 below, are designated in the federal constitution under Article or *Ramo 33* entitled *Aportaciones Federales para Estados y Municipios*.

Table 4.7: Funds Established in Article 33 (Ramo 33) of the Federal Constitution

Fund to Strengthen ----- Social Infrastructure Fund ----- Other		
Municipalities	(FAIS 9.7%) ^a	- Education (FAEB 62.4%)
(FORTAMUN 9.9%)		- Health Insurance (FASSA 12.2%)
	↓	- Social Assistance (FAM 31%)
		- Technical/ Adult Ed. (FAET 1.7%)
		- Public Security (FASP 1.4%)
	Municipal Social Infrastructure Fund (FISM 87.9%) ^b	
	State Social Infrastructure Fund (FISE 12.1%)	

^aName and % of total *Ramo 33* allocation

^bName and % of total FAIS fund

The most significant fund for the purpose of water services is the *Fondo para la Infraestructura Social Municipal* (FISM), which is a sub-fund of the *Fondo de Aportaciones para la Infraestructura Social* (FAIS). The main purpose of FISM is to “finance works for potable water, sewage, drainage and latrines, municipal urbanization, electricity in rural areas and small *colonias*, basic health and education infrastructure, improving the quality of life, rural roads, and productive rural infrastructure.”¹⁰⁹ FAIS is set at 2.5% of the shareable federal revenue (*Recaudación Federal Participable*). Of this 2.5%, FISM makes up 87.9% of the fund and this money goes directly to municipalities for the aforementioned infrastructure improvements.¹¹⁰ The municipalities must specify their use of the FISM money into twelve different categories, two of which are water and sanitation. States allocate the FISM funds based on a relative poverty index that builds on indicators for income, education, housing, sanitation, and electricity. The formulas for these comparisons are established in the federal fiscal coordination law (*Ley de Coordinación Fiscal*).¹¹¹ Table 4.8 below shows the distribution of *Ramo 33* and the two

¹⁰⁹ Authors translation from the Serie de Cuadernos de Finanzas Públicas (2006:14).

¹¹⁰ The other 12.1% goes to the FISE fund which provides resources to states for infrastructure improvements on a regional level. See Wellenstein et al. (2006) for a breakdown of *Ramo 33* funds.

¹¹¹ While Guanajuato and San Luis Potosí both use this more complicated formula, Zacatecas has opted to use a simpler formula that builds on the employed population with less than two minimum wages, the illiterate population 15 years or older, population in settlements without sewerage, and population living in settlements without electricity.

relevant funds to the state of Guanajuato and the case study municipalities between 1998 and 2005.

Table 4.8: Allocations of Aportaciones- Ramo 33, FISM, FORTAMUN

	<i>Ramo 33</i> % change 00-05 ¹¹²	FISM % change 00-05	FORTAMUN % change 00-05
Guanajuato	65.87%	30.7%	113.8%
Jaral del Progreso	1.11%	-26.6%	106.8%
Ocampo	-15.76%	-31.9%	110.9%
Tarandacuaao	-21.66%	-56.8%	95.8%
Xichú	-48.56%	-52.7%	104.6%

Source: Author's calculation from INEGI's SIMBAD data set except for Tarandacuaao's 2000 allocation which was accessed from the SHCP (La Secretaría de Hacienda y Crédito Público) and Guanajuato State Finances; Cuenta Pública: Gasto Ejercido de las Aportaciones para los Municipios (2000) and Estado del Gasto Ejercido de las Aportaciones para los Municipios (2005).

Table 4.8 indicates a tremendous increase in *Ramo 33* transfers to the state of Guanajuato between 2000 and 2005; however, this sizeable increase is not reflected in the distribution of funds to any of the case study municipalities. Only Jaral del Progreso saw an increase in funding

The practical differences in the application of these different formulas will be explored in Chapter 5. Wellenstein et al. (2006:17) suggests that this formula based allocation of revenue has some important advantages, specifically the improved transparency in how resources are distributed from the federal to the municipal level and that the resources are directed more progressively to those municipalities that have greater infrastructure needs. Additionally, the funding is predictable and stable which helps municipalities better manage their finances. Nevertheless, the federal fiscal pact in Mexico is not perfect. Diaz-Cayeros et al. (2002:5) suggest that “the central problem of fiscal federalism in Mexico is that subnational governments do not have clear jurisdictions over virtually any policy area, the federal government always holds a crucial piece of the process and the key mechanisms to hold either the federal government or the subnational governments accountable are very imperfect.” Wellenstein et al. (2006) and Scott and Banister (2008) point out that the formula used is somewhat problematic because it does not provide an incentive for improvement of infrastructure since to do so means that future funding is jeopardized. Thus, while FISM funds are targeted at those municipalities most in need, there are no parallel *aportaciones* monies to reward municipalities that properly use the funds and improve upon their services. Additionally, there has been an historical absence of incentives for states and municipalities to use funds appropriately since there are no punishments for misusing the funds or not reporting expenditures. The Fox Administration (2000-2006) took steps to correct some of these problems. For a discussion of this, see Diaz-Cayeros et al. (2002).

¹¹² Ramo 33 was not created until 1998 so allocations begin in this year. Guanajuato received conditional transfer funds in 1998 but, with the exception of the largest municipalities, did not allocate aportaciones to the rest of the state until 2000.

between 2000 and 2005 and the increase was especially modest, far below the state's municipal average of 28.7%.¹¹³

This inconsistency may reflect the fact that only three of the *aportaciones* funds have an allocation based on variables related to capacity. The other funds allocate their monies based on a range of considerations from general population size to public safety statistics to personnel needs depending on the aim of the fund.¹¹⁴ An examination of allocations from *Ramo* 33 funds that are related to water infrastructure and are less dependent on population, FAIS and FORTAMUN, provides an opportunity to see if any of the *aportaciones* are attempting to remedy uneven capacity in the state.

In Guanajuato, unlike other states, the government has only recently issued regulations for FISM though the federal allocation is based on a collection of poverty indicators. Planning, including the preparation of a list of works to be funded as well as the prioritization of that list is done by municipal planning councils (Consejos de Planeación Municipal- COPLADEM). The projects are overseen by the state's Social and Human Development Ministry, which requires monthly reporting, and are audited by the state's congress. Wellenstein et al. (2006) found that Guanajuato has fewer distribution guidelines and less oversight of implementation of its FISM disbursements than is the norm among states in Mexico.¹¹⁵

¹¹³ Author's calculation using INEGI's Sistema Estatal y Municipal de Bases de Datos.

¹¹⁴ The largest fund, basic education (FAEB), which accounts for 62.4% of the total money allocated from *Ramo* 33 bases its allocation on established infrastructure and personnel from previous budgets; therefore, it is not too much of a stretch to assume larger municipalities have larger education systems and consequently larger budgets which result in higher allocations. This assumption seems to hold true if one considers which municipalities saw the greatest increases. The largest, most prosperous municipalities in the state had increases in their conditional transfers of between 105% and 170% between 2000 and 2005 while the smallest municipalities in the state (all those under 32,000 people) saw either decreases in their conditional transfer or extremely minimal gains as Jaral del Progreso saw. According to data from INEGI's Sistema Estatal y Municipal de Bases de Datos and the national census data from 2000 and 2005, the municipalities (including Tarandacuao, Xichú, and Ocampo) that received fewer conditional transfers in 2005 than in 2000 were eleven out of thirteen of the smallest municipalities in the state of Guanajuato in both 2000 and 2005. Of the thirteen smallest municipalities, only Victoria, Huanímaro, and Cuerámbaro saw increases in their allocations in 2005 and these were very modest, ranging from 4.5% to 12.7%.

¹¹⁵ In 10 states (Aguascalientes, Estado de México, Guanajuato, Nayarit, Nuevo León, Sinaloa, San Luis Potosí, Sonora, Tabasco y Yucatán) the state congresses have not incorporated within the local law of fiscal coordination, the criteria of distribution of FISM and FORTAMUN resources specified in Articles 32 to the 38 of the federal law.

Table 4.8 above indicates that there was a 30.7% increase in Guanajuato's FISM funding from 2000 to 2005 but all four of the case study municipalities saw a decrease in their funding. Fourteen of forty-six municipalities in the state of Guanajuato saw a decrease in their FISM allocation, some as high as 81% less than in 2005. Though it does not appear that, generally speaking, FISM funds were dispersed on a political basis both of the PRI case study municipalities, Tarandacua and Xichú did receive significantly less money than the two PAN municipalities, Jaral del Progreso and Ocampo between 2000 and 2005.¹¹⁶ At least regarding the case studies, politics may be at play to some degree due to the fact that the two opposition municipalities saw decreases almost twice that of the PAN municipalities yet their relative capacity was not that much different. The size of the municipalities that received fewer FISM funds in 2005 than in 2000 is also relevant since all have less than 75,000 people and, in fact, almost all of them had a population size below 32,000 including the four case studies. It is not a surprise that all four case studies saw a decrease in their funding, since this is consistent with the statewide trend, but it is interesting to note that the decrease was much larger in the PRI case studies than in the PAN case studies when population is controlled for.¹¹⁷ In Guanajuato, as is the case in most other states in Mexico, smaller municipalities tend to have a more marginalized population which, considering FISM's funding mechanism that is based on poverty indicators, should suggest that these municipalities would receive more money.¹¹⁸

Two factors may be impacting the allocation of funding. First, as Wellenstein (2006) points out, Guanajuato has historically lacked a clearly defined process for allocating FISM

¹¹⁶ It is interesting to note that there are no general political similarities between those that received less funding- the municipalities were a mix of both PAN and PRI in both 2000 and 2005. Of the two municipalities that saw the largest decrease, one was PRD in 2000 and PAN in 2005 while the other was strongly PRI throughout the period.

¹¹⁷ Pérez (2007:14) concluded that "FISM resources seem not to be influenced by electoral competition at the municipal level, by the concurrence of party at the federal level or by municipal elections. There is some evidence of a positive cyclical state election effect and when the municipality belongs to a state with the same political party in government."

¹¹⁸ Consejo Nacional de Población (2005).

money to municipalities from the state level instead, as previously mentioned, relying on municipal planning councils to distribute it. Secondly, there may have been such an improvement in relative poverty in the municipalities that received less money that they no longer qualified for the funding based on the FISM formula. 2005 data from the National Council on Population (CONAPO) suggests that the second reason, a reduction in poverty is not the case. According to CONAPO, in 2005 ten of Guanajuato's municipalities were considered at high risk of marginalization and seven of these same municipalities saw considerable reductions in their FISM allocation. The changes in Xichú's funding could reflect the inherent problem addressed by Wellenstein above. Between the years 2000 and 2005, Xichú's designation by CONAPO changed from very high risk of marginalization to high risk. On the various indicators used to calculate the likelihood of the population being marginalized, it had improved and the reduction in funding from the state government may reflect this. It is interesting to note that at the same time FISM funding was declining greatly for the poorest municipalities in Guanajuato it was, simultaneously, increasing between 20% and 60% in the five municipalities with the lowest risk of marginalization.¹¹⁹ This may be a reflection of both Guanajuato's lack of clear funding formulas during this time period as well as the cultural bias toward the largest, highest capacity municipalities in the state and the country that have a history of receiving preferential treatment.¹²⁰

¹¹⁹ The lowest risk marginalization municipalities include Celaya, Guanajuato, Irapuato, León, and Morelón.

¹²⁰ Throughout the period of 1995-2005, Guanajuato lacked a formulaic method for delegating its funding, instead relying on COPLADEs which are bodies designed to provide for municipal input in planning at the state level. Higher capacity municipalities are likely to have a greater influence in the discussion, planning, and ultimate distribution of resources by the state. This is even more likely in Mexico where there has been a historic bias toward large, urban municipalities, what Barracca (2005) refers to as the "principal city thesis".¹²⁰ Unless these same principal cities happen to have high degrees of marginalization, and the CONAPO studies suggest this is not the case, then their influential role in resource allocation may explain the distribution of need based federal funds to municipalities that do not "need" the money based on their demographics. The World Bank's own 2010 development assessment of Mexico comes to the same conclusion observing that "[t]he majority of federal water infrastructure spending and transfers are not targeted for poverty reduction, and the distribution strongly favors the wealthier states and localities." In non-FAIS federal spending for water and sanitation Barocio (2005:71) found that funding to the wealthiest eight states in 2003 was two and a half times higher per capita than in the poorest eight states. This suggests that without proper

The other significant fund from *Ramo* 33 related to institutional capacity building of municipalities in the area of water infrastructure, the Fund to Strengthen Municipalities (*Fondo de Aportaciones para el Fortalecimiento de los Municipios*- FORTAMUN) is distributed across states at the discretion of the national congress based on population size. States then distribute this funding to municipalities using a similar method based on population. Neither FORTAMUN nor FISM have existing constituencies as is the case with other funds such as health or education so state and municipal governments have more potential latitude in how they choose to spend the money.¹²¹ That said, most states have adopted the formulas established by the federal government for distribution to states, which rely on poverty indicators (FISM) and population (FORTAMUN). Table 4.8 above provides a breakdown of funding that the state of Guanajuato and each municipality received from the FORTAMUN between 2000 and 2005. The allocation of FORTAMUN in the state of Guanajuato mirrors the allocation from the federal government to the state. While the state enjoyed an increase of 113% in FORTAMUN funds in 2005 compared to 2000, the four case study municipalities saw increases of between 95% and 110%, close to the same rate of increase as the state. Guanajuato, like most states, uses a population and equitable distribution based method so the consistent pattern of distribution makes sense.

Federal funding makes up most of both state and municipal budgets and they are highly dependent on it since they have given up most other adequate forms of revenue generation. While on its face, there appears to be an uneven distribution of funding in some cases- such as the overall conditional transfers and the more specific FISM transfers in which low capacity municipalities seem to fare worse- when coupled with the distribution of conditional transfers in which lower capacity municipalities come out ahead, there appears to be an attempt at fairness.

transparency and accountability over the distribution from states to local governments, at least some degree of politics may be involved in how FISM money is allocated though to what degree is unclear.

¹²¹ Webb and Gonzalez (2004).

The formulaic distribution of the *participaciones* and four of the funds that make up the *aportaciones* limit state discretion significantly; therefore, their attempts to use the few tools of leverage at their disposal is potentially more visible in the allocation of funds where there is no formula or the distribution is based on institutions such as the COPLADEs where influence is exerted by larger, higher capacity municipalities.

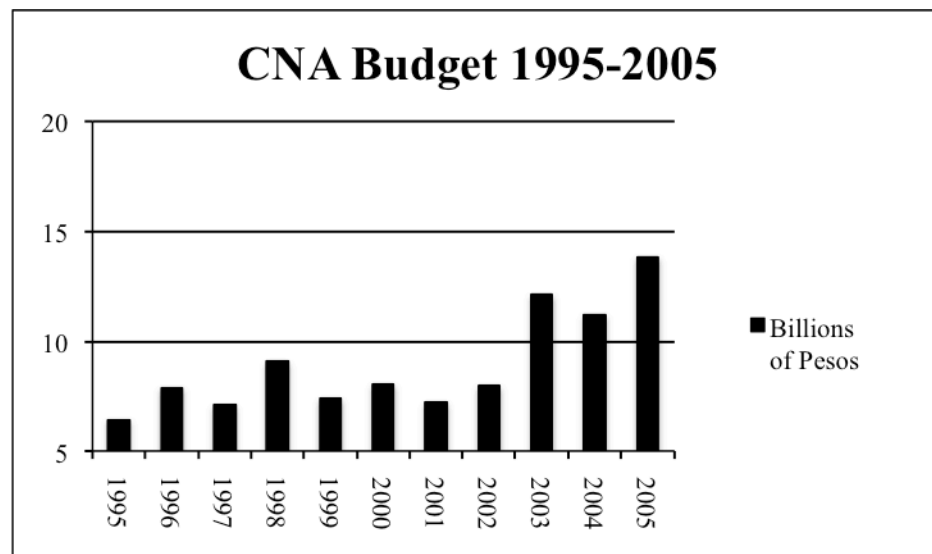
States appear to have traded their autonomy and discretion for the security of federally distributed income. The result is a concentration of fiscal authority largely in the hands of the federal government and, by design, this subverts states' ability to use fiscal resources in any real partisan fashion since they have been forced, especially since the 2000 election of Vicente Fox, to utilize a more transparent formulaic process that yields accountability.

Water Specific Federal Funding- Unlike the more formulaic distribution of *aportaciones* and the transparent process of transferring *participaciones* to states from the federal fiscal pact, CNA funds are far more discretionary. Scott and Banister (2007) point out a unique paradox that has emerged in Mexico where a “simultaneous (and contradictory) existence of water management decentralization with centralized resource allocation” exists.¹²² Nowhere is this more apparent than with the CNA's promotion of decentralized water services through the implementation of local *organismo operadores* that rely on citizen councils (*consejo ciudadanos*) to hold local government accountable while the commission simultaneously directs its money around states to local projects. The CNA, the most important federal agency in relation to water services, is a sub-agency of SEMARNAT- the Ministry of Environment and Natural Resources- and was created in 1989. Funding for SEMARNAT is established in the federal budget under Article 16 (*Ramo 16*.) The budget for the CNA is allocated annually in the SEMARNAT budget and flows to states in many different forms. Specific programs distribute money to, primarily,

¹²² Scott and Banister (2007:9).

municipalities while some emphasize transboundary issues such as aquifer or river management. The budget is also allocated to thirteen basin level offices and state CNA offices located throughout the country.¹²³ Chart 4.2 suggests that over time the CNA budget has continued to grow, making up a significant portion of the total SEMARNAT allocation in *Ramo* 16 of the federal budget.

Chart 4.2: National Water Commission Budget 1995-2005



Source: Comisión Nacional de Agua (2010)

The CNA's budget is distributed across a wider range of activities but the most important consideration for the purpose of this research is the highly concentrated nature of fiscal authority at the federal level for water projects related to expanding access. While the CNA has continued to expand its budget since 1995, making it by far the most important player in Mexico's water

¹²³ The SEMARNAT budget has continued to grow as Mexico, like many countries worldwide, has started to take environmental issues more seriously and appropriate funds to try and deal with many years of environmental neglect. Prior to the establishment of SEMARNAT, the annual budget for its predecessor, the Ministry of the Secretaría del Medio Ambiente, Recursos Naturales y Pesca, was only 4.8 billion pesos total in 1995 while the CNA budget was 6.4 billion pesos the same year (Secretaría de Hacienda y Crédito Público- Presupuesto Nacional 1995-2000).

politics, it has also maintained control over the distribution of its finances, increasingly bypassing states and working directly with local governments to fund projects it deems important.¹²⁴

According to the World Bank, in 2003 federal subsidies for water projects (including both project financing through the CNA and conditional funding from the federal fiscal pact) accounted for 56% of investment financing in water supply and sanitation and 22% of funding was contributed by housing developers. State governments, on the other hand, contributed only 13% and municipal subsidies made up a minuscule share.¹²⁵

As is the case with the distribution of conditional and unconditional transfers, the federal government has largely succeeded in cutting out state governments which, while reducing state discretion, increases the power of the federal government in all levels of water politics. A 2005 assessment of public utility expenditures in Mexico by the World Bank concluded that “[t]he concentration of expertise and power in a single federal institution provides some advantages, but it also means that checks and balances are limited due to the lack of expertise in the sector that is independent of the CNA.”

At the state level, the State Water Commission of Guanajuato (*La Comisión Estatal del Agua de Guanajuato* or CEAG) was created in the state water law as a decentralized agency of the state, responsible for establishing and implementing a state plan that addresses all water related issues but also has a legal responsibility to both support municipal agencies and governments in providing services or to provide the services directly where it is deemed that there is an insufficient level of competency to do so at the local level.¹²⁶ Though decentralized, CEAG’s autonomy is limited by its reliance on both the federal and state government for

¹²⁴ There are varying degrees of discretion in CNA program allocation with some having almost none (for example the Water Rights Return Program- PRODDER) while others have considerable room for the introduction of politics (for example the Water Supply, Sewerage, and Sanitation in Urban Areas program, APAZU). See World Bank (2005) for a description of various federal water programs administered by the CNA.

¹²⁵ World Bank (2005).

¹²⁶ The process for determining who will be responsible for services is established in Articles 32-35 of the *Ley de Aguas Para El Estado de Guanajuato*.

resources. Though it is a decentralized agency, it relies very heavily on the funding provided to it by the state government either directly or through allocations to other programs that are water related. As indicated in Table 4.9, only 0.5% of the budget is based on own revenue while the rest of the revenue is either highly conditioned or the commission has limited jurisdiction over since it is allocated for municipalities, other entities, or specific projects.¹²⁷

Table 4.9: Comisión Estatal del Agua de Guanajuato- Budget 2005

<i>Revenue Source</i>	<i>% of Budget</i>
State Infrastructure Trust- FIES (Fideicomiso para la Infraestructura de los Estados)	2.7%
State Social Infrastructure Fund- FAIS (Fondo de Aportaciones para la Infraestructura de las Entidades Federales)	1.8%
Support Program for the Strengthening of the States- PAFEF (Programa de Apoyos para el Fortalecimiento de las Entidades Federativas)	24.7%
National Water Commission (CNA)	24.5%
Direct State Investment for Public Works Projects	22.7%
Resources from State Ministry of Social Development	0.2%
Municipal Resources	22.9%
Own Income	0.5%
Total Budget	100%

Source: 6° Informe de Gobierno- Administration 2000-2006 Guanajuato.

Note- Shading indicates direct federal funding allocations.

¹²⁷ Guanajuato Cuenta Publica (2005).

In 2005, over half (53.7%) of the resources CEAG received came directly from federal programs and agencies (FIES, FAIS, PAFEF, and CNA) while only .5% of its budget came from resources it had generated on its own. An additional 22.9% of the budget comes from the state but much of this is mainly federal money that is funneled through the state for redistribution while the 22.9% of the budget that is labeled Municipal Resources is typically money that has been allocated to municipalities for water related projects for which CEAG plays a supporting role. The commission, while considered decentralized from the state, relies very heavily on state and federal revenue to fulfill its duties. Its financial leverage is being increasingly restricted. First, the federal government retains the power of the purse by distributing funding directly to municipalities for water infrastructure projects. This process, in effect, bypasses the state government and water agency because municipalities deal directly with the CNA.¹²⁸

Critics have pointed out that this is merely a way for the federal government to supersede the power of states and maintain centralized control over local, decentralized services and in the case of water this seems to be the effect. Compounding this is the federal movement toward basin level management that emphasizes transboundary, regional water planning and funding and shifts it away from states and their agencies. CEAG has also seen its financial leverage over municipalities reduced due to the increasing push to create local agencies that are self-sufficient and driven by efficiency resulting in less need for support from the state. By cutting municipalities loose financially and asking them to rely on their tariffs to fund themselves, there is a decreasing role for the state to play in helping to sustain them. CEAG's role has shifted since the decentralization of a majority of Guanajuato's municipalities to one of support instead of one of authority and much of this has to do with the legal limitations placed on the state in the

¹²⁸ While it is true that some programs require matching dollars from the municipal and state governments in order to get access to federal funds, some do not. APAZU requires a 50% contribution from the federal government (CNA), 25% from the state government, and 25% from the municipal government. PRODDER, on the other hand, requires no state commitment and is entered into by only the federal and municipal governments.

constitution and state water law as well as the financial relationship between the federal and local governments.

CEAG does maintain more influence over centralized municipalities because they are so dependent on the commission for both resources and technical assistance. This is mainly due to the fact that they have fewer personnel, minimal technical capacity, and receive less support from the *ayuntamiento*.¹²⁹ There is a certain irony in the state retaining control over the municipalities that are the least likely to be able to provide their own services which are, incidentally, the most costly to manage because the municipalities are often rural or remote and far from existing water networks. They also require the most support since they are, for the most part, the most highly marginalized populations, which means they are not likely to have the technical or financial know-how to run the water agency efficiently. The design of decentralization means those municipal systems that are the easiest to undertake, where there are more educated people to manage the process, and more resources available to fund the services, are in the hands of local governments. This ultimately shifts the cost burden to the state, which has also seen its own resources decrease.

Fiscal authority in Mexico has not changed significantly since the introduction of decentralization of water services in the 1999 Municipal Reforms. This is primarily due to Mexico's fiscal federalism that has placed most of the control and discretion in the hands of the central government while making state and local governments highly dependent on federal distributions. Discretion has been reduced even further by establishing formula driven allocations at both the federal and state level while improving accountability and transparency in reporting at all three levels of government. While not completely absent, the leverage that states once had has

¹²⁹ Personal communication, May 2011.

been reduced to utilizing what little own revenue they can generate, the few federal funds that lack a formula driven distribution, or refusing to match municipal funds for federal projects.

4.4.3 Regulatory Decentralization

Regulation of water services in Mexico is complicated due to legal, financial, historical, and environmental issues. Because of the inverse relationship between water availability and population concentration in the country, there is a scarcity of the resource in many highly populated areas. Compounding this are historical practices of allocation to various interests in society, such as agriculture, that challenge efficient use.¹³⁰ Add to this the legal transfer of authority for providing water services to municipalities in 1999 and the ability to effectively regulate is incredibly difficult. Regulation of water, which is established in Article 27 of the federal constitution, has been maintained primarily at the federal level with the exception of the deconcentration of federal agencies and ministries to states and.¹³¹

Regulation of the activities that fall within the parameters of Article 27 is under the jurisdiction of the federal government and thus, any duplicative exercise of these activities by states or municipalities is permissible only with approval from the federal government. While states initially controlled much of the domestic water service provision in Mexico, the passage of Article 115 of the constitution gave municipalities responsibility for this. This Article confines state support to that which municipalities expressly demand, and only temporarily. What remains unclear is who has the legal power and responsibility to regulate water provision at the

¹³⁰ See Scott and Banister (2008) for a historical overview of these conflicts.

¹³¹ Article 27 of the Federal Constitution establishes the following parameters on water in Mexico: the Nation has had and has the right to transfer the domain of land and water in order to constitute private property; surface and groundwater, except that which flows through a single property or lies beneath it, belongs to the Nation; groundwater whose use has not been prohibited, regulated or reserved by the Federal Executive, can be used without a concession; the only legal way to use national waters is through a concession granted by the Federal Executive; the Federal Executive has the power to establish and suppress prohibitions to use national waters.

decentralized, local level.¹³² Table 4.10 classifies the type of regulation and the entity that has legal responsibility for carrying it out.

Table 4.10: Existing Regulation and Bodies with Jurisdiction in Guanajuato

Responsibility	Body with Jurisdiction
Access and use	National Water Commission (CNA)
Preservation of the quality of bodies of water	CNA Ministry of Environment (SEMARNAT) Federal Agency for Environmental Protection (PROFEPA)
Budgetary incentives related to performance	CNA State Water Commission (CEAG)
Analysis and authorization of investment plans	Municipal Governments
Authorization of tariffs	Municipal Governments State Congress
Protection of public health	Ministry of Health (SSA) CNA
Construction of water projects	CNA (if near federal waters or involve federal funds) State Government

Source: Adapted from Sandoval (2009).

Many of these same federal agencies are deconcentrated to the state or regional level. As previously stated, the CNA has thirteen basin-level offices and state-level offices located throughout the country, while both the ministries of environment and health have deconcentrated state-level offices.¹³³

¹³² The following regulatory instruments have been identified in the Mexican National Water Law (1992): implementation of water resources planning as the basis for management within river basins, constitutional permission for water exploitation by means of a concession granted by the CNA and includes language regarding abstraction time limits and enforcement mechanisms for inefficient use or waste, federal power to limit or prohibit use in the national interest related to overuse or scarcity, water pollution prevention and control through established standards and a permitting process for waste-water discharge, regulations to manage federal water zones, punitive measures for non-payment of fees associated with water rights, registration requirements for all abstraction concessions, federal zone occupation, discharge permits and water rights trades, and sanctions for non-compliance with the CNA or its by-laws as well as legal remediation procedures.

¹³³ In 2004, many of the original duties given to the CNA in the national water law were transferred to the basin management agencies. It is worth noting that though the 2004 revision of the National Water Law established water basin management agencies (*Organismos de Cuenca*) and basin councils (*Consejos de Cuenca*), these transboundary organizations have had little impact on the management of water. This is mainly due to the fact that the funding

Key concerns with regards to regulation in Mexico- There are a variety of regulatory concerns in Mexico. First, there is the protection of the consumer. Water quality is monitored at the state level by the Ministry of Health (*La Secretaría de Salud*) and enforced by the Ministry of Social and Economic Development and the CNA. The Ministry of Health's jurisdiction over water-quality issues dealing with drinking water is established in the General Health Law of 1984 (amended in 1988) whose standards virtually all states and municipalities incorporate into their own laws and ordinances.¹³⁴

Consumer protection related to excessive water service user fees falls under the jurisdiction of the state government and is outlined in Guanajuato's state water law. Technically Guanajuato's state government lacks formal power to approve tariffs but there have been instances when the unicameral legislature has not approved tariff increases.¹³⁵ There is currently little states or the federal government can legally do to intervene when service quality is poor and the state water law places responsibility on the municipality to tell the state when it is incapable of providing adequate services.¹³⁶ While health standards can be enforced by federal agencies and financing can be used as an incentive to change behavior, both the states and federal government believe that they are bound by Article 115 of the federal constitution to cede control of providing water to municipal governments. Where local governments and agencies are either

mechanisms established in the federal fiscal pact between states and the federal government continues to allocate monies to states and municipalities instead of to the *cuencas*. While it is true that the CNA has tried to steer resources and power to the *cuencas*, the majority of funding related to water infrastructure is still directed through federal *aportaciones*.

¹³⁴ *Norma Oficial Mexicana NOM-127-SSA1-1994* establishes standards for drinking water, including maximum levels of contaminants and the elimination of bacteria are included in the law as is authorization for the Ministry of Health to regulate water quality in all public and private water delivery infrastructure. Wastewater discharge is also prohibited under the law as it relates to potable water sources. The Ministry of Health performs testing of water in each municipality on multiple occasions throughout the year. Federal law stipulates that the selection of the methods for testing water is the responsibility of the operators supplying water for human consumption who must establish a water quality analysis program and provide all data to the authorities when asked to do so. Federal law establishes acceptable levels of biological and chemical contaminants as well as regulating the physical traits of water.

¹³⁵ Personal communication, April 2010.

¹³⁶ Article 32. *Ley de Aguas Para El Estado de Guanajuato*.

incapable or unwilling to provide services, water provision can remain under state control, as is the case in ten of Guanajuato's municipalities, or can be supported by state and federal programs that target rural and poor urban populations to correct inequitable service levels. Even in the high capacity municipalities included in this study, there are communities not covered by the local water agency because of their distance from the main municipality (*cabecera municipal*) or because their physical location makes network extension prohibitively expensive. Typically, these rural or excluded populations maintain their own water councils (*comités rurales*) and are funded with money from state or federal agencies through targeted programs. There is no regulation that requires local governments to provide services to all of the population within their jurisdiction or to provide a minimum standard of service. Guanajuato's state water law mandates that municipalities are responsible for water services in urban areas within their jurisdiction.¹³⁷ As many have pointed out, regulation of water services is important because of the monopolistic nature of water services.¹³⁸ This is especially true when local agencies are the body empowered to provide services and consumers lack alternatives. The impact of this coupling of decentralization and lack of regulation will be assessed in later sections.

Looking at the agencies themselves, there are no regulations that provide local water agencies with the autonomy to administer water services without political interference. One advantage of regulation, and why some at the municipal level see a need for it, is that it would simultaneously give municipal agencies accountability (benchmarks and indicators established at the state or federal level) but would also provide them with some degree of cover from local

¹³⁷ While expectations of adequate service are addressed in Guanajuato's state water law, they are vague at best. One reason is that the state and its water commission feel that they are unable to establish anything beyond recommended targets of efficient service because of the legal implications of Article 115. They must rely on the municipalities to provide adequate service and, as previously addressed, seek out the assistance of the state if they are unable to do so.

¹³⁸ Baumol et al. (1977) provided the following definition of a natural monopoly: "By natural monopoly we mean an industry whose cost function is such that no combination of several firms can produce an industry output vector as cheap as it can be provided by a single supplier." For an analysis of the arguments related to water's natural monopoly, see Clark and Mondello (2002).

political pressures.¹³⁹ The need to comply with higher levels of regulation could be used as a justification to maintain and protect budgets from local political interference but also as a way to help justify more efficient tariff levels that are, at times, rejected for political reasons even if the end result is an agency with inadequate resources to provide services for the public.

Without modification of federal law, regulation of service delivery is largely confined to municipalities unless they give authority to a state regulatory agency. In order to establish a federal regulatory agency, the federal constitution would have to be amended. Changes in the constitution would also allow the federal government to empower states or regional bodies to regulate the provision of services while also promoting agency performance.

4.5 Influences of Intergovernmental Relations on Decentralization

In order to best understand the process of decentralization in Guanajuato, fieldwork at the state and municipal level was conducted primarily between January and December 2010. As indicated in Chapter 3, a survey was administered to multiple stakeholders but responses were extremely low and so it is of little quantitative value. Some of the results of this survey will be discussed in the following section but much of the understanding of “how” decentralization has occurred and both the positive and negative consequences of it will be derived from interviews conducted in Mexico over the last year. It is worth pointing out that cases were selected based on indicators such as party, size, and capacity in order to reduce case selection bias. As stated in Chapter 3, the use of small municipalities was thought to offer more opportunities to talk to people and truly get a sense of what was happening at the local level. A limitation of this approach was the availability of individuals to interview who had adequate information for the

¹³⁹ See Padowski (2007) for a discussion of regulation.

whole period of this study and the relative unavailability of historical data related to water services.

While much can be gleaned from data available from the federal statistics bureau INEGI, state governments and water commissions, and various government agencies, local level data that is generated by the local agency or government is hard to come by. Compounding this was the quite frequent movement of local officials out of the municipality once their tenure had ended. Perhaps due to the three-year term limit of elected officials and its subsequent effect on agency directors that are politically appointed as well as the relatively limited opportunities in small, rural municipalities, many of those with prior knowledge of the government dynamics or water provision had long since departed. Those individuals that made themselves available were able to provide very insightful observations regarding how water services work in Guanajuato and in their municipality though in some cases, covering a limited time period. It is important to point out, however, that the conclusions are highly dependent on available data and willingness on the part of local officials and employees to be open about their experiences. This may inevitably affect the conclusions but this is unavoidable given the research method employed.

A former state and municipal water agency director that was interviewed for this project provided the following insight: where there is space, there is room for politics.¹⁴⁰ In Guanajuato there is space, and thus, the potential for politics to affect the process of decentralization. In many instances during fieldwork, examples provided by municipal and state workers suggested that intergovernmental relations do matter; however, it is not the overriding factor impacting the process of delivering water services at the municipal level. Additionally, there were several examples (to be discussed below) where one would expect to see influences of intergovernmental relations in which there were none. One overriding theme, which is evident across all three

¹⁴⁰ Personal communication, April 2010.

states, and will be discussed here and in Chapter 5, is the presence of politics at the local level more so than between the state and local governments.

4.5.1 Administrative Authority

Administratively, there appears to be significant decentralization of authority to municipalities but relatively little influence of intergovernmental relations. Employees at CEAG were quite adamant that the commission treats all municipalities the same and are basically there to support the municipalities in their obligation to provide services under Article 115 of the federal constitution.

Agency Structure- There appears to be no apparent intergovernmental influence on the structure of the local agency and state law takes an extremely hands-off approach towards it. The state water law provides no guidance to municipalities as to what type of agency they should create. What this vagueness does do is provide an opportunity for *local* politics to enter. Because of the lack of legislated guidelines provided by the state, some agencies are completely separate from the local government, some have a director that is appointed by the municipal president, some have boards composed of all citizens, and some have no autonomy from the local government. This appears to be where the politics are present. While perhaps linked more to capacity, which will be discussed below, the three year term limit of local office often leads to significant turnover in personnel within the agencies. Political changes in the local municipal president typically means change in at least the general director of the agency if not the entire staff (with the exception of unionized employees); however, perhaps challenging the notion that partisan change is the primary driver, is the fact that in some municipalities, personnel turnover does not

solely occur when a new party comes to power. Instead, it also occurs when anyone new comes to power even from the same party. These differences are presented in Table 4.11 below.

Table 4.11: Municipal Agency Leadership Staffing Practices

Municipality	Changes in Agency Leadership	Effects of Practices on Agency Stability
Jaral del Progreso	New director every three years even if same party re-elected.	Stable since only bureaucratic administrator changes.
Ocampo	New director every three years if new party elected.	Unstable under conditions of political competition at municipal level.
Tarandacuao	No change in director with new administration.	Stable- maintenance of longtime director with experience in water.
Xichú	New director every three years if new party elected.	Unstable under conditions of political competition at municipal level.

In Jaral del Progreso, agency officials indicated that there is typically a new director and sub-director every three years because the new municipal president replaces them. Though not legally required, the opportunity to fill positions becomes an opportunity for patronage and appears to be utilized as such. It is interesting to note that Jaral del Progreso has been one of only a handful of municipalities in the state to institute a civil service program. In 1997, the state legislature of Guanajuato passed the *Ley Organica Municipal Para el Estado de Guanajuato* that, in part, instituted a civil service at the local level.¹⁴¹ In compliance with this law, the *Sistema Municipal de Agua Potable y Alcantarillado de Jaral del Progreso*, the municipality's water agency, utilizes a civil service system which creates two layers of employees; administrators and non-administrators. According to the director and sub-director, they are likely to be replaced

¹⁴¹ *Ley Organica Municipal Para el Estado de Guanajuato*, published in the state's *Periódico Oficial*, July 25, 1997. Articles 135-139.

every three years but the rest of the staff, both those responsible for technical and non-technical operations as well as any unionized employees, are likely to stay. An interview with the technical operator in Jaral del Progreso, who is primarily responsible for network maintenance, confirmed that he had in fact remained in his position over the course of two administrations and was not likely to be removed except due to poor job performance. The director and sub-director, on the other hand, were quite aware that they were likely to be removed after the next municipal election even if the PAN was re-elected. Aside from the municipal appointment of the director and sub-director, all of those interviewed in Jaral del Progreso indicated that the state and municipal laws in place buffer them from politics in other administrative areas.

Conversely, in Tarandacuao where the water agency is not autonomous from the municipal government and might be subject to potentially more political manipulation, the director has been in place since 1998. She was appointed by a PAN municipal president in 1998 and has remained in her position over the course of two PRI governments (00-03 and 03-06), one PAN government (06-09), and is currently serving under a PAN administration (elected 2009). Her observation is that while politics are definitely present at the local level, her agency has been treated the same by both the municipal government and the state government regardless of which party was in power. Her permanency may be an indication of an absence of local political interference in water services or it may suggest that Tarandacuao's agency lacks significant autonomy and there is no need to remove the director since the local government has ultimate veto power over any decisions made.

Ocampo and Xichú both utilize a more typical process, which is to retain the person in charge of the water department as long as the party that controls the municipal administration is the same. In Ocampo, the same individual maintained his position throughout the PAN party's rule until 2009 when the PRI took control of the municipality. Likewise, the head of Xichú's

water department remained in his position while the PRI controlled the municipality, only changing with a PAN victory in 2009. The key similarity here is that both are centralized, managing the water sector out of the municipal administration and the individual in charge of potable water has little to no autonomy in either case. There does not seem to be much of a reason to remove the individual for reasons related to managing the sector since planning and execution of water services occurs from within the local administration. Unlike the structure of most decentralized agencies, in which the municipal president directly appoints and removes the agency director, the personnel decisions in both of these centralized municipal water departments appear to be more driven by partisan change instead of the more personalized nature of changes in the municipal president. Whether this tradition will be maintained in the face of increased political competition or future decentralization remains to be seen.

While the state has not tried to influence the structure by which municipal governments deliver water to their population, the federal government has slowly started to influence local agency administration by tying funding to agency structure.¹⁴² In a state such as Guanajuato, where there is minimal direction provided for what the local water agency should look like, agencies can be created at the local level that reflect the federal preference. The agency in Jaral del Progreso is structured the most closely to what the CNA recommends with an independent board of directors (*consejo directivo*) on which four local representatives sit; however, there is not a separate public advisory council (*consejo consultivo*) which is a key component of restructuring agencies to be responsive to community demands and concerns. Tarandacuao has neither a *consejo directivo* nor a *consejo consultivo*, instead relying on a decentralized committee

¹⁴² The APAZU operating guidelines state that “In the case that an agency integrates an advisory board in which ample citizen participation exists, implements a system of personnel permanence, and implements a system of quality management, the agency will be supported with an additional 15% in funding for programs that are to be implemented.” Author’s translation from Comisión Nacional del Agua (2008b).

to oversee the agency with direct accountability to the government of the *ayuntamiento*. So far, the fact that the agencies have structures that vary from the CNA's preference has not seemed to impact their ability to apply or qualify for federal programs. Both decentralized municipalities have qualified for federal APAZU program funds in the past and neither agency director seemed to think that they would have a difficult time accessing the program's resources in the future; however, interviews with employees at the CNA suggest that the commission plans to increasingly incorporate funding criteria specific to agency structure in the future.¹⁴³

Agency Operations- In relation to daily operations, the state provides some degree of regulation and financing (to be discussed in a later section) and assists local agencies with technical know-how through training and providing technical guidance on projects. The state government only appears to meddle in local water agency operations as it pertains to user rates but the degree to which they interfere appears to have less to do with partisanship and more to do with their own election cycle. The state congress has a legal responsibility to review tariffs and sets a cap on rates annually. CEAG is involved in providing tariff studies and consultants to local agencies in order to assist them with establishing their tariff rates but appears to interfere little in the actual setting of rates. Similarly to the previous discussion regarding staffing, there appears to be minimal interference by the state in the daily operations of local governments and their agencies and little of it has to do with partisanship.

Instead, the interference in local water service delivery appears to come from the local government itself. The broader municipal governing body, the *ayuntamiento*, is charged in both state and local law with various functions from approving tariff levels and budgets to appointing the agency director and its governing board. It is in these duties that agencies noted seeing the

¹⁴³ Personal communication, April and December 2010.

influence of politics, though not necessarily partisanship. Agency representatives in both Tarandacuao and Jaral del Progreso noted that the local government had not approved tariff changes many times. Recently, in Jaral del Progreso a 5% increase in rates to cover higher costs for service delivery and project construction and maintenance was not approved while in Tarandacuao, an increase in rates as well as a shift from fixed rates to rates based on average use was not approved. Similarly to observations made by some agencies that the state congress was not willing to approve rate increases prior to an election, local politicians are likely to be scared off by passing on higher rates to users even though they also want the agencies to be self-sufficient and cover their own costs using mainly revenue from tariffs so that state and federal revenue is freed up for municipal government use. This appears to be the most significant area the state and local government directly interfere in agency decision-making. Under the process of decentralization, it appears that most of the authority for administering local water services has been devolved to the local level and, perhaps appropriately, this is where we see the most obvious examples of politics because of the very real impact that rate increases have on elected officials and parties.

Water Projects- The case study municipal agencies all indicated that they were treated equally by CEAG regarding project requests and suggested that “good” projects would be approved. While of course one could question who determines what constitutes a “good” project and whether the state uses its discretion to influence project promotion, this did not seem to be the case according to local agencies and governments who were ruled by both the PRI and PAN under the PAN state government. The discretion for the state lies in its ability to assist municipalities in their applications for federal projects that require state matching funds but none of the municipalities indicated that the state had utilized this leverage to their detriment. As previously stated, in

relation to projects, there is more discretion exerted through federal financial channels and this will be discussed in the next section. Because the federal government has almost completely cut the state out of the financing process for water projects, they are limited in their influence. While the state can prevent a municipal government from proposing a project to the CNA, municipalities can appeal to the CNA directly, which can then award the project over the objection of the state.¹⁴⁴ Again, the authority of the state is undermined by the federal government's control of resources tied to water. While this has provided some autonomy to local governments to determine their own project needs it has increased their reliance on the federal government substantially. It should be pointed out that there is a certain irony in the fact that the CNA, under the neoliberal PAN party, has strengthened its own position in the water sector relative to both subnational levels of government. Though simultaneously supporting decentralization of water services in the way that it promotes local management, resources and authority have been increasingly concentrated at the federal level, away from states, which is in direct contradiction to the theme of subsidiarity, which the party has historically promoted.

Conclusion- Decentralization of administrative control over water services does not appear to be heavily influenced by intergovernmental relations. This is due to the fact that the state of Guanajuato has actually devolved much of the authority for service provision to municipal governments in its state water law and subsequently largely reduced its own role in local water delivery. CEAG has deferred to municipalities in relation to how they choose to administer their water services and, with the exception of approving tariffs, the state has for the most part removed itself from the administrative aspects of water services so there is little opportunity for partisanship to impact the relationship between the state and local level. There is however, an

¹⁴⁴ Personal communication with CNA official, April 2010.

opportunity for conflict over authority between the federal and state level but since Guanajuato is a strong PAN state under two successive PAN federal governments and a PAN appointed CNA director, none has been observed.

4.5.2 Fiscal Control

Fiscal authority and discretion in Mexico has been decentralized through the process of centralization. Though a majority of revenue is directed to the federal government to reallocate, the process of reallocation has been carefully codified in the various *ramos* of the federal constitution to reduce the discretion of individual actors. The method has also been adopted in some states where formulas are used to determine funding. Municipalities have discretion over their budgets but the revenue available to them is highly dependent on federal decision-making and subsequently, on state distribution. In some cases, formulas create equity but in others, such as funding from specific state or federal agencies, the process is far less transparent or equitable.

Shifting to fiscal federalism should lead to at least some degree of redistribution of wealth. Rowlands (1998) finds that even with the economic crisis that Mexico experienced in 1994, data on municipal revenue clearly shows that municipalities have more, not less to spend on public services than before the decentralization reforms were put into place. Table 4.11 provides an overview of case study revenue between 1995 and 2005.

Table 4.12 Gross Income by Municipality 1995-2005^a

	Income 1995 (thousands of pesos)	Income 2000 (thousands of pesos)	Allocation per Capita ^b (2000)	Income 2005 (thousands of pesos)	Allocation per Capita (2005)
Jaral del Progreso	5,480.5	36,036.2	1162.45	49,300.8	1551.31
Ocampo	4,623.1	40,121.0	2006.04	46,771.9	2272.79
Tarandacua	3,836.1	28,163.9	2816.38	25,581.8	2495.30
Xichú	3,319.4	38,308.0	3830.80	33,523.1	3194.64

^a Source: INEGI “Estadística de finanzas públicas estatales y municipales”

^b Per capita calculation is author’s own using INGEI income and population statistics from 2000 and 2005 census data.

It is important to review the degree to which local governments rely on state funding.

Municipalities in Mexico generate little of their own revenue meaning they have an extreme reliance on primarily the federal government, and in some cases, the state. This also suggests that examining their income is highly reflective of what is being allocated to them instead of what they are generating themselves. While Table 4.12 provides an overview of the ever-increasing revenue in local government coffers, it also includes a column for per capita income for the years 2000 and 2005. One thing that this additional information reveals is that though Jaral del Progreso, a municipality with a much higher level of capacity, has the largest gross income, once adjusted for population it has the lowest per capita income. Intergovernmental relations that punish non-PAN municipalities by providing less revenue are not likely to be blamed for the lower revenue because both the governments of Jaral del Progreso and Ocampo, which received the least amount of money per capita, were PAN throughout the period of PAN state control.

Though the amount of funding that states can manipulate has dropped significantly since the introduction of the federal fiscal pact, the differences presented in Table 4.12 could reflect strategic allocation since the non-PAN municipalities, both high and low capacity, had higher

gross incomes than the PAN municipalities. The PAN has been historically strong in Jaral del Progreso and the municipality is more affluent so there may have been little need to over-invest in a PAN victory there. Conversely, Ocampo has a lower capacity and in 2005 was considered at higher risk for marginalization so it might have needed additional revenue. It is worth noting that Ocampo did elect a PRI government in 2009 after three successive PAN governments. It certainly could not have helped the previous PAN municipal government that they had less money overall to distribute to constituents. Tarandacua and Xichú, both PRI municipalities during this time, could have been allocated additional federal and state money in order to weaken the PRI's grip by providing outside, PAN linked, support. While Xichú is the lowest capacity municipality and certainly needs the assistance, Tarandacua is fairly affluent. While assuming the higher level of revenue is based on party politics is purely speculative, the fact that both of these municipalities recently (2009) elected PAN municipal governments suggests that the additional revenue did not hurt the party.

Water specific funding also varies considerably. Outside funding is important to municipalities since their own tariffs are only used for operation and maintenance. Larger investments in network improvement and expansion rely the funding provided by the state and the CNA. Table 4.13 presents the percentage of each municipality's total revenue and water services budget that comes directly from the state for potable water in 2005.

Table 4.13: State Potable Water Investment- 2005

Municipality	State Investment as % of Municipal Budget	State Investment as % of Water Services Budget
Jaral del Progreso	0.412%	3.1%
Ocampo	8.607%	157.9%
Tarandacuao	4.249%	96.9%
Xichú	1.988%	Data not available

Source: Author's calculation from CEAG (2000, 2005, 2008) and 6º Informe de Gobierno-Administration 2000-2006 Guanajuato

Table 4.13 suggests that there is a tremendous inequity in municipal water investments by the state in 2005. Jaral del Progreso has been extremely self sufficient since 1995. The agency covers a majority of its costs with user tariff collections, increasing this amount from 82.2% in 2000 to 93.7% in 2005 and since 1995, the agency's income from all sources has surpassed its expenses by up to 16% making it highly self sufficient; therefore, there appears to be little need for additional state investment. Conversely, Ocampo relies on the state for a majority of its water services budget covering only 16.3% of water expenses from user tariffs in 2000 and 45.8% in 2005. Complete data was unavailable for Tarandacuao in 2000 and for Xichú in all years but Tarandacuao does appear better able to cover its expenses than Ocampo, with 83.2% of total water expenses covered by user tariffs in 2005. The investment by the state seems to reflect this with Jaral del Progress receiving very little funding, while both Tarandacuao and Ocampo received substantial investments from the state to cover expenses that their water agency or department cannot cover itself. Ocampo appears to be much more reliant on state investment

than Jaral del Progreso and to a lesser degree Tarandacuao which may represent the distinction between the dependence that decentralized and centralized municipalities have on state support.

When total municipal budgets beyond the water sector are more closely examined, the reliance of local government on state and federal funding becomes highly apparent. Table 4.14 summarizes the taxes collected by the municipality and the percentage of the municipal budget that this money constitutes.

Table 4.14: Percentage of Total Municipal Budget Attributed to Taxes- 1995-2005

	<u>1995</u>	<u>2000</u>	<u>2005</u>
Jaral del Progreso	16.9%	3.4%	4.5%
Ocampo	14%	3.1%	4.2%
Tarandacuao	14%	2.7%	5.2%
Xichú	1.6%	0.3%	0.6%

Source: Author's calculation using INEGI data from the *Sistema Estatal y Municipal de Bases de Datos*.

Data in Table 4.14 indicate that the bulk of the money that composes municipal budgets comes from the state and, thus indirectly, from the federal government. It is not so much that the state is obstructing revenue generation as it is that municipalities have given up that power in exchange for a consistent, if at times fluctuating, source of revenue from the state and federal government.¹⁴⁵ Though reforms to the constitution gave municipalities access to a variety of sources of revenue such as property taxes and municipal related fees, municipalities still rely

¹⁴⁵ Though it is worth noting that municipalities may have less of an incentive to generate own revenue because of the guarantee of funds from the federal fiscal pact, the incorporation of tax effort in the federal *participaciones* formula should encourage them to do so if they want access to more of those funds.

heavily on the state and federal government. In examining tax collection by the case study municipalities, with the exception of Xichú, they are relatively similar in their ability to generate revenue. This ability is minimal but appears to be strengthening between 2000 and 2005. Rowland (1998) points out that this trend is potentially indicative of decentralization taking hold at the municipal level where local leaders are becoming more adept and subsequently exploiting local level revenue generation. Though limited by the federal fiscal pact in what they can collect, municipalities are finding creative ways to increase fiscal resources that also increase their autonomy because the money does not come from higher levels of government. Rowland's study focuses on the fifty largest municipalities that are likely to have greater revenue sources at their disposal, but Table 4.14 suggests that even very small, and in some cases fairly rural, municipalities are able to do the same thing though on a much smaller scale.

Regarding decentralization, fiscal authority does not appear to have changed much. Local government is still highly dependent on the federal government for its funding and lacks any real ability to raise its own independent revenue. This is especially true regarding water services. Aside from tariff collection, revenue for water services comes almost exclusively from the federal government. Some is given to states that then distribute it but almost all of the money utilized by local agencies for water related projects comes from either federal transfers or from projects funded by the CNA. Local governments have authority over their own budgets and the directors of the water agencies in Jaral del Progreso and Tarandacuaio both indicated that their budgets, once approved by the *ayuntamiento*, have been left alone; however, their budgets mainly cover daily operation and maintenance.¹⁴⁶ Budgeting for network extension and improvement generally comes from federal water project money, which makes them less autonomous. Water service budgets in centralized municipalities such as Xichú and Ocampo remain under the control

¹⁴⁶ Personal communication, December 2010.

of the municipal government and are much more susceptible to interference by local government because they are not given to an independent agency to control.¹⁴⁷ This was confirmed by the individuals in charge of potable water services in both municipalities who felt that they have extremely limited autonomy regarding both managing their networks and utilizing their budgets.¹⁴⁸ Tariffs go directly into the municipal budget and funding for projects passes through the municipal administration's hands before being utilized by the department. Local politics and priorities become much more important than when agencies are decentralized because there are more opportunities for local government interference. Additionally, because water services are part of the local government these centralized water providers are less buffered from partisan conflict that arises between the state and the municipal governments.¹⁴⁹

While revenue-raising in and of itself is relatively limited to collecting user fees, once money is in the hands of local governments, they appear to have authority over it. The fiscal hierarchy has not changed much with each lower level of government having to rely on that above it for resources; however the increasingly formulaic and transparent process of fiscal federalism and direct project funding has increased the role of the federal government at the expense of the state. Local governments have fiscal authority over the money they receive and this could be interpreted as decentralization but they lack complete control over their revenue

¹⁴⁷ This control is one aspect of the decentralization process that is problematic. In discussions with employees of CEAG, it became apparent that there was a tradeoff for local governments between remaining under the state's centralized control and moving to a decentralized model. This tradeoff involves the revenue available for water services. As a centralized municipality, local governments potentially lose out on independent funding coming from federal projects that they either do not apply for or do not qualify for since only decentralized agencies may be eligible. On the other hand, because water services are not decentralized funding for water services remains a part of the general municipal budget and is available for use by the government. Either way the municipality receives its federal transfer money from the state over which local government retains discretion. The decision to decentralize has a potential cost to the municipal government, which it has to consider before deciding to decentralize. For those municipalities that have a lower capacity, and are least likely to be able to generate their own resources, staying centralized means consistent funding even if additional federal dollars are forfeited.

¹⁴⁸ Personal communication, January 2010.

¹⁴⁹ Department employees in Xichú, for instance, felt that municipalities received far more assistance from the PAN state government than from the PRI, with the former far more responsive to the needs of the municipality for financial and technical assistance and in its attempt to access federal money for a reservoir project. Additionally, the employees believed that the municipality, which had long been under PRI control, was receiving far more help from the PAN state since it had elected a PAN government in 2009. Personal communication, January 2010.

stream, which remains highly centralized at the federal level. As with administrative authority, the potential for political interference is increasingly at the local level because of the reduced influence of the state in resource allocation.

4.5.3 Regulatory Authority

Regulation is perhaps the most affected by the ambiguity of federal law. As previously stated, there are many ways in which water is regulated in Mexico but its provision by municipal governments to local users has few restrictions beyond the general sentiments found in the state water law and regulation for health purposes by state and federal health authorities. What is not regulated is performance. Data on efficiency and performance is available but what is lacking is an assessment of this information that translates into improvements or changes. The state does not step in until the municipality itself tells the state commission or government that it is unable to deliver water adequately and the federal government must rely on its limited funding leverage to see any changes which are, ultimately, voluntary because municipalities do not have to apply for federal project funding. Because there is a lack of a separate regulatory agency that monitors quality, there is no analysis of the match between tariffs and performance and no accountability on the part of agencies to meet a particular standard.

The federal government has an incentive to maintain an interpretation of Article 115 that prevents any meddling in municipal water responsibilities because to not do so is to invite states to challenge the convenient, dependent relationship that the federal government has created with local governments and agencies. Similarly, states do not have an incentive to regulate for to do so is to potentially identify problems that the state will then be financially obligated to step in and

fix.¹⁵⁰ Additionally states may not be rushing to create regulatory agencies or pressuring the federal government to do so because of the current push by the CNA to move toward a basin management model. The CNA began promoting this model in 1994 and began transferring some of its authority and targeting portions of its funding to the basin level in 2004. The federal government is pushing a model of water management that is transboundary in nature which challenges the control of states over water resources within their jurisdiction; therefore, the natural evolution of the federal government in this direction means that regulation at the federal level would likely follow this trend. States would, in effect, lose even more control if regulation authority is transferred to transboundary basin management offices or user organizations. The status quo is, for states, working. Failure to provide adequate services can be blamed on local government because it has responsibility for providing services or the federal government can be faulted because they control the resources and plan at a national level. It is worth noting that the use of the basin model also puts more control in the hand of the PAN federal government since it cuts the state level out of the process and allows the federal government to work directly with the various water constituents below the state level.

The case study municipalities do not seem to have any significant regulation of their activities beyond water quality testing and tariff approval. Xichú is more highly scrutinized because it is in the Sierra Gorda biosphere so water infrastructure projects must conform to environmental regulations established and regulated by the Ministry of the Environment (SEMARNAT). Jaral del Progreso was actually decentralized in 1992 because the state passed a law mandating that each municipality have a treatment plant. This was essentially the state regulating water services outside the purview of Article 115 of the federal constitution.

¹⁵⁰ All three state water laws included in this study imply that the state government has a responsibility to assist local agencies and governments that cannot adequately carry out their service provision. Employees all of the state commissions interviewed for this project felt that states had been cut out of the regulatory process but are also better off not participating since they can relinquish any accountability in the case that there are problems.

Tarandacuao and Jaral del Progreso have both received assistance from the state to conduct tariff studies and measure water quality but there is minimal regulation of other activities aside from the CNA ensuring that water extraction is registered and paid for.

There does not appear to be a decentralization of regulatory authority. The limited regulation that does occur is either conducted by federal agencies such as the CNA or by deconcentrated offices of federal agencies such as the Ministry of Health and the Ministry of the Environment. One could interpret the lack of regulation as placing authority in the hands of local government, which constitutes decentralization, but the lack of any self-regulation makes this seem like it is a misapplication of the concept. The legal standards imposed on water quality, extraction, and use by the federal government in national water law and other federal legislation as well as the minimal standards established in Guanajuato's state water law have reduced the likelihood of intergovernmental political pressures because there is little space for picking winners and losers.

4.6 Influence of Capacity on Decentralization

Variation in municipal capacity seems to have a greater impact on the decentralization of water services in Guanajuato than does intergovernmental relations. As municipal governments have been asked to perform more and more duties under the process of decentralization, the variation in institutional and administrative capacity becomes even more apparent.

4.6.1 Administrative Authority

The decentralization of water services to local governments in Mexico took place without much thought as to whether they had the capacity to deliver those services. Additionally, many of the institutions already in place have made the job of local agencies even more difficult. The

impacts of municipal capacity are perhaps the most easily seen in the administration of water services since this is the realm that they have the most control over.

Human Capital- One of the biggest challenges facing local governments in providing adequate water services is a lack of human capital. This is not unique to Mexico but a number of institutions compound it. First and foremost is the extremely transient nature of employees in municipal government, the result of which is a constant cycle of individuals administering a highly complex public service with little experience or technical knowledge. The establishment of term limits in Mexico, while seen as a way to reduce patronage and corruption, has had significant unintended consequences for public administration. Politicians at the local level have a three year-term of office after which they cannot immediately serve in the same position. This creates two issues: first, they have an extremely short time horizon for implementing projects and second, any political appointments they make typically only last for that three year term before a new municipal president comes into office and appoints someone new. Regarding the short time horizon, water projects by nature are not short-term investments, which means that the payoff (electoral or otherwise) for a new project is unlikely to be felt during the three year term of a municipal president. Since local politicians only have one term in office, they must constantly be seeking a new position or job and need constituents to see immediate results in order to be elected to a subsequent position. With the exception of expanding network coverage to users, water projects may not create the immediate political advantage that is needed which makes them a suboptimal tool for politicians with ambitions beyond local government.

The short term of office also means that there is likely to be turnover in the water agency itself because of the political nature of appointments. The CNA estimates that general managers

of water service providers serve in their positions for an average of only 1.5 years.¹⁵¹ Both Ocampo and Xichú should see more turnover in their departments if the recent political competition between parties leads to future changes in control of the municipal government.¹⁵² Turnover was observed in Jaral del Progreso but not Tarandacuao even though both municipalities have directors that can be removed by a board of directors that is headed by the municipal president. This is interesting when one considers that Jaral del Progreso has continued to be ruled by the PAN yet has seen constant turnover while Tarandacuao's constant change in political party control has not led to new directors of the water agency. Tarandacuao's current director has twelve years of experience in the water agency while Jaral del Progreso's current director had three months of experience in the water sector by the time he was first interviewed for this project. Prior to his appointment by a new municipal president, the director of had worked in the previous municipal president's office in a non-water-related position. The tradition of new directors with every new municipal administration in Jaral del Progreso would seem to lead to poor management due to the constant turnover; however, both high capacity municipal agencies seem to provide good services. One difference that might account for the high level of service and capacity in general found in Jaral del Progreso despite director turnover is the civil service model that the municipality follows. As discussed previously, Jaral del Progreso follows Guanajuato's state law regarding civil service so even when the administrative positions of director and sub-director change, the technical and other non-administrative personnel remain. This creates some degree of consistency as political appointees move on, which is especially

¹⁵¹ Kemper and Alvarado (2001:629).

¹⁵² Prior to the 2009 elections of the PRI in Ocampo and the PAN in Xichú, the municipalities had consistent party control for at least three election cycles. During this time, there was little to no turnover in the individual in charge of the water department. Whether future party alternation will lead to a change in the pattern of keeping on personnel is unknown. Jaral del Progreso provides an example of a case where personnel do change every three years, regardless of which party is elected, but Tarandacuao is an example of the opposite approach in which agency personnel are maintained even with the election of a new party. Since there is no guidance provided by the state, community standards and expectations may prevail much as they have elsewhere.

important in such a technical field where the turnover in administrators could easily lead to a lack of institutional memory. If term limits are maintained, and there is some debate in Mexico currently about whether they should be, the question becomes how to foster and keep local level human capital in order for agencies to provide the services they have been empowered to deliver even as the best and brightest move on.¹⁵³ Fieldwork revealed that many municipal presidents and water agency directors had moved on to opportunities beyond their municipality once their term of office was completed or they were removed from office with a change in administration.

While all municipalities are impacted by term limits, some municipalities are more vulnerable to personnel turnover because they lack a highly educated population from which to constantly be drawing new talent. In Xichú, almost one-quarter of the population over fifteen is illiterate. Interviews with both water department and local government employees suggested that the low level of education was important to consider because it prevented the municipality from taking advantage of the great biodiversity in the area and generating its own resources from tourism.¹⁵⁴ It also meant that those with potential would move on because of the lack of opportunity available in the small, isolated municipality. In Ocampo, where 16% of adults are illiterate and two-thirds of the population lives outside of the urban center, the pool of educated individuals that can serve in technical fields such as water delivery is quite limited. Very few employees in any of the municipalities have an advanced education. Even in Jaral del Progreso, the percentage of employees that have an advanced education was only 3% in both 2000 and 2005 while none of the employees in Tarandacuao over the same period had an education beyond secondary school. Ocampo had no employees with an advanced education working in the

¹⁵³ Personal communication with CNA official, April 2010.

¹⁵⁴ In the first municipal plan the municipality had ever submitted, given to the state congress in February of 2007, Xichú identified the expansion of education as a top priority in order for the population to improve its capacity and better exploit the local potential for ecotourism (Manjarraz 2007).

municipal water office in 2000 and by 2005, only six employees were considered educated.¹⁵⁵

The available human capital appears to be quite limited at least from the standpoint of how educated the surrounding population is. Ocampo and Xichú are more highly impacted by this as a result of the low level of education in their municipality overall. This may be reflected in both the fact that the municipalities have remained centralized, unable to provide the services themselves, and from lower levels of performance in water related areas overall.

It would appear that the institutional constraints of term limits and political appointment matter but that higher capacity municipalities can overcome them to provide better water services. Whether this occurs because of locally introduced institutions such as Jaral del Progreso's civil service or due to the commitment made by Tarandacuao to maintain its water director despite political changes, these municipalities have found ways to invest in their human capital. In referring back to the question posed in Chapter 2 regarding whether capacity needs to precede decentralization to be successful, anecdotal evidence from the case studies seems to suggest that it does.

Planning- Capacity is also a consideration as it relates to administrative authority over planning. Municipalities are in charge of developing local water plans that are consistent with both state and federal water plans. This constitutes a devolution of authority over planning; however, though planning is devolved, authority over water resources has not been decentralized. The CNA still retains authority over allocating resources as well as managing most federal waters. Instead of decentralizing authority for this, the federal government implemented a program through the CNA that incentivizes the collection of water use charges at the local level in

¹⁵⁵ CEAG (2005).

exchange for financial support on projects.¹⁵⁶ Thus, municipal governments are collecting the fees but have no jurisdiction over the allocation of water or the revenue generated by water rights unless they apply to be a part of the federal program. Because of the complex nature of water planning and the technical expertise needed to properly carry out water projects, capacity matters significantly. Instead of transferring this skill set from the federal to the local level when water services were decentralized, municipalities have largely had to rely on the initiative of agency managers and directors to teach themselves.¹⁵⁷ In Xichú, several interviews indicated that part of the problem in that particular municipality is that so much relies on the initiative of the municipal president to pursue various programs. Whether one person's initiative can overcome the lack of human capital in a low capacity municipality remains to be seen and this is compounded even more by the fact that an individual with initiative is likely to only be in the position for three years or see no job advancement possibility and will then move on to greater opportunities outside of the municipality.

Capacity is an especially important consideration with regards to administrative authority because local governments have been asked to do so much. As Rowlands (1998) points out, decentralization attempted to empower municipalities but made no effort to ensure that they were properly prepared to carry out their new duties. Because of the historical lack of support for municipal governments, capacity appears to be an important factor in determining their ability to be self-sufficient. Observations at the local level suggest that those with a higher overall capacity were better suited to carry out their new duties, which is reflected in one sense in whether they are decentralized from the state and local government.

¹⁵⁶ The main program used by the CNA to carry this transaction out is the Water Rights Return Program known in Spanish as the Programa de Devolución de Derechos or PRODDER.

¹⁵⁷ Several studies have pointed to the success of municipal agencies in which one individual has instituted programs and policies that have greatly involved the operation and quality of the agency. See Schwartz (2006) for one such study. Chapter 5 provides anecdotal evidence to support this claim in Cerritos, San Luis Potosí.

4.6.2 Fiscal Control

Municipal capacity may be less important in relation to fiscal authority than administrative authority because local governments have very little control over their revenue stream. Yes, they have control over their budgets and agencies are in charge of establishing, collecting, and managing user fees but so much of their revenue is tied to state and federal priorities that one wonders how much autonomy they really have. Capacity matters in relation to managing budgets and the fee related duties carried out by the agency.¹⁵⁸ The same factors that affect administrative authority discussed above are relevant to a discussion of fiscal control. What is perhaps different is that much is out of the control of the municipality.

Guanajuato's lack of formulaic distribution of conditional and unconditional transfers between 1995 and 2005 led to unpredictable budgets while the emphasis placed on high capacity municipalities that tend to receive a disproportionate amount of funding means that small local governments have received devolved fiscal authority over funding sources that are unstable and largely out of their control. In relation to fiscal authority, the capacity of local agency directors and municipal governments does seem to matter as it relates to the ability of local governments to access federal water programs and funding. Under the current paradigm, local agency directors or governments must have an understanding of the system as well as the political capital to succeed in the allocation process since they depend so much on the resources available from the federal fiscal pact and the CNA. This competence is likely to be missing in low capacity municipalities especially in light of the human capital concerns discussed above.¹⁵⁹

¹⁵⁸ One example is the development of alternative payment locations for users. Of the case study municipalities in Guanajuato, only Jaral del Progreso allows consumers to pay their bills outside of the office at a caja popular. All of the other municipalities only take payment in their office. Other municipalities allow bills to be paid at bank branches or drop boxes located throughout the urban center. This kind of "best practice" is something that should be encouraged among the states' municipalities but is not and so municipalities must again rely on the individual initiative of employees to pursue these types of improvements.

¹⁵⁹ Referring back to federal and state allocations made to municipalities specifically for the purpose of water investments discussed above, it is worth noting that the capacity of local agency employees would seem to be

4.6.3 Regulatory Authority

Regulatory authority is related to capacity in two ways. First, regulation is largely in the hands of local governments because of the limits established by federal law. Higher capacity municipalities should be more fit to self-regulate. Second, the absence of an independent regulatory agency that establishes indicators and benchmarks in order to assess performance of local agencies means that there are no standards by which to measure municipalities and hold them accountable. While perhaps higher capacity municipalities can self-regulate and may not need external accountability, the enduring existence of low performing local utilities and poor coverage in many areas suggest that some measure of performance is needed. In relation to the agency itself, Guanajuato's state water law provides no guidance on the training or education necessary for the director of the *organismo operador*. This will be contrasted in Chapter 5 with laws in the other states where it is assumed that the person in charge of local water services should have some education or experience with water.

Unless the capacity of low performing municipal providers is developed it is unlikely that there will be any serious improvement in services. Capacities related to water services are only likely to develop if municipal governments or decentralized agencies are regulated or have some other incentive to improve.¹⁶⁰ Since they are lacking in capacity initially it may be inappropriate to put them in charge of regulation. Regulation by the federal government seems far removed from local water service provision and may be unable to provide a realistic measurement of

extremely important as they navigate the process. If the agency determines that it wants to make bigger investments, for which it needs outside funding from the state or federal commissions, there will typically need to be additional studies conducted as well as frequent visits to state or federal officials to discuss the projects.

¹⁶⁰ Water sector employees in all four municipalities, for example, indicated that there are no pending plans for network expansion even though each has portions of the population that are not covered. Most of the federal programs offer funding opportunities for this type of project but there is no state or federal oversight of the municipalities that would incline them to participate if they choose not to do so.

performance that can be used across the more than two thousand municipalities in Mexico.¹⁶¹

Instead, states or regional bodies are probably the most appropriate regulators since they have the resources and technical capacity to do so and are close enough to municipalities to understand the variation in local contexts. This will only occur if states challenge the notion that they are unable to regulate services and are willing to take on the responsibilities that come with regulation, including a potential expense from improving poorly performing utilities, or the federal government amends the constitution to allow for regional regulation. While decentralizing the actual provision of water services to the local level makes sense because they are closest to users and their preferences, the devolution of regulatory authority may be inappropriate.

4.7 Influences of Decentralization on Water Services in Guanajuato

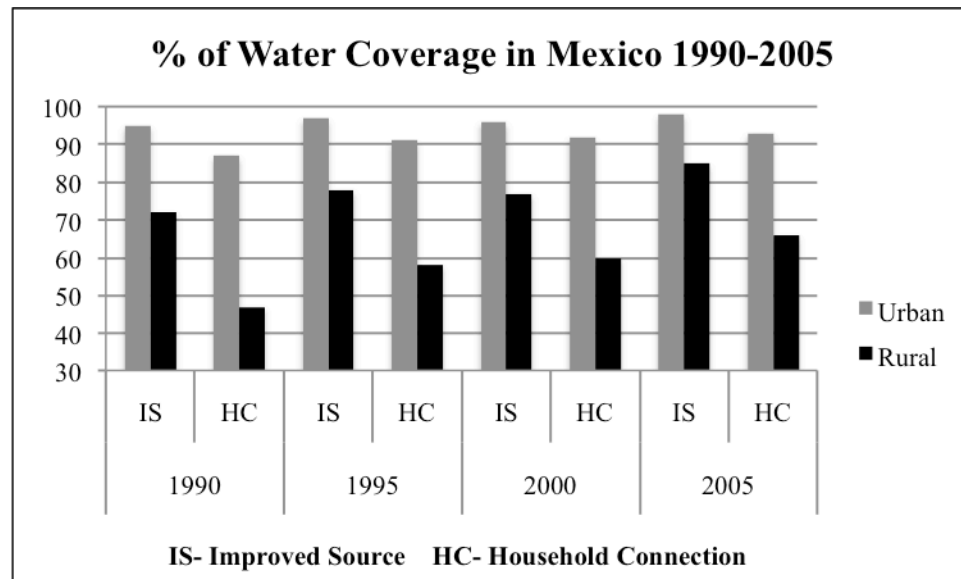
Water services across the state of Guanajuato improved between 1995 and 2005. All of the case study municipalities saw an increase in their coverage though their overall coverage rates vary considerably. Chart 4.3 presents coverage rates based on national census data between 1990 and 2005. This data provides information on accessibility to the water network and to piped water during these years; however, it is not the total coverage rates usually provided by state water agencies. This was done to tease out which users actually had access to an improved water source as defined by the World Health Organization and UNICEF's Joint Monitoring Programme but does not include those users that have access to water delivered by tanker trucks (*pipas*) or other sources.¹⁶² The assumption that decentralization is improving coverage should be based on the expansion of an adequate, reliable network provided by the local government. One additional

¹⁶¹ See World Bank (2005) for an overview of regulation in the Mexican water sector and the potential mismatch between the current sector organization and improving outcomes.

¹⁶² The WHO/UNICEF Joint Monitoring Programme (JMP) for Water Supply and Sanitation defines an improved drinking-water source as "one that, by nature of its construction or through active intervention, is protected from outside contamination, in particular from contamination with faecal matter." This includes sources such as piped water to the dwelling or property, community standpipes, protected wells but not sources such as unprotected springs or wells, trucked water, hand-carts, or bottled water.

difference in using this data is that it is based on the percentage of the entire municipality that has access to network or piped water while most data only looks at urban users. All of the municipalities included in this study have a *cabecera municipal* which is the seat of the government for the entire *ayuntamiento* (county) as well as smaller, outlying urban and rural communities. One of the charges of decentralization is to attempt to reach as many users as possible by giving responsibility to municipal governments that can efficiently cater to the local population but most agencies focus their resources on the main urban area. Chart 4.3 provides data for water coverage in Mexico between 1990 and 2005. It breaks down the data based on coverage for urban and rural populations as well as for those with an improved source (IS) and those with a household connection (HC).¹⁶³

Chart 4.3: Water Coverage Rates in Mexico between 1990 and 2005

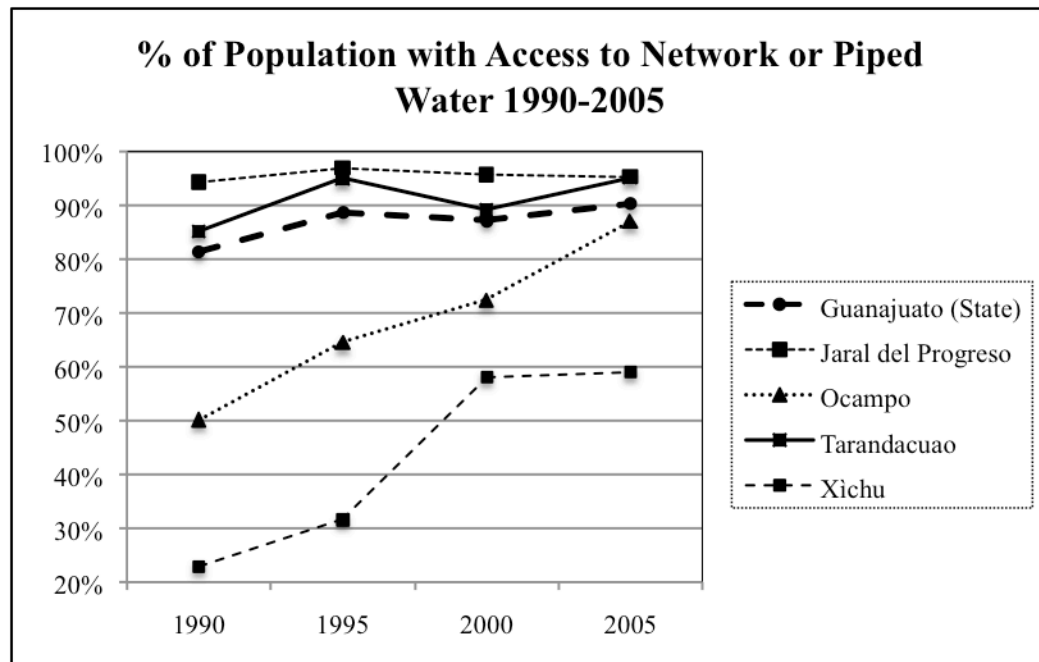


Source: Joint Monitoring Programme data from INEGI Censuses 1990-2005.

¹⁶³ The Joint Monitoring Programme defines a household connection as piped water into a dwelling where a water service pipe is connected with in-house plumbing to one or more taps (e.g. in the kitchen and bathroom).

There is no mandate from the state or the federal government to expand services beyond the urban center. This can leave large portions of the population without access to the main network that then must rely on organizing rural water committees to utilize well water or another source. This is especially true in two of the case studies, Ocampo and Xichú, where more of the population lives outside of the urban areas. Consequently, rural populations in Mexico have a much lower rate of water coverage than urban areas, as indicated in Chart 4.4, and this difference is magnified when consideration is given as to whether the water available is located inside the dwelling (a household connection) or not.

Chart 4.4: Percentage of Population with Access to Network or Piped Water



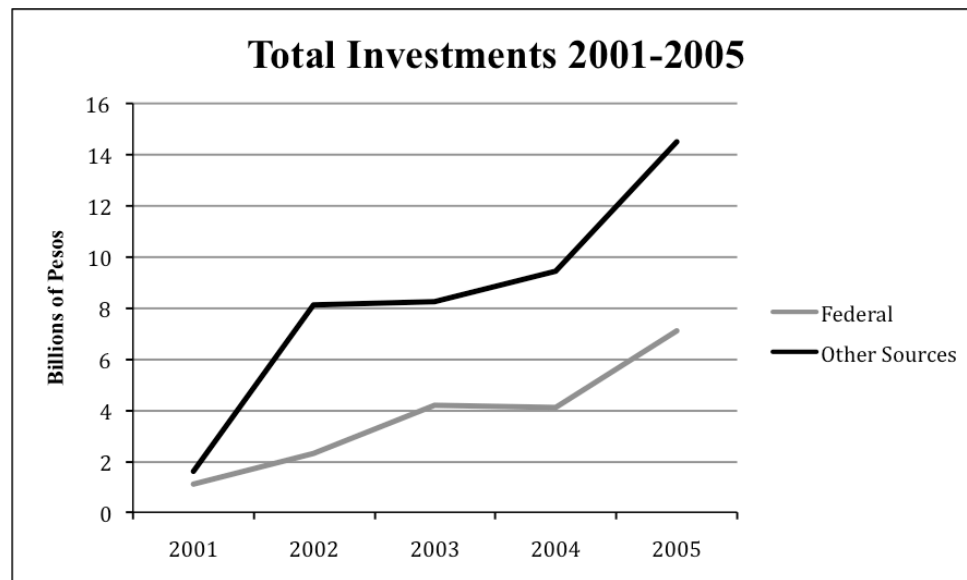
Source: Author's calculation based on INEGI census data.

All of the municipalities have seen improvements in their coverage since 1990 but none had 100% coverage by 2005 (defined in that year's census as availability of water from the public network.) Significant increases in coverage were seen between 1990 and 2000 in Ocampo and

Xichú while Tarandacuao and Jaral del Progreso saw modest gains in coverage between 1990 and 1995 followed by some loss in total coverage between 1995 and 2000. Xichú is the only municipality that has seen its population continue to grow over this period. The other municipalities have seen population declines, especially between 2000 and 2005. The small gains and losses in coverage between 1995 and 2005 in Jaral del Progreso and Tarandacuao may be attributed to small fluctuations in their populations as well as to continued expansion. Xichú and Ocampo show much greater improvement though it should be noted that they started at significantly lower rates of coverage to begin with. The two municipalities that are decentralized have overall higher rates of coverage than the two that remain under state control; however, whether this is due to decentralization is uncertain because the decentralized municipalities are both also classified as high capacity. While it is unclear whether decentralization or high capacity is really driving the improvement in coverage rates, what is clear is that both high capacity municipalities were able to maintain their high levels of coverage and even increase their coverage following the decentralization of their water agencies.

Coverage in all four case study municipalities is consistent with the statewide pattern of increased coverage. This may reflect local initiative but because there are improvements in even the lowest capacity municipalities in the state, it may have more to do with the efforts made by both the state of Guanajuato and Mexico's federal government, specifically the CNA, to improve overall water coverage by increasing their investment in the water sector. The increase in Mexico's water investment is presented in Chart 4.5 below.

Chart 4.5: Evolution of Investments in Potable Water, Sewage, and Drainage



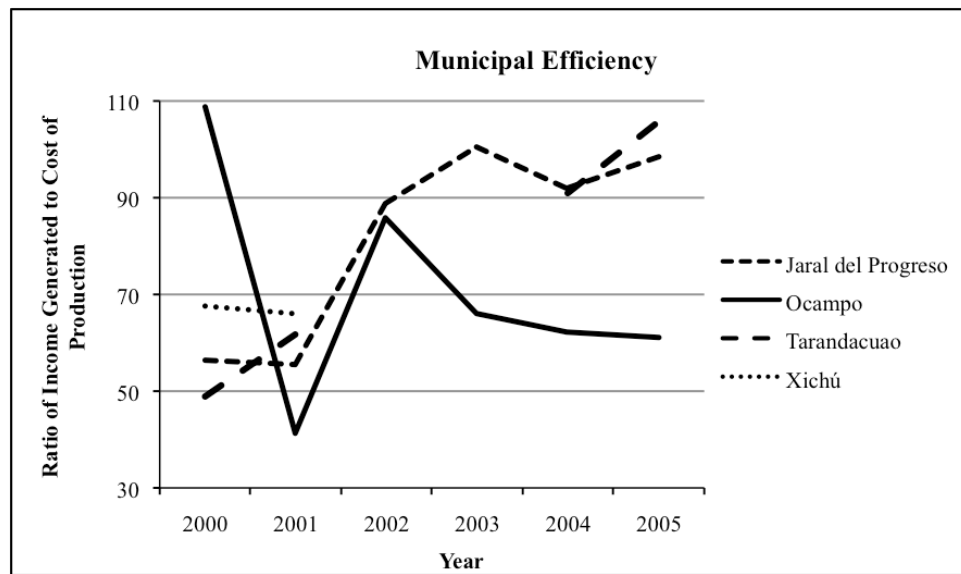
Source: CNA (2008).

^a Federal sources include CNA, SEDESOL, and CDI programs. Other sources include state and municipal matching funds for CNA, SEDESOL and CDI programs, state water commission investments, private initiatives.

As with coverage, the municipalities have varying degrees of efficiency, which is defined based on the relationship between income generated per cubic meter of water and the cost of producing it. Chart 4.6 suggests that efficiency is improving in Jaral del Progreso and Tarandacuao while Ocampo has seen a decrease in its ratio of income to cost of production of a unit of water. Municipalities that are improving their performance would be expected to bring costs down over time as they develop skills, eliminate redundancy, staff appropriately, and invest in maintenance. Jaral del Progreso and Tarandacuao appear to be moving in this direction suggesting that as they become more self-reliant and are forced to rely on tariffs to make up the bulk of their budgets, they have developed ways to bring costs down. The directors of both agencies also indicated that the agencies have continued to raise their tariffs in order to more fully cover their costs even though various increases have been rejected by either the local

ayuntamiento or the state congress.¹⁶⁴ In Xichú and Ocampo, the municipal department in consultation with the ayuntamiento and CEAG establishes tariff increases. Additionally Jaral del Progreso and Tarandacuao have both implemented the state water laws' recommendation that agencies suspend service for non-payment. Jaral del Progreso suspends service after three months of non-payment while Tarandacuao does so after a notification of non-payment is made on a monthly water bill. Both agency directors felt that enforcing this policy increased their tariff collection rate while also professionalizing the agency and reinforcing the concept of payment for water.¹⁶⁵

Chart 4.6: Efficiency of Municipal Water Providers 2000-2005



Source: CEAG (2008). Data was not available for Xichú beyond 2001 and not available for Tarandacuao in 2002 and 2003.

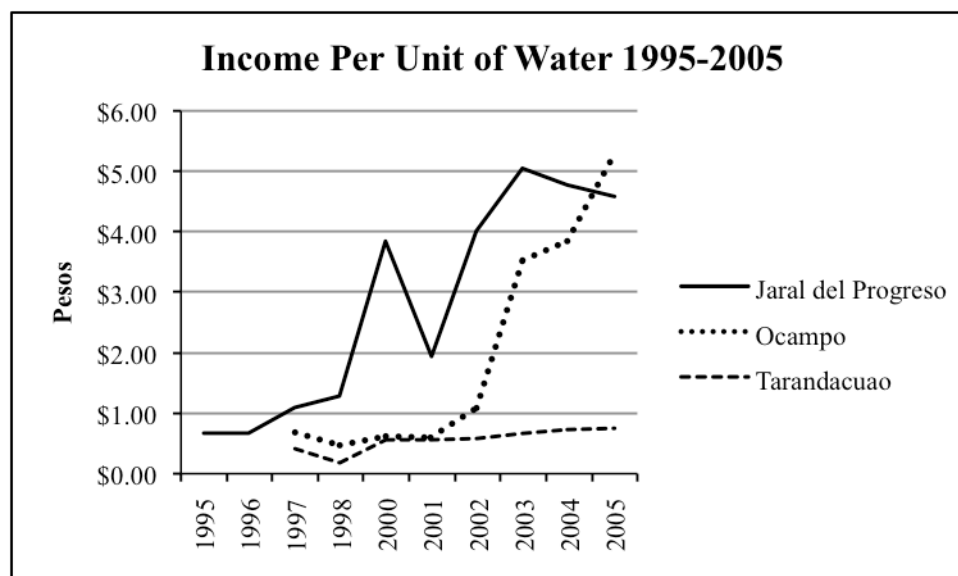
The trend in Jaral del Progreso's improved performance can also be seen in its ability to generate more money from each cubic meter of water that it produces. This is likely due to improving the

¹⁶⁴ Personal communication, December 2010.

¹⁶⁵ Personal communication, December 2010.

network and consequently reducing losses while at the same time developing a service model that justifies increasing rates for users. Chart 4.7 below indicates that this may be happening in Jaral del Progreso since the income generated is increasing over time. Tarandacuao, on the other hand, does not appear to be making this same transition even though data shows that its coverage levels are increasing. Ocampo also shows an overall improvement in its ability generate income with a significant increase after 2002. Whether this is due to the municipal government's own capability or is an indication of the state's commitment to improving local service is unclear.

Chart 4.7: Income Generated per Cubic Meter of Water



Source: Comisión Estatal del Agua de Guanajuato (2000; 2008). Data was not available for Xichú.

Improving the efficiency of an agency and professionalizing the delivery of water is also contingent on the ability to know how much water is being used and holding users accountable for their use. Ocampo has had 100% of its domestic network connections metered since 1996

while neither Tarandacuao nor Xichú had any metered connections as of 2008.¹⁶⁶ Jaral del Progreso increased its rate of metering from 67% in 1995 to 90% in 2005 though it has declined slightly since then.¹⁶⁷ Both Ocampo and Jaral del Progreso are well above the state average of 71% metered connections in 2000 and 79% in 2005.¹⁶⁸

Another major concern in the water sector, and an indicator of performance, is the rate of lost water in the network. This assesses water loss due to poor network quality as well as water that is taken from the network illegally. Jaral del Progreso reduced its percentage of lost water from 72% in 1995 to 31% in 2005 and Ocampo reduced its lost water rate from 56% in 1995 to 25% in 2005. Tarandacuao only reported its rate of lost water for three years between 1995 and 2000 but its rate of loss was 37% while Xichú's 2000 rate of 38% loss was only one of two years reported. It appears that all of the case study municipalities have a loss rate similar to the state municipal average of 30% in 2000 and 38% in 2005 though the trend is only clear in the two municipalities that reported their data for all ten years.

Overall, the case study municipalities have improved their coverage but the individual agencies show varying levels of performance. Xichú is almost impossible to evaluate because of a lack of data reported. Though it qualifies as high capacity, Tarandacuao also has a history of not reporting data and what is reported provides a mix of improvement and stagnation. Jaral del Progreso and Ocampo appear to have improved their coverage, increased their levels of metering and cost recovery as well as reduced their water loss. All of these suggest that both agencies have improved overall between 1995 and 2005. One is decentralized and the other is centralized, one is high capacity, the other is low capacity. The only thing they have in common is that they both

¹⁶⁶ The lack of metering in Xichú and Tarandacuao means that water consumption is based on fixed rates. This leads to overconsumption and an under-collection of tariffs. Additionally it contributes to the persistent problem in Mexico of the public perception that water conservation is not a problem and that it is not an economic good that should be priced accordingly.

¹⁶⁷ CEAG (2005; 2008).

¹⁶⁸ CEAG (2005).

have been governed almost exclusively by the PAN since 1995 while Tarandacuaao and Xichú, both under-reporters, have been primarily PRI. One may surmise that much of Jaral del Progreso's improvement has been self-generated since they have been decentralized since 1994 while Ocampo has relied on the state for support. For its size, Jaral del Progreso is very impressive since it has indicators that are consistent with municipalities in the state that are much larger. In 2005, for instance, Jaral del Progreso had the highest ratio of cost recovery to cost of production (98%) in the entire state.¹⁶⁹ It appears that decentralization has not hurt Jaral del Progreso and it has actually improved services and performance measures over the time period examined. Tarandacuaao too has seemed to perform well since its decentralization in 1998 though a lack of data in many cases makes it difficult to determine how well.

Similarly to assessing coverage, water quality can be measured by looking at the rate of treatment and the actual quality of water that is leaving the network but this is not necessarily indicative of improvement in quality for the population. As one individual in charge of a municipal system stated "I can guarantee that 100% of the water we provide is potable but I can't guarantee anything once it leaves our network."¹⁷⁰ Data from the state water commission indicates that Ocampo, Tarandacuaao, and Xichú reached a 100% disinfection or potability rate beginning in 1997 while Jaral del Progreso did not do so consistently until 2001.¹⁷¹ While the municipalities perceive their services to be improving, only the agency in Jaral del Progreso utilizes satisfaction surveys to measure public opinion while the other three water providers rely on water-related questions on municipal surveys to assess their performance.¹⁷²

¹⁶⁹ CEAG (2005).

¹⁷⁰ Personal communication, April 2010.

¹⁷¹ CEAG (2005; 2008).

¹⁷² Jaral del Progreso utilizes a private firm, Marketing Mexico, to conduct surveys and then communicate the results to the municipal government. Additionally, the agency encourages consumers to participate in random surveys when they pay their bills.

4.8 What Does the Research Reveal About the Hypotheses?

The conclusions derived in this chapter will be summarized here and then elaborated upon in Chapter 5 using the additional analysis of water services in San Luis Potosi and Zacatecas.

H₁: State governments controlled by a neoliberal party will be more likely to decentralize water services.

Chapter 2 provides an overview of the neoliberal philosophy that supports decentralization and the fact that the PAN, as a center right party, has argued consistently for subsidiarity of authority and decision-making. Analysis of the history of decentralization in Guanajuato confirms that it was an early decentralizer compared to many states in Mexico; however, the validity of this assumption can be better supported through a comparison to Zacatecas and San Luis Potosí, neither of which is a neoliberal state. Though there was rhetoric in Guanajuato used by governors Carlos Medina (1991-1995) and Vicente Fox (1996-2000) that references the need for decentralization and subsidiarity, there were also economic incentives for the state to encourage changes that would lead to opportunities for more federal funding. An evaluation of the case studies suggests that though the state has consistently supported decentralization, it has also weighed this against factors such as capacity.

While the PAN has appeared to advocate for decentralization at the state level in Guanajuato, including the promotion of municipal control and the incorporation of basin level management, at the federal level, the party has been more inconsistent. While Vicente Fox promoted decentralization rhetorically, there has been little movement by the federal government under the PAN to truly decentralize the funding allocation process. Furthermore, the party has actually moved away from subsidiarity in relation to water funding and planning. The CNA, under the direction of PAN appointees Cristobal Jaime Jacquez and José Luis Luege Tamargo,

has centralized project planning and funding as well as the process for managing water rights throughout the country. None of this shows an ideological commitment to decentralization.

Further analysis of the decentralization process in San Luis Potosí and Zacatecas will reveal if this is the case or whether more weight should be given to H_2 .

H₂: State governments controlled by an opposition party will be more likely to decentralize water services.

This hypothesis is based on the notion that decentralization will distribute power through the transfer of resources and other responsibilities away from central control; therefore, decentralization directly challenges the influence of the dominant party in power.

Decentralization would seem to serve the interests of acquiring power and control by opposition parties significantly more than that of the dominant party. PAN leadership in Guanajuato has historically advocated for decentralization, which while keeping with the party's ideological views, also takes resources and power away from the center.

Guanajuato was controlled by the PAN between 1995 and 2000 under a PRI presidential administration (though the majority in the national congress was a unified PAN/PRD coalition). This changed with the election of Vicente Fox in 2000 as the first non-PRI president. Throughout the period covered in this study, Guanajuato continued to push for decentralization of water services regardless of the party in power at the federal level. While the original hypothesis is couched in the notion that opposition parties can both gain resources by advocating for decentralization by drawing them from the center and challenging the authority and legitimacy of the party in power, it is difficult to assess whether this was the motivation. The rhetoric used by Guanajuato state politicians was driven by an apparent commitment to local control rather than a desire to weaken the PRI which governed at the federal level; however, one cannot be sure that the motivations were solely ideological and in any case, the result would be the same.

If the PAN government in Guanajuato was supporting decentralization for the purpose of weakening the dominant party, it seems that the party would have pursued changes to the federal fiscal pact since even under the banner of decentralization, the fiscal arrangement in Mexico maintains the control that the center has historically had. To truly challenge that power and undermine the PRI, their dominant source of influence, federal redistribution of funds, would have to be changed. Not only was there a lack of rhetoric to do so within Guanajuato but when former Guanajuato governor Vicente Fox entered Los Pinos (the Mexican President's residence), he maintained the fiscal pact without any significant changes to funding allocations.¹⁷³ In addition to maintaining the existing federal funding structure, Fox also increased transparency and advocated for allocation formulas that reduced state discretion; therefore, decentralization efforts by Guanajuato would have little chance of shifting the balance of power since most resources are tied up in the federal allocation process. Under this arrangement, encouraging decentralization to municipalities would only strengthen the relationship between the federal and municipal governments, further isolating the state. Strategic advocacy by any state without a simultaneous shift in fiscal authority would seem to reduce its own power vis-à-vis the federal government. Whether the PRD controlled government of Zacatecas attempted to use decentralization to undermine the PRI and the PAN when each had control of the center will be discussed in the next chapter.

H₃: State governments will be less likely to decentralize water services in municipalities that lack the ability to effectively provide for their citizens.

Guanajuato has had an incentive to selectively decentralize to those municipalities that can succeed. Failure on the part of local government to provide services means that the state will

¹⁷³ It should be noted that Fox did attempt to create more accountability for how funds were allocated and used but none of this was an effort to eliminate the federal fiscal pact. See Diaz-Cayeros (2000) for a discussion of these changes.

have to step in and use its own resources to fulfill the legal obligation established in the state water law. This hypothesis appears to have been supported by the status of decentralization in Guanajuato. Neither Ocampo nor Xichú, the low capacity case study municipalities, have decentralized water services. Instead, their services continue to be administered out of the municipal government with the support of the state water commission.

Additionally, based on the information presented regarding the other municipalities that remain under centralized control, all of the municipalities had low or below average capacity in 2000 and seven out of ten were at high risk for marginalization in 2005. Interviews with CEAG employees suggested that size was the main determinant of whether a municipality is decentralized but upon further examination capacity may actually be the driving force. This is supported by CONAPO findings in their human development reports that correlate small population with high risk of marginalization. Since size and capacity are highly correlated, CEAG employees' contention that population is the variable most likely to determine whether a municipality is decentralized is also apt to be strongly based on the municipality's capacity. The majority of municipalities in Guanajuato that have a higher capacity, and are thus able to better provide for their citizens in areas outside of water services, have been decentralized. The state appears to have emphasized the ability of the municipality to deliver services in determining which municipalities should be decentralized as opposed to an ideologically driven approach that foisted decentralization on municipalities that could not carry out the mandate.

H₄: State governments will be less likely to decentralize water services to municipalities of a different political party.

This hypothesis is based on the idea that parties will not want to give up power to subnational governments controlled by other parties; therefore, they will choose not to decentralize because to do so would give the other party more power and potentially more success in governing which

might present a threat to the party in control at the state level. In Guanajuato, it does not appear that there is any observable trend regarding partisanship and willingness to decentralize. Based on the party of the municipal president between 2000 and 2009, half of the remaining centralized municipalities could be labeled PRI, three could be labeled PAN, and two were ruled by all three major parties over the course of three elections.

One factor that is worth considering is the power of the PRI in less populated, more rural regions of Mexico. The corporatist strength of the PRI has historically been rooted in the countryside and the first signs of PAN strength were victories in major urban centers. Smaller, more rural municipalities would be expected to have a stronger PRI affiliation because of this historical pattern; therefore, the observation of less decentralization in PRI municipalities could be because they are PRI but is more likely due to the fact that they are smaller and less capable. In Guanajuato, this appears to be the situation since the strong PAN state does not appear to distinguish based on partisanship and there were many non-PAN municipalities that had decentralized water services over the course of the three elections. Non-PAN municipalities were evenly split between those that were decentralized and those that remain centralized in 2000 and by 2008 four non-PAN and six PAN municipalities remained centralized.

The discussion in Chapter 3 suggests that states will not decentralize in order to prevent the opposition municipalities from gaining resources, authority, and successes that can translate into electoral victories. Not only have both PAN and non-PAN municipalities remain centralized, but even as the state was increasing its rate of decentralization in opposition municipalities, the party was seeing more electoral success itself. Over the course of the three elections, as more and more municipalities were taking control of their water services from the state, the percentage of PAN municipalities in the state jumped from 63% to 76%.

H₅: Municipalities with greater capacity will be more likely to request that responsibility for water services be devolved to the local level.

Not only do municipalities that have a greater capacity more frequently decentralize than low capacity municipalities, they have also done so much earlier than those with a lower capacity. As early as 1985, the municipality of Leon decentralized and other major urban areas followed within the next five to ten years. All thirty-six municipalities that are currently decentralized did so before the federal 1999 Municipal Reforms that mandated decentralization while the remaining municipalities were kept centralized. While there was support from the state to decentralize, those municipalities that were the first to decentralize seem to be those that felt they could succeed. It should be noted that Tarandacuao was the most recent municipality to decentralize from the state, which it did in 1998. While high in capacity, the municipality is also very small and located quite a distance away from existing urban networks, which may explain why it took longer for it to move toward decentralization.

An examination of the municipalities that requested to be decentralized reveals that an overwhelming majority, 92%, are classified as high capacity by CONAPO's HDI score. There are three municipalities that remain centralized that probably have the ability to establish independent agencies based on their capacity but there is no mechanism to force them to do so. All of these higher capacity municipalities that remain centralized have higher capacities than the three municipalities with lower capacities that are already decentralized but they do not appear interested in moving in the direction of decentralization. That said, it appears that this hypothesis is correct since almost all high capacity municipalities in Guanajuato have requested that services be decentralized to the municipal level and have established independent water agencies.

H₆: Decentralization of water services will be more successful where municipalities have greater capacity.

Jaral del Progreso provides the strongest argument to support this hypothesis. Its success in delivering water services seems to be contingent upon its high capacity. As a truly decentralized municipality, the agency has taken charge of providing services and all indicators suggest that it is succeeding. Tarandacuaao has also demonstrated success as a decentralized municipality though the local government has maintained more control over the agency, which may explain why there are some differences in how it performs compared to the completely decentralized agency in Jaral del Progreso. Both have considerably higher levels of coverage and efficiency than the centralized municipalities of Ocampo and Xichú. While this may suggest that decentralization is the key factor in the successes of Jaral del Progreso and Tarandacuaao, establishing whether the process of decentralization or high capacity is the more important determinant is more difficult.

Data on water coverage and quality suggests that there are exceptions to both assumptions. There are high capacity municipalities that have very low coverage and metering rates and high loss rates. Conversely, there are some low capacity, even centralized, municipalities with statistics that rival some of the highest capacity municipalities that were the first to ask for services to be decentralized to them.¹⁷⁴ Decentralization, at least in Guanajuato, does not appear to be hindering service improvement but as stated previously, whether it is the driving force behind the improvement is unclear.

¹⁷⁴ See CEAG (2005; 2008) for this information.

H₇: Decentralization of water services will be more successful when the municipal and state governments are from the same political party.

Two of the case studies can be analyzed here: Jaral del Progreso and Ocampo. As stated in the discussion of *H₆*, Jaral del Progreso has been, by far, the most successful municipality of those examined in Guanajuato and it is decentralized. Ocampo has also seen improvements in its ability to provide service but the changes have not been as dramatic as those in Jaral del Progreso. Tarandacuao has also seen success as a decentralized municipality though its gains have been more modest. This could be attributable to either its status as an opposition municipality at times or its much more recent decentralization. Xichú is neither decentralized nor has it had much PAN success and it has seen the most limited improvements; however it is also the lowest capacity and is, geographically speaking, the most isolated. Whether its weak performance in the area of water services is the result of remaining centralized, being governed by the PRI, or simply its capacity is unclear. Further comparison will be made with the case study municipalities in both San Luis Potosí and Zacatecas in order to determine which reasoning seems to be the strongest.

Concluding Part A- Guanajuato has been an active decentralizer. While the PAN has historically advocated for decentralization, the state's ability to utilize decentralization to challenge the highly centralized system as an opposition party has been quite limited due to its reliance on the federal government for funding. While in power at the federal level, the party has also maintained institutions, such as the highly centralized fiscal arrangement and the empowerment of the CNA, that run counter to its ideological commitment to subsidiarity. Within the state, decentralization has been embraced and the state's municipalities, particularly those with the highest capacity, have seen a tremendous amount of improvement in the area of water services since the early 1990s when a majority of them chose to decentralize. Success has been more marked in the decentralized municipalities but since they are also the highest in capacity, it is difficult to

ascertain which factor is responsible. Due to the reduced influence and discretion of the state government and CEAG, intergovernmental politics do not seem to be as important as the politics at the local level where there is more apparent conflict between the municipal government and the water agencies or municipal water departments. Capacity seems to be much more important especially in light of the fact that administrative authority is the area that has seen the most devolvement and has the most immediate impact on the services being delivered and the day-to-day operations of the agencies.

CHAPTER 5: CROSS STATE COMPARISON

5.1 Overview of Cross State Comparison

Purpose: Examine the influence of intergovernmental relations and municipal capacity on decentralization by looking at municipalities governed by the same party across multiple states.

For this part of the study, two municipalities governed by the PAN party between 1995 and 2005 were selected in the states of Guanajuato, San Luis Potosí, and Zacatecas. One PAN municipality in each state is considered to have high municipal capacity while the other's capacity is lower.

As discussed in Chapter 4, Guanajuato has historically been a strong PAN state but San Luis Potosí has maintained a strong *Partido Revolucionario Institucional* (PRI) influence while Zacatecas has twice elected the left-leaning *Partido de la Revolución Democrática* (PRD) to the governor's office. The levels of government with their partisanship are indicated in Table 5.1. Note that the PAN governs both the local and federal governments while each state is governed by a different political party.

Table 5.1: Level of Analysis, Part B

PAN Federal		
PAN State	PRI State	PRD State
PAN Municipality		

Since all of the municipalities had elected PAN administrations between 1995 and 2005, the intent was to look more closely at the differences in the behaviors of high and low capacity municipalities and how they interact with the three different parties in power at the state level.

Emphasis will be placed on how these interactions and the variations in capacity impact the process of decentralization across the three states.

5.2 Overview of the Three States

The recent transition in Mexico from a one-party dominant system to a competitive, multi-party democracy was summarized in Chapter 2. The historical dominance of the PRI weakened in the 1990's with the election of opposition governors and municipal administrations in various parts of the country but this change did not occur everywhere. Some states, such as Guanajuato, have seen a surge in the strength of opposition parties while others, such as San Luis Potosí, have remained aligned with the PRI. Zacatecas is one of only a handful of states to actually elect a governor from the PRD and has seen relatively strong PRD growth at the municipal level. Only the PAN in Guanajuato has maintained its power at the state level throughout the period of this study. The PRI controlled San Luis Potosí until 2003 when it elected a PAN governor but the state reverted back to the PRI with the election of a PRI governor in 2009 (though this was after the period of time examined in this study). Zacatecas had a PRD governor from 1998 to 2009, which is considered a crucial time for the process of decentralization because of the passage of the 1999 Municipal Reform law, which decentralized control over water services to Mexico's municipalities. Table 5.2 lists the parties elected during each *sexenio*, the six-year term served by a Mexican governor, between 1991 and 2010.¹⁷⁵

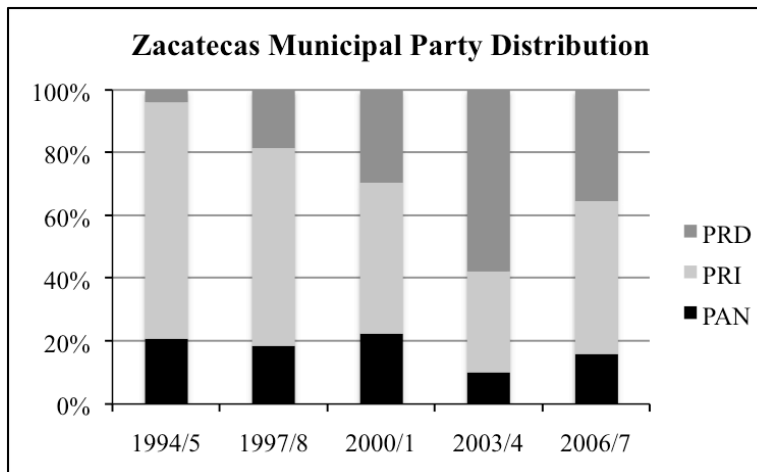
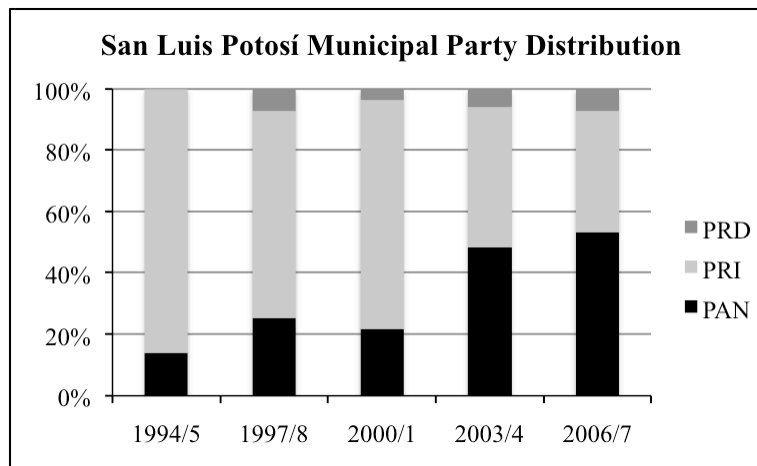
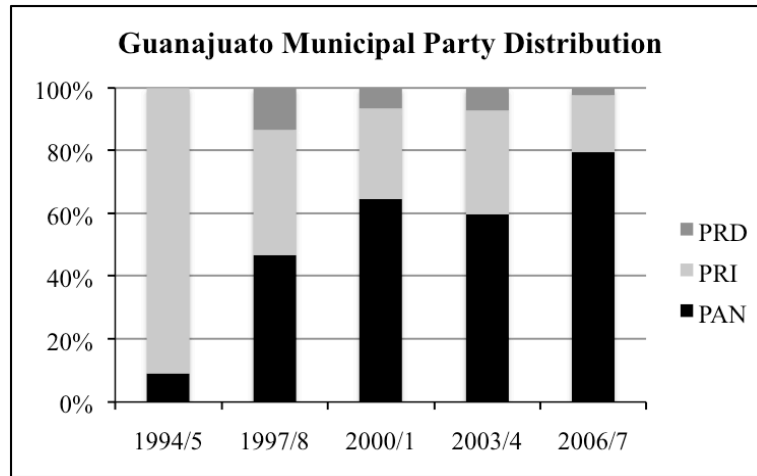
¹⁷⁵ Though the typical term of office for a governor in Mexico is six years, in Guanajuato, Carlos Medina Plascencia was appointed interim governor in 1991 after a contested election between the PRI and PAN. He served until the election of Vicente Fox in 1995 who then stepped down as governor of the state to run for President and was replaced in 2000 by Juan Carlos Romero Hicks which reinstated the six-year term.

Table 5.2: Party Control of State Administrations 1991-2010

<u>Guanajuato</u>	<u>San Luis Potosí</u>	<u>Zacatecas</u>
1991- PAN	1991- PRI	1992- PRI
1995- PAN	1997- PRI	1998- PRD
2000- PAN	2003- PAN	2004- PRD
2006- PAN	2009- PRI	2010- PRI

The strength of the parties at the state level is, to some degree, reflected in the allocation of party control at the local level as well. The PAN has grown substantially in the percentage of Guanajuato's municipalities it controls (see Chart 5.1 below) while the PRD has grown in Zacatecas and the PRI has maintained at least some of its power at the municipal level across the states. Charts 5.1 to 5.3 provide the distribution of municipalities controlled by each party between 1994 and 2007, the years that mark municipal elections during the time period covered in this study.

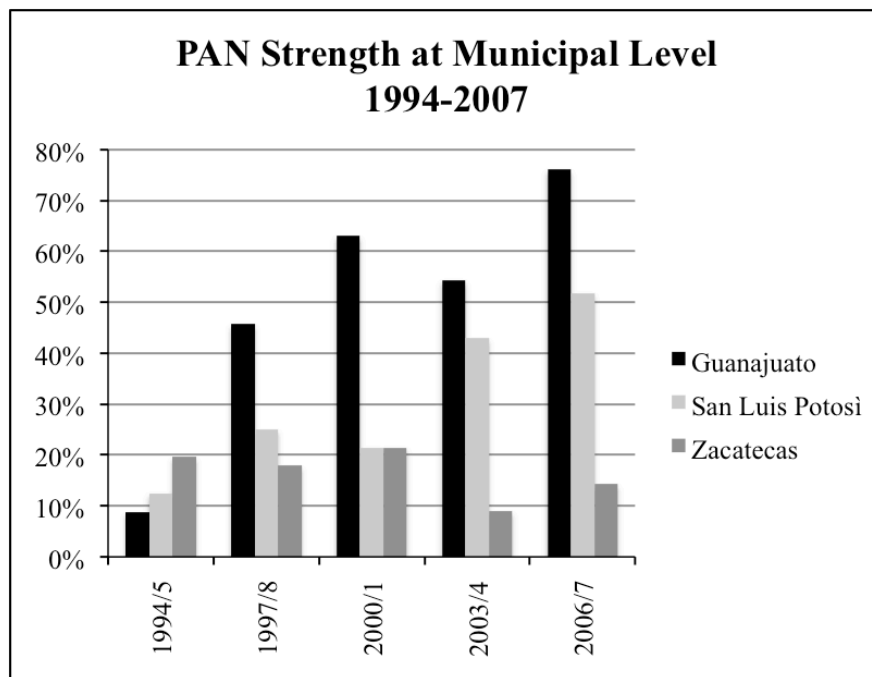
Chart 5.1-5.3: Municipal Party Distribution Across Three States



Source: Author's calculation based on data from El Instituto Federal Electoral.

Relative PAN strength is important to consider since this study is comparing the performance of PAN municipalities across states where the party has had varying degrees of success.¹⁷⁶ Chart 5.4 breaks down PAN success in municipal elections in each state between 1994 and 2007. It is clear that the PAN has been the most successful in Guanajuato but it has also grown significantly in San Luis Potosí. After a peak in 2001 in Zacatecas, the party has seen its influence decline.

Chart 5.4: % of Partido Acción Nacional (PAN) Control of Municipal Governments



Source: Author's calculation based on data from El Instituto Federal Electoral.

¹⁷⁶ The data in both Guanajuato and San Luis Potosí shows a clear trend of contraction of PRI control with growth in PAN party power. Zacatecas saw a similar pattern of PRI contraction at the municipal level but only until the 2007 election cycle when the PRI appears to have bounced back. This was just prior to the PRI again taking control of the governorship in the state in 2010. The PRD has had more success in Zacatecas than it has in either of the other two states, controlling over 50% of the local governments after the 2004 election. Levy et al. (2001) point out that the PRD is historically strong where the PAN is not and vice versa. This seems to hold true in Guanajuato where the PAN has had much electoral success at the state and the municipal level but the PRD has been largely absent. Likewise, in Zacatecas, the PRD has had two historic terms in control of the governor's office and been elected in many of the state's municipalities but the PAN has struggled to find a presence.

5.2.1 Municipal Case Studies

The selection of cases for this part of the study was contingent on the size, partisanship, and capacity of the municipality. While both Guanajuato and San Luis Potosí had a relatively wide variety of PAN municipalities to choose from, the weak presence of the PAN in Zacatecas limited the potential case studies to only a handful. Compounding the lack of PAN municipalities is the fact that the party has historically been more successful in larger, more affluent, urban areas. As Chapter 3 states, finding a small, low capacity PAN municipality was difficult and the case selected, Cuauhtémoc only had the PAN in power for one term before the party lost badly in the next two elections. Additionally, the capacity of Cuauhtémoc is classified as low but it is higher in general than the two lower capacity cases to which it is compared in Guanajuato and San Luis Potosí. Aside from this limitation, the case study municipalities are all under 32,000 people and had a PAN government in the crucial election following the passage of the 1999 Municipal Reforms. Table 5.3 summarizes the partisanship, size, and capacity for each case study included in this part of the study.

Table 5.3: Selected Statistics for Municipalities in Three States

Municipality	HDI (2000)	Risk of Marginalization (2005)	Population (2000)	00/01 Election	PAN %^a 03/04 Election	06/07 Election
Jaral del Progreso	0.727	-.806 Low	31,635	46.4%	39.9%	52.7%
Ocampo	0.667	.008 High	20,848	40.4%	56.8%	62.2%
Ahualulco	0.669	.555 High	19,134	52.6%	56.1%	35.5%
Cerritos	0.752	-.822 Low	20,571	55.0%	53.0%	34.7%
Cuauhtémoc	0.709	-.614 Medium	10,796	34.4%	8.5%	9.2%
Juchipila	0.754	-1.09 Low	12,589	31.5%	44.5%	17.3%

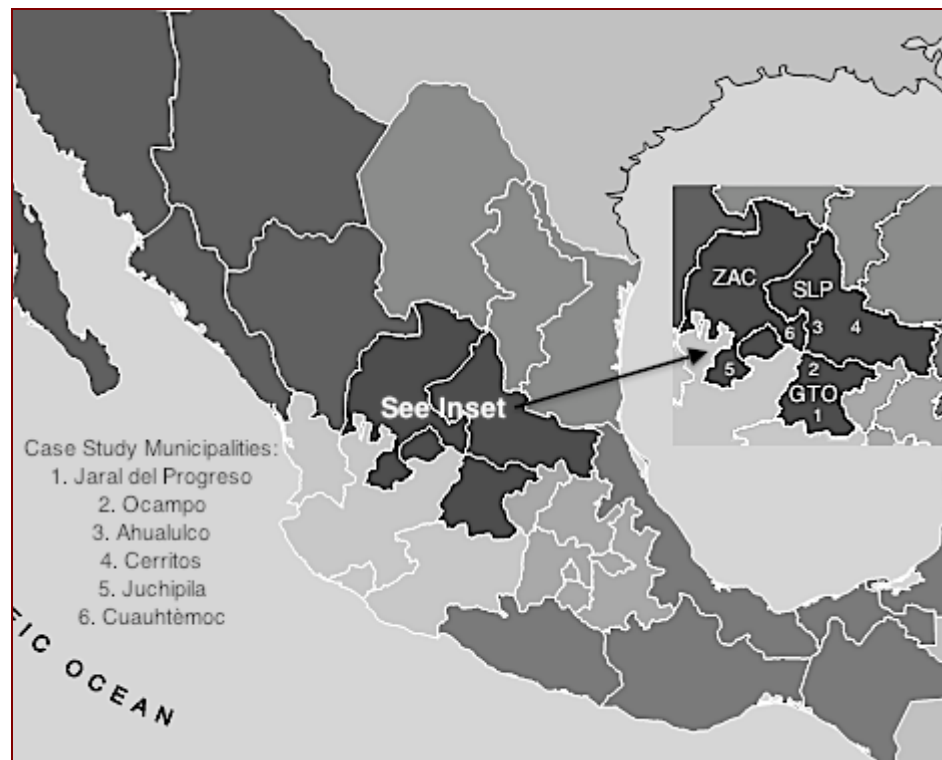
Sources: Compiled with data from CIDAC, CONAPO, and INEGI¹⁷⁷

^a PAN losses are shaded grey

The central location of the three states used in this part of the study minimizes many of the differences that might complicate a study in a country as large and diverse as Mexico; however, they are not a homogenous group. Figure 5.1 presents a map of Mexico with an inset of the three states and the location of each case study. This is followed with a summary of each municipality.

¹⁷⁷ CONAPO's Human Development Indicator scale considers municipalities with a score of 0.50- 0.649 to have a medium-low (*medio bajo*) HDI while those with a score of 0.650- 0.799 had medium-high (*medio alto*) HDI. Risk of Marginalization score in 2005 is based on the following factors: education levels, standard of living, employment income, and percentage of the population living in rural communities. High risk of marginalization scores range from -.07 to 1.06 and medium risk scores range from -.649 to -.077.

Figure 5.1: Map of Mexico with Case Study Municipalities Identified



Jaral del Progreso, Guanajuato: Jaral del Progreso is a high capacity, strong PAN, municipality located in the southern agricultural region of the state. It is set among fields of soybeans, wheat, and corn. Agriculture is both a source of great prosperity for the residents but also a tremendously water intensive industry. Jaral del Progreso began as a small village in 1590 and was established as a municipality by the state legislature in 1912. Jaral del Progreso has a mild climate and receives an average of 647.9mm/ year of rainfall. It covers .57% of the state and is located in El Bajío, the geographic region of the state known for its agriculture and is the heart of Guanajuato's industrial sector. Jaral del Progreso has consistently elected PAN governments and has maintained a high level of human development over the course of the last two decades.

Ocampo, Guanajuato: Ocampo is a low capacity, strong PAN municipality. It is located in the northwestern part of Guanajuato, is bordered by the states of Jalisco and San Luis Potosí, and is situated in the geographic region known as Los Altos. This region of Guanajuato is known for its dry climate and land that yields relatively little. It is categorized as a semi-dry temperate climate with an average rainfall of 433 mm/year. Ocampo was established in 1845 and has a larger indigenous population than the other case study municipalities. Over 21% of the population speaks an indigenous language and only about one-third of the population lives in the urban portions of the municipality. It is the largest of the case studies, covering 3.36% of the entire state of Guanajuato and is the seventh largest municipality in the state in terms of area.

Ahualulco, San Luis Potosí: Ahualulco is a low capacity, strong PAN, municipality located in the dry foothills outside of the capital city of San Luis Potosí. It is characterized by a semi-dry, temperate climate covering three quarters of its territory with the other quarter (23.6%) classified as dry-temperate. It receives 200-500 mm of precipitation a year. 30.25% of the population is engaged in farming and raising animals, 31.47% in secondary industries such as mining, manufacturing, and construction, and 35.24% work in commerce. 16.88% of the population over fifteen years of age was illiterate in 2005. Ahualulco was established in 1542, became a town in 1799, and became a municipality of the state of San Luis Potosí in 1858. The name Ahualulco means “water that floats”.

Cerritos, San Luis Potosí: Cerritos was established as a municipality in 1830. It is a high capacity, strong PAN, municipality located in the central region of the state. It is classified as 62.4% semi-dry, temperate climate and 36.9% is considered dry but temperate. It receives an average of 492 mm of precipitation a year. Cerritos has seen a decrease in its growth rate since

1990 due in large part to immigration to the United States and to the capital, San Luis Potosí, which is located approximately 65 miles away. There are two large immigrant communities from Cerritos in the United States: Chicago, Illinois and Santa Ana, California. Almost one half (49.4%) of the population is involved in commerce and services while 25.39% work in agriculture and farming and 22.16% are engaged in manufacturing and industry. 10.78% of the population over fifteen years of age was illiterate in 2005.

Cuauhtémoc, Zacatecas: Cuauhtémoc is categorized for this study as a low capacity, weaker PAN municipality; however, as previously stated in, its capacity is not as low as the other two low capacity case studies, Ahualulco and Ocampo. It was established as a town in 1594, formally established by the state congress as the municipality of Villa de San Pedro in 1869 and had its name officially changed by the state to Cuauhtémoc in 1949. The municipality is located in the southeastern portion of the state in the valley region and is characterized by a semi-dry, temperate climate and receives an average of 450 mm of precipitation a year. Principal economic activities include small-scale and subsistence agriculture, grazing of animals, and small-scale factories.

Juchipila, Zacatecas: Juchipila is a high capacity, strong PAN municipality located in the fertile southwestern portion of the state. It has four distinct climate zones: 33.6% mild/ sub-humid, 23% semi-dry temperate, 22.1% semi-dry/ very mild, and 21.3% semi-dry/ mild. It receives an average rainfall of 713 mm annually which is the highest rate of rainfall among the case study municipalities. Though Zacatecas is a very active agricultural state, the terrain of Juchipila is very uneven so very little is used to grow large scale crops which, when grown, are typically corn and beans. Seasonal small-scale farming is one of the principle activities for sustenance but only along the Rio Juchipila, which is often polluted. Only 10% of the land is irrigated with the rest of

the crops relying on rainfall. A majority of the land is used for grazing, though this does not provide significant economic activity for the community. Juchipila was founded in 1543 and became a municipality in 1824.

5.2.2 Expected Case Study Outcomes

Table 5.4 categorizes the case study municipalities based on their capacity and by state.

Table 5.4: Municipalities in Three States with Capacity Indicated

	Guanajuato (PAN)	San Luis Potosí (PRI)	Zacatecas (PRD)
High Capacity PAN	Jaral del Progreso	Cerritos	Juchipila
Low Capacity PAN	Ocampo	Ahualulco	Cuauhtémoc

Based on the hypotheses presented in Chapter 3 we would expect to see the most aggressive decentralization of water services taking place in the state of Guanajuato because of both its role as a state governed by an opposition party under the PRI government that instituted the decentralization of water services and because of the ideological commitment neoliberal political parties, such as the PAN, typically maintain. Additionally, we would expect to see the most active decentralization in Jaral del Progreso because it shares the same party ideology as the state and because it is the higher capacity municipality. Ocampo may share an ideological commitment to decentralization because of the strength of the PAN in the municipality but the effects of ideology are likely to have been tempered by its low capacity.¹⁷⁸

¹⁷⁸ Conversely, the other municipalities in Guanajuato discussed in Chapter 4, Tarandacuao and Xichú, are both categorized as PRI municipalities so it is less likely that they have had an ideological commitment to decentralization but they may have seen it as a strategic opportunity to shift resources and authority away from the state government. In

In San Luis Potosí and Zacatecas, the pattern should be the same since all of the municipalities are classified as PAN. There should be some ideological commitment to decentralization based on the neoliberal partisanship of the municipality as well as a strategic interest in shifting power away from the state which was controlled by a different party; however, both this ideological commitment and strategic tactic are likely to be heavily influenced by the capacity of the municipality. Thus, the high capacity municipalities of Cerritos in San Luis Potosí and Juchipila in Zacatecas should be more likely to pursue decentralization while the low capacity municipalities of Ahualulco in San Luis Potosí and Cuauhtémoc in Zacatecas would be less likely to do so. One caveat to the outcomes in Zacatecas and San Luis Potosí is the expected weaker state support for decentralization since neither state is controlled by a neoliberal party, though opposition party control of Zacatecas may have encouraged strategic decentralization which would weaken the national government. The expected outcomes are summarized in Table 5.5 and will be analyzed in Section 5.7 at the end of this chapter after an analysis of the decentralization process in the case study states and municipalities.

neither case is strategic decentralization necessary because the state and municipality are of the same party. This is a far more likely scenario in Tlaxcala because of its greater ability to succeed in delivering services based on its higher capacity.

Table 5.5: Outcomes (Municipal Cases Indicated)

		<i>Capacity of Municipality</i>	
		High Capacity	Low Capacity
<i>State and Local Government Control</i>	Same Party	Decentralization most likely Strategic decentralization by state unnecessary Ideological decentralization by state and municipality likely • Jaral del Progreso, GTO	Decentralization less likely Strategic decentralization by state unnecessary Ideological decentralization by state and municipality possible • Ocampo, GTO
	Different Party	Decentralization less likely Strategic decentralization by state likely • Cerritos, SLP • Juchipila, ZAC Ideological pursuit of decentralization by state possible	Decentralization least likely Strategic decentralization by state likely • Ahualulco,, SLP • Cuauhtémoc, ZAC Ideological pursuit of decentralization by state less likely

5.3 Institutional Differences Across States

There is little difference in terms of the hierarchy of actors and institutions among the three states. All maintain a federal relationship with the central government and all three states have established decentralized state water commissions. There are, however, substantive differences between the kinds of state water laws passed in each state. As presented in Chapter 4, Guanajuato's state water law balances the establishment of a state water plan with providing water to users. This is a reflection, to at least some degree, of the state's early emphasis on decentralization and local responsibility for water provision. The state water law in San Luis Potosí appears to have a much different emphasis, concerned far more with the legal possession

and treatment of the state's water. Instead of emphasizing the coordination of the state and local agencies and governments in providing the services, the law discusses at length the legal ownership of state water, specifically its use and planning. Since decentralization of water management took place relatively late in San Luis Potosí, the emphasis of the law may reflect the state's priorities. Zacatecas' state water law establishes both the organizational structure of water management in the state but also delegates responsibilities to each actor. The administration of water in the state is designated as decentralized- that is to say that there is an expectation that the local water agencies are created as decentralized public agencies with primary responsibility for managing the water sector at the local level.¹⁷⁹

5.3.1 Administrative Authority

The current status of decentralization in Guanajuato was summarized in Chapter 4. To review, ten of forty-six municipalities in the state remain centralized, relying on the state to assist the local government with resources, administration, and technical expertise and administering their service from the municipal government. Based on indicators of capacity and discussions with both political officials and employees of agencies, all of the centralized municipalities are small, low capacity municipalities that do not appear to have the means to independently manage their own water services. In Zacatecas, only six communities are not decentralized but these are all constituent parts of larger municipalities that do have decentralized services that have not been extended to these communities. Table 5.6 presents those municipalities within which communities are not decentralized.

¹⁷⁹ This is established in Article 16 of the *Ley de los Sistemas de Agua Potable* that is labeled the "*Administración Decentralizada de los Servicios De Agua Potable y Alcantarillado*."

Table 5.6: Non-Decentralized Communities in Zacatecas

Main City (<i>Cabecera Municipal</i>)	Communities (shaded indicates not decentralized)
Fresnillo	Fresnillo
	Miguel Hidalgo
	Plateros
	Lázaro Cárdenas
	Rio Florido
	San José de Lourdes
Guadalupe	Guadalupe
	San Jerónimo
	Zopuiste

Source: CEAPA “Relación de Organismos Descentralizados”

Ironically, both Fresnillo and Guadalupe, the large urban municipalities of which the remaining centralized communities are a part, are at very low risk for marginalization according to CONAPO, which suggests they should have the means to provide water services independently of the state.¹⁸⁰ Additionally, both main cities (*cabeceras municipales*) were themselves early decentralizers but most of the communities that remain centralized have been more recently established and are, geographically speaking, further from the center of the municipalities.¹⁸¹ All of the *cabeceras municipales* in the state are decentralized and twelve were considered by the state water commission in Zacatecas (*Comisión Estatal de Agua Potable y Alcantarillado de Zacatecas*, hereafter CEAPA), to be early decentralizers meaning that they decentralized between the mid-1990’s and roughly 2002.¹⁸²

¹⁸⁰ CONAPO (2005).

¹⁸¹ Fresnillo created the System of Potable Water, Sewage and Sanitation of Fresnillo, Zacatecas (SIAPASF) May 5, 1995, a para-municipal, decentralized agency with legal standing. Guadalupe was integrated the *Junta Intermunicipal de Agua Potable y Alcantarillado de Zacatecas* in Decreto #96 on August 13, 1994.

¹⁸² This group includes the municipalities of Fresnillo, Guadalupe, Jalpa, Jerez, Juchipila, Morelos, Hacienda Nueva, Sombrerete, Valparaiso, Saucedo de la Borda, and Zacatecas. The end date for these municipalities making the transition to decentralization is stated as “roughly 2002” because many were at different stages of decentralization at this point. Some had completed the process, others had established an agency, while others had only created a municipal decree stating the objective.

There is no discernable trend in partisanship or population among those municipalities that are categorized as early decentralizers. They range in size from small municipalities such as Juchipila, which in the year 2000, had just over 12,000 people to the city of Fresnillo, which has the largest population in the state of over 180,000 people. One only sees a similarity in relation to capacity with early decentralizers having a higher average HDI score in 2000 and a lower average risk of marginalization score in 2005 than those municipalities that remained centralized.¹⁸³

Table 5.7 provides the average scores for both sets of municipalities.

Table 5.7: Average Capacity Scores for Municipalities in Zacatecas

	Average HDI Score (2000)	Average Risk of Marginalization Score (2005)
Early Decentralizers	0.754	-1.05
Later Decentralizers	0.712	-0.47

Source: Author's calculation using data from CONAPO (2000; 2005).

Note: A higher Human Development Indicator score suggests higher capacity while a lower marginalization risk score suggests higher capacity. See CONAPO (2000; 2005) for an explanation of how these indicators are calculated.

As in Zacatecas, decentralization in San Luis Potosí can be broken into two stages. The state capital, San Luis Potosí, and its adjacent municipalities, Cerro de San Pedro and Soledad de Graciano Sánchez, were decentralized into an inter-municipal agency, INTERAPAS, in 1996. The other largest city, Ciudad Valles, formed its decentralized agency in 1992. These urban areas account for 46% of the state's population, which left only smaller municipalities to be decentralized.¹⁸⁴ The second stage of decentralization followed a decree by PAN governor Marcelo de Sanchez in 2006 when, apparently, the state began to decentralize its municipalities in

¹⁸³ As in Guanajuato, in Zacatecas there are exceptions to the generalization that higher capacity municipalities were early decentralizers and vice-versa, especially due to the minimal differences in capacities across the state.

¹⁸⁴ Both statistics on population percentages are the author's calculation based on INEGI 2005 census data.

order to increase its eligibility for resources. Like both of the other states, those municipalities that were earlier decentralizers are larger, more urban, and have an overall higher capacity. What followed this early stage was a slow movement by smaller, high capacity municipalities to decentralize and ended with the most recent phase in which the lowest capacity municipalities have been transitioned to a decentralized model by the state.

Agency Structure- As discussed in Chapter 4, Guanajuato has placed relatively few restrictions on how local agencies are to organize themselves and operate. This becomes very clear when it is compared to San Luis Potosí and Zacatecas that have state water laws that are very specific when it comes to structure and duties.

Table 5.8: Guanajuato- Local Actors and Responsibilities

Actors	Responsibilities
Public Water Agency - Structure is preferably a decentralized public agency though this is not defined - Local municipal ordinances dictate the structure ¹⁸⁵	<ul style="list-style-type: none"> • Operate the public water sector. • Initiate studies to align tariffs with corresponding services (tariffs should cover the costs of delivering the service).¹⁸⁶ • Promote a culture of water. • Propose a program of hydraulic services to the <i>ayuntamiento</i>.
<i>Ayuntamientos</i>	Approve the tariffs for the provision of public services.

Source: *Ley de Aguas para el Estado de Guanajuato* (2000).

The result of this loose legal structure is a variety of interpretations by municipalities of how to decentralize. The comparison of Jaral del Progreso and Tarandacuao in Chapter 4 provides a good example of this. Compared to Guanajuato, the state water law in San Luis Potosí has

¹⁸⁵ Article 32 of the *Ley de Aguas para el Estado de Guanajuato*.

¹⁸⁶ Article 56 of *Ley de Aguas para el Estado de Guanajuato*.

established a much more rigid structure for municipalities. Articles 71-73 of the law establish the use of decentralized municipal agencies for the purpose of providing water to the public. The law dictates the organizational structure of the municipal water agencies with each agency composed of the following:

Table 5.9: San Luis Potosí- Local Actors and Responsibilities

Actors¹⁸⁷:	Responsibilities:
Governing Board (<i>Junta de Gobierno</i>) 1. Municipal President (presides) 2. A councilman (<i>regidor</i>) 3. A representative of CEASLP 4. President of the <i>Consejo Consultivo</i> 5. Two members elected by the <i>Consejo Consultivo</i>	<ul style="list-style-type: none"> • Approve the annual operating program for the agency, annual budget, investment projects • Recommend tariff levels to the state Congress no later than November 5 • Designate/ remove agency Director General
Director General of the local water agency ¹⁸⁸	<ul style="list-style-type: none"> • Conduct tariff studies, present a proposal to the <i>Junta de Gobierno</i> • Implement the directives of the <i>Junta de Gobierno</i> • Provide an annual report to the <i>Junta de Gobierno</i> of accomplishments, finances, progress on programs • Coordinate federal, state, local agencies in addition to working with the private and public sector • Act as the secretary of the <i>Junta de Gobierno</i> • Appoint and remove agency personnel
Public Advisory Council (<i>Consejo Consultivo</i>) ¹⁸⁹ The structure of the <i>Consejo Consultivo</i> (determined by local ordinance; recommended composition includes the following: domestic user, commercial/ service, pensioner, and education representatives	<ul style="list-style-type: none"> • Represent users' interests in the management of the agency, providing observations and recommendations related to its efficiency and efficacy. • Assist in the improvement of the agency's financial situation • Promote the efficient use of water among users
Oversight Body (<i>Un Organo de Vigilancia</i>) 1. Municipal Controller 2. Public Commissary	<ul style="list-style-type: none"> • Ensure that resources are used in accordance with approved laws and programs • Conduct annual audit in coordination with state budget office
Technical and administrative personnel required for operation	<ul style="list-style-type: none"> • As determined by the Director General and <i>Junta de Gobierno</i>

Source: *Ley de Aguas Para el Estado de San Luis Potosí* (2006).

¹⁸⁷ Article 94 of the *Ley de Aguas Para el Estado de San Luis Potosí*.

¹⁸⁸ Responsibilities of the Director General are found in Article 100, *Ley de Aguas Para el Estado de San Luis Potosí*.

¹⁸⁹ Article 103, *Ley de Aguas Para el Estado de San Luis Potosí*.

In addition to establishing a highly structured local water sector, the law in San Luis Potosí also establishes expectations for the Director General. Article 99 of the state water law stipulates that the Director General of the water agency must be a Mexican citizen, is required to have at least five years of technical and administrative experience, be a resident of the state for at least three years, have no criminal record, and once named to the position, should not provide professional services in public administration if it generates a conflict of interest. This is a much higher standard than the other two states have incorporated into their laws.

Zacatecas has also established a much more rigid structure for its local water sector than has Guanajuato.

Table 5.10: Zacatecas- Local Actors and Responsibilities

Actor¹⁹⁰	Responsibilities
Advisory Board (<i>Consejo Directivo</i>) <ol style="list-style-type: none"> 1) Municipal President (presiding member) 2) Representative of the <i>Consejo Consultivo</i> 3) Vice President of the Organismo 4) Representative of the state water agency 5) Representative of the National Water Commission 6) Director of the Local Agency 7) Representative of the labor union 	<ul style="list-style-type: none"> • Authorize tariffs¹⁹¹ • Oversee the budget • Approve projects • Designate the Director General of the local water agency
Public Advisory Council (<i>Consejo Consultivo</i>) ¹⁹² <ul style="list-style-type: none"> - Representatives of the principal social sectors - Cannot be employees of local agency or municipal administration 	<ul style="list-style-type: none"> • Represent users' interests in the management of the agency, providing observations and recommendations related to its efficiency and efficacy. • Monitor tariffs and make recommendations in relation to them • Assist in the improvement of the agency's financial situation.

¹⁹⁰ This structure is outlined in Articles 24 and 25 of the *Ley de los Sistemas de Agua Potable, Alcantarillado y Saneamiento del Estado de Zacatecas*.

¹⁹¹ The responsibilities of the various actors that make up the Consejo Directivo are designated in Articles 26-29, *Ley de los Sistemas de Agua Potable, Alcantarillado y Saneamiento del Estado de Zacatecas*.

¹⁹² Article 30, *Ley de los Sistemas de Agua Potable, Alcantarillado y Saneamiento del Estado de Zacatecas*.

Table 5.10: Zacatecas- Local Actors and Responsibilities (continued)

Actor	Responsibilities
Director General (Managing director designated by the <i>Consejo Directivo</i>)	<ul style="list-style-type: none"> • Legal representative of the agency¹⁹³ • Coordinate technical, administrative, and financial activities of the agency • Execute directives of <i>Consejo Directivo</i>. • Contract the execution of works • Provide information to public related to performance of agency and water quality • Coordinate activities of the agency with the federal and state agencies. • Recommend tariffs to <i>Consejo Directivo</i>, enforce sanctions related to water services • Provide technical and management information to state agency when requested.
Commissary Representative of Workers Union (<i>Síndico Municipal</i>)	<ul style="list-style-type: none"> • Oversee the administration of resources¹⁹⁴ • Provide a fiscal, technical, and administrative audit for projects once completed • Annually provide the <i>Consejo Directivo</i> with an overview of the information presented by the Director General of the local agency

Source: *Ley de los Sistemas de Agua Potable, Alcantarillado y Saneamiento del Estado de Zacatecas* (1994).

There are minimal differences between the agency structures established in Zacatecas and San Luis Potosí. Both institute a model with some form of board of directors (*junta de gobierno* or *consejo directivo*) with two main responsibilities: oversee the agency's actions and appoint or remove the director general of the agency. Both state water laws also establish a municipal public advisory council (*consejo consultivo*) that consists of representatives from the community and major economic sectors.¹⁹⁵ These sectors are specifically outlined in San Luis Potosí's law

¹⁹³ Article 31, *Ley de los Sistemas de Agua Potable, Alcantarillado y Saneamiento del Estado de Zacatecas*.

¹⁹⁴ Article 32, *Ley de los Sistemas de Agua Potable, Alcantarillado y Saneamiento del Estado de Zacatecas*.

¹⁹⁵ It is worth noting that the inclusion of a *consejo consultivo* in the structure of the *organismo operador* has been high on the agenda of those within the CNA that are working to improve local water services because it is seen as providing important external oversight of both the agency and the local government while maintaining compliance with the decentralization of water services to the local level established in Article 115 of the federal constitution. The inclusion of these bodies may well be an attempt by both states to improve the eligibility of their municipal agencies for federal funding from the CNA.

while Zacatecas leaves discretion to the municipality as to which members of the community will be included. The state water laws establish the position of director general and give that individual considerable authority, at least on paper, over the day-to-day operations of the agency. Beyond these similarities, there are a few distinctions.¹⁹⁶

The variations in state law in relation to structure as well as the transitory process of decentralization has led to different outcomes in the three states. They are summarized in Table 5.11 below:

Table 5.11: Typology of Municipal Agencies Across Three States

Municipality	Type of Water Agency
Jaral del Progreso, GTO	Decentralized
Ocampo, GTO	Centralized
Ahualulco, SLP	Decentralized ^a
Cerritos, SLP	Decentralized
Cauhtémoc, ZAC	Centralized
Juchipila, ZAC	Decentralized

^a Ahualulco was recently decentralized from the municipal government but is heavily reliant on the state. This will be discussed below.

There is a clear distinction in Table 5.11 between those municipalities that are decentralized and those that remain centralized. Only two municipalities, Ocampo and Cauhtémoc, remain

¹⁹⁶ San Luis Potosí's law outlines responsibilities for both an oversight body that is responsible for auditing the agency as well as the duties of the technical personnel within the agency. Zacatecas' law establishes a legal role for union representation within the agency.

centralized though Cuauhtémoc is currently transitioning to a decentralized agency. Ahualulco was centralized in the municipal government's department of public works until 2009 when it was decentralized and is now almost wholly accountable to the state water commission and reports to the state legislature. Additionally, San Luis Potosí has distinguished between municipal and para-municipal agencies which is a reference to its attempts to get its local agencies to broaden their coverage by providing services outside of the *cabecera municipal* and reaching communities that are further from the existing networks.

The status of Guanajuato's municipalities, Jaral del Progreso and Ocampo, is discussed at length in Chapter 4. To summarize, Jaral del Progreso has instituted an autonomous, decentralized agency while Ocampo remains centralized, managing its water services from within a municipal department with significant state support. The structures of the municipal agencies in San Luis Potosí follow that established in the law; however, in practice, the two operate very differently. Like the agency in Jaral del Progreso, Cerritos has a manager that is accountable to the *junta de gobierno* and serves at the whim of the municipal president. The agency is autonomous with oversight by the local government acting through the *junta de gobierno*. The structure that exists in Ahualulco is quite different. Prior to 2009 water services operated out of the municipal public works office, managed by an appointee of the municipal president. The recent decentralization process completely shifted control away from the municipal government to the state. The current manager of the water agency is appointed by the state, can only be removed by the state, and reports to the state commission regarding all planning and financial matters; thus the label of decentralized may be a misnomer since the centralization of the agency has simply shifted from within municipal government to oversight by the state.¹⁹⁷ Ironically,

¹⁹⁷ One interesting aspect of this arrangement is that the agency must be financially solvent or it reverts back to the municipal government. This provides an incentive for the agency to collect adequate tariffs and reduce network losses but there is also a motivation for the municipal administration to not assist the agency in the hopes that it, along with the financial resources that are attached to it, will revert back to municipal control. The agency director indicated that

unlike in Guanajuato and Zacatecas where the decentralization process is an attempt to minimize local political influence on water agencies and reduce the reliance on state resources, the decentralization of Ahualulco actually weakened the influence of the local government but increased the influence of the state commission on local decision-making while also increasing the reliance of the local agency on state assistance.

As in San Luis Potosí, the municipalities in Zacatecas have been given a fairly rigid structure to implement and the only real delineation is between those municipalities that are decentralized and those that are transitioning. The state has made significant efforts to create a model of decentralization in the law that is consistent with what the federal government is advocating (specifically the inclusion of representation for citizens) in order to make municipal projects more attractive to federal funding. Thus, the law dictates what the local water agencies should look like and it is reflected in how Juchipila and Cuauhtémoc have structured their *organismso operadores*. Cuauhtémoc has not completely institutionalized the model outlined in the state water law since it is only now transitioning to an independent, decentralized water agency.

The recent pushes by Zacatecas and San Luis Potosí to encourage local governments to adopt decentralized agencies is motivated, at least in part, by the desire to qualify for additional federal funding. In Guanajuato, though the structure is not pre-determined by the state and the *organismos* often look different from municipality to municipality, the state is increasingly basing its own funding allocations on whether there is an *organismo operador* in place because this also increases the likelihood of federal funds being directed to municipalities in the state.¹⁹⁸ Tying

he has no contact with the public works office in the municipal government that used to be in charge of water services. Personal communication, January and November 2010.

¹⁹⁸ Personal communication with the Ministry of Environment- San Luis Potosi, January 2010.

state funding to specific criteria allows states to circumvent the potential jurisdictional issues related to water provision in the federal constitution while getting the desired outcome.

Day-to-Day Operations- The state water laws and state water commissions in both San Luis Potosí and Zacatecas have given authority and discretion over administrative affairs to municipalities much the way administrative control has been devolved in Guanajuato. Personnel issues, budgeting, minor network maintenance, and planning is typically left to agency directors in decentralized agencies while municipal administrations make these decisions in centralized departments. Day-to-day operation is the responsibility of the local water agencies with oversight by boards of directors that reflect the preferences of local government and advisory councils that give the community an opportunity to both provide input as well as hold the agency and municipal government accountable. With the exception of Ahualulco, the municipal president can remove the agency director or individual in charge of the municipal water department. As discussed in Chapter 4, in some municipalities, this happens quite frequently and can have significant long-term effects on the ability of the local agency to deliver adequate services. This will be explored more thoroughly within the discussion of municipal capacity below.

Project Selection- All three state water commissions defer to the authority granted to municipal governments under Article 115 of the federal constitution in regards to carrying out water projects. Water sector employees in each of the municipalities indicated that the local government is responsible for determining which projects to pursue and working with the CNA for approval and funding. In Jaral del Progreso, Cerritos, and Juchipila, the water agency proposes the projects while in Cuauhtémoc and Ocampo, the municipal government is responsible for determining which projects will be pursued. The municipal water office in

Cuauhtémoc indicated that this responsibility will transition to the water agency once it is fully decentralized. It is worth noting that agency personnel in Cuauhtémoc felt that the municipality has historically had the necessary resources to fund projects but there has been a lack of agreement between the municipal water office and municipal officials over which projects to fund so very little has been done to expand or improve the network. Whether this will change under a completely autonomous agency is still to be seen. Because the office has been a constituent part of the municipal government, it has not had the autonomy to act on its own but this is likely to change once it is decentralized. Based on the structure of decentralized agencies in Guanajuato such as Jaral del Progreso, one could assume that this same authority will be devolved if and when Ocampo becomes decentralized though none of the representatives of the municipality that dealt with water services saw this transition as likely to happen in the near future. Because of the unique relationship of Ahualulco's agency to the state water commission, while the agency director can make recommendations for projects that the municipality needs, everything is approved by the state through its water advisory councils (*Consejo Técnico Consultivo del Agua* or *Consejo Hídrico Estatal*). It is apparent that there is a high degree of autonomy enjoyed by the completely decentralized agencies in Jaral del Progreso, Cerritos, and Juchipila while those agencies that remain under the control of the municipal or state government lack the authority to make their own decisions in general but especially when they deal with projects that have very real political and financial implications.

User Fees- Authority over setting tariffs varies from state to state. Responsibility for establishing tariff rates is decentralized in all of the states to the municipality or local agency but

responsibility for approval of the rate levels varies from state to state.¹⁹⁹ Both Guanajuato and Zacatecas have, at least in their laws, reduced the role of the state to one of oversight while giving the local government discretion over how to set their water tariffs. All of the decentralized agencies are responsible for conducting tariff studies and recommending rates. This duty has been supported by both the state water commissions and the CNA through various means such as providing tariff studies, equipment, and technical assistance to local agencies; however, only Guanajuato has consistently provided an assessment of tariff levels and the overall performance and efficiency of the decentralized agencies.²⁰⁰ In Jaral del Progreso, the state water commission (CEAG) provided consultants to assist the local agency with determining appropriate tariffs while in Cuauhtémoc and Juchipila, Zacatecas' state water commission (CEAPA) provided computers to help assess tariffs, improve agency billing, and assist in revenue collection. Since the power to establish tariffs and collect revenue is in the hands of local governments and their agencies, states have an incentive to support this devolved authority in order to create the most efficient outcome possible and reduce their own financial obligation. It appears that, with the exception of occasional interference by local or state elected officials who fear the repercussions of raising tariff rates, local agency authority is supported in regards to tariffs and other user fees.

¹⁹⁹ Guanajuato's decentralized municipalities, though having some variation in their structures, typically follow a similar process: the water agency proposes tariffs to the *junta de gobierno* which then forwards its recommendations to the state legislature. The state's approval is supposed to serve as an oversight function through the establishment of a ceiling on tariffs but in reality, there are times when the legislature has refused to approve tariff increases (personal communication April 2010). The process is similar in Zacatecas where the agency director recommends tariff levels to the *consejo directivo*, which then authorizes them and reports the information to the state to be recorded in the official state registry, the *Periódico Oficial*. According to the state water law, the local agency is responsible for planning the water program at the municipal level and general management of the local system, which includes approving tariffs and suspending services for failure to pay. In San Luis Potosí after the director has conducted a tariff study and tariff levels are approved by the *junta de gobierno* proposed rates are sent to the state congress, which retains veto power over rates that they perceive to be too high.

²⁰⁰ Guanajuato's state water agency, CEAG publishes its "*Diagnóstico Sectoral de Agua Potable y Saneamiento*" with comprehensive data on all aspects of water services, including water tariffs.

Conclusions- As in Guanajuato, much of the authority and discretion over administrative tasks has been devolved to the local level by the state governments of San Luis Potosí and Zacatecas; however, this is highly contingent on the apparent ability of the municipality to adequately provide services. The high capacity municipality in each state is decentralized and has an agency that is largely autonomous from the local government while the low capacity municipalities have either retained water services within the municipal government or are under direct supervision of the state. Administrative authority is clearly granted in each of the state's water laws and discussions with employees of the state water commissions suggest that they actively support that authority.

5.3.2 Fiscal Authority and Discretion

As discussed in Chapter 4, Mexican states and municipalities rely to a very high degree on the federal government to distribute resources through the fiscal federal pact.

Participaciones- All three states saw very similar increases in the unconditional transfers (*participaciones*) that they received through the federal fiscal pact between 1995 and 2005. The trends indicated in Table 5.12 are consistent with what was seen across Mexican states during this time period. Chapter 4 provides an overview of both unconditional transfers and the national trends in funding over this period. Because the distribution of *participaciones* is the purview of the state and because municipalities rely so heavily on them, it is useful to look more closely at how they are allocated by the state governments.

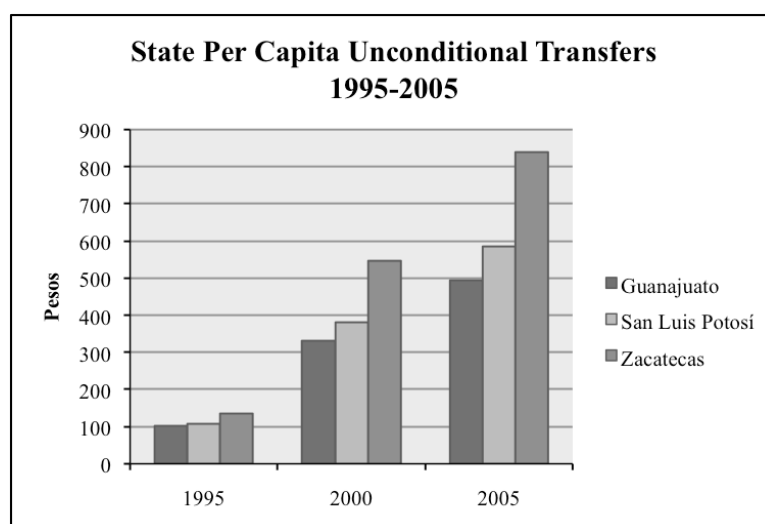
Table 5.12: Federal Unconditional Transfers to Selected States 1995-2005

State	% Change 95-00	% Change 00-05
Guanajuato	240.7%	55.3%
San Luis Potosí	269.6%	59.9%
Zacatecas	307.6%	54.2%

Source: Author's calculation using data from the Sistema Estatal y Municipal de Bases de Datos, INEGI.

All three states have similar increases in their funding though Guanajuato received the least between 1995 and 2000 but the largest increase between 2000 and 2005 while Zacatecas saw the reverse trend. States then distributed this money to municipalities with minimal oversight from the federal government. Chart 5.5 provides a per capita distribution of the unconditional transfers based on the state populations in each year.

Chart 5.5: Per Capita Unconditional Transfers in Selected States 1995-2005

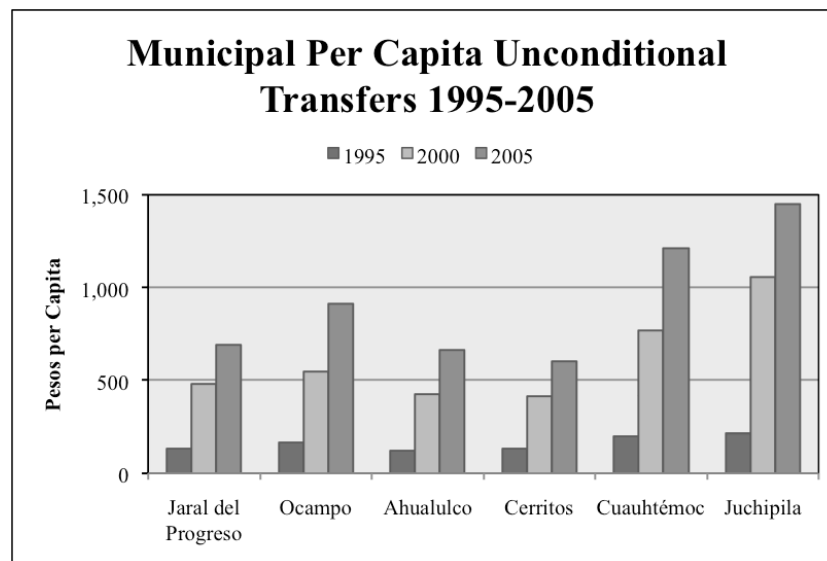


Source: Author's calculation using data from INEGI censos and the *Sistema Estatal y Municipal de Bases de Datos*, INEGI.

There is minimal relative difference between the per capita distributions among the three states from year to year though it is consistently higher in Zacatecas throughout the period.

Establishing the per capita distribution of the unconditional funding in each state provides a basis from which to examine the variation among the municipalities. Chart 5.6 provides a comparison of the state per capita distribution presented in Chart 5.5 with the actual allocation in the case study municipalities and what this amounts to on a per capita basis.

Chart 5.6: Per Capita Unconditional Transfers in Selected Municipalities 1995-2005



Source: Author's calculation using data from INEGI censos and the *Sistema Estatal y Municipal de Bases de Datos*, INEGI.

The lack of variation across the states is not as important as the differences between the state per capita distribution and the actual distribution to the municipalities. An examination of the per capita distribution across each of the three states highlights two things: first, San Luis Potosí appears to have the fairest distribution of *participaciones* across its municipalities with fewer receiving less than the statewide per capita amount presented in Chart 5.5 and second, both

Guanajuato and San Luis Potosí distribute a larger share of the transfers to lower capacity municipalities.²⁰¹ One outlier is Juchipila, which saw a much higher per capita allocation than Cuauhtémoc in 2000 and 2005 perhaps due to the minimal overall difference in capacity and population between the two municipalities. The case study municipalities all have unconditional allocations that are higher per capita than what is projected as an equal distribution in Chart 5.5. This is consistent with the notion that the unconditional transfers given to states can serve a redistributive purpose and balance out the more formulaic conditional transfers.

Aportaciones- Conditional transfers (*aportaciones*) to the states and municipalities have more variation than do the unconditional transfers discussed above. Chapter 4 provides an overview of *Ramo 33*, the federal article that establishes the funds and the guidelines for their distribution to the states. The distribution of the funds varies with some relying heavily on population while others are based on relative poverty. The change in transfers of *aportaciones* between 2000 and 2005 are presented in Table 5.13 below.

²⁰¹ While San Luis Potosí does this to a minimal degree, both Guanajuato and Zacatecas distribute the funds in a highly disproportionate fashion with some small municipalities allocated up to ten times the state per capita distribution shown in Chart 5.5. Santiago Maravatio, Guanajuato received 10.3 times the calculated “fair” distribution of 493.30 pesos per person in 2005. Source- *Sistema Estatal y Municipal de Bases de Datos*, INEGI.

Table 5.13: Changes in Ramo 33, FISM and FORTAMUN Allocations 2000-2005²⁰²

Municipality/ State	Ramo 33 % Change 2000-2005	FISM % Change 2000-2005	FORTAMUN % Change 2000-2005
Guanajuato	65.9%	30.7%	53.2%
Jaral del Progreso	1.1%	-26.6%	51.6%
Ocampo	-15.8%	-31.9%	52.5%
San Luis Potosí	69.9%	32.8%	33.8
Ahualulco	114.7%	137.7%	32.3
Cerritos	74.2%	76.2%	33.0
Zacatecas ^a	103.3%	37.8%	23.5
Cuauhtémoc	87.1%	52.4%	24.0
Juchipila	149.3%	44.3%	23.6

Source: Ramo 33- Author's calculation using data from the *Sistema Estatal y Municipal de Bases de Datos*, INEGI.
Source: FISM and FORTAMUN - Author's calculation based on data from Guanajuato Cuenta Pública, Zacatecas State Secretary of Finance, and San Luis Potosí official filings (Periódicos Oficiales) at the *Sistema de Información Hacendaria del INAFED*.

^a Zacatecas FORTAMUN data is for 2001.

There is a wide range in the changes in conditional funding both among the states and between the municipalities within the states. All three states saw large increases in their funding but this increase materialized differently in the municipalities. Though Guanajuato saw a large increase in funding, it did not pass this on to the two case study municipalities. Data from all of the municipalities in the state suggest that the largest, highest capacity municipalities benefited the

²⁰² Ramo 33 was not created until 1998 so allocation of FISM money begins in this year. All states received conditional transfer funds in 1998 but with the exception of the largest municipalities, did not allocate aportaciones to the rest of the state until 2000.

most from conditional transfers while the smallest, most rural and marginalized municipalities saw the biggest decreases in their funding.²⁰³ As discussed in Chapter 4, this may reflect the allocation of the four conditional funds that are highly determined by population and existing services and budgets.²⁰⁴ Neither San Luis Potosí nor Zacatecas distributed the conditional funds as extremely as Guanajuato did but Zacatecas did appear to utilize a more moderate version of the same method. San Luis Potosí had far less variation in how it distributed the conditional funds with only one municipality receiving less in 2005 than it did in 2000 and just under half receiving more than the state's own increase of 69.9%. In Zacatecas, 58% of the municipalities received less than the state's increase of 103.3% and two out of the three largest urban areas received more than the state increase. Again, the sizeable increases in conditional funding to larger municipalities is likely, at least to some degree, to reflect the formula driven nature of some of the funds that make up *Ramo 33*.²⁰⁵ The unequal distribution of conditional transfers may help explain the distribution of conditional transfers discussed above. Both Guanajuato and Zacatecas distributed far fewer conditional transfers and far more unconditional transfers to smaller, low capacity municipalities, perhaps in an effort to balance out the funding. San Luis Potosí utilized a far less extreme method in distributing both types of funding.

As discussed in Chapter 4, two funds from *Ramo 33* that are relevant to water services, the Municipal Social Infrastructure Fund (FISM) and the Fund to Strengthen Municipalities (FORTAMUN), should be further examined. Table 5.13 shows the changes in both FISM and FORTAMUN funding in the three states and their municipalities between 2000 and 2005.

²⁰³ See Section 4.4.2 Fiscal Decentralization for a description of how Guanajuato distributed this funding.

²⁰⁴ The increases to the three states vary considerably between 2000 and 2005. Guanajuato and San Luis Potosí saw increases that were consistent with the national trend but Zacatecas saw a much larger increase in its allocation. While an increase in population could serve to justify this change because of the formulas for distribution that include population and services, both Zacatecas and San Luis Potosí saw similar increases in population (an average of 4.27% between 1995 and 2005). There may also have been partisan explanations in which the federal allocations were targeted at states such as Zacatecas where there was potential movement in the electorate running up to the 2006 presidential election and to create more inroads by the PAN in a state where it had little past success.

²⁰⁵ Chapter 4 provides a discussion of the various funds that make up *Ramo 33* and how the money is distributed.

While FORTAMUN funds are distributed by all three states relatively equally and consistently with the increased percentage in funding the state received based on population, FISM funding is less proportional. The distribution of FISM funds to the case study municipalities in Zacatecas and San Luis Potosí in Table 5.13 is consistent with the trend in both states to allocate more funds to lower capacity municipalities. Only in Guanajuato do the case study municipalities see less funding than the state increase and the low capacity municipality, Ocampo, actually saw a greater decrease than the higher capacity municipality, Jaral del Progreso.²⁰⁶ As stated in Chapter 4, Guanajuato has, until recently, lacked a transparent process for the allocation of FISM funding, which may account for this difference. Aside from the potential discretion possible in Guanajuato that is less feasible in the other states because they have a more rigorous process for allocation, the low capacity municipalities in Guanajuato may just need the FISM funds less in 2005 than they did in years prior in which case their allocation would be reduced with little to compensate them for their improvement.²⁰⁷ Both Cuauhtémoc and Ahualulco both receive a larger increase in FISM funds, which seems to reflect both the state and broader federal goal of directing this funding to lower capacity municipalities. Additionally, since both states were beginning to decentralize their municipal water services, the allocation of more FISM money to lower capacity municipalities may reflect funds earmarked for water infrastructure projects. In light of the fact that all of the case study municipalities are PAN, relative municipal capacity appears to be a much more important factor for the distribution of FISM monies than politics.

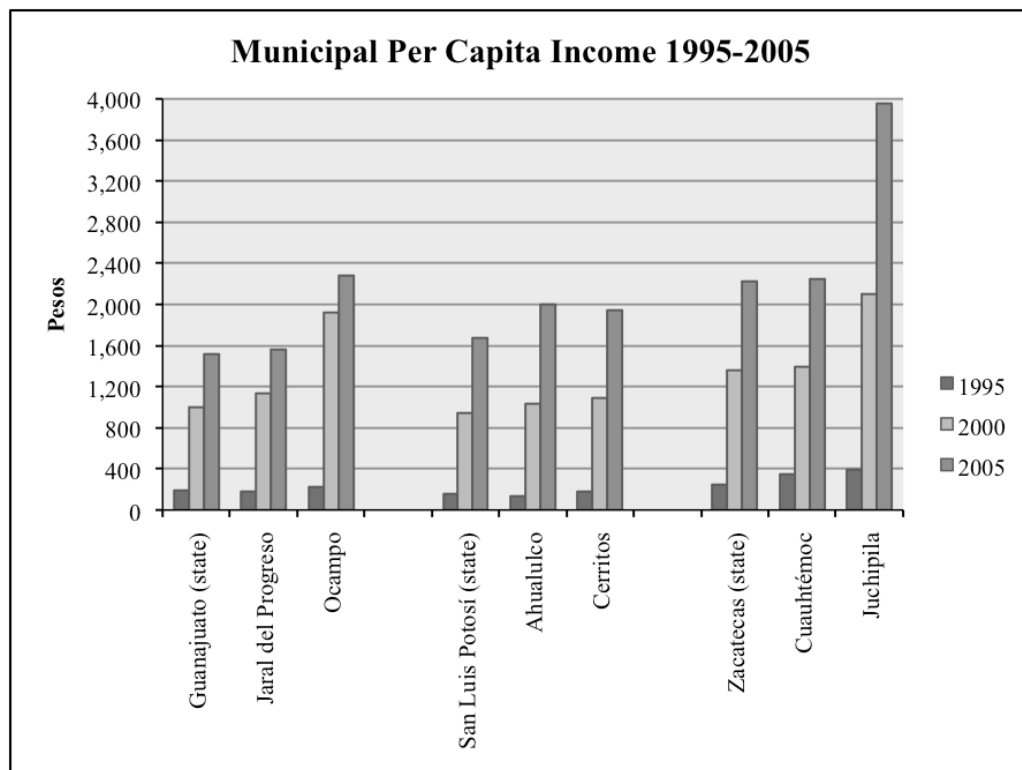
Own Revenue- As discussed in Chapter 4, the current federal fiscal pact in place makes states and their municipalities almost exclusively reliant on both conditional and unconditional funding and

²⁰⁶ See Wellenstein et al. (2006) for a discussion of the variation in state regulations for FISM allocation..

²⁰⁷ Wellenstein et al. (2006).

this reality does not vary from state to state. The success of municipalities in delivering water services is going to be based, at least to some degree, on the resources available to them. As in Guanajuato, municipalities in the other two states have improved their ability to generate their own revenue but it still constitutes a minuscule portion of their total income. Chart 5.7 presents the per capita income of the states and the case study municipalities:

Chart 5.7: Per Capita Income in Selected States and Municipalities 1995-2005



Source: Author's calculation using data from INEGI censos and the *Sistema Estatal y Municipal de Bases de Datos*, INEGI.

All of the case study municipalities have slowly increased their per capita income beyond that of their state. Though in 1995 most of the municipalities had just slightly more per capita income than the state, by 2000, and increasingly in 2005, the municipalities had a per capita income much

higher than that of their own state. The outliers should also be identified. Ocampo had a much higher per capita income than both the state of Guanajuato and the high capacity municipality of Jaral del Progreso. Since Ocampo lacks a significant economic base from which to draw own income, it is likely that this is the result of state and federal transfers. Conversely, Juchipila in Zacatecas has maintained a much higher per capita income than both the state and the low capacity municipality Cuauhtémoc since 1995, topping out at close to 4,000 pesos in 2005 which is almost double that of the state average of 2224.17 pesos. This is consistent with the municipality's ability to generate its own revenue, which is presented in Table 5.14 as it relates to taxation. Since Zacatecas has not shown a pattern of significantly different municipal funding from conditional and unconditional transfers, it is likely that Juchipila is demonstrating stronger revenue generation than the other municipalities.

Table 5.14: Own Revenue Generated by Case Study Municipalities 1995-2005

Municipality	Own Revenue Generated by Taxes 1995	Own Revenue Generated by Taxes 2000	Own Revenue Generated by Taxes 2005
Jaral del Progreso	16.9%	3.4%	4.5%
Ocampo	14.0%	3.1%	4.2%
Ahualulco	2.7%	1.8%	1.5%
Cerritos	7.0%	4.3%	5.3%
Cuauhtémoc	2.7%	1.7%	1.9%
Juchipila	32.9%	5.2%	7.2%

Source: Author's calculation using the *Sistema Estatal y Municipal de Bases de Datos*, INEGI.

While the case study municipalities have received varying degrees of external financial support from each state government through the distribution of the *participaciones* and *aportaciones* they

also show a tremendous variation in their ability to generate their own sources of revenue. Webb and Gonzalez (2004) point out that though some municipalities, mainly the largest and most highly urbanized, have an adequate property tax base from which to raise revenue the tax effort overall has declined since municipal transfers were increased in *Ramo 33* after 1997. This appears to be the situation in the case studies which all had much higher rates of tax collection in 1995 than in 2000.

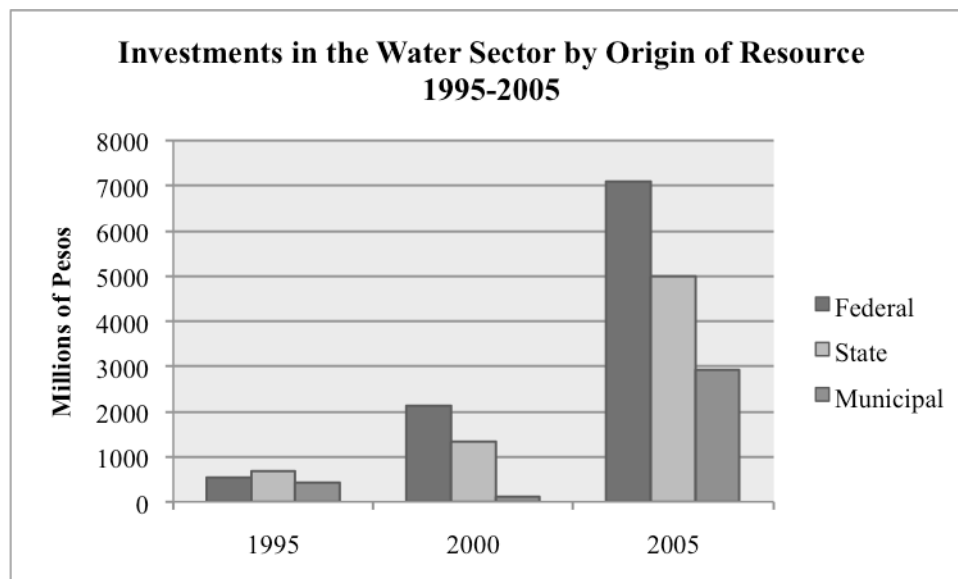
It is quite clear from Table 5.14 that the municipalities differ greatly in their ability to generate revenue through taxes and fees and the high capacity municipalities (Jaral del Progreso, Cerritos, and Juchipila) show a much greater ability to generate revenue from taxes than the low capacity municipalities. In 1999, the year of the Municipal Reforms, the average tax collection rate by local governments in Mexico was 10.4%.²⁰⁸ While all of the case study municipalities are generating tax revenue below this level, it is important to consider their relative size since all have populations under 32,000 people. Though they are below the national average in 1999, the municipalities have shown an ability to improve their own revenue generation with the little fiscal authority and discretion they have been given. While their reliance on state and federal funding limits their opportunities to generate revenue, some (Juchipila for instance) have attempted to take advantage of local revenue sources while others have either not attempted to or not been successful in doing so.²⁰⁹

²⁰⁸ Moreno (2003:5).

²⁰⁹ One additional consideration with regards to revenue that can be utilized for such services as water supply is the inflow of remittances to the municipalities. Though not a significant contributor in all of the municipalities one in particular, Cerritos, has benefitted tremendously from money sent back from community members that have immigrated to the United States. One study found that over 3% of Chicago's immigrants from the state of San Luis Potosí, which at that time numbered 50,000, were from Cerritos (Badillo 2006:125). While not formally calculated, money sent back has a tremendous impact on the municipality where it has been used to fund construction projects and stimulate the local economy as well as sustain three banks which is rare for a community so small. The water agency in Cerritos also suggested that the motivation for building a water treatment plant in the municipality, again a rarity for a community its size, was to serve the needs of the continuous flow of migrants to and from the United States. Access to this additional funding may be one reason that Cerritos has managed to sustain a higher level of capacity, relative to municipalities that are similar in size, and improve its water services coverage.

As in Guanajuato, authority and discretion over finances at the local level in San Luis Potosí and Zacatecas is in the hands of the municipal government; however, much of the funding they receive is tied to a specific fund or project that is dictated allocation formulas at the state level or the power to approve projects at the federal level. Ultimately, as was the case in Guanajuato, this discretion and authority over resources that have already been earmarked or oriented to a specific project may not hold that much importance. Where the variation in municipalities' ability to generate revenue may differentiate between their success and failure to deliver water services is in the ever-increasing demands by the state and federal water agencies that local governments contribute to project funding. The CNA reports a substantial increase since 1990 in the amount of money that municipalities have invested in the water sector and part of this increase is due to federal program requirements for matching funds. Chart 5.8 presents the overall increase in water investments since 1995.

Chart 5.8: Water Sector Investments 1995-2005



Source: Comisión Nacional del Agua (2009).

Greater revenue generation, either through increased taxation or higher user fees for services, gives local governments and their agencies access to other forms of water project funding. In the end this makes them more independent of the state but simultaneously increases their dependence on the federal government because of the centralization of resources in the CNA for water related projects.

Municipal fiscal authority and discretion in San Luis Potosí and Zacatecas is no different than that of municipalities in Guanajuato. Though they have the freedom to use funds for local projects as they see fit the fact that they rely so heavily on state and federal transfers seems to call their real power into question. While they enjoy a steady stream of funding, they also have few options to improve their fiscal situation should the state or federal government reduce or cut funding from one year to the next.

Even once municipalities receive their funding, there is no guarantee that it will be used in the manner for which it was authorized. One water agency director described how the allocation for water projects in the municipality ended up buying new trucks for the municipal administration.²¹⁰ Another employee of a different agency explained how water projects were not moving forward because the municipal administration did not agree that the projects were necessary and was holding up the *Ramo 33* funding until they agreed on which projects should be undertaken.²¹¹ Though decentralized agencies are given legal authority over managing their budgets and resource planning, there is no good oversight mechanism in place to protect resources earmarked for water services from local political manipulation.

²¹⁰ Personal communication, January 2010.

²¹¹ Personal communication, December 2010.

5.3.3 Regulatory Differences

The regulatory environment in which local governments and agencies are operating appears to be the same across all three states. There is no difference in the relationship between the federal government and the local governments nor are there any significant regulatory variations in the relationship between the state government and local governments. Aside from the differences in the emphasis of each state water law, states have acquiesced to the federal constitution's mandate that municipalities are in charge of providing local water services. All three states provide some degree of oversight by their state water commission but, as previously discussed, commission employees responsible for working with local agencies consistently stated that they have limited power over local governments and agencies and are simply there to provide whatever temporary support the local actors deem necessary. Though the state water law in San Luis Potosí does suggest that the state has the power to regulate potable water services, there is deference throughout the law to the municipalities to actually provide the services.²¹² Similar to the tone taken by the state water law in Guanajuato, the other state water laws have not incorporated a clear process for identifying municipalities that are failing to deliver adequate services except to suggest that those that cannot provide the services will meet with the state, which will take temporary control of the services.²¹³ Zacatecas' state water law places the municipality in charge of providing water services and the role of the state, through its water commission, is limited to one of support, participating in or supporting water services when municipalities ask for assistance.²¹⁴

All three states regulate water quality through their state health department, with representatives of municipalities reporting that they have their water tested weekly (San Luis

²¹² State regulatory power is established in Article 2 of the law; however recognition of municipal power to delivery services is recognized in Article 71 of the *Ley de Aguas Para el Estado de San Luis Potosí*.

²¹³ Article 75, *Ley de Aguas Para el Estado de San Luis Potosí*.

²¹⁴ Article 3, 6, and 7. *Ley de los Sistemas de Agua Potable, Alcantarillado y Saneamiento del Estado de Zacatecas*.

Potosí) or every three months (Guanajuato and Zacatecas). Jaral del Progreso in Guanajuato indicated that they have a water quality office with two employees that conduct additional testing while other municipalities test occasionally for excess chlorine or fluoride but rely mostly on the state to regulate water quality.²¹⁵ Quality regulation in San Luis Potosí and Zacatecas falls under the jurisdiction of the federal Secretary of Health and its state affiliates as it does in Guanajuato. Any role by the state water commission in monitoring quality is done to support municipal efforts and comply with federal law.

Chapter 4 made the case that municipal governments have been handed the responsibilities of water services without regard for their ability to do so effectively. This is compounded by the fact that federal law limits any state oversight of their activities and so municipalities, with the exception of testing done by the state health departments, are largely responsible for regulating themselves. Though state water laws go to great lengths to explain such things as metering obligations, users rights, and service requirements, the reluctance on the part of the state to assert control over municipalities and risk either legal challenges or new fiscal obligations to fix problems gives municipalities wide latitude in how they choose to provide their services. It can also mean that municipalities will not or cannot fix problems that need to be addressed which may result in legal problems for municipal agencies that they are unable to overcome on their own.²¹⁶

²¹⁵ Personal communication, December 2010.

²¹⁶ There were many examples of this alluded to during interviews. The agency director in Ahualulco stated that there are 1,800 meters of asbestos pipe in the municipal network that needs to be replaced but no one has the resources to fix it and there has been no response from the state to municipal requests for assistance (Personal communication, November 2010). Agencies in Cerritos and Ahualulco have been unable to get access to wells on private land in order to utilize the water. The agency in Cerritos also dealt with while work done by a contractor in Cerritos that used plastic pipes instead of bronze and could not withstand the pressure of the network and broke, flooding streets and homes, leaving the agency with the liability. The agency in Cerritos was also challenged by users who did not want to pay for water from the network that was extended to them by the municipal government without their request. A legal loophole allowed them to not pay for the water and the agency is now required to have a contract signed by potential users before it can expand its network (Personal communication, November, 2010).

While these and other problems are likely avoidable and/or resolvable, the ability of municipalities to deal with them varies due to their relative capacity. Some degree of oversight by states or regional bodies may lead to both improved performance as well as providing some degree of protection for municipal agencies. As it stands now, there is minimal oversight, with the exception of health requirements, over local water service delivery, which makes assessing and improving performance unlikely unless it is driven by municipal stakeholders or agencies.

5.4 Influences of Intergovernmental Relations on Decentralization

Analysis of the impact of intergovernmental relations on the process of decentralization in Guanajuato led to the conclusion that legal and financial mechanisms have created an environment in which states have very few tools at their disposal for the purpose of influencing how water services are delivered. The legal limitations placed on states in the federal constitution, the federal fiscal pact's shift of resource allocation to the federal government, and the imposing role played by the CNA in determining how federal water resources are allocated all work together to restrict state interference. Additionally, municipal agencies seem to be slowly improving their services, which further reduces their dependence on the state government. This conclusion, drawn in Chapter 4 in relation to Guanajuato, is also applicable in San Luis Potosí and Zacatecas. This is not to suggest that there is a complete absence of partisanship but it is perhaps not as pronounced as it might be if states had control over the legal and financial tools that the federal government currently has.

Fieldwork interviews suggested that, at times, individual initiatives or projects were not supported or were even ignored due to perceived partisan differences but, especially in light of the long history of corporatism utilized by the PRI, this interference was minimal and is likely to be reduced even more as the CNA works more closely with municipalities beyond the influence

of the state. While in some municipalities, no mention was made of the influence of politics on water services, in others it was clear that the local government and agency felt that they were treated differently by the state depending on which party controlled the state legislature and the state water commission. Both municipal presidents and agency directors in the municipalities in San Luis Potosí indicated that they felt that treatment varied depending on whether the parties were the same at the state and local level. One former municipal president suggested that even though the governor and his family were from his municipality and, as can be typical in Mexico there is a tremendous loyalty to the locale from which one originates, the governor's discretion was limited due to the fact that the state and the municipality were controlled by different parties.²¹⁷

Agency directors and employees in San Luis Potosí seem to feel that the state was not interested in providing support to local water services until decentralization became a state priority after 2006. They observed no noticeable difference when parties changed at the local level but that the state, governed by the PRI at the time was, at a minimum, disinterested and in some cases intentionally ignored requests for assistance, financing, and political support.²¹⁸ The fact that political partisanship seems to be the most prevalent in San Luis Potosí may in some way reflect the corporatist history of the PRI, which has, with one exception, maintained control of the state. Because the PAN controlled the state from 2003 to 2009, the interference or indifference felt on the part of agencies may reflect the state's political culture more than the behavior of a specific party.

In Zacatecas, while agency officials in Juchipila felt that the partisan differences between the state and municipality never made a difference, those in Cuauhtémoc and at the state water commission felt that politics did play a role in how financial and political support for projects was

²¹⁷ Personal communication, January 2010.

²¹⁸ Personal communication, January and December 2010.

managed.²¹⁹ The municipal coordinator at the state water commission in Zacatecas felt strongly that politics has a tremendous influence on the interactions between all three levels of government. He made the argument that there should be a state advisory council (*consejo directivo*) for the purpose of reviewing municipal projects, assessing performance, and providing guidance in relation to statewide water use but that this was unrealistic because of the political dynamics in the state.²²⁰ As in the others states, agency employees also suggested that the state congress can be both obstructionist and political in using its authority to approve tariff levels even though Zacatecas' state water law has defined the role of the congress the most minimally of all three states.

These anecdotes suggest that there is definitely room for intergovernmental politics in the process of decentralization. Experiences in San Luis Potosí seem to highlight the partisan divide between the state and municipality more so than in the other states but the broader experiences in San Luis Potosí and in Zacatecas mirror the sentiments expressed in the municipalities of Guanajuato: the real politics related to water services are at play between the municipal government and the agency. This is especially true when the municipal president and *ayuntamiento* have the power to remove agency directors, approve tariff levels and projects, or control the agency's budget. Reducing the local government's role to one of oversight or, preferably, outsourcing this responsibility to a regional actor might reduce the effects of politics and improve the agencies' ability to deliver water services to the community. The creation of a regional regulatory body would also help coordinate water usage in the region, which is currently heavily over-exploited.²²¹

²¹⁹ Ironically, the representative from Juchipila who made the strongest argument against political partisanship having any significant influence was subsequently removed by the incoming administration after more than 17 years in his position in November, 2010.

²²⁰ Personal communication, June 2010.

²²¹ See Scott and Banister (2007) for a discussion of this issue as it relates to coordination of water usage in Mexico.

5.5 Influences of Capacity on Decentralization

Capacity is an important aspect of any examination of decentralization and this is especially true in Mexico where there are such variations in local capacity. As with the discussion presented in Chapter 2 regarding whether capacity is a necessary precursor to successful decentralization or whether capacity can be developed and improved by empowering local governments through decentralization, this project cannot definitively say which is more true. In fact, both arguments appear to have anecdotal and data driven support across all three states. That said, returning to the discussions of capacity presented in Chapter 4, both San Luis Potosí and Zacatecas face the same institutional and cultural hurdles as Guanajuato and have seen, predictably, similar results.

Like the municipalities in Guanajuato, those in San Luis Potosí and Zacatecas face high turnover rates of water agency personnel, are impacted by municipal term limits, and draw their personnel from minimally qualified populations. Table 5.16 offers an overview of the practices in relation to staffing the municipal water agency leadership in each case study as well as the implications of the different practices.

Table 5.15: Municipal Agency Leadership Staffing Practices

Municipality	Changes in Agency Leadership	Effects of Practices on Agency Stability
Jaral del Progreso	New director every three years even if same party re-elected.	Stable since only bureaucratic administrator changes.
Ocampo	New director every three years if new party elected.	Unstable under conditions of political competition at municipal level.
Ahualulco	Prior to 2009, new director with new administration. Current director only removed by state commission. ²²²	Stable- strong state involvement buffers director from municipality.
Cerritos	New director every three years even if same party re-elected.	Unstable/ High Turnover.
Juchipila	No change in director with new administration.	Stable- maintenance of longtime director with experience in water.
Cuauhtémoc	New director every three years if new party elected.	Unstable under conditions of political competition at municipal level.

Whether municipalities have a pattern of replacing their agency directors seems to be less associated with their capacity than with tradition. In municipalities where directors were in their positions for years or even decades, and things appeared to be running smoothly, there did not appear to be much of an incentive or desire to remove them. Conversely, in municipalities where the tradition was for the incoming municipal president to appoint a new director in each new term, the turnover was consistent with each new administration, regardless of how well the agency had performed during the previous three-year term. Both Jaral del Progreso and Cerritos exhibit this pattern in which, though the agency is providing a high quality service, the director is replaced with someone new, who in many cases, has little to no experience in the water sector; however, the fact that Jaral del Progreso maintains its civil service seems to help ameliorate

²²² Director in power has remained since recent decentralization (2009), employed by water municipal department for over 29 years prior to his appointment. Previous directors changed with every new municipal administration.

potential instability. Conversely some municipalities such as Juchipila have maintained their director throughout periods of administrative and partisan change. While most directors appear to get on-the-job training in the water sector some manage to survive the constant change in municipal government and build a broad knowledge of the water sector over time. Even these individuals, however, are not immune to local politics. This was the case with the director of the agency in Juchipila who had over 17 years of experience in the agency and was kept on through four PAN and two PRI administrations but was recently replaced by the new municipal president with a director who had no experience or training in water services.

The influence of institutional design on capacity is most apparent in one example outside of the case study municipalities, in which an individual who had acted as the director of the state water commission and sat on the board of Mexico's largest municipal water lobbying group was removed from his position as director of a large municipal agency because a new administration came into office.²²³ This individual had significant knowledge and experience as well as a proven track record of providing good service in the municipality but was removed because the governing board wanted to give the job to someone new.²²⁴ As is the case in Guanajuato, in San Luis Potosí and Zacatecas those that leave municipal government due to term limits or are removed from their position by new administrations often move on, taking with them their experience and knowledge.²²⁵

While San Luis Potosí has strict requirements in place in its state water law for who can act as agency director, none of the municipal directors that were interviewed for this project met these requirements and each felt that the requirements were irrelevant. In all three states, the state water commissions appear to have attempted to remediate the lack of skilled personnel by

²²³ Personal communication, November 2010.

²²⁴ Personal communication, November 2010.

²²⁵ Multiple former directors and municipal presidents from the cases studies included here, that were previously working in the municipality, had moved on to work for either a state or federal agency, had run for higher office, or were working for a water agency in a larger municipality.

supporting the agencies with training and equipment.²²⁶ Most directors interviewed stated that they had attended courses on the weekend offered by the state commission and in both San Luis Potosí and Zacatecas, the commissions had supplied computer equipment to municipalities to improve billing and revenue collection by the agency or municipal office.

Even with turnover in agency personnel, high rates of outmigration (especially of the most educated and ambitious), and the confines of short municipal horizons due to term limits, the municipalities have all continued to do a better job of providing water services to their local populations since 1995. Variations in municipal performance continue to exist and capacity is one important distinction between those that are doing a very good job and those that still need to improve. As was the case in Guanajuato, the higher capacity municipalities in San Luis Potosí and Zacatecas are providing better services and are more self-sufficient than the low capacity municipalities suggesting that they have been able to undertake their new responsibilities more easily than the low capacity municipalities. The centralized municipalities, which are also the lower capacity municipalities, have improved their coverage rates but have had a more difficult time doing so. There is also more municipal government interference in local water operations and more state interference in the municipal government's operations when the system is centralized.²²⁷ Decentralized municipalities clearly have greater independence and latitude which appears to translate into more effective decision-making and, ultimately, better performance.

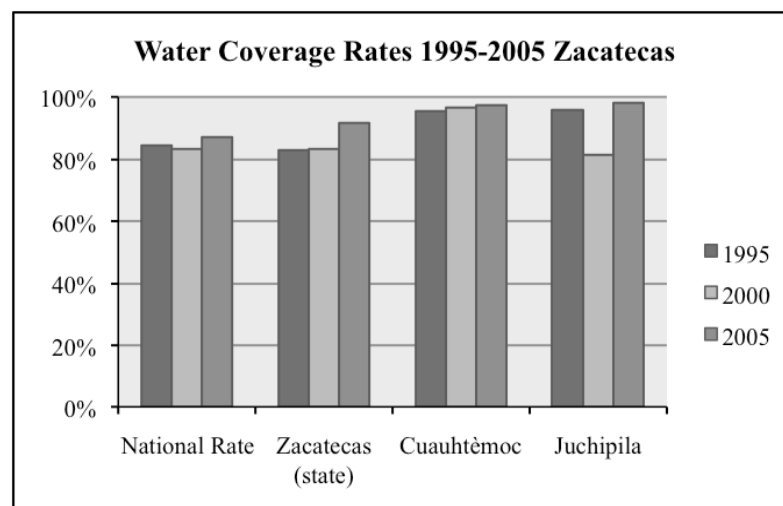
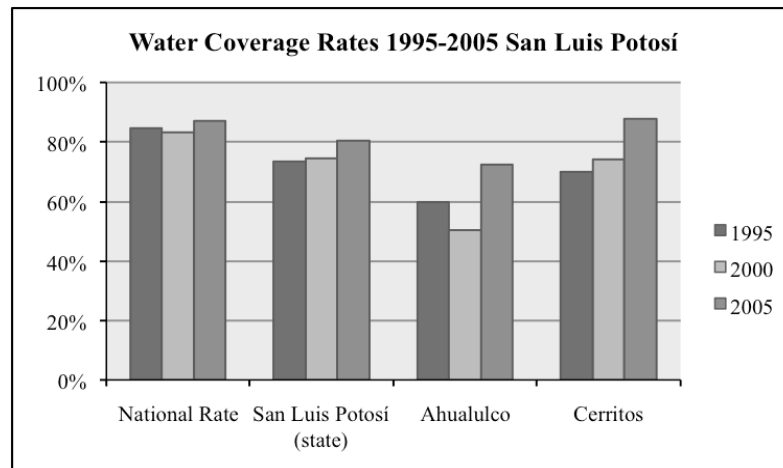
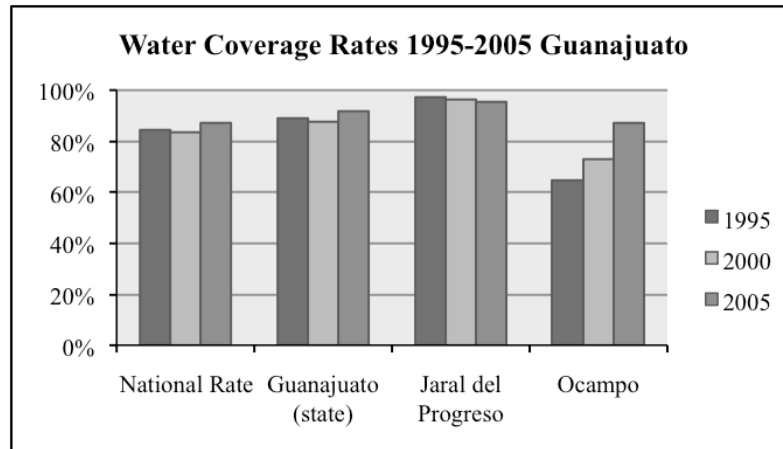
²²⁶ CEAG instituted bi-monthly meetings (*reunions*) under a previous director in which municipal agency directors met with commission officials to assess their performance and get technical assistance. While still utilized, they have become much more of a formality than an opportunity to improve local services since the departure of the director that instituted them. Personal communication, April 2010.

²²⁷ This was conveyed during multiple interviews with agency directors in all three states. Especially important was the distinction between those municipalities that are more self sufficient due to budgets that are composed of mainly tariffs and other user fees, over which the agencies have complete discretion, and those that do not. Jaral del Progreso and Juchipila are both relatively self sufficient while Cerritos' tariffs do not completely cover their budget. Agencies that are not self sufficient (Ahualulco) or municipal departments (Ocampo and Cuauhtémoc) report much more interference by local government in budgeting and accessing monies earmarked for water projects.

5.6 Influences on Water Quality and Coverage

The upward trend in water coverage rates that has been seen nationally in Mexico holds across all three states and the case study municipalities. Chapter 4 provides a more specific explanation of this trend as well as the very obvious distinction in coverage rates between urban and rural municipalities. INEGI census data from 1995, 2000, and 2005 shows an increase of coverage across Mexico from 84.6% to 87.1% during this time period. Some of the case studies surpass this national coverage rate as well as their state coverage rate while others are well below one or both. Charts 5.9-5.11 present INEGI data for water coverage between these years in the three states addressed in this study.

Charts 5.9-5.11: Water Coverage Rates for Selected States and Municipalities 1995-2005



Source: Author's calculation using data from INEGI censos.

Tables 5.9-5.11 provide information on accessibility to the water network and to piped water during from 1995 to 2005; however, it does not utilize the total coverage percentages usually provided by state water agencies. As discussed in Chapter 4, this was done to extrapolate which users actually had access to an improved water source as defined by the World Health Organization and UNICEF's Joint Monitoring Programme but does not include those users who have access to water delivered by tanker trucks (*pipas*) or other informal sources.²²⁸ Only two case study municipalities utilize non-piped sources: Ahualulco delivers water to users with two *pipas* while in Cuauhtémoc 2% of the population in the *cabecera municipal* is served by *pipas*.²²⁹ To reiterate the argument made in Chapter 4, the assumption that decentralization is improving coverage should be based on the expansion of an adequate, reliable network provided by the local government or its delegated agency so it is important to try and discern what kind of coverage users really have.²³⁰ The data also does not differentiate quality of the coverage. In Ahualulco, according to agency representatives, while 100% of the municipality has access to network water

²²⁸ The WHO/UNICEF Joint Monitoring Programme (JMP) for Water Supply and Sanitation defines an improved drinking-water source as "one that, by nature of its construction or through active intervention, is protected from outside contamination, in particular from contamination with faecal matter." This includes sources such as piped water to the dwelling or property, community standpipes, protected wells but not sources such as unprotected springs or wells, trucked water, hand-carts, or bottled water.

²²⁹ Personal communication, November 2010.

²³⁰ Data that is based solely on whether there is access to piped water, for instance, will not reflect this kind of inadequacy. The census data used between 1995 and 2005 utilizes different classifications regarding water access which may account for some of the differences between the data presented in Charts 5.9-5.11 and rates that are typically presented by both the federal and state governments and are, incidentally, higher than those found here. Census data from 1995 classifies whether users had piped water available to them, 2000 data is based on the availability of piped water in the home and/ or on the property, while 2005 data provides data on whether users had access to the public network. This is based on the author's translation of the following language utilized by each INEGI census: 1995- disponen/ no disponen de agua entubada, 2000- disponen de agua entubada dentro de la vivienda/ dentro del terreno, 2005- disponen/ no disponen de agua de la red pública. This may account for some of the variation in percentages of coverage, especially by the municipalities, but as previously stated, it provides the best understanding of network improvement and what kind of water services users really have as opposed to overstating access. One additional difference in using this data is that it is based on the percentage of the entire municipality that has access to network or piped water while most data only looks at urban users. All of the municipalities included in this study have a *cabecera municipal* which is the seat of the government for the entire *ayuntamiento* (county) as well as smaller, outlying urban and rural communities. As discussed in Chapter 2, one of the charges of decentralization is to attempt to reach as many users as possible by giving responsibility to municipal governments that can efficiently cater to the demands and interests of local population but most of the agencies focus their resources on the main urban area. None of the states included in this study, nor the federal government, mandate that municipalities expand services beyond the urban center though there are programs at both the state and federal level specifically targeted at doing so. This can leave large portions of the population without access to the main network that then must rely on organizing rural water committees to utilize well water or another source.

sometimes, only 70% of the municipality has access to network water all day. In Juchipila and Cerritos, agency directors stated that the lack of adequate pressure in the network meant communities lying at higher elevations had inconsistent coverage based on how much water was being used elsewhere in the network.²³¹ In order to provide network water to one area of the municipality, service has to be cut to another area resulting in service disruption.²³²

Representatives from agencies in Cerritos, Juchipila, and Jaral del Progreso all indicated that though there are communities that are not included in the municipal network, expansion is unlikely because the cost of expanding the network is not worth the expected revenue generated from the new users.²³³ One former municipal president from Cerritos said that network expansion beyond the *cabecera municipal* had been on the municipal government's agenda since 2002 but his proposal to expand coverage had been ignored by the state and had not been taken up by subsequent administrations due to the costs associated with the project.²³⁴ Agency employees in Juchipila said that despite almost 5% of the population not having access to the network, there are no plans for expansion because of the distance and cost involved in doing so.²³⁵ Any measurement of the impact of decentralization must take these factors into consideration.

A comparison of user access in the case study municipalities indicates that overall there have been improvements in network coverage; however, not all municipalities made the same degree of progress between 1995 to 2005. With one exception (Juchipila in 2000), the high capacity municipalities had higher rates of coverage than the low capacity municipalities throughout the time period. The difference in coverage between the municipalities in Guanajuato and San Luis Potosí was substantial while In Zacatecas the differences was minimal. This may just be a reflection of the variations in overall capacity between high and low capacity

²³¹ Personal communication, January and December 2010.

²³² Personal communication, November 2010.

²³³ Personal communication, January and June 2010.

²³⁴ Personal communication, January 2010.

²³⁵ Personal communication, June and November 2010.

municipalities which is not as great in Zacatecas as it is in the other two states. As indicated in Chart 5.9 coverage rates were as much as 32.6% higher in Jaral del Progreso than in Ocampo in 1995, and though the gap in coverage was reduced over the ten-year period, even in 2005 Ocampo's coverage was still 7.9% lower.

The state of San Luis Potosí has the lowest coverage of all three states and so it is not surprising that the municipalities in the state also have lower coverage rates than those found in the other two states. Even in Cerritos, the high capacity case study municipality, the rates are still 7-10% lower than the high capacity municipalities in Guanajuato and Zacatecas in 2005, the year in which Cerritos saw the greatest improvement in its coverage. Likewise, the low capacity municipality Ahualulco had the lowest rates of coverage each census year among all of the case studies. Conversely, the municipalities in Zacatecas, both high and low capacity, had the highest rate of coverage overall by 2005. This may reflect, at least to some degree, the overall higher level of capacity in the state, even among its smaller, more rural municipalities, which was discussed in Chapter 3. The selection of Cuauhtémoc as a case study was not ideal because of its higher relative capacity when compared to low capacity municipalities in Guanajuato and San Luis Potosí but it was lower than that found in Juchipila which provided some degree of comparability within the state even if a comparison across states was not as useful. The fact that Cuauhtémoc maintained high rates of coverage from 1995 (95.6%) to 2005 (97.2%) does challenge some of the typical assumptions about decentralization and capacity which will be discussed below.

5.7 What Does the Research Reveal About the Hypotheses?

Table 5.16 below was initially presented in Chapter 3. It suggested that there was the greatest chance of seeing ideological decentralization take place in the PAN state, Guanajuato, in

general and specifically Jaral del Progreso because it is a PAN municipality and high capacity. The other two high capacity PAN municipalities, Juchipila and Cerritos, located in PRI and PRD states would be likely to advocate for decentralization for both ideological and strategic reasons. While Ocampo, Cuauhtémoc, and Ahualulco are all classified as PAN municipalities, they are also low capacity, which suggests that there is an inherent risk to the state in transferring services to them. Only Ocampo would be more likely to be decentralized because it is located in Guanajuato which is both governed by the same party as the municipality and is a neoliberal state that would support decentralization. Finally, strategic decentralization may be observed in Zacatecas and San Luis Potosí if efforts were made to decentralize to the low capacity PAN municipalities, Ahualulco and Cuauhtémoc, because the state governments, controlled by the PRI and PRD, could be sabotaging them by transferring responsibility to a local government that is ill-equipped to deal with it.

Table 5.16: Expected Outcomes (Municipal Cases Indicated)

		<i>Capacity of Municipality</i>	
		High Capacity	Low Capacity
<i>State and Local Government Control</i>	Same Party	Decentralization most likely Strategic decentralization by state unnecessary Ideological decentralization by state and municipality likely • Jaral del Progreso, GTO	Decentralization less likely Strategic decentralization by state unnecessary Ideological decentralization by state and municipality possible • Ocampo, GTO
	Different Party	Decentralization less likely Strategic decentralization by state likely • Tarandacuao, GTO • Cerritos, SLP • Juchipila, ZAC Ideological pursuit of decentralization by state possible • Tarandacuao, GTO	Decentralization least likely Strategic decentralization by state likely • Xichú, GTO • Ahualulco,, SLP • Cuauhtémoc, ZAC Ideological pursuit of decentralization by state less likely • Xichú, GTO

After analyzing both the single case study presented in Chapter 4 and the cross-state case studies in this chapter, the following conclusions have been drawn.

H₁: State governments controlled by a neoliberal party will be more likely to decentralize water services.

Guanajuato, the neoliberal state in this study, has been by far the strongest proponent of decentralization among the three states. Not only did Guanajuato implement decentralization far earlier than the other two states, it has continued to move in the direction of decentralizing all

municipalities that are capable of doing so and has worked to assess their efficiency and provide assistance where necessary. Guanajuato's governors, as members of the neoliberal PAN party, have advocated for decentralization of services such as water at the state level. While some have suggested that the motivation was more strategic than ideological, it appears that it has been a consistent theme since the early 1990's at least in water services, which is many years before any broad movement to decentralize took place in either San Luis Potosí or Zacatecas. As stated in Chapter 3, determining whether decentralization is ideological or strategic is difficult, if not impossible. The PAN party platform both within the state of Guanajuato and nationally has advocated for subsidiarity and the actions of the state are consistent with this theme; however, it is unclear whether this was the only motivation of the state. This ideological commitment to decentralization was supported by the ideological position of the PAN party at the federal level by two presidential administrations after that year but as noted in Chapter 4, the PAN president and the PAN appointed director of the CNA both maintained the highly centralized fiscal relationship that had been established under the PRI.

Guanajuato's ideological commitment to decentralization was in keeping with the 1999 Municipal Reforms and the agenda of the CNA that began to work directly with local governments and agencies in project selection, funding, and support. The state government in Guanajuato was able to maintain a consistent ideological commitment to water decentralization that was supported by the federal government and its tremendous resources, especially after 2000 when the PAN was in power at the federal level. That said, for all of Guanajuato's active efforts toward decentralization, it has still kept almost a quarter of its municipalities centralized within the municipal administration with strong state support.

On the other hand, San Luis Potosí and Zacatecas have been much more reactionary to the federal government's move toward decentralization. Though some of Zacatecas'

municipalities did decentralize earlier than the majority, many have only recently decentralized. In San Luis Potosí, the push by governor Jesús Marcelo de los Santos Fraga in 2006 was far more oriented toward accessing federal resources than giving local governments control over services. It is also worth noting that Marcelo de los Santos, though governing in a historically strong PRI state, was a PAN governor. While it appears that the resources at stake were driving the movement to decentralize in San Luis Potosí, there could also have been an ideological motivation on the part of the governor to do so. PRI and PRD state governments were less willing to ideologically embrace decentralization statewide; however, the largest municipalities in both states, all governed by the PRI at the time, were decentralized in the early to mid 1990's under PRI governors. Because PRI governors and municipalities were not actively promoting decentralization either in rhetoric or party platforms, it is unlikely that there was an ideological motivation for the transfer of responsibility to the municipal agencies (with the possible exception of Marcelo de los Santos). It is also important to be somewhat critical in assuming that the transfer of power to the largest municipalities in San Luis Potosí and Zacatecas was really significant decentralization since both involved the establishment of inter-municipal agencies that provided services to the capital cities and surrounding municipalities which have historically been highly intertwined with the state political and fiscal environment.

H₂: State governments controlled by an opposition party will be more likely to decentralize water services.

As stated above, Guanajuato actively advocated for decentralization while governed by an opposition party between 1995 and 2000 under the PRI. Though not technically governed by the opposition once the PAN party won the presidential elections in 2000 and 2006, it continued to move in the direction of decentralized water service provision. Zacatecas, governed by the PRD

between 1998 and 2010 began to decentralize water services in the larger urban municipalities earlier in the early 1990's but has only gradually begun the process of water decentralization in smaller, more rural municipalities in recent years. Cuauhtémoc, one of the case study municipalities only actively begun the process toward decentralization in 2009. San Luis Potosí, the PRI state, was not governed by an opposition party until 2000 when the PAN party's candidate, Vicente Fox, was elected president. Though San Luis Potosí had not actively pursued a policy of decentralization earlier, its move to mandate decentralization by the governor in 2006 could have potentially been a response to the state's position as an opposition government between 2000 and 2006 though the PAN governor of the state technically meant it was not governed by the opposition between 2003 and 2009. Decentralization, as the other two states had discovered, brought resources directly to the municipalities from federal water programs such as PRODDER, APAZU, and PROMAGUA while they simultaneously reduced the fiscal burden on the state. Opposition states could get resources from the PAN federal government by forcing their municipalities to adopt a decentralized structure that was consistent with what the CNA wanted, and was in some cases a prerequisite for funding. Agency employees in Ahualulco seemed to think that this was the state's motivation, especially in light of the fact that the services were being decentralized to relatively low capacity municipalities.²³⁶

Similar to this attitude, though not only found in opposition state governments, is the consistent view that representatives of the state commissions expressed about the limitations placed on them by Article 115 of the federal commission. Deferring to the municipalities and advocating decentralization of water sources because it is mandated by the constitution both reduces states' obligations to provide resources for water services and allows them to take the

²³⁶ Personal Communication, January 2010.

position that the federal government, by requiring local service provision, should also foot the bill for doing so.

It appears that there is some truth to the notion that opposition states will be more likely to advocate for decentralization. Guanajuato, and to a lesser degree Zacatecas, were both advocating decentralization much sooner than the state government in San Luis Potosí and during a time when both states were playing the role of opposition to the PRI federal government. San Luis Potosí, the historically strong PRI state, began its movement toward decentralization long after the PRI lost control of the presidency in 2000.

The assumption that pursuing decentralization strategically will lead to resources access is problematic in Mexico because of the tightly control that the federal government has over resources. To reiterate the assessment made in Chapter 4, if Guanajuato and Zacatecas were pursuing strategic decentralization, both would have had to make attempts to pursue changes to the federal fiscal pact in order to loosen the grip that the central government had on resources. Neither state made attempts to do so. All three states had an incentive to decentralize once it was clear that doing so would give them access to federal resources from the CNA but beyond that, strategically speaking, their efforts would be futile as long as the federal fiscal pact was maintained. As stated throughout both Chapters 4 and 5, there was actually an incentive for states to decentralize and absolve themselves of responsibility since it freed up the states' own resources and they could shift the blame for failure to the municipalities and the federal government. This seems to have actually been the strategic assessment made by states.

H₃: State governments will be less likely to decentralize water services in municipalities that lack the ability to effectively provide for their citizens.

Both the single case study of Guanajuato and the cross state case studies presented in this chapter provide the strongest support for this hypothesis. In Guanajuato, both low capacity municipalities Ocampo and Xichú are still centralized and though representatives of the state water commission indicated that some of those that remain centralized may soon shift toward a decentralized structure, the lowest capacity municipalities are not likely to change any time soon. Similarly, the low capacity case study municipalities in both San Luis Potosí and Zacatecas have only recently begun the transition to decentralization. Ahualulco's decentralization was part of efforts by the governor in San Luis Potosí to make the state's municipalities eligible to receive more federal funding. Because it is not likely that the Ahualulco could succeed as a completely decentralized municipality, there is heavy state oversight of everything from the appointment and removal of the agency director to project selection and tariff approval. According to agency employees, the state must approve everything the agency does and if the agency fails to be adequately funded, it will revert back to the municipal government to administer. Cuauhtémoc has a higher overall capacity than the two low capacity municipalities in the other two states but it is still lower in capacity than most of the municipalities that are successfully delivering services through a decentralized model. Like San Luis Potosí, Zacatecas is offering significant support to Cuauhtémoc as it traverses the process of decentralization. Ultimately, to allow small, low capacity municipalities to move toward decentralization presents a risk for states due to the potential that they could fail. This must be balanced with the gain that states see in resources. Apparently, both Zacatecas and San Luis Potosí have made the calculation that the risk is worth additional funding.

In all three states, the high capacity municipalities were early decentralizers and have proven that they can, overall, do a good job at delivering the services themselves with little state involvement. As was the case in Jaral del Progreso and Tarandacuao in Guanajuato, both Cerritos in San Luis Potosí and Juchipila in Zacatecas have found ways to overcome the potential pitfalls that small municipalities might face in taking charge of the administration of water services. Juchipila, like Tarandacuao, maintained the same director of the water agency for over seventeen years. Both directors survived changes in administrations and party control during their tenure and operated the agencies consistently and successfully while in charge. Though Jaral del Progreso does change directors with every new municipal administration, the use of a civil service system appears to create technical consistency in the face of high administrative turnover. While Cerritos uses neither of the techniques that seem to be helping the other high capacity municipalities, it has been successful though it is worth noting that its coverage rates are lower than that of Jaral del Progreso, Tarandacuao, and Juchipila. The initiative of one highly ambitious municipal president in Cerritos led to the decision to decentralize and the population appears able to pay tariffs that cover the operating costs of the agency. This may in some way reflect the very high migration rate to the United States that results in remittances that subsidize an otherwise limited local economy. This aspect of higher capacity municipalities, the ability of the population to pay more for water services and the fact that they have a higher level of education in general seems to assist the decentralized agencies in covering their costs and finding good personnel.

H₄: State governments will be less likely to decentralize water services to municipalities of a different political party.

This hypothesis appears to be refuted by the case study evidence in all three states. In the PAN state of Guanajuato, the PRI municipality of Tarandacuao is decentralized while PAN

municipalities are also decentralized in the PRI state of San Luis Potosí and the PRD state of Zacatecas. As discussed in Chapter 4 in relation to which municipalities are decentralized and which are not, there is no consistent partisan trend among the two classifications of decentralized and centralized municipal water systems. Instead of partisanship, the greatest determinants of whether a municipality will be decentralized are capacity and size.²³⁷

In both San Luis Potosí and Zacatecas, the larger municipalities that were decentralized were actually decentralized by the PRI state while the municipalities were governed by PRI municipal administrations but as stated above, these large capitals are often synonymous with the state so whether decentralization was really occurring is questionable. Since this initial decentralization movement of the mid-1990's seen in all three states, the rate of decentralization has been slower as states and their water commissions have had to make cautious calculations about the risks and rewards of decentralizing services to smaller, lower capacity municipalities. This type of cost benefit analysis has taken place at the same time as increasing party competition at the state and municipal level meaning that state governments are more and more likely to be dealing with many municipalities of a different party. Since the rate of decentralization has only gained momentum since the early 1990's regardless of the increase in political competition, it seems that states are determining that partisan gains at the local level are less important than the potential increases in funding for water projects from the federal government. Partisanship is far less of a factor than capacity in the decision to decentralize water services to municipalities.

²³⁷ Fresnillo, Guadalupe, and the city of Zacatecas, which were all decentralized in the early part of the 1990's account for 33% of the Zacatecas' population while in the state of San Luis Potosí, the capital city of San Luis Potosí and its adjacent municipalities, Cerro de San Pedro and Soledad de Graciano Sánchez have also been decentralized into an inter-municipal agency, INTERAPAS, since 1996. The other largest city, Ciudad Valles, formed its decentralized agency in 1992. These urban areas account for 46% of the state's population which leaves only smaller, lower capacity municipalities that may or may not be decentralized. Both statistics on population percentages are the author's calculation based on INEGI 2005 census data.

H₅: Municipalities with greater capacity will be more likely to request that responsibility for water services be devolved to the local level.

This hypothesis appears to be correct. None of the low capacity municipal case studies have yet requested that water services be decentralized to them and in fact, the two that are currently transitioning to decentralization, Ahualulco and Cuauhtémoc, were directed to by the state governments in San Luis Potosí and Zacatecas, respectively.

As stated in the discussion of *H₃*, all of the high capacity municipality case studies requested that services be transferred to them. Jaral del Progreso was the first to decentralize in 1994 followed by Tarandacuao in 1998. Cerritos, and Juchipila both decentralized their water services in 2002. The decision to decentralize was made by the municipal governments and in most cases there was an individual that took the initiative to *actualizar*, or activate, the decentralized agency. In addition to a motivated individual who is in most cases the municipal president, many times there is an external incentive that pushes decentralization. In Jaral del Progreso, the state mandated that municipalities needed to have a treatment plant by 2002 and so the decision to decentralize would bring in additional revenue from the federal government in order to pay for the plant. In Cerritos, employees of both the water agency and the municipal administration indicated that the main motivation for decentralizing was to have access to external resources so that the agency would not have to rely solely on tariffs to operate.²³⁸

Much the way that the largest, highest capacity municipalities are the most likely to apply to federal programs and be funded, it appears that they are also the most likely to request that services be decentralized to them. Two of the human development indicators used by CONAPO to establish capacity are highly relevant here: literacy rate/ school attendance and per capita income. High capacity municipalities have a more highly educated and affluent population.

²³⁸ Personal communication, January 2010.

They have a larger pool of educated individuals that are more apt to show ambition and, like the municipal president in Cerritos or Jaral del Progreso, be motivated to improve the municipality and have an understanding of how to do so. This population also serves as a source for staffing the decentralized agency with better-qualified personnel. Because there is a higher per capita income, it is also more probable that they will have the resources at their disposal within the community to be able to charge users a realistic fee that will cover the costs of operation and pay their personnel salaries to encourage longevity. CEAG officials stated that though low capacity municipalities can technically request decentralization, the need to increase tariffs in order to cover the newly decentralized agency's costs would prove prohibitive for local populations so it would be unlikely that these municipalities would make the decision to decentralize.²³⁹

Commission employees in the other two states also believed that the lowest capacity municipalities would be unable to undertake decentralization on their own and would require extensive state support so the municipalities had not requested decentralization on their own but were instead directed to do so.

H₆: Decentralization of water services will be more successful where municipalities have greater capacity.

As stated in Chapter 4, it is almost impossible to determine whether performance improvements are due to decentralization of water services or to the high capacity of the municipality.

Decentralization has not been unsuccessful. The municipalities that have been decentralized since the 1990's (Jaral del Progreso and Tarandacuao) or 2002 (Cerritos and Juchipila) have continued to improve their water services as defined by both coverage and quality so it has not

²³⁹ This question was specifically asked to CEAG officials regarding the ability of Xichú to request services. Though CEAG officials stated that they would follow the legal requirements to allow a municipality to decentralize in the case that it was requested, doing so would lead to an unsustainable situation because of the inability of the local population to support the agency. Personal communication, May 2011.

hurt them to be responsible for providing water services. The low capacity municipalities have also seen an improvement in their network coverage and quality but the improvements have not been as dramatic as those in the high capacity/ decentralized municipalities. Whether these marginal improvements are the work of the municipalities or the result of the increased federal and state emphasis on water services, which has led to an ever-increasing effort to improve services nationally, is unclear.

Fieldwork indicated that the aspect of decentralization that has been the most difficult for municipalities is the expectation that they will be self-sufficient. Once decentralized, the municipalities are expected to rely on tariffs and user fees to cover their expenses. In some cases this has not been a problem while in others they have been unable to adequately cover their expenses. If this is a problem in even some high capacity municipalities, it would seem to be an extremely high hurdle for low capacity municipalities that lack a local population that can afford tariffs to cover the expenses of a high performing local water agency.

H₇: Decentralization of water services will be more successful when the municipal and state governments are from the same political party.

This hypothesis is based on the assumption that states and municipalities will work better together if governed by the same party. Resources will flow more freely to municipalities from the state and the state will make fewer attempts to obstruct municipal efforts since successful service provision will reflect positively on the state government and the party in charge of it. Despite anecdotes from employees of both state and local governments and water agencies regarding which party is more supportive or obstructionist of local efforts, the bottom line is that local agencies have successfully delivered their services regardless of which party has been in charge at the state level or the local level and whether the administrations were of the same or different parties.

The lack of obstruction seems to be due, at least in part, to the way that funding is allocated by the federal government. Much of the funding is allocated using formulas that account for relative poverty or population and so state discretion has been significantly reduced. The federal government has also reduced the discretion of the states in relation to water services by circumventing their authority. With the exception of a limited number of federal programs that require state matching funds, decentralized municipalities deal directly with the federal government through the CNA. In the end, the combination of how federal money is allocated both in general and through federal water programs as well as the state's own incentive not to intervene in the activities of the local water agency because of the potential expense incurred by drawing attention to problems with service delivery means all states, regardless of party, are not interested in interfering at the local level. This would seem to be especially true in small municipalities such as those examined in this study. While larger municipalities and capital cities have much larger budgets and are often highly intertwined both fiscally and politically with state governments, the types of municipalities included in this study offer little reason for states or the federal government to interfere with water service delivery because the potential gain from doing so is not worth the effort.

Concluding Part B- Based on the discussions presented in Chapters 4 and 5, the following assessments can be made:

Hypotheses Confirmed by the Research

H₁: State governments controlled by a neoliberal party will be more likely to decentralize water services.

H₃: State governments will be less likely to decentralize water services in municipalities that lack the ability to effectively provide for their citizens.

H₅: Municipalities with greater capacity will be more likely to request that responsibility for water services be devolved to the local level.

H₆: Decentralization of water services will be more successful where municipalities have greater capacity.

Hypotheses not Confirmed by the Research

H₂: State governments controlled by an opposition party will be more likely to decentralize water services.

H₄: State governments will be less likely to decentralize water services to municipalities of a different political party.

H₇: Decentralization of water services will be more successful when the municipal and state governments are from the same political party.

Referring back to Table 5.16 above, the following municipal outcomes were observed. Jaral del Progreso, the high capacity PAN municipality in Guanajuato, was the earliest and most active decentralizer and has also demonstrated the most improvement in all aspects of water service delivery since 1995. Tarandacuao, Cerritos, and Juchipila also sought decentralization though not as actively or as early as Jaral del Progreso. The ideological commitment to decentralization in Tarandacuao would be inconsistent due to the alternation of control by the PRI and PAN so this may explain the lack of advocacy for decentralization before 1998. Cerritos and Juchipila have both been governed by the PAN at multiple intervals during the period of this

study so there could be some ideological motivation for decentralization though neither sought to do so as early as Jaral del Progreso even though larger municipalities in their respective states were decentralizing five to ten years before them. It is likely that the capacity of these municipalities, as opposed to the ideology of the party in control at the municipal level, drove the request to decentralize services.

Conversely, the capacity of Ocampo, Ahualulco, and Cuauhtémoc has made decentralization unattractive since they would be unable to be successful carrying out the delivery of local water services independently even if there was ideological support by the local PAN government. Ironically, the low capacity municipality in the PAN state has remained centralized while the low capacity municipalities in the PRI and PRD states are transitioning to decentralization. Apparently the ideological commitment to decentralization on the part of Guanajuato does not outweigh the concerns regarding the ability of a low capacity municipality such as Ocampo to successfully deliver water services. This also seems to be the case regarding the lack of pressure applied by the state to Xichú, which is also low capacity. Even if the state does have an ideological commitment to decentralization, which the research here suggests it does, the state is not willing to force decentralization on any of its municipalities unlike San Luis Potosí and Zacatecas which have both actively decentralized water services even in the lowest capacity municipalities. This has been done not to sabotage them but to access additional federal resources. Unlike the decentralization that has taken place in the high capacity municipalities that have requested that services be decentralized, the decentralization process in Ahualulco and Cuauhtémoc has required significant state support both administratively and fiscally. Much of this is due to the fact that the local government did not request decentralization but was instead directed to do so. This lack of buy in on the part of the municipality may make decentralization

more challenging than in municipalities where the local government has pursued decentralization and is actively involved in providing oversight to the agency.

CHAPTER 6: CONCLUSIONS

6.1 What Conclusions Can be Drawn?

The primary research question of this project was how do intergovernmental relations and municipal capacity influence the process of decentralizing water services, the form that decentralization takes, and the quality of the services provided? The exploration of two different contexts, one looking at different municipal governments within one state and the other examining municipalities of one party across states governed by three different political parties leads to some fairly specific conclusions. This research suggests that decentralization is advocated for both ideological and strategic reasons; however, the institutions present in Mexico, specifically the control of resources by the federal government and the constitutional amendment that places control of water services under the control of local government, highly shapes the advocacy of decentralization. The assumptions made in the hypotheses regarding what was driving advocacy were, however, oversimplified. Instead of using strategic decentralization to sabotage political opposition, it was used by states to access additional water related resources from the federal government.

While it is true that Guanajuato, a neoliberal state with an ideological predisposition to support decentralization did more actively advocate for decentralization, it also had financial incentives to do so. The research suggests that states have an incentive to decentralize water services to high capacity municipalities because they have the resources to succeed but that increasingly, states are decentralizing to low capacity municipalities because of the financial benefit of doing so even if it means heavy handed support on the part of the state government and its water commission to make the decentralized agencies succeed. Differences in partisanship do not seem to matter. While there are potential opportunities for states to interfere in local service

delivery, they do not appear to be likely to do so since it can jeopardize additional funding and obligate them to provide assistance to low performing municipalities.

The success of decentralization seems to be the most contingent on the capacity of the municipality. Not only do these municipalities have more resources, they have more human capital at their disposal which generates assertive local leadership that is more likely to request decentralization from the state, apply for federal water project funds, and understand how to improve their local water agency overall. As stated in Chapters 4 and 5, decentralization has not led to detrimental outcomes in Mexico the way some believe that it can. Instead, services have continued to be expanded and improved but whether this is the result of decentralization cannot be determined. It does appear that the capacity of local government and agencies is the most critical factor for determining whether decentralization will succeed. Though low capacity municipalities have slowly begun to improve their services, they have only done so with active state support. While discussions with employees of low capacity municipalities suggests that they have the potential to do a good job of providing services if decentralized, there is also more political interference and fewer resources to draw on in these municipalities. The question presented in Chapter 2 regarding the relationship between decentralization and capacity seems to suggest, at least in the case of municipalities in Mexico, that capacity is a necessary precursor for successful decentralization and if it does not exist, higher levels of government will have to expend greater amounts of time, energy, and funding to make autonomous local agencies successful.

6.2 Contributions to Existing Scholarship

This research supports the idea that building local capacity is an important part of making decentralization work. Equally important is the consideration of existing institutions and their impact on the decentralization process. In Mexico, the following institutions seem to matter:

Term Limits- The use of term limits at the local level has two significant impacts on decentralization. It creates short time horizons for elected officials which reduces their incentives to invest time and money in projects that cannot be completed quickly and or do not effect large numbers of constituents. Additionally, short terms of office often result in high rates of turnover in local water agencies because of the powers given to the municipal president to appoint and remove agency directors. This often leads to a loss of human capital because those with prior experience and knowledge move on. This is especially critical in lower capacity municipalities that already have lower rates of both education and per capita income from which to draw personnel and resources.

Regulation- Because of the deference shown to local government's power to provide water services under Article 115 of the national constitution, the ability of the state and federal government to regulate potable water services is unclear. While there is certainly no question that the federal government has reserved the right to regulate water quality, other forms of regulation are minimal. While quality can be assessed and steps taken to work with local governments and agencies to improve it, regulation of other aspects of performance are largely absent. The federal government has used the funding power of the CNA to entice state and local governments to make changes that it feels are beneficial to users but their influence is limited to their ability to distribute resources. Performance related regulation that emphasizes efficiency and network

improvement is largely absent. This inability to measure and compare performance with the objective of incrementally improving services is compounded by the turnover in personnel. The depletion of water resources in Mexico makes this even more important since inefficient use of water and poor quality networks lead to greater losses. Regulation that seeks to both improve local agency performance as well as coordinate management of water resources is necessary. Locating this regulator outside of the influence of the state, possibly positioning it at a regional level reduces the influence of politics and takes into consideration the regional nature of water management. Successful decentralization is in many ways reliant on a system that can measure outcomes and improve upon them. The absence of a regulator that is legally and politically able to measure performance and provide benchmarks for governments and their agencies is highly desirable and will provide a much clearer picture of what is and is not working across different municipal systems

Mandated Expansion- While coverage is high in urban areas throughout Mexico, it is much lower in rural regions of the country. This distinction is even more apparent in smaller municipalities which often have higher coverage rates, some close to or at 100%, in their *cabecera municipal* but have either not attempted or given up on expanding their networks to outlying communities. While both states and the federal government would like municipalities to expand this coverage, there is nothing mandating that they do so. Legal requirements, which could be reinforced with adequate regulation, need to emphasize universal coverage. The heavy dependence of local governments and water agencies on federal transfers and federal water project funds means that there are tools available to encourage this expansion but it will also require a shift in cultural perspective which tends to give strong preference to both the *cabecera municipal* at the local level and the largest, most urban parts of the country.

6.3 Future Research

This research suggests that decentralization of water services can deliver on the promises of its advocates in high capacity municipalities that have resources, primarily an educated population and a higher per capita income, to draw from. It suggests that the institutional context in which decentralization is occurring needs to be considered and possibly modified to make the decentralization process even more successful. In Mexico in particular, changes in the aforementioned institutions could improve the success rate of decentralization tremendously. Future research on decentralization of water services should seek to identify those capacities that are the most important for local success and make attempts to better understand which capacities can be increased in order to improve water services. Identifying these capacities and then attempting to replicate them in low capacity municipalities needs to be a priority if decentralization is to succeed. This is especially the case in countries such as Mexico, which has incorporated decentralization into its legal framework but has largely failed to make any distinction between those local governments that are capable of providing the services and those that are not. In such cases, it is incumbent on higher levels of government to help local governments be successful by investing in improving capacity.

In Mexico, the case studies suggested that the longevity of an agency director or the technical staff is important; therefore, encouraging municipal governments to reduce the turnover of directors and/ or implement a civil service structure that creates permanency below transient administrators could prove to be of great benefit. Assessing the performance of local governments and their agencies would provide both benchmarks by which to measure improvement and areas in which local services need to improve- especially in light of the personnel changes that take place in Mexico's local government every three years. Assessment would also provide the public with better information about the performance of local service

providers, which could generate additional revenue from skeptical local populations that are hesitant to pay for services that they often cannot gauge. Measuring performance of local agencies and governments also provides states with a tool by which they can distribute funding and improve accountability. While Guanajuato has made greater efforts than San Luis Potosí and Zacatecas in collecting data about water services at the local level, this data needs to be more comprehensive and complete as well as needs to be better utilized in relation to funding and determining which municipalities are underperforming and need assistance. In all three states, increasing the transparency of performance information and making it easily available to the public would also create greater agency accountability and public trust.

There are large investments being made by Mexico and the international lending community in the water sector as well as significant resources being transferred through the federal fiscal pact to states and local governments. More research needs to be undertaken that attempts to determine whether the current fiscal arrangement in Mexico is the most effective in improving access to water services. While there does not appear to be a shortage of funds available to local governments from the federal government and the CNA, whether this is the most appropriate arrangement is yet to be determined. While studies that examine the federal fiscal pact abound, few focus specifically on water, which at this point is of high priority in the country. This is especially true when one considers the need for both regional coordination of water resources and the desire to have states support local water projects. If bypassed both legally and fiscally, states have little incentive to support the development and success of local water services because they are absolved of responsibility. Observation of the three states included in this study suggests that states in Mexico appear to have taken a hand-off approach toward water services because they have had so much of their leverage taken away.

At many points in this study, it is asserted that states have deferred to the legal requirements established in Article 115 of the federal constitution that give control over water services to municipalities. Unlike other areas, states do seem to comply with this requirement and most have never challenged the current arrangement. Much of this has to do with the financial incentives and disincentives in place that encourage states to support municipal efforts and not interfere with the federal government's allocation of resources. Reducing state influence does seem to decrease their negative political interference. This means that the primary relationship is increasingly between the federal and local governments, which may make decentralization less successful because of the distance from which the federal government is managing the sector.

Proving that decentralization is working better than keeping water services under the control of states as it had been prior to the decentralization movement in Mexico will be difficult. Water coverage rates are increasing which suggests it is not hindering progress in the country; however, a more comprehensive comparison across multiple states and municipalities is probably necessary to come to any concrete conclusions. Additionally, as in this study, future research must include those populations living in smaller municipalities. The historical bias in Mexico toward large, urban municipalities is also present in the research, which tends to focus on large cities but much of Mexico's population lives in small municipalities. In 2005, 37.2% of the population lived in municipalities under 14,999 people while 51.1% of the population lived in municipalities under 99,999 people.²⁴⁰ This translates into over 52 million people that are often dismissed by research that emphasizes large municipalities. To ignore them, especially when it is in these exact places that coverage rates are often lower and local governments and agencies need the most help, is to ignore the real decentralization process. Larger, urban municipalities are

²⁴⁰ Censo de Población y Vivienda 2005, INEGI.

often higher in capacity, and as has been stated, often have greater resources at their disposal so seeing successful decentralization in these places is not a surprise. On the other hand, it is rare to find studies that address the success of Mexico's national program to decentralize water services in small municipalities which is a necessary pre-requisite in assessing the success of decentralization both in Mexico and its potential for success in other places.

This study was focused on determining what impact, if any, intergovernmental relations and municipal capacity have on the process of decentralization and ultimately water services. While the case studies offered minimal anecdotal evidence of negative political or partisan influences by the state or federal government, it did become clear that at times local governments interfere in the ability of local agencies to provide high quality services to the community. This suggests that the emphasis of future research should be on reducing political obstruction at the local level, especially if the current federal fiscal pact that limits states' influence is maintained. The case studies revealed much more, both anecdotally and in data, about the difference that municipal capacity makes in the ability of local operators to deliver water services. If decentralization of water services is a development priority both in Mexico and beyond, then improving municipal capacities and providing them with appropriate support must also be a priority.

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