Managing Public Water Utilities

An assessment of bureaucratic and New Public Management models in the water supply and sanitation sectors in low- and middle-income countries

Klaas Schwartz

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The research presented in this thesis was performed at the UNESCO-IHE Institute for Water Education in Delft, the Netherlands

Front cover: Youths in Port Moresby, Papua New Guinea, show the catch of the day. The fish were caught at the Morata ponds, which are used for treating the wastewater of Port Moresby. In the location where the boys were fishing (towards the end of the treatment process) pathogen levels exceeded WHO standards 30 times.

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Management van publieke drinkwater bedrijven
Een analyze van bureaucratische en New Public Management modellen
in de drinkwater en sanitatie sectoren van ontwikkelingslanden

PhD. Thesis

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1 Introduction

Despite strong encouragement of many international financing and development agencies to stimulate private sector involvement in the water supply and sanitation sector[1] (Haque 1996; Nickson 1997), the overwhelming majority of water supply and sanitation services are still provided by public sector organizations in most middle- and low-income countries. Current estimates place the share of the world's population that is being serviced by private service providers at no more than 3%-10%, of which the majority resides in high-income countries (OECD 2003). The general consensus is that provision of water services will remain in the public sector for many years to come, especially in low- and middle-income countries.

1.1 The Poor Performance of Public Water Utilities

In many countries, however, the public service providers have failed to provide consumers with adequate water supply and sanitation services (Panayotou 1997; Nickson 2002; Mwanza 2004; Mwanza 2005). Despite making progress, in the sense that between 1980 and 2000 an additional 2.4 billion people have gained access to water supply and 600 million more people have access to sanitation services, some 1.1 billion people still do not have access to safe water and 2.4 billion lack access to sanitation services (WHO UNICEF 2001). The existing frustration of inadequate service provision is exacerbated by the fact that population growth and the mounting pressures of increasing urbanization have offset much of the gains in service coverage (Gentry and Fernandez 1997).

Apart from problems of service coverage, other problems also plague public service providers. Many public utilities experience high unaccounted-for-water (UfW) rates, which often average between 40%-60%[2]. UfW rates of 40%-60% mean that half of the potable water produced by a service provider is lost somewhere in the provision process. Public water utilities are also frequently overstaffed. According to Haarmeyer and Mody (1997) these utilities have five to seven times more employees than what is considered 'efficient'. Moreover, the service providers are often confronted with financial problems due to a combination of low tariffs, poor consumer records and inefficient billing and collection practices (World Bank 1994; Idelovitch and Ringskog 1995; Foster 1996; Mwanza 2004).

As a result, the quality of water services that is actually delivered to the consumer, if he/she is lucky enough to be connected at all, is low.

[1] In this thesis the term 'water supply and sanitation' sector and 'water services' sector are used interchangeably.

[2] UfW rates between 10% and 20% are usually used as an indicator for well performing utilities. In some high-income countries UfW rates of 5% are reported (VEWIN 2003).

1.1.1 Problem Statement

The problem statement that underlies this thesis is that many public water utilities in low- and middle-income countries, which are likely to remain responsible for service provision for many years to come, provide inadequate services to their customers.

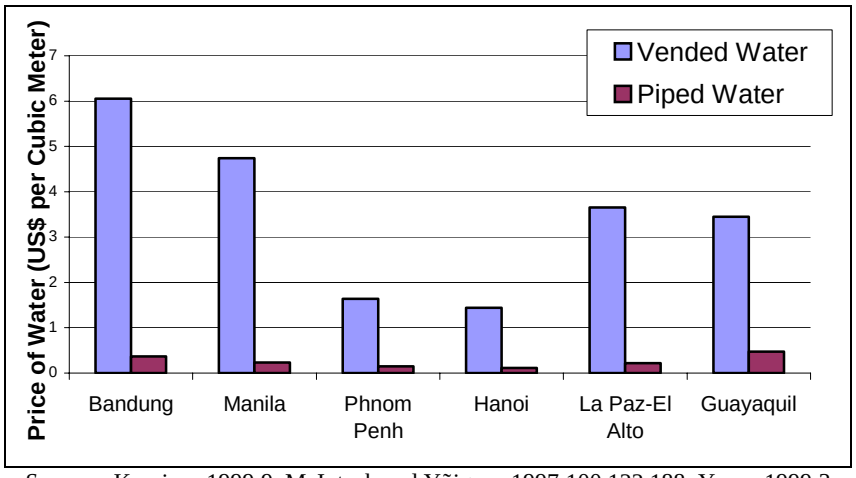
1.2 The Economic and Health Consequences of Poor Service Provision

In cases where water utilities provide inadequate services, the people not served or being poorly served often belong to the low-income segment of the population (Jouralev 2004). Briscoe (1992:16) provides a gripping description of how the poor are impacted by inadequate service provision. Although the description originates from the early 1990s, it still provides an accurate account of the consequences of poor service provision. Briscoe's description is of a family in Lima, Peru.

> "A poor family, living in an illegal squatter settlement, waits for the water truck to arrive. When it does, the family members fill a few buckets with water of dubious quality, paying $3 per cubic meter[3], which often amounts to 10 percent of household income. Because the price is so high, they use little water, cutting down, particularly, on 'discretionary uses,' such as washing and bathing. They defecate in a fly- and insect-infested open toilet. The economic, health and human consequences of these miserable sanitary conditions are tremendous. As a result of diarrhea and other hygiene-related diseases, for example, almost one in ten children dies before its first birthday".

As Briscoe's description clarifies, the burden of inadequate service provision is visible both in financial terms as well as in health terms. The financial impact of inadequate service provision is most convincingly illustrated by the prices charged by private vendors in comparison to the piped water supplied by the 'formal' utilities. As everyone requires water to live, those people who are not served by the 'formal' utilities must arrange for their water in an alternative manner. Often this alternative source for water supply takes the form of buying water from private vendors. However, the water supplied by these private vendors is much more expensive than water supplied by the formal utilities. On average, the people depending on private vendors for their water pay 12 times more per liter of water than citizens who have a house-connection.

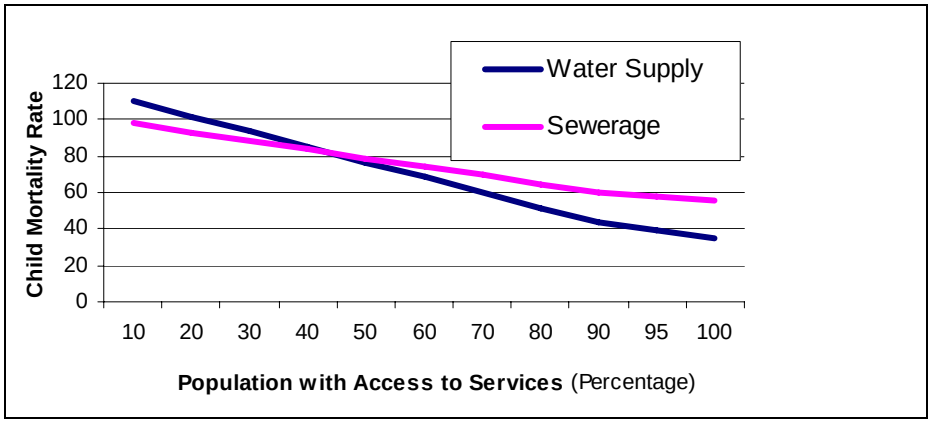
[3] The price of US$ 3 per cubic meter is more than 10 times as much as the average water tariff in Lima in 1992. The average water tariff stood at approximately US$ 0.29 per cubic meter. It also represents a price which is approximately 30 times higher The 'social tariff' which was approximately US$ 0.10 per cubic meter (Alcázar et al. 2000).



Sources: Komives 1999:9, McIntosh and Yñiguez 1997:100,122,188; Yepes 1999:3

Figure 1.1: Price of vended water and piped water

The health impacts of access to potable water are most clearly illustrated by the relationship between child mortality and access to water supply and sanitation. Figure 1.2 displays a graph showing the link between access to water supply and sanitation services and child mortality rates. If access to water supply would increase from a level of 70% for a given location to 90%, the child mortality rate would decline from 60 deaths per 1,000 to 43 deaths per 1,000. If household sewerage connections were to be increased from 70% to 90%, the child mortality rate would decline from 70 per 1,000 to 60 per 1,000.



Source: Shi 2000:21

Figure 1.2: Predicted child mortality by percent of access to potable water and household connections to sewerage system in 1993 (Number of children dead before reaching the age of five per 1,000 live births)

1.3 Explanations for the Poor Performance

The problems facing the water supply and sanitation sectors in many low- and middle-income countries have not gone unnoticed. Countless interest groups and authors have analyzed the functioning of public utilities and have proposed explanations for their poor performance[4]. Although the details of the explanations presented by these groups and authors may vary, what is apparent is that the poor performance can often be linked to the nature of the sector and the political institutions in a given location. Spiller and Savedoff (1999:2), who analyzed the provision of water supply and sanitation services in Latin America, explain the poor performance of many public water utilities as follows:

> "[T]he nature of the sector, coupled with a nation's political institutions, […] together create incentives for government-owners of public utilities to behave opportunistically, for the service providers to operate inefficiently, and for the consumers to withhold support from the sector. As such, the water services sector under these circumstances has a tendency toward a low-level equilibrium from which it is difficult to escape".

1.4 Reforms in the Water Sector

Until the International Drinking Water Supply and Sanitation Decade (1981-1990) the main approach to improving the performance of water utilities was to focus on providing poorly performing utilities with the proper 'hardware' to provide services. The thought was that if a utility would be technically equipped to provide services, the utility would do so. Unfortunately, the results of the Drinking Water Decade proved disappointing with almost as many people still lacking either clean water or sewerage at the end of the Decade as when the Decade began (Economist 1994). The main lesson learnt was that concentrating on the technical aspects of service provision is, in itself, unlikely to improve the provision of water services. Or as Spiller and Savedoff (1999:2) noted, "the problem [of providing adequate services] is not related to project finance or lack of technical or manpower capabilities". As a result, at the end of the Drinking Water Decade, attention shifted from technical solutions to solutions of a 'managerial' and institutional nature in the early 1990's. The 'managerial' approach to improving service provision basically followed two paths. Firstly, management of the water utilities was delegated to the private sector through concession contracts or other contractual arrangements. The second reform strategy kept management of the utility within the public realm, but concentrated on introducing management practices associated with the private sector in the public water utility.

[4] See for example World Bank 1994, Foster 1996, Nickson 2002

1.4.1 Private Sector Involvement

The first reform path involves large-scale involvement of the private sector (World Bank 1997b) and is exemplified by much publicized contracts such as the Buenos Aires, Jakarta and Manila concessions[5]. Many international and bilateral donors and lending agencies perceived private sector involvement as a means of removing politics from the sector and as a source of investment capital (Brown 2002)[6]. Following the disappointment of the Water Supply and Sanitation Decade in the 1980s, initial optimism for the beneficial impact of increased private sector involvement was enormous, even if the actual implementation remained controversial. Illustrative of this optimism is the following passage written by Michael Dumol about the preparatory stages of the awarding of two concession contracts for water services provided by the Metropolitan Waterworks and Sewerage System (MWSS) in Manila.

> "Also about this time, through one of the MWSS board members we got hold of a copy of a pamphlet written by Emmanuel Idelovitch and Klas Ringskog (both from the World Bank) about the Buenos Aires privatization. The copy we got was probably a fifth-degree copy, terribly faded, but we treated it as a *sacred document*" (Dumol 2000:14; emphasis added).

In recent years, however, the gospel of private sector involvement in the water supply and sanitation sector has faded. High-profile concession contracts which once were presented as representing the future of the water services sector collapsed or are facing increasing operational difficulties. Best-known among the collapsed concession contracts is the concession contract in Cochabamba in Bolivia, which was terminated in 2000 following a period of civil protest often referred to as the 'Water War'[7]. Other well-known concession contracts that were terminated include the El Alto-La Paz concession (2005) in Bolivia and the Buenos Aires concession (2005) in Argentina. In recent years, it has become apparent that private sector involvement, as it was envisioned and implemented in the 1990s, was not the 'golden solution' that many had believed it to be a decade earlier.

Increased private sector involvement was also an important strategy for improving performance in the Mexican water supply and sanitation sector. In the early 1990s the private sector was seen as an essential component to 'the solution' to Mexico's water problems (Casasús 1994). For this purpose build-operate-transfer (BOT) contracts, concession contracts and service contracts were strongly promoted. An evaluation in 1999, however, concluded that:

[5] In the period between 1990-2001, more than 40 countries engaged in over 200 projects with private sector participation in the water and sewerage sector (World Bank 2003a).

[6] The 1994 World Development Report argues that numerous examples of past failures in public provision, combined with growing evidence of more efficient and user-responsive private provision, argue for a significant increase in private involvement in financing, operation, and – in many cases – ownership (World Bank 1994).

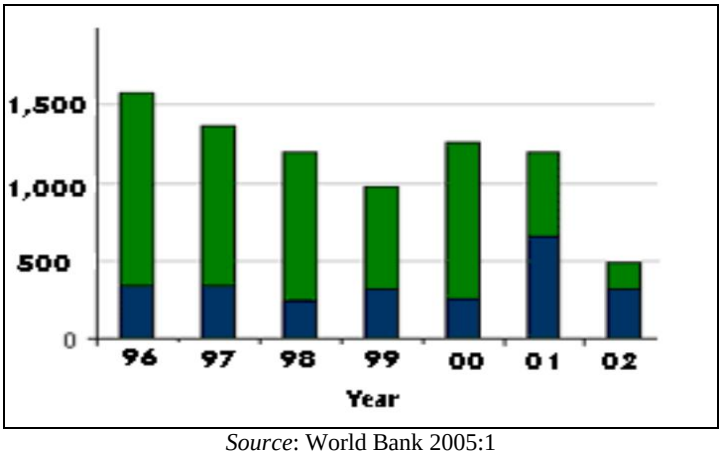
[7] For a discussion about the collapse of the Cochabamba concession see Nickson and Vargas (2002) and Assies (2003)

> "The first wave of PSP initiatives in the water sector fell short of expectations, and left most of the water system's needs unmet. In response to newly imposed, and very stringent water effluent standards, between 1990 and 1993, 50 municipalities awarded BOT contracts for wastewater treatment plants. Today, however, only 11 of these plants are operating. The remainder were canceled outright, or have yet to be constructed due to lack of financing" (Capital Advisors 1999:8).

The same evaluation finds that:

> "[t]he use private sector participation to increase efficiency and investment has been much less effective than anticipated and therefore have contributed little to ameliorating performance problems of urban water and sanitation systems. Over the past seven years, the primary strategy to improve the sector has been private sector participation. Few projects were a success, many failed or were filled with conflicts, and most of the successes needed government support, or require little private sector risk. Consequently, the impact has been negligible" (Capital Advisors 1999:3).

By 2003 it became apparent that the overwhelming majority of urban water services provision remain (and would continue to be so) in the hands of public sector organizations. At the same time, the World Bank, who had been one of the strongest promoters of private sector involvement, found itself confronted with disappointing levels of lending to the water supply and sanitation sector. As figure 1.3 illustrates, lending decreased by more than two-thirds between 1996 and 2002.



Source: World Bank 2005:1

Figure 1.3: World Bank lending in the water supply and sanitation sector 1996-2002 (US$ millions)

The strong decline in World Bank lending to the water supply and sanitation sector (through loans and guarantees by the International Bank for Reconstruction and Development and the International Development Agency) led to a policy shift in the World Bank. Roughly speaking from 2003 onwards, the World Bank set to 'engage' itself again with public sector water utilities. In 're-engaging' itself with public services providers the World Bank implicitly acknowledged that the promise of large-scale private sector involvement as it was envisioned in the early 1990s did not live up to expectations.

1.4.2 Reforms within the Public Organizations

The second reform strategy promoted in the 1990s is that of introducing reforms within the public realm, in which institutional arrangements and management practices generally associated with the 'private sector' are introduced in the institutional context in which these utilities operate and in the public water utilities themselves.

Bately (1999), in examining reforms in four developing countries, including one country in which the study focused on the water supply and sanitation sector, found that the thrust of reforms was towards changes in arrangements within the public sector by increasing the autonomy of state-owned utilities and requiring them to manage on a more commercial basis. The origins of this second form of reform, often referred to as the New Public Management, lie in New Zealand and the United Kingdom where it originated in the early 1980s. The New Public Management 'model' is often presented as a more market-oriented and output-based approach alternative to the traditional 'bureaucratic model' of public administration (Kettl 2000; Peters 2001; Barzelay 2002). It is this second reform path in the water supply and sanitation sector, the New Public Management, which is the main focus of this research.

Although this reform strategy was implemented parallel to that of large-scale private sector involvement, it has become more prominent in recent years as the difficulties of implementing forms of private sector involvement have emerged (Schwartz 2003; Braadbaart 2005). Nickson and Franceys (2003:182) even go so far as to conclude that "the sector lends itself to the introduction of NPM reforms" and that "it is proving to have a significant impact on improving service provision the world over". Nickson and Franceys' conclusion appears to be widely shared within the global water supply and sanitation sector (Schwartz 2003; Baietti et al. 2006).

1.5 Research Objectives and Main Research Questions

As mentioned previously, public water utilities are not providing adequate water supply and sanitation services to its consumers, if they serve them at all. The consequences of poor service provision in terms of health and financial costs to especially the low-income households are enormous. At the same time, the disappointing experiences with private sector involvement in the water supply and sanitation sector have lead to the acknowledgement that the overwhelming majority of people will continue to be serviced by public water utilities for many years to come.

The objective of this research is to examine the potential of reforms associated with the New Public Management and to contrast these reforms with reforms associated with the bureaucratic model of public administration, the so-called Weberian reforms. The main research questions that underlie this thesis are:

- Do urban public water utilities in low- and middle-income countries perform better because they adhere to the New Public Management?
- Do poorly performing urban public water utilities adhere to the traditional 'bureaucratic' model of public management?

Achieving the research objective and answering the research questions will be done primarily by way of an in-depth analysis of five case studies in the State of Guanajuato in Mexico.

1.6 Research Significance

As explained above, the New Public Management has increasingly been promoted in the water supply and sanitation sector. Nickson and Franceys (2003:182) arrive at the conclusion that the water supply and sanitation sector "lends itself to the introduction of NPM reforms" and find that the New Public Management is proving to have a significant impact on improving service provision the world over.

At the same time empirical evidence for the impact of the New Public Management, both in the water supply and sanitation sector as well as in other sectors remains rather thin. Often the evidence of the NPM's impact is considered to be at best 'inconclusive' (Lynn 1997; Kettl 2000[8]; Skelley 2002; Pollitt 2003).

Answering the main research questions by researching selected case studies thus contributes to the current discussions concerning the New Public Management by adding to the available empirical evidence. At the same time, addressing these questions can lead to more concrete and applied benefits for the water supply and sanitation sector. The most important of these benefits is that it provides considerable insight in effective reform strategies for poorly functioning water utilities. A finding that the overwhelming majority of well functioning public water utilities adhere to a certain management model or elements of that model would warrant reforms associated with that management model to be investigated as potential reform options for poorly performing water utilities.

1.7 Outline of the Thesis

In the first chapter we have sketched a particular serious problem in the water services sector (the poor performance of many public water utilities) and the economic and health consequences of that problem for especially low-income households. The origins of that problem, the nature of the water services sector in conjunction with prevailing

[8] Kettl (2000:51) does, however, mention that "anecdotal evidence, coupled with cross-national comparisons, indeed suggests that many nations succeeded in improving government's ability to produce more and better government services at lower cost".

political institutions, were briefly touched upon. The two dimensions, the nature of the water services sector and the political institutions are the main focus of chapter two and three.

Chapter two revolves around the nature of water services sector. The nature of the water services sector can, however, be approached from a number of different angles. The chapter starts with a definition of 'water services' and explains the main differences in the way the water services sector can be organized. The second part of chapter two examines the considerations, which underlie the organization of the water services sector. This section argues that a particular setup of the water services sector can be traced back to physical characteristics of providing water services, economic considerations, political and ideological considerations as well as historical developments. The third part of this chapter addresses the prevalence of public water utilities. It is argued that urban water services can be viewed as a private good, as well as a merit good, and subject to market failure. This combination of characteristics causes the provision of water services to feature prominently on the political agenda in many countries, essentially making it a 'political good'. The prevalence of public water utilities can, for a large part, be linked to water being a 'political good'. The chapter ends with a discussion about how the performance of a water utility can be assessed. The research questions speak of well performing and poorly performing utilities. But how can good performance and poor performance be distinguished?

The third chapter introduces two models of management for managing public organizations. This introduction then leads to the presentation of the hypotheses and propositions in the final section of this chapter. The two models discussed are the 'traditional bureaucratic model' and the New Public Management. The 'traditional bureaucratic model' is based on Weber's 'ideal type'. After discussing Weber's bureaucracy the criticism levied against this model will be examined. Although Weber's 'ideal type' has received criticism from a variety of sources[9], the focus will particularly be on criticism originating from the Public Choice School. The reason for this is that a number of authoritative authors have identified the Public Choice School as being one of the foundations upon which the New Public Management is based (Aucoin 1990; Harrow 2002). Following the discussion on the Public Choice School's criticism on Weber's bureaucracy and the reforms that emanate from this criticism, the 'managerialist school of thought' (or managerialism) will be discussed. The importance of managerialism is that, like the Public Choice School, elements of the New Public Management can be traced back to it. In the third part of chapter three the New Public Management is discussed and defined. As part of this discussion I also examine concerns, which have been raised against the NPM in literature. The chapter culminates, as mentioned, with the presentation of the hypotheses and propositions around which this thesis revolves.

Chapter four highlights the research methodology used in this research. This research is based on a case study research methodology involving a two-stage approach. The first stage consists of primary data collected in five water supply and sanitation utilities in the State of Guanajuato, Mexico. These cases represent one well performing utility, one whose performance has improved considerably between 2000-

[9] See Lane (1987) for a discussion of various criticisms to the bureaucratic model.

2003, and three poorly performing utilities. From these cases preliminary conclusions will be drawn. The second stage consists of checking the validity of the findings from the first set of case studies. This is done by using secondary data from four cases.

Chapter five encompasses a discussion of the research results for a series of five case studies undertaken in the State of Guanajuato in Mexico. The chapter starts by presenting a brief introduction of the five case studies. These are the utilities operating the municipalities of Dolores Hidalgo, Moroleón, Valle de Santiago, San Francisco del Rincon, and Guanajuato. The second part of the chapter goes into detail regarding the level of performance of each of the public water utilities operating in these municipalities. The third part discusses the findings from the cases relating to the hypotheses and the propositions. The final part of this chapter draws the preliminary conclusions regarding the hypotheses and the propositions stated in chapter three.

For reasons explained in the research methodology, secondary data is available for a number of public water utilities, which have been identified by international financing agencies as well as sector specialists as examples of well performing public utilities. This data provides the basis for undertaking a crosscheck regarding the preliminary conclusions presented in chapter five. In chapter six the results of these four cases are presented. First, the four cases are introduced. The four well performing cases are the water utility in Hai Phong, Vietnam, the State utility in Nuevo Leon, Mexico, the national utility operating in Uganda and the municipal water utility in Campinas, Brazil. The chapter follows a similar setup as chapter five in order to allow for a comparison between the findings.

In Chapter seven, the results from the previous two chapters are combined to discuss the results stemming from the two sets of case studies. These results focus mainly on the bureaucratic model, the New Public Management model and utility reform. Moreover, the chapter discusses salient findings from the research.

Chapter eight forms the final chapter of this study. This chapter is devoted to the conclusions of this thesis.

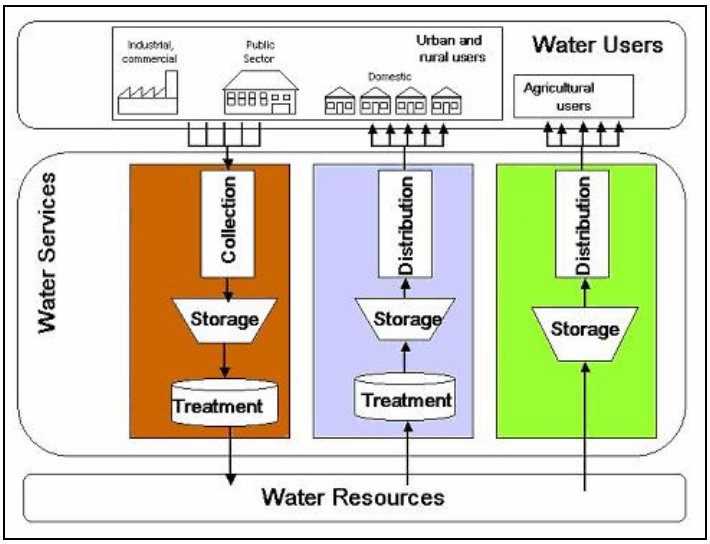
2 Water Services

This chapter begins by providing a definition of the term water services and elaborates about variations in the way in which the provision of these services can be organized. The second part of this chapter discusses considerations, which underlie a particular choice for organizing the water services sector. The third section discusses the question why the provision of water services is often kept in the hands of public sector organizations. The chapter ends with a discussion on the way in which performance of a water utility can be measured.

2.1 Defining Water Services

Article 2 of the Water Framework Directive of the European Union provides a series of definitions related to the water sector. This Directive defines water services as[10]:

"all services, which provide, for households, public institutions or any economic activity:
(a) abstraction, impoundment, storage, treatment and distribution of surface water or groundwater,
(b) waste-water collection and treatment facilities, which subsequently discharge into, surface water.



Source: Schouten and Schwartz 2005:4

Figure 2.1: Schematic overview of the provision of water services

[10] Water Framework Directive 2000: article 2, point 38.

In the EU definition, water services relate to the whole series of activities from the abstraction of raw water at the source to the delivery of (treated) water to the consumer and from the consumer back to a water source. The definition of water services as stipulated by the Water Framework Directive also encompasses a broad range of consumers. Provision of industrial water, irrigation water for agriculture and potable water for domestic purposes all fall under the definition of water services. Although the definition of the Water Framework appears thorough, it does obscure the fact that in reality water services are not as homogenous as the definition suggests. What all water services share is that water is abstracted, it is delivered to the consumer and then is likely to be discharged again. However, what happens in between those phases of the provision process may differ. For some consumers, treatment of water may not be required or only rudimentary treatment is necessary[11]. For consumers of potable water, however, extensive treatment may be required. Moreover, the fact that something is desirable does not mean it actually takes place. In Mexico, only between 10%-16% of wastewater is actually treated (Saade 1997; Morales-Reyes et al. 1998). This basically means that the wastewater-treatment step in the provision of water services is absent in approximately 87% of the water services provided to the population of Mexico. In this research, the focus is exclusively on urban water services, which means that the provision of water for agricultural use is not part of the research.

2.2 The Organization of Water Services

Not only the actual characteristics of water services provided can differ. Also, the way in which this service provision process is organized can show considerable variance from one location to the next. The organization of the service provision process revolves around three dimensions. These three dimensions concern:

1) The degree to which activities in the service provision process are concentrated;
2) The type of organization that is responsible for a certain step or steps in the provision process; and
3) The outcontracting of steps or aspects of a certain step to third parties.

2.2.1 The Concentration or Fragmentation of the Service Provision Process

Firstly, the question which organization is responsible for which step (or which steps) in the service provision process has to be answered. In the provision of (urban) water services the following steps can broadly be identified (VEWIN 2001:16):

- Production process: The production process consists of all activities concerned with groundwater abstraction, surface water collection, storage, pre-purification, transport and infiltration in the production company and the purification and

[11] Water used for agriculture, for example, often receives no treatment. Also water for some types of industry requires only rudimentary treatment.

processing of this water into drinking water (including operation and maintenance of these facilities).

- Distribution process: This process consists of all activities concerning the distribution of drinking water to end-users including maintenance of pipes, connections, and replacement and maintenance of water meters.
- Sales process (water supply): Consists of all service activities in which the relationship with end-users (customers) is central. It includes obtaining and processing meter-readings, invoicing, management of debtors and payments received, management of customer contacts and provision of water-related services such as advice, information and inspection.
- Collection process: The collection process consists of all activities concerned with the removal of wastewater from the user and the transport of that wastewater to a treatment facility (or to the water source to which it is discharged).
- Treatment process: The treatment process consists of all activities related to the treatment of collected wastewater and the subsequent discharge of the treated wastewater to a water source.
- Sales process (wastewater): The sales process for wastewater is similar to that of water supply and essentially concerns all service activities in which the relationship with users from whom wastewater is collected is central. It includes invoicing, management of debtors and payments received, management of customer contacts and provision of wastewater-related services such as advice, information and inspection.

The question which organization is responsible for which step is basically an indication to what extent responsibilities for providing the different steps (or processes as they are called above) in the provision of water services are either concentrated in one organization or fragmented over multiple organizations. Often these responsibilities are attributed by way of laws and regulations. In the Netherlands, for example, the water services sector is highly fragmented (Schwartz 1999). Production and distribution of potable water is the responsibility of the regional water supply companies, collection of wastewater is the responsibility of municipalities and the treatment and discharge of wastewater is the responsibility of waterboards. In Mexico, article 115 of the Mexican constitution attributes the responsibility for providing public services such as water supply, drainage, sewerage, treatment and disposal of wastewater to the municipal governments. In the State of Guanajuato, the State Water Law reiterates the Constitution and stipulates that municipalities are to create organizations for the provision of these services. As a result, the various steps in the provision of water services have been concentrated in single municipal organizations.

2.2.2 The Type of Organization

The second dimension in which the organization of the service provision process may vary from one location to the next relates to the type of organization that is responsible for providing (part of) water services. This dimension relates to the characteristics of the service provider (public, semi-public or private organization, legal status of the organization) and the administrative level (local, regional, national) at which the

organization operates. In the Netherlands, for example, the regional water supply companies that supply potable water are almost all[12] government-owned public limited companies covering a large number of municipalities. In the case of Guanajuato, article 146 of the State Law of Municipal Organizations calls the so-called 'autonomous agency'[13] the preferred option for organizing the provision of water services at the municipal level. The five case studies discussed in chapter five of this study are indeed all 'autonomous agencies'.

2.2.3 The Outcontracting of Activities

Thirdly, the responsible organization(s) can contract third parties to undertake parts or all of the steps for which they bear responsibility. In the provision of water services a distinction needs to be made between the organization that has the *responsibility* for providing services and the organization that may be *contracted* to provide all or parts of these services. In almost every service provider part of the tasks of providing services are contracted to third parties. This does not diminish the responsibility of the organization responsible for providing water services. It does, however, mean that not all of the activities of the service provision process for which the organization is responsible are done 'in house'. The question is then what steps or what aspects of a certain step in the service provision process have been outcontracted to a third party or third parties? In the case of the municipal organizations in Guanajuato, relatively few tasks or parts thereof have been outcontracted as will be discussed at greater detail in chapter five.

2.3 Factors Underlying the Organization of Water Services

The way in which service provision is organized in a given locality essentially depends on a number of interdependent factors. Although these factors may be interdependent they may also be contradictory. Striving for the most economically efficient service provision process, for example, will lead to an arrangement, which, from a purely economic point of view, is the most efficient. In many cases, this may lead to a preference for large-scale, centralized systems. At the same time socio-political and ideological considerations, such as stimulating greater accountability of the service provider and more public participation in the service provision process, may, lead to favoring decentralized, small-scale systems. As such, the outcome of exactly how the service provision process is arranged is very much dependent on the priorities given to the various factors and considerations mentioned below. The considerations and factors affecting the organization of water services provision are as follows:

- The Physical Characteristics of the Service Provision Process - As the definition in the Water Framework Directive states, the physical activities undertaken in the

[12] The two exceptions in 2005 are the Municipal Water Department of Amsterdam and a private water supply company operating in the rural municipality of Doorn.
[13] *Organismo decentralizado.* The Law on Municipal Organizations also contains a description of the rights and obligations of the 'autonomous agency' and of its owner, the municipality.

provision of water services are the abstraction, impoundment, storage, treatment and distribution of surface water or groundwater and the collection, treatment and discharge of wastewater. Although these steps may be generally applicable, the actual nature of these steps differs from one location to the next. For example, when the users reside at great distance from the water source the service provision is different then when the users are located nearby as the element of distribution of potable water and collection of wastewater figures less prominently in the latter situation. Also, when groundwater of relatively good quality is the source for raw water the service provision process is different than when the service provider has to use surface water from a polluted river as its source of raw water as the demands on the treatment process will be very different. In summary, the physical characteristics of the service provision process determine the (technical) complexity of the provision process. The (technical) complexity of the service provision process and the affiliated requirements in capacity are likely to influence the scale of the organization and the type of organization considered most suitable for handling the complex task. The more technically complex the service provision process is the more capacity is required to provide the service.

- Economic Considerations – The degree to which the provision of services is subject to economies of scale and scope and the degree to which 'the market' can efficiently provide the service influence the organizational set-up of the water service sector. Economies of scale imply that an organization lowers the average cost per unit through increased production since fixed costs are shared over an increased number of goods. Economies of scale tend to exist where production requires high fixed costs relative to variable costs, so that average costs for service provision decline continuously over the relevant range of output. Economies of scope are determined by the degree to which "unit costs of producing different services in combination are lower than of producing them separately" (Kessides 1993:5). An example of utilizing economies of scope is the 'multi-utility', which provides distinct infrastructure services, such as water services and electricity. The 'marketability' or 'contestability' of a good or service depends on the degree to which the production of that service or good requires 'sunk costs'[14]. When "production of a good [or service] requires no 'sunk costs' it is said to be perfectly contestable" (Kessides 1993:7). The contestability of a good can influence the extent to which private sector production of that good or service is feasible.
- Political and Ideological Considerations – Water is a basic necessity for human life, as well as a valuable economic input in many industrial, agricultural and commercial production processes. Of great impact on the way services are organized are the political and ideological views concerning the way such a good should be managed (and the role of different stakeholders in the management of that good). Moreover, the water sector like other sectors is subject to political and ideological shifts that influence society as a whole. These 'macro' political and ideological characteristics impact the way in which the service provision process is organized.

[14] Capital costs are 'sunk' to the extent that they cannot be recovered for other uses (Kessides 1993).

- Historical Developments – Apart from technical, economical, political and ideological considerations the organizational set-up of the water services sector in a given locality is also dependent on historical developments in the water sector. The allocation of responsibilities in the water services sector in the Netherlands, for example, is partly "the peculiar product of historical events, some of which date back to the Middle Ages" [15] (Schwartz 1999:21).

As mentioned, the final outcome of the way water services provision is organized is largely dependent on the emphasis given to the various considerations and factors mentioned above. In the case of Mexico, and specifically the water supply and sanitation sector in the State of Guanajuato, the political considerations are of particular importance to highlight. Article 115 of the Mexican constitution, which devolved responsibilities for water services provision to the municipal level, is a product of the decentralization policies of the 1980's. The main reasons for introducing these decentralization policies appear to have been to ease "mounting political pressures" and to "alleviate some of the administrative problems that have contributed to the erosion of the government's legitimacy and control" (Rodríguez 1997:1). This observation is of considerable importance as it highlights two important characteristics of the decentralization of water services in Mexico.

First of all, it means that the attribution of responsibilities for providing water services to the municipal level is not likely to have been based on a consideration of the (physical and economic) characteristics of the provision of water services. Indicative that this may be the case is the fact that water supply and sanitation services were decentralized as part of the larger package of 'public services', without distinction between these public services. Illustrative is that the Mexican constitution decentralizes 'public services' as diverse as street lighting and water services in the same article, without any distinction between these two services.

Secondly, with the decentralization of public services to the municipal level, little attention seems to have been paid to the institutional and administrative capacity of the level of government to which responsibilities were attributed. In the Mexican context this is quite important as the disparities in capacities are more pronounced among municipalities than among states, with urban and larger municipalities typically having more capacity than rural and smaller municipalities (Courchene et al. 2000).

2.4 The Prevalence of Public Utilities

Based on the considerations and factors mentioned above, each locality has organized the water services sector in their own way, resulting in a wide landscape of organizational modes. Although the specific characteristics of service provision for each locality differ, in the vast majority of cases the responsibility for providing water services has been attributed to the public sector organizations. Although exact figures on the degree of private sector participation in the water supply and sanitation sector do not exist, it is generally assumed that the number of people served by private utilities is

[15] The historical events in this quote relate to the establishment of the first waterboards during the Middle Ages.

limited to about 200 million (OECD 2003)[16]. This leaves about 5.8 billion people who receive water services from either public water utilities or independent systems. Also in Mexico the overwhelming majority of service provision remains in public hands.

Two main reasons explain the prevalence of public sector organizations in the provision of water services. These two reasons, which cannot be seen in isolation but rather must be seen as reinforcing each other, are the nature of providing water services (basically, the nature of the good) and the political importance of providing water services. Interestingly, these two reasons for the prevalence of public utilities are strikingly similar to Spiller and Savedoff's (1999) reasons for poor performance of water utilities (the nature of the sector coupled with a nation's political institutions).

2.4.1 The Nature of Water Services

In this section, the nature of water services is discussed. Essentially, the section will explain why water services is a private good, a merit good as well as a good that is subject to market failure. The combination of these three characteristics forms part of the explanation why public service providers are so prevalent in the water supply and sanitation sector.

2.4.1.1 Water Services as a Private Good

Water is often characterized as being a 'public good'. Especially in the often-heated debates regarding the (possible) role of the private sector in providing water services, the argument is frequently forwarded that the private sector should not be permitted to provide a 'public good'. However, characterizing water as a 'public good' is not only done in the context of the 'public-private debate' that has raged through the water supply and sanitation sector during the past decade and a half. Savenije (2001:342) in explaining why water is unlike other good, states that "[w]ater is public good. This is a consequence of water being essential, scarce and non-substitutable". Often in these discussions it is not entirely clear if the author in question refers to water resources or providing water services.

From a purely economic perspective, however, the majority of water supply and sanitation services, strictly speaking, fall in the category of being a 'private good'. The economic distinction between different types of goods is based on[17]:

1) The degree to which a good is subtractable in use.
2) The degree to which consumers can be excluded from consumption

If a good is non-subtractable in use (meaning they are goods which can be used by one person without diminishing the opportunity for use by others) and it is very costly to

[16]The same publication estimates that in low- and middle-income countries approximately 3% of the population is supplied by private operators.

[17] Interestingly enough, if one uses these two criteria to establish if a particular good is public or not, one would have to conclude that also water resources are not a public good, as they are subtractable in use.

exclude (potential) consumers from accessing the good then we can speak of a public good[18].

In the case of urban water supply and sanitation services, the degree to which service provision is either a public good or a private good depends on the way in which services are provided. For potable water services by way of in-house connections, water supply services are both subtractable in use and it is possible to exclude consumers by cutting off service provision. As such, in-house connections of water supply services are private goods (Nickson 1997)[19].

2.4.1.2 Water Services as a Merit Good

In the previous section it was mentioned that water services are often referred to as being a 'public good'. Even if, from an economic perspective, this may be an incorrect view, the message that often underlies the description of water as a 'public good' is that access to adequate water services is a human right and that nobody should be excluded from having access to safe water supply and sanitation. This argument refers not to water (services) being a public good, however, but rather to water services being a 'merit good'. Merit goods are goods or services that are deemed to have positive externalities or considered to be so important that society believes that everyone should have access to these goods or services. In the Introduction the consequences of poor service provision were highlighted. It was explained that poor service provision has both an economic as well as a health impact on those who are unserved. Especially the impact on health, as illustrated by child mortality, is such that a general consensus exists that everybody should have access to water services. As such, water services can also be viewed as a merit good (Clarke and Wallsten 2002; Kessides 2003) in addition to being a private good.

2.4.1.3 Water Services as Being Subject to Market-failure

Although the provision of water services is a private good, the provision of water services is subject to potential market-failures. Market-failures mean that markets will fail to provide services either efficiently or in line with the public interest. Therefore, correction of market-failures is one of the four reasons often presented for the existence of public enterprises (Hughes 2003)[20]. A number of possible reasons for market failure exist (Musgrave and Musgrave 1989), but in the case of water supply services the most

[18] It is relatively difficult to find public goods in their pure form. In fact, it has been suggested that "there is no such thing as a public good in an objective sense, and that it is a purely cultural construct" (Malkin and Wildavsky 1991, as cited in Walsh 1995:7).

[19] It should be taken into account that other forms of service provision may have different degrees of excludability and subtractability in use. In the case of traditional sewerage services it is much more difficult to exclude consumers from using these services as it is very difficult to cut off users. In many countries, however, this difficulty is overcome by combining water supply and sewerage services in the same company.

[20] The other three reasons are to alter the structure of pay-offs in an economy, to facilitate long-term centralized economic planning and to change the nature of the economy from capitalist to socialist.

important cause of market-failure is the monopoly-like characteristics of service provision through a piped-network and the externalities of service provision.
With the fixed costs of potable water generally making up two-thirds to 80 percent of the costs of supplying services (Noll et al. 2000; Kessides 2003), the urban water sector is characterized by a high degree of sunkness of costs. In addition, the sector is subject to large economies of density, meaning that for a given distribution network, increasing the number of households connected or their consumption reduces the network's average costs (Spiller and Savedoff 1999). This means that the provision of urban water services would be subject to declining marginal cost for service provision. These two factors cause distribution of water supply to be "a natural monopoly bottleneck to an urban water system" (Nol et al. 2000:5). With distribution making up such a large part of the costs of service provision, the provision of water services, viewed holistically, obtains monopoly-like characteristics. As a result, the main scope for competition between different service providers is competition *for* the market rather than *in* the market[21]. The crucial importance of this aspect for water services lies in the fact that the consumers (or customers of the water supply and sanitation utility) are 'captive', in the sense that short of moving they had few alternatives to the service provision of that particular utility. This 'captivity' was aptly illustrated during a visit to a water supply company operating in one of the northern provinces of the Netherlands. The financial manager of that company was asked about the customer-orientation of the utility. The manager raised his shoulders and replied "I don't go to the customers, the customers come to me"[22].

2.4.1.4 A Private Good, a Merit Good and Subject to Market-failure

The combination of being a private good, a merit good and subject to market-failure has some important consequences for the provision of water services. Being a private good it could be suggested that provision should be left to the private sector, as the combination of subtractability of use and excludability would appear to make water services an appealing service to provide by the private sector.

However, water services are also a merit good meaning that everyone should have access to them. Being a merit good means that the criterion of excludability *de facto* no longer applies, essentially causing the good to no longer be a 'private good'. A similar argument is forwarded by Wolfson (1988), who describes what he calls 'quasi-public goods'[23]. 'Quasi-public goods' are goods, which in principle are characterized by excludability but which, for normative reasons[24], are not treated as such. In other words, for normative considerations these goods are withdrawn from the workings of the market and treated more in line with public goods.

With the excludability criterion no longer applicable and water services as such being quasi-public goods, there would be a very strong incentive for consumers of that service to generate 'free-rider' behavior, as there is no possibility of them being cut off

[21] Although ideas of common carriage competition have been raised, they have so far not been applied extensively in the water sector.
[22] Visit in February 2005.
[23] Wolfson (1988) uses the Dutch term '*quasi-collectieve goederen*'.
[24] As opposed to purely descriptive reasons.

from service provision. In addition, a private company is essentially driven by profit. As such, there is little incentive for a private service provider to expand service connections, if the costs of expanding these connections are high in relation to what the (new) consumers can afford. In other words, the private service provider would have a strong incentive to concentrate on the profitable areas of its service network and neglect the less-profitable areas (so-called 'cherry picking'). In the context of water services being a merit good, this would be unacceptable to society.

Moreover, water services are subject to market-failure. This in essence means that there is a strong incentive for the private operator to provide water services inefficiently. Efficiency in essence relates to the amount of resources used to produce an output. Without any competition, the private service provider is likely to have an incentive to charge higher prices for the services it provides in order to increase its profitability[25].

The result of this combination of characteristics (a private, as well as a merit good that is subject to market failure) is that the provision of water services features prominently on the political agenda in many countries, essentially making it a 'political good'. With water services being a 'political good' it is not surprising that the overwhelming majority of water supply and sanitation services are still provided by public sector organizations in most middle- and low-income countries.

2.4.2 Public Control and Government Opportunism

In addition to the reason provided above, which stresses the regulatory task that the government has filled in by ownership of the service provider, direct government control over the provision of water services may be a means for a government to achieve objectives, which are not directly related to the provision of water services. An example is the water supply company PWN in the province of North-Holland, the Netherlands. This water supply company not only has the task of providing water supply to the residents of that province, but also has a 'nature conservation' task. Another example is that of the municipal water utility in the city of Naucalpan in Mexico. Apart from providing water services this utility is, at times, also requested to perform activities "that are not the utility's responsibility or within its budget" such as constructing fountains (Rangel 2005:47). It should be noted, however, that although these utilities are performing tasks, which are not directly core activities, arguments can be made why having these organizations perform these tasks is desirable. In both cases mentioned above, for example, certain economies of scope may exist which make the combination of tasks more desirable (from an economic efficiency point of view) than appointing a separate organization to perform these tasks.

Not only can water utilities be asked to undertake tasks, which lie outside their core activities. Also, income generated by water utilities can be used for cross-subsidizing other government activities, which are not necessarily related to the field of water services. In this case the income of the utility is not used for purposes of providing water services, but rather other activities, which the government may find more

[25] The existence of market failure per se does not mean that a public enterprise should actually deliver services. It does, however, mean that some form of regulation should take place.

pressing[26]. In other words, the utility is used as a fund-raising center to finance other activities. If the service provider would not be government-owned, the government would not have access to the income generated by the service provider. Thus government officials have a strong incentive to stay in control of the service provider. Linked to this (financial) incentive the government also has political incentives reasons for staying in control of the service provider. The government may try to use the water utility in order to achieve short-term political objectives. The most notorious example from the water supply and sanitation sector is a government seeking to appease 'the governed' by reducing water tariffs. In locations where the government official is subject to periodic elections, such politically based decisions often come shortly before elections. In these situations, in which the government uses water utilities to achieve 'short-term' objectives, existing assets are often run down in order to achieve these objectives.

It is important to realize that one of the difficulties of managing water services is the friction between short-term objectives and long-term service provision objectives. In case of public management, these short-term objectives are likely to be political in nature. A government has an incentive to see short-term results for its reform and investment efforts, as the government is held accountable (by its constituents) in the short-term (for example, by way of a 3-yearly or 4-yearly electoral cycle). At the same time, reform efforts, which incorporate substantial investment efforts and require a change in 'corporate culture', are likely to require long-term commitments. This friction between short-term and long-term objectives not only exists for 'public' water utilities. Also privately owned utilities face trade-offs between realizing short-term objectives and long-term objectives. The short term-objectives for privately owned utilities are often the (short-term) profitability of the company. In order to increase profits private owners may have to run down existing assets (and/or limit investment in future assets). Maximizing profitability in the short-term, by limiting investment and running down existing assets may come at a cost to service provision objectives in the long term.

2.5 Measuring the Performance of a Water Utility

Establishing what constitutes 'good performance' in the water services sector is actually more difficult than it may appear. To determine to what extent a utility is well performing or poorly performing (or anything in between) almost automatically implies comparing the performance of one utility with that of another. This comparison is rather difficult, however, as the circumstances under which different utilities function show considerable variation. A variety of external factors can influence the performance of a utility. These include:

[26] A World Bank study of the infrastructure sector in Indonesia found that "[d]espite the legislative intent to 'create 'autonomous' organizations, in practice, local governments interfere in management [of the water utility], notably by insisting on receiving dividends even when the utility is incurring losses" (World Bank 2004a:197). The dividends that the local government receives are subsequently used for other purposes, not related to providing water services.

- Availability of raw water resources. The availability of raw water resources concerns the nature of the source (groundwater or surface water), the quantity of the water resources available and the quality of the water source (basically the degree of pollution). A utility, which is dependent on a limited surface water source of poor quality, will have much higher treatment costs than a utility, which has access to an abundance of unpolluted groundwater sources.
- Topography. About 66%-80% of the total costs in providing water services lie in the distribution of water through the network. As such, the distribution of potable water forms by far the largest cost component of providing services. The topography of a service area can greatly influence these costs. The costs of providing services in an area in which large differences in altitude exist are likely to be substantially higher than in areas in which there is very little difference in altitude.
- Socio-demographic processes. Over the period 1980-2020 the world's population is expected to grow from 4.5 billion to approximately 7.7 billion people (WRI 1997). Most of this population increase, approximately 90%, will take place in cities in middle and low-income countries (Gleick 1993). This presents water utilities in these cities with a plethora of problems. First of all, a rapidly increasing population means that the network also needs to be rapidly expanded in order to keep up with the pace of growth of the population. Secondly, the high concentration of people in urban areas is likely to result in increased pollution levels and stress on water sources, leading to increasing water scarcity (OECD 2000). As such, varying urbanization rates will also likely lead to varying levels of performance.
- Legal and administrative frameworks and culture (Larbi 1999). As mentioned earlier, a utility does not function in a vacuum but operates within a specific institutional setting. This setting greatly influences the performance of the utility. Aspects which are important in this context include the nature of enabling legislation, clarity of rules and regulations, enforcement mechanisms and means of redress, predictable and stable legal environments, administrative culture, ethics and attitude towards accountability and openness.
- Civil-public interactions (Larbi 1999). As argued earlier, the provision of water services is, in many countries, a politically sensitive issue. This means that the nature of civil-public interactions will influence the performance of a utility. Aspects of civil-public interactions which are of importance include change in societal values, reactions and responses to change, level of literacy and awareness of rights, opportunities to express 'voice' and 'choice', private-public sector interactions and existence and clarity of property rights.

With this in mind, it is clear that the performance of a utility should be seen in the context of the external factors, which impact it. A utility operating in a relatively flat, industrialized country such as the Netherlands, with access to an abundance of water resources, with an average per capita income of above $26,000 has fewer challenges to address than a utility operating in water-scarce and mountainous areas of Mexico, with a per capita income of some $6,000.

Having noted the difficulty of establishing if a utility is well performing or poorly performing, there are some generally accepted indicators, which collectively provide a picture about a utility's performance. Tynan and Kingdom (2002:1) identify "five broad characteristics of a well run utility". These are:

1) Efficient and effective capital investment;
2) Efficient operations and maintenance;
3) Financial sustainability;
4) Responsiveness to customers; and
5) Accountability to stakeholders.

Tynan and Kingdom then translate these characteristics into seven categories of performance. These categories are subsequently 'operationalized' by way of one or two indicators per category. For each indicator, a target is set, which indicates the performance target that a utility should strive for. Tynan and Kingdom (2002) developed the targets by taking a sample of 246 water supply and sanitation utilities in 51 developed and developing countries. They measured the level achieved by the top 25% of these utilities. That level they take as the target for other utilities.

Table 2.1: Tynan and Kingdom's categories and indicators for measuring performance

Category	**Indicator**	**Target**
Operational efficiency	Staff per 1,000 connections	<5 staff per 1,000 connections
	Staff per 1,000 population served	<0.94 staff per 1,000 served
Financial sustainability	Working ratio	<0.68
Commercial performance	Collection period*	< 3 month equivalents
Coverage and access	Water coverage	100%
Asset maintenance	Unaccounted for water	<20%
Service quality	Continuity of service	24 hrs per day
Price and affordability	Affordability of 20 L per day	<0.12% of GDP

* Accounts receivable/annual revenues expressed in months equivalent sales

Source: Tynan and Kingdom (2002:1-5)

The framework presented by Tynan and Kingdom is useful in the sense that it analyzes different categories of utility performance. At the same time some qualifications need to be added when using this framework as a framework for assessing if a utility is well performing or not[27]. The first of these qualifications is that improving service provision takes considerable time and this dynamic perspective on utility performance is not really captured in this framework. Even if a utility has shown remarkable performance improvements over the past decade, they may still not meet the performance targets as set by Tynan and Kingdom.

A second qualification concerns the question how realistic the proposed targets are? The targets appear to be somewhat unrealistic in the sense that few utilities will be

[27] It should be noted that the framework was originally developed for benchmarking purposes and not for the question of assessing the performance of a water utility.

found that actually meet the set targets[28]. This is especially a question in low- and middle-income countries and specifically in Mexico. Perhaps most illustrative of this point is the proposed target for water coverage. Tynan and Kingdom recommend that a well performing utility should have coverage rates of 100%. Although the reasoning behind this target (and the desirability thereof) is clear, few utilities in middle and low-income countries are able to claim such a rate. In fact, with the pressures resulting from urbanization and the rapid development of unplanned settlements on the city's fringes, it is unlikely that any city in middle and low-income countries has a service coverage rate of 100%[29]. Moreover, it is likely that there are very few utilities in middle and low-income countries that will have 100% coverage *and* also meet the other targets.

A third qualification concerns the selection of the indicators. Specifically, the 'operationalization' of the performance category 'operational efficiency' can be questioned. Tynan and Kingdom (2002:1) define this category as the "lowest cost use of labor, energy, water and materials in the day-to-day operation of a utility, *with the most efficient combination partly dependent on local input prices* and prior capital investment decisions" (emphasis added). Their selection of indicators, however, only focuses on labor productivity (staff per 1,000 connections or staff per population served). This means that operational efficiency is equated with labor productivity without regard for the 'local input prices' of the various resources. In industrialized countries, such as the Netherlands, where labor costs are relatively high, the water utility has a strong incentive to reduce the number of staff. Not surprisingly, almost all utilities in the Netherlands have a very high labor productivity (of less than 1 staff member per 1,000 connections). In many low- and middle-income countries water utilities rarely reach a value below 5 staff per 1,000 connections. However, labor costs in many low- and middle-income countries may be relatively cheap in comparison with other input prices. As such, it is not surprising that water utilities in low- and middle-income countries have more employees per 1,000 connections.

In chapter four the methodology for this research will be discussed. Part of that chapter also highlights the framework used to determine if a utility is well performing or not. The framework presented in chapter four is based on that of Tynan and Kingdom but some alterations have been made in order to address the qualifications mentioned above.

[28] This second qualification can be traced to the method for setting targets that Tynan and Kingdom used. As mentioned earlier, they took the top 25% for each category. They did not take the top 25% of the utilities in general (i.e. incorporating all performance categories).

[29] The issue of service provision to informal settlements is a rather complex issue. Often water companies are not allowed to establish service provision to these areas even if they were able to do so. This is because development of such infrastructure services could be viewed as a legalization of the informal settlement, which the local government wants to avoid. This means that water companies are often under pressure from government to ignore these areas, which are subsequently serviced by alternative service providers such as private vendors.

3 Two Models of Public Management

This chapter revolves around two models of public management. The first of these models is the bureaucratic model, which is largely based on Weber's 'ideal type' bureaucracy. This model will be examined in the first part of this chapter. The second model is that of the New Public Management, and this model will be the subject of the final part of this chapter. These two models will be linked by elaborating on the Public Choice School and on the 'Managerialist School' in the middle part of this chapter. The Public Choice School provides a suitable link between these two models because this School has been a source of considerable criticism levied against Weber's 'ideal type', whilst at the same it is seen by a number of authors[30] to be one of the two pillars on which the New Public Management has been built. Apart from providing a suitable link between the two models of public management, the Public Choice School is also useful to illustrate an important conceptual difference between these two models. This difference, the importance of self-interest for the individual employee, can be traced back to the contrast of methodological individualism which underlies the 'economic approach' to public management as highlighted by the Public Choice School with the 'collectivist method' of sociology which guides Weber's 'ideal type' of bureaucracy. In addition to the Public Choice School, this chapter also discusses 'managerialism', which is the second pillar on which the New Public Management is based. As mentioned, elements of the New Public Management can be traced back to both the Public Choice School and managerialism. The interesting thing about this parentage, however, is that this hybrid parentage leads to some internal contradictions in the New Public Management. This contradiction will also be examined in this chapter.

The first section of this chapter focuses on the bureaucratic model of public management. The background of the model is discussed and the main features of the model are presented. The second section of this chapter concerns the criticism levied against this model by the Public Choice School. Although the bureaucratic model has been criticized by other schools, for aforementioned reasons this study concentrates on criticism originating from the Public Choice School. The main criticism discussed revolves around the work of Downs (1967), Niskanen (1994) and Tullock (2005). Once this criticism has been elaborated upon, the chapter turns to the second pillar on which the New Public Management is founded. This second pillar concerns 'managerialism'. Having elaborated on the Public Choice School and managerialism, and the contradictions brought forth by this parentage, the New Public Management is discussed. The third section of this chapter starts by placing the origin of the New Public Management and its increasing popularity in the context of political, economic and societal developments of the 1980s and early 1990s. Subsequently, the main principles of the New Public Management are discussed. The fourth section of this chapter focuses on the bureaucratic model-New Public Management dichotomy, which is frequently presented in literature[31]. Although this study does not necessarily

[30] These authors include Harrow (2002), Hill (1997), Aucoin (1990), Christensen and Laegreid (2002).
[31] See for example Lane (2000), who refers to these models as 'mirror images'.

subscribe to the perspective of viewing the bureaucratic model and the New Public management as opposites, this section of this chapter does present the two models as being 'contrasting'. The final section of this chapter presents the two main hypotheses, which will be addressed in this research.

3.1 The Bureaucratic Model

Although the bureaucratic model was not developed solely by one person Weber's writings on the rational-legal authority and the bureaucracy are considered to be highly influential in this approach (Lane 2000). Considering the prominence of Weber's work for the 'theory of bureaucracy' it is useful to elaborate on the background of his work and how the 'bureaucratic model' fits in his work.

The starting point of the bureaucratic model must be seen in the three 'pure' types of 'legitimate' authority that Weber distinguishes. These are claims to legitimacy based on (Weber 1978:215):

- Rational grounds – which rest on "a belief in the 'legality' of patterns and normative rules and the right of those elevated to authority under such rules to issue commands". Under this so-called rational-legal authority, obedience is owed to the legally established impersonal order.
- Traditional grounds – in this case authority rests on "an established belief in the sanctity of immemorial traditions and the legitimacy of the status of those exercising authority under them". In this case obedience is owed to a ruler on the basis of tradition, in which tradition has often provided the ruler with an area in which he can exercise his free discretion (Diamant 1962).
- Charismatic grounds – in which case authority rests on "the devotion to the specific and exceptional sanctity, heroism or exemplary character of an individual person, and of the normative patterns or order revealed or ordained by him".

The nature of an organization and especially the staff serving in that organization is strongly influenced by the prevailing authority in that organization. As such, the nature of administrative staff can be linked to 'pure types' of authority as described above (Diamant 1962). Or as Weber phrases it "according to the type of legitimacy which is claimed, the type of obedience, the kind of administrative staff developed to guarantee it, and the mode of exercising authority, will all differ fundamentally" (Weber 1978:213). At this time it is useful to also elaborate on the Weber's usage of 'pure types' or 'ideal types'. The organizing principles proposed by Weber should be read as 'ideal types', meaning that they are formulations which exaggerate and simplify the empirical evidence in the interest of conceptual clarity (Weber 1978). As such, it is clear that 'truly' bureaucratic organizations do not exist. The argument made by Weber, however, is that organizations, which approximate this ideal type, are likely to be more efficient than those organizations, which do not resemble this ideal type (Kiggundu 2002).

For the 'bureaucratic model' the legal-rational authority is of particular importance. According to Weber (1978:217) "the effectiveness of the [rational]-legal authority rests

on the acceptance of the validity of the following mutually inter-dependent ideas". These ideas are fivefold (Weber 1978:217-218):

- "That any given legal norm may be established by agreement or imposition, on grounds of expediency or rational values or both, with a claim to obedience at least on part of the members of the corporate group. […].
- That every body of law consists essentially in a consistent system of abstract rules which may have normally been established. Furthermore, administration of law is held to consist in the application of these rules to particular cases. […].
- That thus the typical person in authority occupies an 'office'. In the action associated with his status, including the commands he issues to others, he is subject to an impersonal order to which his actions are oriented. […].
- That the person who obeys authority does so only in his capacity as a member of the corporate group and what he obeys is only 'the law'. […].
- In conformity with point three, it is held that the members of the corporate group, in so far as they obey a person in authority, do not owe this obedience to him as an individual but to the impersonal order. […]."

Based on these ideas the main principles that underlie the bureaucratic model can be summarized as follows:

- There is a principle of fixed and official jurisdictional areas, which are generally ordered by rules, that is, by laws or administrative regulations. Officials should apply these rules and procedures in a uniform manner.
- The principle of office hierarchy and levels of graded authority mean a firmly ordered system of super- and subordination in which there is a supervision of the lower offices by higher ones
- Tasks are organized on a rule-governed basis. Experts in substantive matters – such as engineers – should be assigned to line agencies whilst experts in budgeting, accounting, purchasing, and personnel should be assigned to centralized staff functions.
- Office management presupposes thorough and expert training.
- Public employees orientate towards the tasks within the public sector in terms of vocation or sense of duty. The employee also strives and usually enjoys a distinct social esteem as compared to 'the governed'.
- Loyalty of the employee is devoted to impersonal and functional purposes and does not establish a relationship to a person.
- An employee is appointed by a superior authority and normally the appointment of the employee is for life. As such, the employee is set for a career within the hierarchical order of the organization.
- Each position of an employee is to be remunerated according to a fixed monthly salary. The salary is not measured like wage in terms of work done, but according to 'status'. The 'status' depends on the responsibilities that the employee has.

The principles deriving from Weber's ideal type have been somewhat adapted by other authors to describe the main features of the bureaucratic model. Peters (2001:4), who

recognizes that the bureaucratic model is not singularly implemented, nonetheless finds it possible to attribute certain core characteristics to a bureaucracy, which he refers to as the "old chestnuts". The core characteristics that Peters (2001:4-12) identifies are:

- An apolitical civil service – This core idea is strongly associated to the policy-administration dichotomy. The idea is that public sector employees should not have "political allegiances of their own", but that they should be able to serve "any master".
- Hierarchy and rules – This core idea relates to the hierarchical and rule-bound management that is to predominate in the bureaucratic model.
- Permanence and stability – Permanence and stability relates both to the permanence and stability of organizations as well as to the secure terms of employment of public sector employees.
- An institutionalized civil service – the fourth core idea is that "there should be an institutionalized civil service that is governed as a corporate body".
- Internal regulation – The fifth 'chestnut' finds that "the civil service should be acquiescent and respond almost without question to policy directives issued by its nominal political masters".
- Equity - The last of the 'chestnuts' is the conception that clients with the same objective characteristics should receive exactly the same benefits with the aim of producing equitable outcomes.

As such, the bureaucratic model public sector leads to organizations that are permanent and stable organizations within government that implement hierarchical and rule-based management. The characteristics of the bureaucratic model "evolved over periods of time and generally represent responses to a number of problems that existed in public administration at earlier times" (Peters 2001:4). As Pollitt (2003:33) explains, the bureaucratic model "appeared to offer considerable advantages over what went before. Bureaucracy was designed to be reliable, equitable, and free from corruption. Civil servants in bureaucracies owed their jobs to merit, not patronage. They worked to predictable rules, based directly or indirectly on public laws. They treated individual cases impartially, according to these rules". Praise for the bureaucracy is also provided by Jaques (1990:234), who finds that "managerial hierarchy is the most efficient, the hardiest, and in fact the most natural structure ever devised for large organizations".

In this research, the bureaucratic model revolves around six principles. These principles are mainly based on Weber's ideal type and Peters' 'chestnuts'. However, the exact content of these principles has at times been altered to reflect the realities of the water supply and sanitation sector. In the context of the water services sector, for example, a principle such as permanence and stability is limited to permanence and stability of staff within the organization and not so much about the organization itself. The reason being that, water services being a merit good, a water utility has a continuous task of providing water services. This means that ideas such as 'flexible' organizational arrangements or 'virtual organizations' to take the place of water utilities may not be very applicable (or at least have not been applied to my knowledge). These six principles are:

- An apolitical civil service – Which is understood as meaning a separation of the political realm and the management of the service provider. Policy is formulated by the political realm, which is then subsequently implemented by the management and staff of the service provider.
- Hierarchy and Levels - The organization operates according to the principle of hierarchy and levels in which there is supervision of the lower office by higher ones.
- Permanence and Stability - The organization is characterized by permanence and stability, meaning little staff turnover and stable management.
- Internal Regulations - The organization operates according to explicit internal regulations, which guide the employees in the work they do. Management and staff are accountable for following these regulations.
- Fixed salary - Employees are remunerated according to fixed salary levels
- Vocation - Employees opt for working in water supply and sanitation companies in terms of vocation or sense of duty.

3.2 Criticism of the Bureaucratic Model: The Public Choice School

The many negative connotations of the word 'bureaucracy' illustrate that the bureaucratic model has been subject to considerable criticism. This criticism is not a recent phenomenon. The bureaucratic model has received criticism since the 1930s (Hood and Jackson 1991; Barzelay 1992; Hill 1997; Pollitt 2003). Criticism has originated from a variety of schools and has been levied at various principles identified by Weber. This thesis, however, focuses mainly on the criticism originating from the Public Choice School. The reason is that apart from being one of the most influential sources of criticism, Public Choice Theory is often seen as having greatly influenced the New Public Management.

The tone of the criticism deriving from the Public Choice School is perhaps best illustrated by Rowley who opens the 'Foreword' to Niskanen's collected works by stating that the early theories of bureaucracy "emanated not from economics but from naive sociological scribblings by Max Weber" (Niskanen 1994:vii). Apart from highlighting the disdain to Weber's work, which can be frequently observed in many of the writings by Public Choice Theorists, Rowley's statement also encompasses the basis for criticism coming from the Public Choice School. This basis is the application of the methodology of economics to public administration.

In this section, the underlying principles of the Public Choice School, those of methodological individualism and of utility-maximizing bureaucrats are elaborated upon. Subsequently, the criticism of the bureaucratic model originating from the work of Downs, Niskanen and Tullock is presented.

3.2.1 Two Underlying Principles: Methodological Individualism and Utility Maximization

As mentioned, the Public Choice School applies the methodology of economics to study public administration and public institutions. Because the Public Choice School uses this methodology it has been viewed as an 'economic approach' to public

administration. The importance of the 'economic approach' to public administration lies in the use of methodological individualism as its underlying postulate. Methodological individualism takes the individual agent as the fundamental building block for analysis[32]. In essence, methodological individualism assumes that social aggregates such as groups or formal organizations can be viewed as collections of individuals. As such, "the properties of these social aggregates are reducible to the properties of individuals" (Lane 2000:210). Whereas Weber's view of organizations emphasized the formal structure and implicitly viewed these 'social aggregates' as "single organisms whose individual parts were all directed to a common purpose" (Fukuyama 2005:63), methodological individualism reduces the organization to "the purposive behavior by individuals, not to explain the behavior of the individual […], but to generate hypotheses concerning the aggregative consequences of the interaction among individuals" (Niskanen 1994:5-6).

In addition to taking the individual as the starting point, a second principle underlies the Public Choice School. This principle emphasizes the interests and preferences of individual agents or in the case of bureaucracies of individual bureaucrats. Downs (1967:2) states this as follows: "the fundamental premise of the theory is that bureaucratic officials, like all other agents in society, are significantly – though not solely – motivated by their own self-interests". The specific focus on the individual and the emphasis on the self-interests of that individual contrast sharply with Weber's 'ideal type', which focuses on "the formal organization which reflected the official goals, needs, etc. of the organization" and "made no provision for informal structures which might develop by which bureaucrats would try to satisfy their own needs" (Diamant 1962:83).

3.2.2 Rigidness: Downs

Within Public Choice one of the sources of criticism of Weber's bureaucracy derives from Downs' *Inside Bureaucracy*, which was published in 1967. Downs' publication deals with the life cycle of bureaus. Of particular importance, in terms of criticism regarding Weber's bureaucracy is the aging of bureaus and the effect of age on the way the bureau functions. Downs (1967) argues that bureaus, like people, follow similar patterns of aging when they grow older. A selection of the effects of the aging of bureaus is as follows (Downs 1967):

- Bureaus learn to perform given tasks better with experience. Although this at first glance seems like a positive development, Downs argues that efficiency gains that are accrued from this better performance are translated into input-cuts for the bureau. Rather, the bureau increases output of the same service, absorbs efficiency gains as organizational slack or devotes the gains to seeking new functions or 'capture' existing functions from other bureaus.
- As bureaus grow older, they tend to develop more formalized rule systems. As the organization ages it experiences a wide variety of circumstances and the

[32] Niskanen contrasts the methodological individualism with the 'collectivist method' of sociology which "develops hypotheses about social behavior from models or role behavior by aggregative ideal types" (Niskanen 1994:5)

organization learns how to deal with this variety. Over time more formalized rules appear to deal with the variety of circumstances that the organization has been exposed to. The increasing rules have three main effects on the organization. First of all, it improves the performance of the organization regarding situations previously encountered and provides a degree of stability and predictability to the organization. Secondly, they tend to divert attention of employees in the organization from the official objectives of the organization to the conformation to the formalized rules. This can also be referred to as 'goal displacement', in the sense that rather than pursuing the goal of achieving the organization's objective, the goal becomes the conformation of the rules of the organization, which do not necessarily lead to the fulfillment of the organization's objectives. Thirdly, these formalized rules increase the organization's structural complexity. This in turn strengthens the organization's inertia as sunk costs in the organizations procedures increase. The result is that older organizations are more stable and less flexible (i.e. more resistant to change) than younger organizations.

- As bureaucratic organizations grow older the objectives of the organization's employees and managers shift from the official 'social functions' to ensuring the organization's survival and growth as an autonomous institution. In order to ensure the survival of the organization, the employees and managers also become more willing to modify the official objectives of the organization. This willingness is largely explained by the personal interests of the officials in the organization. As they stay with the organization for a longer period of time, the less incentive they have to find a new job (which may result in losing rank and seniority). As result, rather than abolishing an organization (and their own position in it) the official prefers to alter the objectives of the organization ensuring that it (and the official's own position) survive.
- As an organization grows older, the number and proportion of administrative officials tends to rise. This shift illustrates the increasing emphasis that is placed on routines and administration as the organization becomes older.

The result of these effects lead to what Downs describes as being the 'Law of Increasing Conservatism'. This Law reads as follows: *All organizations tend to become more conservative as they get older; unless they experience periods of rapid growth or internal turnover*. The result of the 'Law of Increasing Conservatism' is that as bureaus become older they become more and more rigid. The organization will have abandoned its original goal for objectives, which will ensure its survival. Moreover, the average age of officials working in the organization increases as the officials working in the organization focus on securing their position and the accompanying benefits that this position brings forth.

3.2.3 Budget Maximization: Niskanen

One the most influential criticisms stemming from the Public Choice School was formulated by Niskanen[33]. His book, *Bureaucracy and Representative Government*, was one of the first systematic efforts to study the bureaucracies within the public choice framework[34]. The main argument he makes in this book relates to budget maximization tendencies in bureaucracies. A bureau does not supply a number of units of outputs, but rather supplies levels of activities from which output levels must be inferred (for example, a level of security is measured by the number of police walking in the streets). The budget for the bureau is defined not by the outputs (the level of security), but rather by the activities that the bureau undertakes (the number of police walking in the streets), even if ultimately the citizens are only interested in the final outputs (Mueller 1989). The reason being that the outputs produced by bureaus are at times difficult to measure (such as the level of security). As it is easier to monitor the activities (number of policemen, etc.), these activities are taken as proxies for the output and as such as the defining indicator for the budget. This monitoring problem, however, is exacerbated by an informational advantage of the bureau and weak incentives for the bureaucrats to improve efficiency.

So with weak monitoring of the bureaucrat's activities and little incentive to improve efficiency, what are the goals that a bureaucrat will strive for? Niskanen's argument is that a bureaucrat will pursue goals such as salary, prerequisites of the office, public reputation, power, patronage, output of the bureau, ease of making changes, and ease in managing the bureau (Niskanen 1994). He continues to explain that, apart from the last two goals, each goal is positively related to an increased budget. As such, the bureau will strive to maximize its budget and as such, also increase the activities it undertakes.

Budget maximizing in itself does not represent bureau inefficiency in the sense that the activities produced may be produced efficiently. What it does mean is that it leads to so-called social inefficiency. This refers to an inefficient allocation of resources of society as certain activities or goods are overproduced (in other words, there would be too many police men walking the streets).

Although the issue of budget maximization has been a cornerstone in the criticism of Weber's bureaucratic model, the question is if public water utilities can be considered bureaus in Niskanen's model. Contrary to Weber who does not distinguish between public and private bureaus, Niskanen (1994:15) defines bureaus as "nonprofit organizations, which are financed, at least in part, by a periodic appropriation of grant". This means that utilities, which are operating on the basis of full cost recovery, would be excluded, as they are entirely self-financing. As the case studies in chapters four and five show, however, few water utilities in low- and middle-income countries operate at

[33] Aucoin (1990:116), in explaining the "ascendancy" of Public Choice Theory in political circles, refers to Niskanen's work as 'best representing the spirit of the set of Public Choice ideas'.

[34] In discussing Niskanen's criticism of the bureaucracy, the main source used is a collected works publication published in 1994. This publication included his book *Bureaucracy and Representative Government* from 1971. As such, although reference is made to the 1994 publication it should be noted that this publication is the same as the 1971 book.

full cost-recovery levels. This means these utilities are indeed dependent on a periodic appropriation of grants and as such they would qualify as being a 'mixed-bureau', which is dependent on income from sales as well as grants.

3.2.4 The Uncontrollability of the Bureaucracy: Tullock

Another authoritative criticism of the bureaucratic model originates from one of the founding fathers of the Public Choice School, Gordon Tullock. Tullock's book, *The Politics of Bureaucracy*, was published in 1965. The fundamental criticism levied by Tullock revolves around bureaucracies being too big. So big, in fact, that these organizations suffer an information problem as well suffering a compliance problem.

The information problem that Tullock identifies finds its origins in the difficulty of passing information through the various levels of an organization without distortion. Tullock compares this difficulty with the 'Whispering Down the Lane' game[35] often played by children. According to Tullock (2005:149) the "standard version of bureaucracy" works as follows: "The lower levels of the structure receive information from various sources. This information is then passed along upward through the pyramid. At the various levels, the information is analyzed, collated, and coordinated with other information that originates in separate parts of the pyramid. Eventually, the information reaches the top level where the basic policy decisions are made concerning the appropriate actions to be taken. These decisions on policy are then passed down through the pyramid with each lower level making the administrative decisions that are required to implement the policies sent from on high". Tullock, however, argues that this system inevitably will lead to distortions in the information passed up and down the organization. "The degree of distortion that would arise under such a bureaucratic system would probably be so great that neither the original report nor the issued order would be recognizable in any sizeable organization. This would be true due to the complexity of the information, and of the orders, transmitted and also because of the particular problems in transmission" (Tullock 2005:149-150). The information problem ultimately leads to the officials at the top of the pyramid being unable to control the lower levels. "In a large organization […], each link in the 'chain of command' will introduce some modifications and changes on the order received from above, and as a result of the series of these changes, which compound each other, central control will be eliminated" (Tullock 2005:178-179).

The second criticism that Tullock levies against the bureaucratic model is based on situations in which bureaucracies have greatly exceeded the limits of control and are related to the aforementioned problem of information. Tullock (2005:178) argues that "the larger the organization, the smaller the percentage of its actions that represent directly the ultimate sovereigns of the organization, its higher officials". Because of the difficulty for the higher officials to control what is happening in the lower levels (partly due to the information problem described above) "the bureaucracy will be 'free' from whatever authority it is allegedly supposed subordinate to. 'It', the bureaucracy, will do things, will take actions, not because such actions are desired by the ultimate authority, the center of power, in the organization, but because such things, such actions, develop

[35] In fact, Tullock (2005) titled the chapter dealing with this criticism 'Whispering Down the Lane".

as an outgrowth of the bureaucracy's own processes" (Tullock 2005:179). The result is what Tullock refers to as 'bureaucratic free enterprise' and is characterized by the inability of higher officials to control the bureaucracy. This inability to control the bureaucracy leads to inefficiency, irresponsibility and waste (Lane 2000).

3.2.5 Summary of Public Choice Criticism: Principal-Agent Problems

The criticism of the Public Choice School described above can be summarized by referring to principal-agent problems that form the core of agency theory. The central dilemma of principal-agent problems is how to get the agent to act in the best interests of the principal when the agent has an informational advantage over the principal and has different interests from the principal. In the context of this research the principal is formed by the politician, who represents the electorate[36] and whose policy decisions are to be implemented by the people working in the public organization (the agent). The question is how to get the public organization, or 'the bureaucracy', to implement the policies of the principal when the bureaucrats have an informational advantage and have interests, which are different from implementing the policy formulated by the politician.

The authors mentioned above, Downs, Niskanen and Tullock, all argue that the agent in a bureaucracy will always have an advantage over the principal. Or as Aucoin (1990:126) explains "the perception under which public choice theory operates is one in which the problem is bureaucratic power". The bureaucrats will then use this power to maximize their own utility by increasing their own power, prestige, security and income by "using the hierarchical structure for their own ends instead of advancing the goals of the organization" (Hughes 2003:40). This inevitably leads to rigid organizations in the case of Downs, to budget-maximization in the case of Niskanen and to an uncontrollable bureaucracy or 'bureaucratic free enterprise' in the case of Tullock.

In summary, the principal-agent problems inherent in bureaucracies leads to inefficiency of service provision because of rigidity and inflexibility of the organization, an uncontrollable organization which pursues its own survival rather than organizational goals, and an internal orientation of staff who focus more on maximizing budgets and chasing their self-interests rather than serving the public (Metcalfe and Richards 1990; Burki and Perry 1998; Minogue 1997; Kettl 2000; Lane 2000).

3.2.6 Public Choice Reforms

It has been mentioned that the Public Choice School is often viewed as one of the strands of parentage to which the New Public Management can be traced. Having presented the criticism levied by the Public Choice School above, it is useful to discuss the reforms proposed by the Public Choice School as elements of these reforms reappear in the New Public Management.

1) One of the reforms advocated by the Public Choice School is 'simply' a wider use of local government. This, as Tullock (2005:236) argues, "obviously puts

[36] The relationship between the electorate (the voters) and the politician can also been seen as a principal-agent relationship. In this case the politician is the agent and the voters the principal.

less strain on the voter's ability to supervise his government". By pushing "governmental functions to the lowest possible organizational level" the voter is better able to control the government and as such ensure that services provided are in accordance with the wishes of the voter. Niskanen (1994) also promotes the 'decentralization', by arguing in favor of the financing of public services at the lowest level of government that includes most of the beneficiaries of that service.

2) Secondly, the bureaucracy is seen as being "well above the optimum size" (Tullock 2005:237) and this, as Tullock has argued leads to uncontrollability of the bureaucracy (or bureaucratic free enterprise). The proposed solution is relatively simple, namely limit the size of the bureaucracy by essentially privatizing a variety of services that are not necessarily the 'core business of government. Tullock argues that by "trying to do too much the (local) government is losing its power to carry out even its minimum responsibilities". Niskanen (1994:228) argues that the 'optimal' level of public services could be achieved by "[a] competitive supply of public services". This competition would include the following 'general' changes:

   - Increase competition among the bureaus for the supply of the same or similar public services;
   - Change in the incentives of the bureaucracy to induce more efficient behavior by the senior bureaucrats;
   - Increase competition to the bureaucracy by greater use of private sources of supply of public services.

   Increasing competition, Niskanen argues, should reduce both the problem of oversupply (resulting from budget maximization) and the problem of inefficiency of some public organizations.

3) Thirdly, in discussing the information problem in bureaucracies, Tullock (2005) argues that decision-making should not be centralized. Rather decisions should be made at lower levels. These decisions should fit in the grand design of the organization. In other words, the information problem could be overcome by decentralizing decision-making authority to lower levels, as long as decision makers at that level take the overall objective of the organization into account.

4) Fourthly, the mechanism of organized hierarchy is considered unable to achieve the required degree of coordination necessary for producing certain specified tasks or aspects of tasks. Although acknowledging that there are governmental functions that are not suitable for market organizations, Tullock (2005:172) argues that "no comparable mechanism even approaches the market in terms of functional efficiency"[37]. In other words, if possible, the

[37] Tullocks (2005) argument conflicts with Donahue's (1989) conclusions based on a comparison of public and private management of water utilities. Donahue (1989:75) concludes "that there is no tendency for private water utilities to be any more productive" or efficient.

provision of services should be left to the market rather than providing that service through organized hierarchy.

Reforms emanating from the Public Choice School highlight "the need to reestablish the primacy of representative government over bureaucracy" (Aucoin 1990:115). In other words, the primacy of the principal should reestablished by restricting the power of the agent. As the abovementioned list of reform measures illustrates, the preference within public choice theory is that this power should be reduced by "devolving authority" to levels closer to the electorate (Aucoin 1990:119). Although public choice theory prefers reassertion of representative democracy over the 'professional bureaucrats' by way of reducing the latter's power, in many cases the executive authority has preferred to reassert its position by strengthening its power against bureaucracy. In other words, rather than reestablishing primacy by restricting the power of the agent, primacy is reestablished by increasing the power of the (central) principal. This requires effective centralization, coordination and control by the executive authority over the bureaucracy and as such appears to run against the notion of devolving authority to levels closer to the electorate, which is often advocated by Public Choice Scholars.

3.3 Managerialism

Whereas the Public Choice School was borne out of the application of the methodology of economics to public institutions, the second line of heritage to which the New Public Management can be traced is the rise of managerialism in the public sector. Managerialism itself seems to have been around for quite some time. Walsh (1995), for example, argues that managerialism should be seen as a continuation and enhancement of a managerialist process that had long existed. Pollitt (1993; 2003) places the origins of 'managerial thought' at the end of the 19th century. Since its origin it has moved through at least six broad phases.

The first phase is characterized by theorists who have to deal with the process of industrialization. The dominant doctrine in this phase is that of Social Darwinism with the employer focusing on maintaining the "healthiest, strongest workers and not paying too much attention to the rest" (Pollitt 1993:13).

The second phase is that characterized by the 'New Thought Movement', which emphasized "not biology, but the power of positive thinking". The idea being that with sufficient willpower and mental energy success could be achieved.

The third phase is strongly associated with Taylor and his principles of management. Taylor introduced management as a "true science, resting upon clearly defined laws, rules and principles, as a foundation" (Taylor as cited in Pollitt 1993:14). Taylorism was centrally concerned with the "processes of determining and fixing effort levels and can be seen as the bureaucratization of the structure of control but *not* the employment relationship" (Littler as cited in Pollitt 1993:16).

The fourth phase is characterized by the 'human relations school', which developed from the 1930s onwards. What distinguishes the human relations school is that more attention is paid to the individual worker, who is viewed as responding not only to incentives and punishments from the management, but "to a much wider variety of

environmental factors, including behavioral norms created and sustained by informal groups of fellow workers[38]. The significance of the human relationist school in contemporary management lies in the importance and the attention paid to the informal relations within an organization and the feelings and attitude of the employees.

The fifth phase distinguished by Pollitt (1993) is that of the 'decisions and systems' phase and can be situated in the period following the second World War until the 1970s. Essentially it consists of two approaches, the decision-making approach and the systems approach. The decision-making approach is closely associated with Herbert Simon and focuses on the detailed cognitive and emotional processes of individual and group decision-making in organizational contexts. The systems approach concentrates on the level of the organization as a whole, and aims to understand the "macro-features of organizational performance by characterizing them as open, socio-technical systems" (Pollitt 1993:18). Rather than develop absolute principles, as those forwarded by Taylor, these two approaches have a more relativistic stance in which the design of an organization is dependent on the type of objectives that the organization seeks to achieve and the environment in which it operates.

The sixth phase of management thought, that of 'culture management' as Pollitt (1993:23) calls it emerged in the 1970s and became popular in the 1980s. Similar to human relationist school's reaction to Taylor's principles of scientific management, 'culture management' can be seen as reacting to the decision-making and systems approaches, which were seen as neglecting symbolism and ritual in organizations. Successful organizations, in this perspective, were seen as being 'value driven' guided by carefully maintained 'cultures of excellence'. In these organizations managers work to create "the right 'climate', to encourage identification with corporate goals, high motivation, and internalization of 'constructive attitudes'" (Pollitt 1993:24).

Although it is not disputed that (elements of) managerialism have been around for a long time, it is also undeniable that in the 1980s and 1990s it has been the subject of a considerable revival in the public sector. Hughes (2003:48) places the beginning of this revival between the 1950s and the 1980s when governments became "unconvinced that the traditional system of administration provided an effective form of management of their public services".

The main elements of managerialism as defined by Pollitt (1993:2) are as follows:

- The main route to social progress lies through the achievement of continuing increases in economically defined productivity.
- Such productivity increases come mainly from the application of ever-more-sophisticated technologies. These include information and organizational technologies as well as the technological 'hardware' for producing material goods.
- The application of these technologies can only be achieved with a labor force that is 'disciplined in accordance with the productivity ideal'.

[38] The human relations school is also a source of strong criticism of Weber's bureaucracy. As mentioned, Weber focused strongly on the formal organization and said little about the individual employees in a bureaucracy.

- Management is a separate and distinct organizational function and one that plays a crucial role in planning, implementing and measuring the necessary improvements in productivity.
- To perform this crucial role managers must be granted reasonable 'room to manoeuvre' (i.e. the 'right to manage').

3.4 The Public Choice-Managerialist Contradiction

In the aforementioned sections, the Public Choice School and managerialism have been presented as the parentage to which the New Public Management can traced. This mixed parentage of the New Public management can give rise to tensions, however. Public Choice theory places a strong emphasis on reestablishing primacy of the principal, by weakening the power of the agent. Managerialism, on the other hand, focuses much more on a manager's 'right' to manage. The main contribution of this school of thought is that it seeks to "enhance the capacities of managers to take action, to clarify missions and objectives, and to be responsive to their clients/customers on the one hand and to their personnel on the other" (Aucoin 1990:122). In this perspective a deconcentration of power is regarded as beneficial to good management and as such extensive decentralization, deregulation and delegation are promulgated.

It is notable that coupling the idea of reestablishing primacy of the principal, as it is frequently implemented in practice, with that of managerialism thus can give rise to tensions, if not outright contradictions (Aucoin 1990, see also Hill 1997). Christensen and Laegreid (2002) concur with Aucoin as they also highlight the, at times, conflicting elements of the New Public Management. They attribute these tensions to the centralizing tendencies inherent in the public choice perspective and the devolutionary tendencies of managerialism. The hybrid character of the New Public Management, Christensen and Laegreid (2001:78) argue, make the NPM into "a double-edged sword that prescribes both centralization and devolution". It should be emphasized, however, that the 'centralization-side' of 'double-edged' sword finds its origin in the actual implementation of the New Public Management rather than the theoretical reform agenda proposed by the Public Choice School. In practice, politicians have opted for 'reestablishing the primacy of the politician over the bureaucracy' by opting for centralization, i.e. increasing the power of the politician rather than decreasing the power of the bureaucracy (Aucoin 1990). This has the added benefit for these politicians that it increases their own power.

3.5 The Shift towards New Public Management

Having elaborated on the (at times conflicting) foundations on which the New Public Management rests it is useful to examine the context in which the NPM gained in popularity. The increasing popularity was largely a result of a series of interdependent developments in the 1980s. These developments, which are described below, paved the way for what some authors consider a shift from the bureaucratic model to that of the

NPM. The underlying pressures for the shift away from the bureaucratic paradigm are three fold[39].

3.5.1 Rising Government Expenditure and the Effectiveness of Large Bureaucracies

First of all rising government expenditure in combination with poorer than anticipated economic performance inspired a fundamental questioning of the effectiveness of large public bureaucracies (Hood 1991; Barzelay 2001; Minogue 1997; Aberbach and Christensen 2001; Hughes 2003; Jones and Kettl 2003). During the 1980s, many western governments faced economic slowdowns and large public sectors that generated high levels of public expenditure[40]. Thompson (1997) finds 'some truth' in viewing the ascendancy of the New Public management in the context of economic crises that many countries were facing. Many countries that initially adopted these reforms (New Zealand, Australia, Great Britain, Sweden, and Canada) were under considerable economic and fiscal pressure. Schick (1996:11) argues that:

> "Economic conditions were not sustainable in New Zealand when reform was initiated in 1984. The economy was in disrepair and conventional remedies – more fiscal stimulus and more government intervention – had not worked […]. Doing nothing – or as little as politicians could get away with – was not a viable option".

Kaul (1997:14), after finding that changes in the role and responsibilities of government have largely been driven by economic pressures, even goes so far as to state that it has led to a "reassessment of the fundamental responsibilities of government in economic management and delivery of public service". This reassessment, as Kaul argues, has led to the rise of the New Public Management.

In the water supply and sanitation sectors of middle and low-income countries, the majority of expenditure on infrastructure is financed through tax revenues. Increasingly, however, governments found their tax revenues "insufficient to meet all the competing needs" (OECD 2000). NPM style-reforms could then mitigate both the burden of the rising expenditure as well as the large bureaucracies. For example, by introducing reforms such as agencification, which refers to "the conversion of government-departments which previously operated in a hierarchical chain […] into semi-autonomous [agencies]" (van Donge 2002: 315), large bureaucracies could be reduced in size as these agencies, operating at arm's length of the government, would be

[39] Pollitt stresses that the transition to the doctrines of the New Public Management was not such a totally clean-cut break with the past. Moreover, he argues that the NPM was not so much 'caused' by external events, but rather 'chosen' by practitioners (2003:36-37).

[40] Hughes (2003:49) mentions the first oil shock as severely constraining government resources. As "practical politics" dictated that the actual services delivered by the public sector could not be cut, a strong pressure existed to attempt to manage the same services with less money and fewer staff.

expected to reap the efficiency gains associated with private sector organizations[41]. Other reforms that mitigate this 'burden' include privatization and outsourcing strategies.

Thompson (1997) argues that part of the shift can be explained by other forms of organization (*in casu*, the market) becoming more efficient than the traditional bureaucracies. Changes in 'information or transaction costs' could cause a shift in viewing which institutional arrangement has a comparative advantage over other arrangements. With a significant reduction in information costs over the past decades, the efficacy of the market has increased relative to government provision and control.

3.5.2 Consumers as Customers

Secondly, consumers of services provided by public organizations have come to demand services of better quality and no longer accept to be treated as passive objects of public policies (van Mierlo 2003). "People today expect to be valued as customers, even by government [service providers]" (Osborne and Gaebler 1992:167). The improved levels of education of the consumers explain part of this shift. "Increasingly well-educated and demanding citizens […] were less and less prepared to accept poor service from public officials" (Pollitt 2003:33). Some even argue that increased customer-orientation lies at the heart of the New Public Management and presents the most important conceptual challenge to the bureaucratic model (Barzelay 1992; Jackson 2001[42]). Kaul (1997:15) echoes that observation when he finds that "citizens have indicated a clear limit to their willingness to purchase unattractive and inefficiently produced public services through their tax contributions".

3.5.3 The Ideological Attack on the Bureaucratic Model

A third pressure driving the shift towards New Public Management is more ideological in nature and finds its roots in the "ideological attack on the public sector in the 1970s and 1980s […] in the United Kingdom and the United States" (Hughes 2003:256) and is, as such, associated with right leaning governments like that of Mrs. Thatcher in the U.K. and Reagan in the U.S. (Jones and Kettl 2003). In this context the NPM is considered to be "an accepted administrated philosophy concerning organization design in government" (Barzelay 2002:19; also Exworthy and Halford 1999). However, not everyone agrees with viewing the NPM as a result of 'new right' ideological pressure. Pollitt (2003) argues that social democratic or Labor governments introduced some of the most sweeping NPM-style reforms, for example in Australia and New Zealand. In Australia, the initial steps, which lead to the introduction of NPM-style reforms, were

[41] The question whether empirical support exists for the view that private sector organizations are more efficient than public organizations is beyond the scope of this research. This view, based on property rights theory, is, however, forwarded often (Braadbaart 2002).

[42] Jackson (2001) places this development in a broader crisis of confidence in the public sector. He finds that by "the mid-1970s the general public's attitudes towards the public sector had reached a low. There was loss of confidence in the public sector's abilities to deliver public services of the quality expected, to manage the economy, to solve social problems or to be prudent with the public finances" (Jackson 2001:9).

taken by the conservative Malcolm Fraser. Much of the actual implementation of these reforms was done under the Labor government of Prime Minister Hawke. As such, the political parties at both sides of the political spectrum appeared to share views on the way public services were to be managed (Hughes 2003). In New Zealand, the Labor Government of Prime Minister Lange would be one of the most reform-minded administrations in the country's history. Similarly, improved management in the United States appears to have been initiated in the Carter Administration as illustrated by the Civil Service Reform Act of 1978, which aimed to give managers greater responsibility for results. As such, although the NPM may have received a considerable boost by the administrations of Thatcher and Reagan, it would appear that the support for the New Public Management couldn't only be attributed to 'right-wing' governments.

Rather, the ideas of the New Public Management were so influential "precisely because they were combined with and succeeded in articulating other intellectual currents" (Kirkpatrick and Martínez 1996:4). The actual implementation of the New Public Management was then much more a choice made by practitioners (of various political signatures) rather than ideologists. Perhaps more important than the ideology of the government was the fact that government changed. Britain (1979), the United States (1980), Australia (1983), and New Zealand (1984) all experienced changes in government in a relatively short time span. These changes presented opportunities for practitioners to implement new reforms. The fact that two of the cases (Britain and the United States) shifted to right-leaning governments, whilst two cases (Australia and New Zealand) shifted to left-leaning governments indicate that the ideological leanings of the government in power seem to be of secondary importance.

3.6 The New Public Management

Although there appears to be a general consensus that 'New Public Management' (NPM) originated in New Zealand and the United Kingdom in the early 1980s, a review of literature would, at first, lead the reader to conclude that little agreement exists on what exactly NPM encompasses[43]. Hood (1991) has described the NPM as 'a loose term', which covers a 'set of broadly similar administrative doctrines'. Lane (2000:131), who can be viewed as standing favorably towards the New Public Management, mentions that "it is certainly not a coherent set of principles that replace public administration". Manning (2002) has suggested that the absence of a standard definition of New Public Management is related to the mixed parentage of the New Public Management, which as highlighted earlier has some inherent contradictions. He characterizes NPM as being a 'slippery term', which describes a menu of choices rather than a single option. Pollitt (2003:27) finds that many commentators allow the NPM to have a number of "facets and ingredients, and that from one country and time to another the emphasis may vary between these".

[43] One possible explanation for the lack of agreement regarding the specific meaning of the term 'New Public Management' is that this term was first used by Hood (1991) to describe reforms which had taken place in the 1980s and early 1990s. As such, the term 'New Public Management' was coined well after the administrative reforms it described were implemented (Christensen and Laegreid 2002). The term was thus used to describe a wide array of administrative reforms.

3.6.1 Defining the New Public Management

Combining the pillars of Public Choice theory and managerialism leads to a public management model that presents a more market-oriented and output-based approach to the traditional bureaucratic model with an increased emphasis on user-orientation by adopting 'business' style measures (Kaboolian 1998; Kettl 2000; Peters 2001; Harrow 2002; Budding and de Groot 2003). As such, NPM seems to advocate that public sector organizations adopt practices that have long been associated with the 'private sector' (Metcalfe and Richards 1990). However, even if these broad classifications shed some light on what the NPM is, it still does not enlighten us on what elements the NPM exactly encompasses.

With the aim of identifying what elements can be placed under the New Public Management umbrella different descriptions of the NPM by a selection of authoritative authors were analyzed. Table 3.1 (page 49) provides an overview of these different definitions. At first glance the definitions appear to be quite different. In fact, some statements, such as 'meet the needs of the customers, not the bureaucracy' (Osborne and Gaebler 1992:166), almost appear to be political slogans.

However, if one analyzes the descriptions, it also appears that the differences in description relate not so much to different views on what the NPM encompasses, but are a result of different perspectives and at different levels of the public sector. Lane's (1994) description, for example, largely contains itself to a description of elements within an organization and almost reads like a checklist for a manager of that organization. Pollitt's (2003:28) description appears to take a broader view, and looks at the NPM from outside the organization as is illustrated by an element such as the "blurring of the frontiers between the public sector, the market sector and the voluntary sector". Similarly, Osborne and Gaebler's (1992:25) plea for a "steering rather than rowing government" also takes a very broad perspective. In fact, in the discussions relating to the NPM it is surprising to see how little attention is paid to the levels at which the analyses of the authors takes place.

Moreover, some elements mentioned by the authors are strongly related. So strong in fact, that it can be questioned if these elements should be seen as separate 'ingredients' of the NPM. If emphasis is placed on achieving accountability for specified outputs than it should not be surprising to see that a shift occurs "towards more measurement and quantification especially in the form of systems of performance indicators" (Pollitt 2003:27). How else could one measure if the outputs, which are so heavily emphasized, have been achieved?

This begs the question if the NPM is such a 'slippery' and 'loose' term after all? The fact that almost all authors first introduce the NPM as a 'loose' term, only to proceed to discuss this 'loose' term at great length seems to indicate that the NPM may not be as 'slippery' and 'loose' as many suggest it is. An indication that there is a relatively concrete understanding of what the NPM entails is that the absence of this understanding would severely frustrate any discussion about the topic. Few authors find it necessary to start their articles and papers by explicitly stating what they mean by the NPM. The most likely reason for this being that they assume that the reader already knows.

It would, in fact, perhaps be even more surprising if there were something of a uniform New Public Management. If administrative reform is (at least partly) a response to specific problems and local challenges the reform measures have to be implemented with the aim of addressing these specific problems and challenges, within the prevailing administrative and political structures and in the context of historical developments in that locality. It would seem logical that, given the variance of problems, structures and historical developments, the actual reform measures introduced also show variation. As such, we would expect to see 'facets and ingredients' of the NPM vary from one country to the next.

Furthermore, this would also apply to the 'facets and ingredients' of the bureaucratic model, which as Peters (2001) explained is also 'not singular'. In contrast to the NPM, however, the bureaucratic model is not considered 'slippery' or 'loose' by many authors. As such, it is my opinion that a pattern of recurring themes does exist although it is acknowledged that not every author adheres to this pattern (partly because of the different perspectives taken). Based on each of the definitions presented in table 3.1, four main elements of the NPM can be identified. These main elements are:

1) Autonomy - A focus exists on the decentralization of authority. The decentralization of authority has an external component and an internal component.
    a) The external component refers to decentralizing authority to autonomous organizations, which become responsible for providing services.
    b) The internal component relates to decentralizing authority within the organization. This essentially means creating 'lean' and 'flat' organizations.
2) Accountability for results - All definitions mention an increased emphasis on outputs produced by the organization. Although here too the terminology differs the authors refer to the same idea, namely that the organization has to meet certain specified results (be they called outputs or objectives) and is held accountable for meeting these results. Similar to the element of autonomy accountability for results has an external and an internal component.
    a) The external component concerns accountability for results produced by the organization as a whole.
    b) The internal component relates to accountability for results achieved by individual managers and employees within the organization.
3) Customer-orientation - Almost all definitions refer to the consumer, be it that a variety of terms are used such as client, customer or citizen. Although I realize that these terms strictly speaking have different meanings, in this context they more or less appear interchangeable. Part of the usage of different terms may also be because the authors have different public services in mind. In other words, the terminology of the end-user of a service may differ, for example the beneficiary of street cleaning would not often be referred to as a customer, whilst this can be the case for water services.
4) Market-orientation - Most of the authors refer to 'the market' and 'market-type' mechanisms. These markets are both external to the organization as well as internal. The external market appears to refer to both outsourcing activities to (private) organizations, which can undertake that activity cheaper or better. The

internal market (or market-style mechanisms) appears to be aimed at introducing a degree of competition with the organization.

3.7 The New Public Management: Criticism from Literature

Over the past decade(s) the NPM-style reform strategies have been implemented widely and promoted by a broad coalition of sector professionals, donors and lending agencies (Bately 1999). In fact, a wealth of literature has grown, promoting the New Public Management reforms over the traditional bureaucratic model. However, as the discussions below will show, the NPM is not without criticism. In light of the question if public water utilities perform better because they adhere to the New Public Management it is useful to review and discuss the criticism levied against the NPM.

3.7.1 The Impact of the NPM

As mentioned, much of the literature regarding the NPM is written with the perspective of celebrating the NPM's triumph over the bureaucratic model or defending the bureaucratic model from these celebrations. Unfortunately, little empirical evidence supports the claims by many of the NPM advocates.

Part of the inconclusiveness of the evidence can be traced to the question what exactly constitutes 'beneficent change'. As Hood (1998) notes different notions of 'beneficent change' exist. In the water supply and sanitation sector, for example, beneficent change may be a lowering of the price of water per cubic meter, it may be a more reliable service for the customer, or it may be an expansion of the service network. But what happens if the network is expanded at the cost of service reliability and a higher price per cubic meter of water? Would that constitute 'beneficent change'? Or if reliability to customers is improved and the price stays the same, but the network is not expanded?

Secondly, reforms tend to consist of several simultaneous changes (Pollitt 2003), making it difficult to conclude what the impact of the NPM reforms have been. This opinion has been echoed by others such a Foster (1996:6) who suggests that the existence of a "strong institutional culture, encompassing both a high degree of professionalism among staff and a sense of pride and 'ownership' within the local community" may be at the root of the success of well-functioning public utilities. Others have noted the importance of leadership of top management on the performance of utilities (Cullivan et al., 1988). Dimensions associated with the NPM, such as customer-orientation and market-orientation, may then be outward manifestations of these factors rather than underlying causes of the success of well-functioning enterprises (Foster 1996).

The fact that reforms are introduced simultaneously with reform elements that are not part of the NPM model, make it difficult to establish if water utilities perform better because they perform to the NPM. Perhaps other elements, such as leadership or corporate culture, are of greater importance than elements of the NPM model, or the bureaucratic model for that matter?

Table 3.1: Elements of the New Public Management

Hood (1991)	**Osborne and Gaebler (1992)**	**Pollitt (2003)**	**Kernaghan (2000)**	**Borins (1997)**	**OECD (1995)**	**Burki and Perry (1998)**	**Lane (1994)**
Hands-on professional management	Steering rather than rowing government	A shift in the focus of management systems and efforts from inputs and processes towards outputs and outcomes	Citizen-centered	Providing high quality services that citizens value	Greater flexibility on results and increased value for money	Devolution of decision-making	Focus on the achievement of objectives
Explicit standards and measures of performance	Empower communities, rather than simply serving them	A shift towards more measurement and quantification especially in the form of systems of performance indicators	Leadership	Increasing managerial autonomy, particularly by reducing central agency controls	Devolution of authority and enhanced flexibility	Performance orientation	Efficiency is more important than rule obedience
Greater emphasis on output controls	Injecting competition into service delivery	A preference for more specialized, 'lean', 'flat' and autonomous organizational forms rather than large, multi-purpose, hierarchical ministries or departments	Change-oriented	Demanding, measuring, and rewarding both organizational and individual performance	Strengthened accountability and control	Client focus	Flexibility and adaptation are more important than predictability and responsibility and require unconventional decision-making, surprise and secrecy in order to enhance innovation
Shift to disaggregating of units in the public sector	Transforming rule driven organizations to mission-driven organizations	A widespread substitution of contracts for what were previously formal, hierarchical relationships	Results-oriented	Providing the human and technological resources that managers need to meet their performance	Client- and service-orientation	Market orientation	Effectiveness is expected of the management
Shift to greater competition in the public sector	Fund outcomes, rather than inputs	A much wider-than-hitherto deployment of markets of market-type mechanisms	Decentralized	Maintaining receptiveness to competition and open-mindedness about which public purposes should be performed by public servants as opposed to the private sector.	Strengthened capacity for developing strategy and policy		Managers work on the basis of a contract that appeals to the self-interests of managers
Stress on private sector styles of management practice	Meet the needs of the customers not of the bureaucracy	A emphasis on service quality and consumer orientation	Revenue driven		Introducing competition and other market elements		Profitability is a highly relevant objective
Stress on greater discipline and parsimony in resource use	Focus on earning resources, rather than just spending	A broadening and blurring of the frontiers between the public sector, the market sector and the voluntary sector	Collaboration		Changed relationships with other levels of government		
	Prevent rather cure problems	A shift in value priorities away from universalism, equity, security and resilience, and towards efficiency and individualism	Non-departmental form				
	Decentralize authority		Competitive				
	Leveraging change through the market		People-centered				

3.7.2 The Costs and Benefits of Contracting

Contracts are one of the main instruments of the NPM. In discussing the NPM Lane (2000:147) even refers to it as "the medium of communication in the public sector". These contracts can vary in nature such as performance contracts, employee contracts or contracts for outsourcing tasks and activities to the private sector. Entering into and monitoring these contracts is not without cost, however, and the question is if the cost of implementation is not higher than any efficiency gains that may have been realized. For example, although proponents of outcontracting often claim savings of around 20% to 30%, establishing if the increased use of service contracts does indeed lead to cost savings is difficult. This difficulty is due to problems in measuring "the costs of transactions, the ongoing costs associated with managing contracts (or governance costs), and the overall costs to the organization of organizing market competition and undertaking the transition to new arrangements" (Hodge 2000:237; also Hill 1997). Much appears to depend on the nature of the service or activity that is outsourced. Some activities, such as vehicle maintenance, may lend themselves for realizing significant savings whilst "contracting for some services may not enhance, and may even reduce, the efficiency of public sector services because the additional transaction costs are likely to outweigh any gains in technical efficiency"(Hodge 2000:238)[44]. In other words, when transaction costs are high, "the incorporation of suppliers, distributors, etc. into hierarchies may become a desirable strategy" (Hill 1997:168). In addition to transaction costs, the use of contracts may involve so-called switch costs, which refer to costs, which have to be incurred when a reneging contractor has to be replaced by a new contractor (Lane 1996) as well as 'information costs' which are costs that a utility must bear in order to increase the probability of selecting the best contractor (Ferris and Graddy 1997). Moreover, the responsible government agency requires "an effective capacity to monitor among other things achievement of performance indicators set out in the agreement and the resources devoted for this purpose" (Awortwi 2003:108).

With making, monitoring and revising contracts being a costly business, it would make sense for both the party awarding the contract and the party fulfilling the contract to seek long-run stability (Hill 1997). But not only is the tendency for long-run stability a question of costs. Often the party awarding the contract is too eager to bind a good contractor beyond the duration of the contract agreed upon, when a credible contractor with specific performance qualities is identified (Lane 1996). This tendency to seek long-run stability may run against the original aims for which the use of contracts was intended. One of the main arguments for the use of outcontracting is that the application of competitive tendering can provide substantial efficiency gains (Awortwi 2004). However, the tendency of both parties towards establishing long-run stability (or partnering) is likely to be at the cost of the level of competition for the contracts. With

44 The theory of transaction costs includes characteristics such as uncertainty, frequency, asset specificity, measurability of attributes, bounded rationality and opportunism to arrive at a transaction cost (Hodge 2000:39). These characteristics of a service would then also indicate the suitability for outcontracting a service or task. Lane (1996) has stated that there is an inverse relationship between production costs and transaction costs.

the contracts being tendered with less competition, the gains from competitive tendering will be reduced.

3.7.3 The pre-requisites for implementing the NPM

The implementation of NPM-style reforms may require a set of preconditions, which are required for these reforms to be successful. Schick (1998) argues that a formal public sector, incorporating budgets that controlled spending and corresponded to actual transactions and a civil service system that governed how public employees are hired and paid are essential preconditions for NPM-style reforms to succeed. Or put differently a utility should first "be able to control inputs before they are called to control outputs; they must be able to account for cash before they are asked to account for cost; they must abide by uniform rules before they are authorized to make their own rules; they must operate in integrated, centralized departments before being authorized to go it alone in autonomous agencies" (Schick 1998:130). In many developing countries, which are characterized by an informal economy and public sector, these preconditions are not met. This view is shared by Wallis and Dollery (2001:260) who find that in areas where "these basics have been mastered, there may be scope to shift from systems of external control to internal control". However, if these basics have not been mastered, NPM-style reforms are unlikely to hold great promise. This view is also shared by the former World Bank president Wolfensohn, who states that "New-Zealand-style management-by-contract systems, or indeed, any system of public sector contracting out, cannot work in a society without a well-developed system of contract law. Output-based management controls fail if the government does not have a strong budgeting system to set goals and accounting system to track results. The government reforms movement puts especially heavy pressure on government managers, who not only must do more with less. They must also build new capacity to find imaginative ways to do things they have never done before" (Wolfensohn, as cited in Kettl 2000:60). Even one of the 're-inventing government' gurus has noted that "you have to invent government before you can re-invent it" (Gaebler as cited in Schneider and Heredia 2003:8). In short, "the greater the shortcomings in a country's established management practices, the less suitable the reforms" (Schick, 1998:124).

3.7.4 Accountability for Results

Questions can also be raised regarding the applicability of some of elements of the NPM model in the (public) water sector. Accountability for results, for example, assumes that performance can be fully and properly measured by objective measures. The question is if many of the real benefits of the provision of water services lend themselves to quantative measurement (Mintzberg 1996). "The high degree of uncertainty and complexity under which [public utilities] have to function do not lend themselves to a neatly divided set of obligations set down in a document" (Islam 1993:144). Even Tullock (2005), in examining the potential of 'judgement by results'[45]

[45] Tullock (2005:207) identifies three separate requirements that must be fulfilled before 'judgement by results' can be implemented. These are 1) the results can, without great trouble be measured, 2) it must be possible to attribute the results to particular persons who are responsible

as a means of improving control of the bureaucracy finds many activities undertaken in an organization are ruled out from 'judgement by results' as these activities do not meet the requirements to allow for this 'device of supervising subordinates'. Apart from tasks and activities being potentially unsuitable for accountability for results, such mechanisms may also lead to an over-concentration on what is precisely quantifiable and an under-concentration on other aspects of service delivery, which are not so easily measured, but which may be just as important (Pollitt 2003).

Another potential problem with accountability for results relates to the weak redress that governments have when its own organizations fail to perform. If the government, being the owner of the water utility, were to undertake legal action against that water utility, it would essentially be undertaking legal action against itself (Lane 2001). As such, "[i]t may be subject to as much capture in negotiating and enforcing as it was under pre-reform management" (Schick 1998:126; see also Bately 1999).

3.7.5 The Weakening of Public Sector Values

The trend that recent public sector reforms seem to be inspired by private sector experience has also meant that traditional 'public sector values' may have been weakened (Kernaghan 2000; Schick 1998). In particular, questions can be raised about the strong emphasis on efficiency and effectiveness that this reform strategy adheres to. As Lane (2000:14) explains the "NPM is basically about focusing on efficiency". However, the criteria the public sector, and public water utilities, are supposed to pay attention to extend beyond efficiency and effectiveness. With water services being a merit good, public water utilities also have social objectives as part of their responsibilities and the question is if these social objectives are not neglected due to an overemphasis on the increase in efficiency (Islam 1993; Lane 1994; Hill 1997; Hodge 2000; Hague 2001)? Pollitt (2003:28) mentions as a key element of the NPM a "shift in value priorities away from universalism, equity, security and resilience, and towards efficiency and individualism". This position appears to be supported by Walsh (1995:xvi), who argues that "the impacts of the more critical consumer of public services are quite strong as it alters the nature of the concept of citizenship from one relating to participation in the public realm to one referring to consumption in the private realm".

Some authors argue that the introduction of the NPM may also weaken the 'public sector work ethic'. "As the security of their employment has diminished, and the pressure on them to produce results has increased, public officials are said to have become more instrumental and calculating in their attitudes. They won't 'go the extra mile' unless their contract specifies it, or some extra bonus or privilege is provided as reward" (Pollitt 2003:48). Interestingly enough, this criticism seems strikingly similar to criticism levied against the bureaucratic model.

for it and 3) the results from the activities of one subordinate must be comparable to those obtained from others.

3.8 Contrasting the Bureaucracy and the New Public Management

According to Lane (2000) the bureaucratic model and the NPM model can be viewed as 'mirror images'. Lane's metaphor is illustrative of current discussions in much of the literature regarding the bureaucratic model and the NPM. In this section, however, the perspective is taken that although visualizing the two models as 'mirror images' is perhaps a useful metaphor in the discussion concerning the (possible) existence of a paradigm shift from one model, it also obscures the realities of public administration and management in many countries.

In this section we discuss the supposed dichotomy between the bureaucratic model and the NPM. The argument forwarded is that much of this supposed dichotomy can be traced to the ideological nature of discussions regarding both the bureaucratic model and the New Public Management. The alleged dichotomy is explained by the fact that the conduct of a polemic focuses attention on the differences between two points of view to the neglect of their continuity and convergences (Gouldner 1954). Rather than viewing the two models as opposites, they are presented as contrasting.

3.8.1 The Bureaucratic Model - New Public Management Dichotomy

In many writings about public management, the bureaucratic model is often presented as a distant predecessor of the New Public Management. Hughes (2003:256) for example, argues that the bureaucratic model is "obsolete and has effectively been replaced by a new model of public management. This change represents a paradigm shift from bureaucracy to markets […]" (see also Barzelay 1992; Borins 1997; Aucoin 1990; Lane 2000; du Gay 2000[46]). This position is not shared by everyone, however. Pollitt (2003:32-33) has argued against the idea that 'traditional bureaucracy' ruled the earth, "like some ponderous dinosaur", prior to the advent of the New Public Management. He explains that "the public sectors or West European and North American states contained a rich variety of organizational types and forms". Pollitt's view is largely reflected by Lynn (2000), who expresses doubt about the existence of the 'bureaucratic paradigm', which supposedly dominated the public sector prior to the onset of the New Public Management. Although the views of Lynn and Pollitt are most likely correct and unlikely to be contested by many, it has not withheld an array of authors from actually portraying recent developments in public management in the same bureaucratic model-New Public Management dichotomy that Hughes (2003) heads towards. Whereas Pollitt and Lynn question the idea of a paradigm shift by emphasizing that both models co-existed for many years, other authors stress that "it is both misguided and remarkably premature to announce the death of the ethos of the bureaucratic office" (du Gay 2000:146; also Hood 1995; Gow and Dufour 2000; Manning 2002; Goodsell 2004).

Interestingly enough, much of the literature relating to the New Public Management has the focus of wanting to declare final victory or discussing if victory can be declared. Countless articles address the question if the New Public Management

[46] Du Gay (2000:6) argues that the proponents of the New Public Management represent bureaucratic government as the "paradigm that failed".

can be seen as a 'paradigm' and if a paradigm shift has taken place. All the while, empirical evidence for supporting these claims (whichever way they go) remains rather thin. It would appear that much of the literature concerning the bureaucratic model and the NPM is written from an ideological perspective.

3.8.2 Contrasting the Two Models

The aim of this research is not to contribute to the 'celebration' of the NPM, or to the 'celebration' of the bureaucratic model for that matter. This research will, however, be based on using the bureaucratic model and the New Public Management as contrasting theories of public management. Contrasting, as it is used here is seen as markedly different from opposite.

Although there are perhaps elements of both models that appear opposite, the two models also share elements. The bureaucratic model, for example, presupposes an apolitical civil service (essentially a stringent separation between the political and administrative realms). The NPM model incorporates autonomous agencies operating at arm's length of the government. Both models, as such, do not view politics to be part of the day-to-day functioning of public sector organizations. Similarly, if the bureaucratic model finds that 'loyalty is devoted to impersonal purposes' then it does not mean that the NPM model views loyalty as being solely devoted to 'personal purposes' (although the NPM does place a strong emphasis on creating incentives for employees and highlights self-interests). And if the NPM model views the extensive use of markets as a key element of a well-functioning public organization, it does not mean that the bureaucratic model is vehemently opposed to using markets in the delivery of services. All bureaucratic organizations use 'the market'. What is different, however, is the emphasis placed on using the market as a means of improving service provision. Different emphases, however, do not constitute mirror images.

The reason for elaborating on this issue is that in this section the bureaucratic model and the NPM model will be presented as two contrasting theories. Important to realize, however, is that although the two theories are contrasted, they are not necessarily opposites in all aspects. Essentially, the contrasting theories are based on the earlier discussions of the models. In the case of the NPM model the elements of decentralization of authority and of accountability for results have been separated into an external component and an internal component.

Table 3.2: The bureaucratic model

The Bureaucratic Model
1. An apolitical public service (a separation of the political and administrative realms)
2. The organization operates according to the principle of hierarchy and levels in which there is supervision of the lower office by higher ones
3. The organization is characterized by permanence and stability, meaning little staff turnover and stable management
4. The organization operates according to explicit internal regulations.
5. Employees are remunerated according to fixed salary levels
6. Employees opt for working in water supply and sanitation companies in terms of vocation or sense of duty.

Table 3.3: The New Public Management model

The NPM Model
1. The organization enjoys a large degree of autonomy.
2. The organization is strongly accountable for results to external organizations and the owner
3. The organization has a strong market-orientation.
4. The organization has a strong customer-orientation
5. Within the organization decision-making has been decentralized
6. Within the organization employees have a strong accountability for results

3.9 Main Hypotheses and Propositions

As mentioned in the introductory chapter the objective of this research is to identify whether implementing reforms associated with the New Public Management can improve the performance of the poorly performing public water utilities. Do public water utilities perform better because they adhere to the New Public Management? And, do poorly performing public water utilities adhere to the 'traditional' bureaucratic model of public management? In order to address these questions, two main hypotheses have been identified. The hypotheses that will be tested in this research read as follows:

Hypothesis 1: Well performing public utilities adhere to the NPM model.
Hypothesis 2: Poorly performing public utilities adhere to the bureaucratic model.

In order to test these hypotheses a series of propositions relating to the NPM model and the bureaucratic model have been developed. These propositions are based on the discussion of the two models in this chapter. The propositions all relate to the public utility and as such, the utility shall be the main unit of observation in this research.

The propositions that derive from the first hypothesis, which concerns well performing utilities and the NPM model, are as follows:

1. Well performing public utilities have a large degree of external autonomy.
2. Well performing public utilities are strongly accountable for results to external organizations.
3. Well performing public utilities have a strong market-orientation.
4. Well performing public utilities have a stronger customer-orientation.
5. Well performing public utilities have decentralized decision-making within the organization.
6. Well performing public utilities have a strong accountability for results within the organization.

The propositions that derive from the second hypothesis, which relate to poorly performing utilities and the bureaucratic model are as follows:

7. Poorly performing utilities are apolitical.
8. Poorly performing utilities are characterized by hierarchal levels in which lower offices are supervised by higher ones.
9. Poorly performing utilities are characterized by permanence and stability.
10. Poorly performing utilities operate following internal regulations.
11. Employees in poorly performing utilities are remunerated according to fixed salary levels.
12. Employees opt for working in water supply and sanitation companies in terms of vocation or sense of duty.

4 Research Methodology

As mentioned in the previous chapter the hypotheses and propositions that are to be tested relate to the performance of public water utilities and the extent to which they adhere to either the bureaucratic model or to the NPM model. In this chapter the research methodology is presented. The first part of the chapter addresses two terms, which require explicit definitions. These two terms are the 'public utility' and 'good performance'. These two terms are explicitly defined in sections 4.1 and 4.2 of this chapter.

The second part of this chapter revolves around the actual research methodology. The main research methodology used is that of the case study approach. The aim is to identify a pattern for well performing public water utilities by analyzing two clusters of case studies. The identified pattern will then be compared with the bureaucratic model and the New Public Management model presented in the previous chapter. As the selection of case studies is of fundamental importance in case study research, the basis for selecting the cases is also elaborated upon. The chapter ends by discussing the two clusters of case studies that were selected (and why they were selected) and the collection of data concerning these cases.

4.1 Defining a 'Public' Utility

The water supply and sanitation sector is characterized by a wide landscape of organizational models. This landscape of models seems to have become increasingly diversified with the increase of private sector involvement over the past decades and the resulting landscape of options is a sliding scale from 'pure public' to 'pure private', which are also the two forms of utilities that are quite rare. Almost all utilities concern a mix of public sector and private sector involvement. In this sense I concur with the view of Bozeman (1987) who finds that that no organization (or utility) is wholly public or private. Only the nature of this mix seems to differ from utility to utility. This "blurring of the distinction between public and private" is not limited to the water supply and sanitation sector but appears to be describing a range of public sector activities (Hogget 1996:11).

Although the issue of what exactly is 'public' and what exactly is 'private' may seem trivial, in an era where discussions on 'privatization' in the water sector still lead to highly emotional responses, such a distinction is in fact crucial. Illustrative is a study financed by the Bank-Netherlands Water Partnership (BNWP) from 2003-2005[47]. The World Bank, following the realization that it would have to reengage itself with public water utilities decided to undertake a study in which it would analyze well performing public water utilities. The idea was that these well performing examples could provide insight into how to reform poorly performing public water utilities with World Bank

[47] This example is based on own experience as the consultant hired for this study was the UNESCO-IHE Institute for Water Education. I was part of the project team that was involved in this project.

assistance. The World Bank hired a consultant to undertake this study. After an initial selection of cases and development of the framework for analyzing the cases, the research-phase of the project, incorporating the actual case studies was started. Before any of the results were even published, however, the Public Services International Research Unit criticized the research. Hall (et al. 2003:7) argued that only a minority of the cases studies by this project "relate effectively to publicly-owned and managed water supply and sanitation operations". In their view a utility which has engaged in private sector participation by a "management contract or other forms of PSP" cannot 'effectively' be considered to be "publicly-owned and managed".

As such, when discussing public water utilities, it is first necessary to specify what we mean by a 'public utility' and what different kinds of public utilities we distinguish. In this research, a utility is considered to be public as long as the government owns more than 50% of the organization[48]. This definition, which adheres to using the "conventional distinction" of ownership to distinguish between public and private (Boyne 2002:98), largely follows the 'standard check-list' proposed by Praxy and Sicherl (as cited in Tuner and Hulme 1997). As the example, above shows, however, this definition of a 'public utility' is not likely to be generally accepted.

Table 4.1: The basic characteristics of three types of organizations in government[49]

	Ministry or Department	**Statutory Body (or parastatal)**	**A Company**
Legal Foundation	Normally an executive order	A Statute	A Memorandum and articles of association (registered under a Companies Act or the like)
Status as Legal Entity	Normally unincorporated (thus does not have a legal personality separate from that of the government)	Either incorporated of unincorporated	Incorporated (thus has own legal personality)
Basis of Ownership	Notionally, owned by the government as creator	Notionally, owned by the government as creator	Owned by the government as creator and shareholder
Legal Framework	Operating under public law	Operating under public law	Operating under private (company) law

Source: Based on Thynne 1994

It also should be noted that although the only criteria is the ownership of more than 50% of the organization, the actual type of public organization that is providing services can differ. In the case of the Mexican water supply and sanitation sector, for

[48] This means that the joint-stock company or '*empresa mixta*', in which the government owns more than 50% of the shares, is considered to be a public utility.

[49] Thynne (1994) also distinguishes the government 'trust' as a possible type or organization. This type of organization, however, is not very common in the water supply and sanitation sector.

example, the 'autonomous agencies' providing water services are organized as statutory bodies, fully owned by the government. In the case of SANASA in Brazil, which will be subject to discussion in chapter five, the water utility is organized as a company, or to be more precise a joint-stock company, in which the municipality owns 99.9% of the shares.

In general, four types of government organizations can be distinguished (Thynne 1994). Three of these types of organizations can also be found in large numbers in the urban water supply and sanitation sector. Table 4.1 provides an overview of these three common types and their general characteristics.

4.2 Defining 'Good Performance'

In chapter two the measurement of performance of a water utility was discussed using Tynan and Kingdom's benchmarking framework. That discussion ended with some qualifications concerning the use of that framework for determining if a utility is well performing or not. In this study two types of good performance are distinguished. First of all, a utility which has managed to improve performance on four categories of performance (labor productivity, financial sustainability, asset management and coverage/access) over a number of years will be considered well performing. Secondly, a utility which meets specified performance targets for these same performance categories will also be considered well performing. As such, the specific definition used for considering a utility well performing or not are as follows:

1) The utility shows continued good performance (according to the categories and indicators provided in table 4.2). These indicators are based on Tynan and Kingdom (2002), but the values of the targets have been altered to address some the qualifications discussed at the end of chapter two;
2) The utility has shown a remarkable improvement (or 'turn-around') in recent years on the categories and indicators in table 4.2. This turn-around would have to be visible by looking at the following indicators: working ratio, labor productivity, financial sustainability and unaccounted-for-water.

Table 4.2: Defining a well performing utility

Category	Indicator	Target
Labor productivity	Staff per 1,000 connections	<8
Financial sustainability	Working ratio	<1
Asset Management	Unaccounted for water	<25%
Coverage and access	Water coverage	>90%

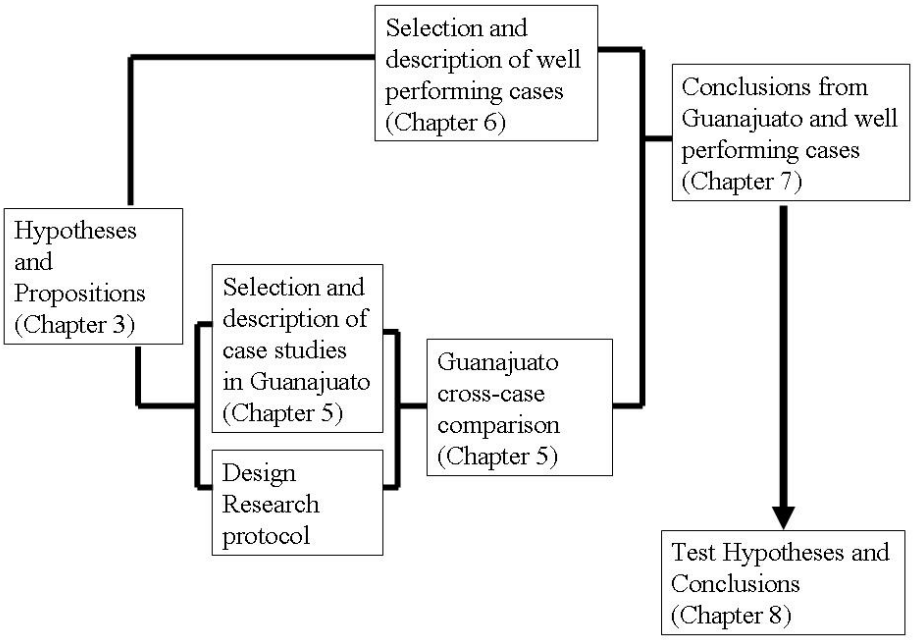
Source: Based on Tynan and Kingdom (2002)

4.3 Research Methodology: A Two-Staged Approach

When the original ideas for undertaking this research were developed in the beginning of 2003, the idea was to concentrate on a series of five case studies that were to be located in a similar region and within the same administrative boundary in order to ensure that the utilities would be operating in similar topographic, climatological and

institutional settings. The idea was to focus only on one cluster of case studies. However, the opportunity arose to expand the research allowing an extra check on the results obtained in the 'main' cases. As such, by chance, the research developed into a two-staged approach in which a first cluster of cases led to preliminary conclusions, which could then be checked by a second cluster of cases.

Figure 4.1 provides a graphic overview of the research methodology. The details of the methodology are discussed below.



Source: Based on Yin (1994)

Figure 4.1: Research methodology

4.3.1 The First Cluster: Five Cases in the State of Guanajuato, Mexico

As the main hypotheses both revolve around the issue of performance, the five case studies that were selected in the State of Guanajuato had to show varying performance. The idea being that this variation in performance could then be explained by a different pattern of adherence to one of the public management models, as the propositions would suggest. With this in mind a cluster of five case studies was selected in the State of Guanajuato in Mexico. The case studies were selected after consultation with Dr. Ricardo Sandoval, the Director of the State Water Commission of Guanajuato (CEAG) in May 2003. In addition to the variation in performance the cases were selected on the basis of two other criteria. These were:

1) The cases are all municipal utilities located in the State of Guanajuato in Mexico and as such are subject to a similar institutional environment. This means that the differences in terms of the institutional environment are likely to be limited. Moreover, all organizations are the same type of organization[50].
2) All but one of the utilities are of a similar scale, with all but one serving more than 100,000 inhabitants and having between 15,000 and 22,500 connections. The one exception is the utility in the city of Moroleón, which serves a relatively small amount of people. However, the number of connection (12,495) is more in line with that of the other utilities.

Table 4.3: Characteristics of five cases in Guanajuato in 2000

Name of the utility	Service Coverage (%)	Service area (pop.)	Water Connections	Average Consumption (lt/hab/day)
Sistema Municipal de Agua Potable y Alcantarillado de Guanajuato, (SIMAPAG)	94.4	141,196	22,395	97
Sistema de Agua Potable y Alcantarillado del Municipio de San Francisco del Rincon (SAPAF)	93.7	100,239	15,540	100
Sistema de Agua Potable y Alcantarillado Municipal de Valle de Santiago (SAPAM).	94.5	130,821	15,569	99
Comité Municipal de Agua Potable y Alcantarillado de Dolores Hidalgo (CMAPADH).	95.6	128,994	15,094	84
Sistema Municipal de Agua Potable y Alcantarillado de Moroleón (SMAPAM).	96.5	47,132	12,495	103

Source: Comisión Estatal del Agua de Guanajuato (2002)

4.3.1.1 Replication Logic and Pattern Matching

Testing of the propositions was done by focusing on the 'replication logic' as described by Yin (1994). For this cluster of five cases, I focused specifically on theoretical replication. Theoretical replication predicts that the researcher will find contrasting results but for predictable reasons. For the cluster of 5 cases in the state of Guanajuato, the differences that are 'predicted' relate to the adherence to the two management models.

As mentioned above, the five cases that were selected showed varying performance. If the propositions are not false, the expectation is to find contrasting patterns of adherence to the two management models among these five cases, as the propositions link the performance of the utility to a specific management model. On the basis of the propositions stipulated at the end of chapter three, the prediction is that

[50] The 'type of organization' is used as it is described in chapter two

poorly performing utilities will show a pattern that indicates a strong adherence to the bureaucratic model. At the same time the prediction is that the well performing utility will show a contrasting pattern, one that indicates a stronger adherence to the New Public Management model. As such, the expectation is that contrasting patterns will be visible, but for predictable reasons.

Testing for theoretical replication of the propositions was be done by using a 'pattern-matching logic' (Yin 1994). The main idea behind pattern-matching is that by comparing an empirically based pattern with a predicted one (in essence the propositions as stipulated above), the validity of the propositions can be tested. This means that instead of statistical generalization this study shall adhere to the method of 'analytical generalization' (Yin 1994). The predicted patterns for which we will analyze the case studies are based on the propositions stated earlier. This means that the pattern that is expected to characterize poorly performing utilities is as follows:

- A stringent separation of the political and administrative realms
- Hierarchy and levels in which higher levels supervise lower levels
- Permanence and stability
- Explicit internal regulations
- Remuneration of employees by fixed salary levels
- Employees who work in the utility out of vocation.

The pattern that is predicted for the well performing utilities contrasts with the above mentioned pattern, which is based on the bureaucratic model. The predicted pattern for well performing utilities is as follows:

- The utility enjoys a large degree of autonomy
- The utility is strongly accountable to external agencies and the owner
- The utility has a strong market-orientation
- The utility has a strong customer-orientation
- The utility has decentralized decision-making responsibilities
- The utility holds individual employees accountable for results that these employees produce.

In order to test the empirical pattern a semi-structured questionnaire was developed which was used as the guideline for data collection for all five cases. This semi-structured questionnaire is presented in Annex three. The questionnaire was tested thoroughly in the context of the BNWP Public Modes of Engagement Program. On August 25th and August 26th, 2003, a workshop was held in Delft, the Netherlands, during which the semi-structured questionnaire was tested and discussed[51].

[51] At the workshop the following people were present: David Tagg (consultant), Edna Aguiñaga (consultant), Do Nhat Hoang (MSc. Participant), Cesar Yñiguez (consultant), Meike van Ginneken (World Bank), Jan Janssens (World Bank), Bill Kingdom (World Bank), Jude Mwoga (consultant and NWSC), Phillip Pybus (consultant), Meine Pieter van Dijk (Professor UNESCO-IHE), Irma Philips (M.A. student), Marian Kwietniewski, Fadhel Ghariani (consultant), Fernando Ruiz Mier (consultant), Pedro Rojas (MSc. Participant), Klaas Schwartz (UNESCO-IHE).

4.3.1.2 Data Collection

Having selected the case studies and established a pattern for which to look for in the selected case studies, the next step was data collection. Apart from studying available documentation, reports and literature, data collection was undertaken in a number of ways. For each of the cases, the main method for collecting primary data was as follows:

- In July of 2003, a first round of interviews, over a period of four weeks, was held by a local consultant[52] using semi-structured questionnaire presented in Annex three as a guideline.
- In October 2003, a second round of interviews, over a period of five weeks, was held at all utilities. This time both the local consultant and I undertook the interviews. As a guideline for the second round of interviews the semi-structured questionnaire was used again. This time, however, the answers provided in July were included. During this second round I attempted to collect any missing information and clarify any uncertainties from the first round of interviews. The list of people interviewed is presented in Annex four.
- In September/October 2005, I undertook a final round of fieldwork lasting six weeks . The purpose of this last visit was to collect any missing data from the case studies that were still outstanding.

4.3.2 The Second Cluster: Four 'Well Performing' Utilities

In the course of 2003, the opportunity arose to undertake more case studies using the same guideline that was used for the five cases in Guanajuato. These cases were either undertaken as part of the BNWP project Public Modes of Engagement (BNWP 033) project or as Master of Science (MSc.) theses by MSc. students at the UNESCO-IHE Institute for Water Education or a combination of both. In contrast to the cases from Guanajuato, these cases are scattered around the globe, with two cases from Latin America, one from Africa and one from Asia. What makes these cases interesting is that all these cases are viewed and promoted as examples of well performing public water utilities. In this context these cases have received considerable publicity at various international fora and in numerous publications over the past years[53]. The main purpose of including these cases in this research is to check if the findings from the five cases in Guanajuato are corroborated by evidence from these four cases. The selection of these cases is based on:

- Exemplary function. These cases have been presented in international fora and in publications as being examples of well performing utilities. The fact that three of these utilities were selected in the BNWP Public Modes of Engagement project,

[52] The local consultant who undertook the first round of interviews was Ms. Edna Aguiñaga, who was financed under the BNWP 033 project.
[53] In section 6.1 of chapter six, the recognition received by these utilities is elaborated upon.

which sought to analyze 10+5 cases of well performing public water utilities, supports this[54].

- The performance of the utility. All utilities are considered to be well performing or have shown remarkable improvements in performance over the past decade, and as such meet the criteria for well performing utilities stipulated earlier.
- The scale of the utility. The utilities differ in scale. One of the utilities has a national mandate, two operate at state or provincial level and one is a municipal utility. As we are assuming that well performing utilities adhere to the NPM model, the issue of scale should not matter, so the same patterns should be observed regardless the scale of the utility.
- Geographical spread. The utilities are geographically distributed over the continents. The geographical spread of the cases is important as it can contribute to the generalizability of the conclusions of this research as the utilities operate in a different institutional context.

The second cluster of cases consists of the following four cases:

- Hai Phong Water Supply Company (HPWSC), Vietnam
- National Water and Sewerage Corporation (NWSC), Uganda
- SANASA, Campinas, Brazil
- SADM, Monterrey, Mexico

Three of these four cases (HPWSC, NWSC and SANASA) were identified as part of a larger sample of 10 cases, which was the focus of the BNWP Public Modes of Engagement project. Selection of these cases was based on a long-list of cases, which counted 27 utilities. These utilities were identified by sector professionals through interviews[55]. Selection of the final 10 cases from the list of 27 was based on a discussion between the different project members and task managers as to which cases would be most suitable for the BNWP 033 project.

The case of SADM was added at a later stage. The reason for this is that this utility has the reputation of having a long tradition of good performance. SADM was, in fact, already mentioned in 1990 as being one of the best performing utilities in Latin America (Yepes 1990).

Of these cases SANASA and SADM represent cases, which have performance indicators in-line with the definition of a well-functioning utility as provided in the previous chapter[56]. HPWSC and NWSC present a performance, which does not meet the criteria for a well performing utility as defined earlier. HPWSC has service coverage below 90% and unaccounted-for-water levels above 25%. The NWSC has unaccounted-for-water levels, which are well above 25% and staff per 1,000 employees

[54] The project sought to analyze 10 single case studies and five case studies which were subject to a smiliar institutional environment. These five cases were the five municipal water utilities in Guanajuato, Mexico.

[55] The majority of these interviews took place at the World Bank in January 2003.

[56] On the indicator of unaccounted for water SANASA scores 1% above the target of 25%. However, it was decided to include SANASA in light of the fact that the level of unaccounted for water improved significantly over the past decade, decreasing from 37% in 1995 to 26% in 2003.

above 7. The reason for including these cases, however, is that these indicators have improved noticeably over the past years. In the case of NWSC, unaccounted-for-water decreased from 42% in 1999 to 39% in 2003. In that same period, staff per 1,000 connections decreased from 21 to 11 staff per 1,000 connections (Mwoga 2004). In the case Hai Phong, unaccounted for water decreased from 72% in 1992 to 32% in 2002. In that same time frame service coverage increased from 68% to 85% (Hoang 2004).

Table 4.4: Characteristics of 4 cases in 2002

	Pop served (millions)	Service coverage –water supply	Level of decentralization	UfW	Working Ratio	Staff per 1000 population served
Hai Phong Water Company, Vietnam (HPWSC)	0.54	85%	Municipal	32%	0.62	1.27
National Water and Sewerage Corporation, Uganda (NWSC)	1.3	63%	National	39%	0.79	0.72
SANASA Campinas, Brasil	0.98	98.9%	Municipal	26%	0.79	1.68
SADM, México[57]	3.44	99.18	Regional	24.94%	0.73	0.94

Sources: Hoang 2004, Mwoga 2004, Aguiñaga 2004, Ramos 2005, Rangel 2005

4.3.2.1 Literal Replication and Pattern-Matching

This cluster of cases aims at 'literal replication'. Literal replication predicts similar results in similar cases meaning that because all of these utilities are considered to be well performing utilities, they should also show similar adherence to the New Public Management model if the propositions are not false. Similar to theoretical replication for the five cases in Guanajuato, these cases were analyzed using 'pattern-matching logic'. In fact, the patterns used for these four cases were the same as the patterns used for the cases in the State of Guanajuato. This means that the following pattern is predicted for these four cases:

- The utility enjoys a large degree of autonomy
- The utility is strongly accountable to external agencies and the owner
- The utility has a strong market-orientation
- The utility has a strong customer-orientation
- The utility has decentralized decision-making responsibilities
- The utility holds individual employees accountable for results that these employees produce.

[57] Figures from 2003

4.3.2.2 Data Collection for the Second Cluster of Four Well Performing Cases

As mentioned earlier, the collection of data for the cluster of four well performing utilities is based on two main sources. These sources are the BNWP 033 Public Modes of Engagement Project and the research work undertaken by a number of MSc. students at the UNESCO-IHE Institute for Water Education. For the Master of Science theses at UNESCO-IHE, I was involved as supervisor in all cases.

- For the case of Hai Phong, Vietnam, Mr. Do Nhat Hoang, applied the analytical framework in the period October 2003 – January 2004[58]. In November 2003, I also visited the utility in Hai Phong with Mr. Hoang and together with him held interviews with managers at the utility and with the former managing director of the utility. The case description in the annex draws heavily on Mr. Hoang's case description and my notes during the interviews in November 2003.
- For the case of NWSC, Uganda, this study depended on two persons. As part of the BNWP 033 project, Mr. Mwoga undertook as case study of the NWSC in the fall of 2003. In addition, Mr. Mwoga defended his MSc. Thesis in 2003, which addressed the use of performance contracts by the NWSC. In addition, Ms. Irma Philips researched the NWSC for her Master of Arts Thesis in 2004 at the University of Twente, which was arranged in conjunction with the UNESCO-IHE and in which I was involved as the supervisor from UNESCO-IHE. Ms. Philips focused her thesis on the influence of the political environment of the functioning of NWSC. These three reports form the main source for the case description in the annex.
- For the case of SANASA, Brazil, this research uses a consultant's report by Ms. Edna Aguiñaga and a Master of Science study by Ms. Mara Ramos as the main sources. Ms. Aguiñaga's consultancy report concerned a case study of SANASA in the context of the BNWP 033 project in January 2004. As part of her Master of Science thesis, Ms. Ramos visited SANASA in January 2005.
- For the case of SADM, Mexico, this research depends strongly on the research of Mr. Rangel in the context of his Master of Science thesis at the UNESCO-IHE Institute for Water Education. For his MSc. Thesis Mr. Rangel undertook case studies of three utilities, which have different performance records, in the country of Mexico. The utility from Mr. Rangel's selection of case studies with the best performance was SADM, which he visited for his fieldwork in the beginning of 2005.

[58] For his MSc. Thesis, mr. Hoang compared three cities in Vietnam (Hai Phong, Hanoi and Ho Chi Minh City) applying the analytical framework described in Chapter three for all three cases (Hoang, 2004). The Hai Phong case doubled as a case for the BNWP 033 project.

5 Five Public Water Utilities in the State of Guanajuato, Mexico

In this chapter, the five case studies in the state of Guanajuato will be presented. This presentation begins by providing a very brief description of the five municipalities in which the water utilities operate. Once this description has been provided the level of performance of the five utilities is elaborated upon. This overview will show that one of the utilities can be classified as well performing, one as having improved performance substantially over a period of three years and three utilities are relatively poorly performing. After discussing the performance of the utilities, the chapter focuses on the legal framework and institutional set-up of the water supply and sanitation sector in the State of Guanajuato. All five cases operate within the same institutional setting and as such, the characteristics discussed apply to all five cases. Having identified the institutional setting, the most salient findings from the five case studies will be discussed in the third part of this chapter. The final part of this chapter consists of a cross-case comparison, in which the patterns found in the five case studies are compared in terms of their adherence to one of the public management models. This will lead to preliminary conclusions, which can be drawn about the propositions presented at the end of chapter three. In the following chapter these preliminary conclusions will then be compared with findings from the second cluster, which consists of four well performing utilities.

5.1 Description of the Five Cases

In this section a brief description of the five case studies in Guanajuato will be provided. Apart from the physical location of the municipality some salient features of the municipality will be elaborated upon. The public water utilities operate in the municipalities of Dolores Hidalgo, Moroleón, Valle de Santiago, San Francisco del Rincon, and Guanajuato.

5.1.1 Dolores Hidalgo

The Municipality of Dolores Hidalgo counts 129,000 inhabitants and is located in the center of the State of Guanajuato. The city is famous for being 'the Cradle of National Independence' as it was in this city that Don Miguel Hidalgo y Costilla, pronounced his famous 'Cry for Independence' (*El Grito*) in the early morning hours of September 16th, 1810. Apart from being the cradle of Independence, the municipality is known for its traditional ceramics industry. In terms of employment per economic activity, the manufacturing industry is Dolores' largest employer, followed by agriculture and cattle farming, and commerce. The per capita GDP in Dolores is approximately US$ 2,300 below the state average of US$ 5,376 (Instituto Nacional para el Federalismo y el Desarrollo Municipal 2003).

Figure 5.1: Location of the five utilities in Guanajuato

5.1.2 Moroleón

The municipality of Moroleón with its 47,000 inhabitants is located in the southern part of the State of Guanajuato bordering on the State of Michoacan. Although more than 80% of its territory is used for agriculture, the main economic activity in terms of income generation in the municipality is the textile industry, which accounts for 91% of the municipality's income. The industrial development of Moroleón is also evident in the per capita GDP, which lies about US$ 1,000 higher than the state average. The importance of the textile industry is also evident in the employment figures of Moroleón. Almost two-thirds of the population works either in the manufacturing industry (which is mainly focused on textile manufacturing) or in commerce (which has a strong focus on selling the products produced in the textile industry).

5.1.3 Valle de Santiago

The municipality of Valle de Santiago is located in the southern part of the State of Guanajuato. The per capita GDP of the more than 130,000 inhabitants living in the municipality of Valle de Santiago is considerably less than the State average. In fact,

the per capita GDP is almost US$ 2,000 below the state average. About 70% of the territory of Valle is used for agriculture and cattle farming. The main crops harvested include corn, beans, sorghum and alfalfa.

5.1.4 San Francisco del Rincon

The municipality of San Francisco del Rincon was created by the governor of the State of Guanajuato in 1867. The municipality is located in the western part of the State of Guanajuato. The per capita GDP in the municipality lays approximately US$4,000 above the State average, which is largely explained by the prominence of the industrial and manufacturing sector in San Francisco del Rincon. The main manufacturing activities, for which this municipality is renowned, concern the production of footwear and hats. The prominence of the manufacturing and industrial sector is also visible in an overview of industrial activities in terms of the employment of the municipality's residents. Whereas a municipality like Valle de Santiago had only 10% of its residents working in the industrial and manufacturing sector, more than half the employed population works in this sector in San Francisco.

Table 5.1: General characteristics of the five cases in the State of Guanajuato (2000)

Indicator	Dolores Hidalgo	Moroleón	Valle de Santiago	San Francisco del Rincon	Guanajuato
Total population	128,994	47,132	130,821	100,239	141,196
Population growth 1995-2000 (%)	1.63	0	-0.09	0.6	1.95
Population density (persons per km^2)	81	262	156.54	194	140
Dwellings	24,015	10,838	26,307	18,975	28,871
Literacy rate (%)	82.8	90.2	86.2	89.5	92.6
Population earning less that minimum wage (%)	10.4	9.12	14.82	5.62	8.23
Population earning between 1 and 2 times minimum wage (%)	37.2	28.41	34.73	28.97	26.04
Population earning between 2 and 5 times minimum wage (%)	26.72	38.69	23.50	45.43	38.53
GDP per capita (US$)	3,004	6,365	3,716	10,410	6,979
Infant mortality rate (per 1,000 live births)	29.10	21.6	26.2	23.3	24.10
Life expectancy index[59]	0.80	0.86	0.82	0.84	0.84

Source: Instituto Nacional para el Federalismo y el Desarrollo Municipal 2003

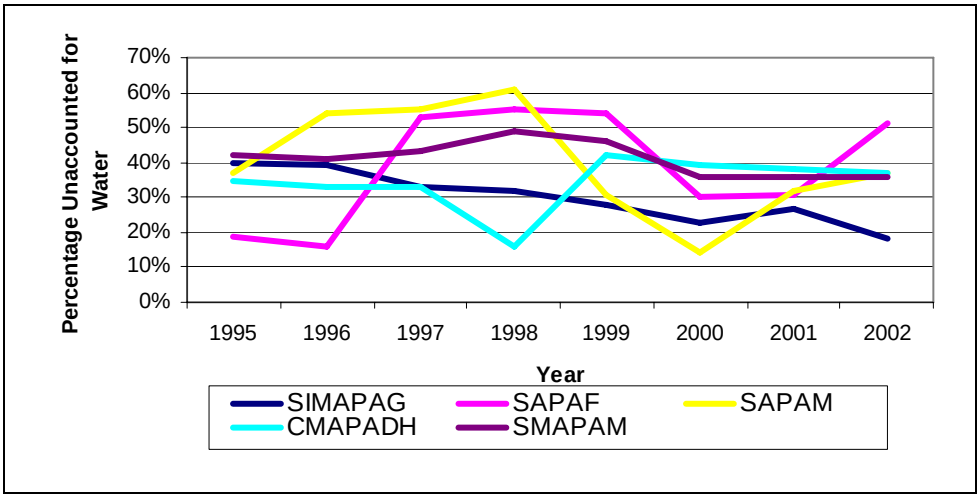
[59] The life expectancy index is calculated by applying the following general formula: LFI = (Actual value – minimum value)/ (maximum value – minimum value). In this formula the maximum value is considered to be 85 years and the minimum value 25 years. The result of this formula is an indicator between 0 and 1. The United States, for example, have a life expectancy index of 0.87. Kenya has a life expectancy index of 0.34 (United Nations Development Programme 2004)

5.1.5 Guanajuato

The municipality of Guanajuato is the capital of the State of Guanajuato. It not only houses the State Government offices, but also the main buildings of the University of Guanajuato, which is attended by some 15,000 students. The municipality is located in the center of the State and is renowned for its colonial architecture, which was constructed following the discovery of silver in the vicinity in the late 1500's. The city has since received the status of UNESCO World Heritage site. The presence of the University and the State Government is visible in the employment structure in Guanajuato. Close to 1 out of 10 people works in the education sector and 1 in 20 for government. With the colonial city being a World Heritage site, the tourist industry is very important. The manufacturing and industry sector provides employment to about 11% of the working population.

5.2 Comparison of Performance for Five Utilities in the State of Guanajuato

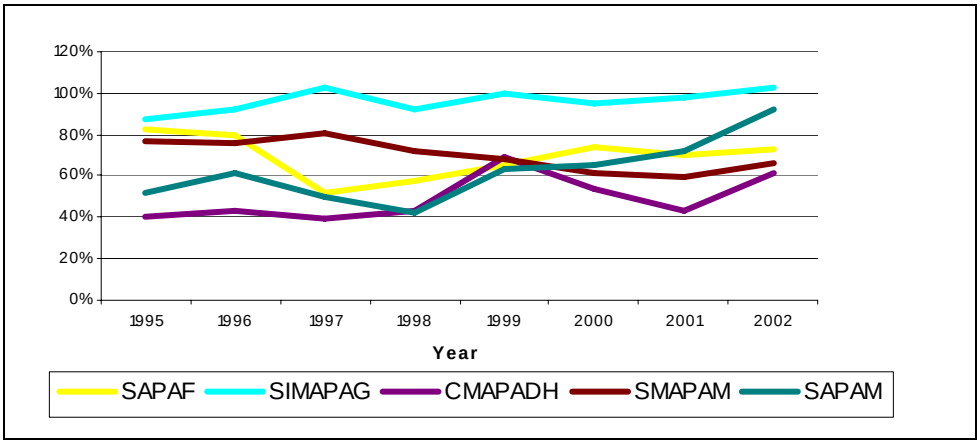
As mentioned in the methodology, the selection of the five case studies is based on the possibility of making a distinction in the performance of these utilities. Below the performance of the five utilities is compared for the period between 1995 and 2002. Over this period the performance of these utilities shows substantial variation. Not only does performance vary considerably between service providers, but also within one service provider performance at times shows a large variation from one year to the next. Over these seven years, unaccounted for water levels have shown significant fluctuation for many of the utilities. In one case (SAPAF), unaccounted for water supposedly jumped from below 20% to well over 50% in the span of 1 year. In the case of SAPAM, the official data suggests that the UfW went from over 60% to 15% and back up to 35% in the span of four years. A number of factors can explain such tremendous variations. Part of the large fluctuations could possibly be explained by poor measurement of unaccounted for water over the paste decade leading these utilities to simply estimate UfW. Another possible, and perhaps more likely, explanation is that it may have been politically desirable for the utility to report estimates which are much more optimistic than realistically possible. As such, the extreme downward peaks in this graph (the sharp downward drops followed by sharp increases) should be taken with some caution. Nonetheless, the most consistent of the utilities is SIMAPAG, which has reduced its unaccounted-for-water from close to 40% to 18% over the past 7 years at a steady pace. SIMAPAG is the only utility, which has managed to have unaccounted for water rates, which lie below or slightly above the 25% mark between 1999 and 2002.



Sources: CMAPADH 2003; SIMAPAG 2003; SMAPAM 2003; SAPAM 2003; SAPAF 2003

Figure 5.2: Unaccounted for water 1995-2002

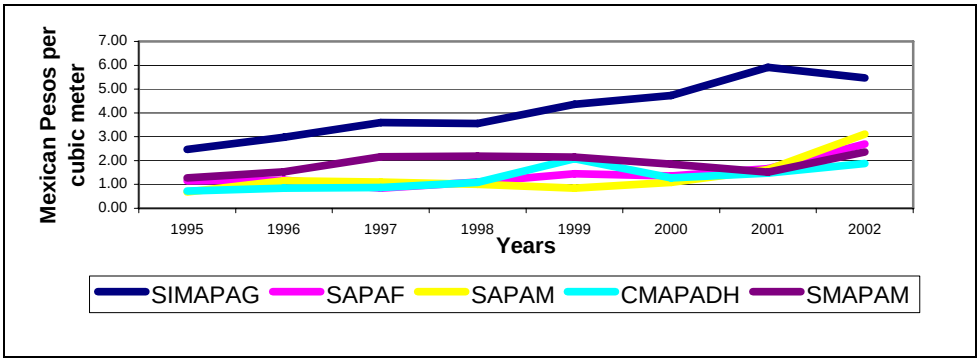
Whereas the unaccounted-for-water presents an indication of the state of physical infrastructure, the ratio of income generated versus income required presents an indication of the financial viability of the utility. In figure 5.3, this ratio is presented for the utilities over the 1995-2002 period. From the graph it is clear that the only utility that is managing to generate enough income is the utility of SIMAPAG. The other utilities seem to cover only 60%-80% of their required needs. Impressive is also the significant increase displayed by the utility from Valle de Santiago, which in 1998 only met approximately 40% of its requirements, whilst in 2002 managed to achieve well over 90% of its requirements.



Sources: CMAPADH 2003; SIMAPAG 2003; SMAPAM 2003; SAPAM 2003; SAPAF 2003

Figure 5.3: Actual versus required income 1995-2002

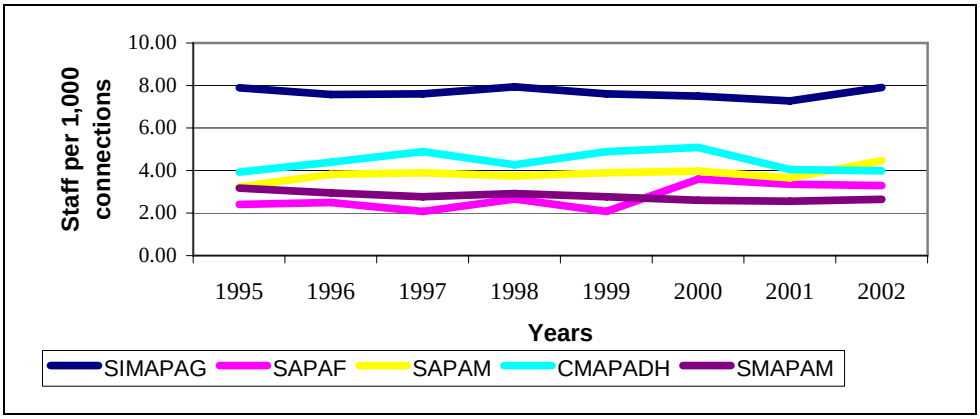
The main explanation of why SIMAPAG was able to meet its requirements and why the utility from Valle de Santiago has shown impressive improvements is that in 2002 these utilities had the highest tariff levels of the five utilities. SIMPAG, which has been able to meet its requirements (more or less) for the 5-year period between 1997 and 2002, has by far the highest tariffs. The tariff level in Valle has more or less tripled over the same time period.



Sources: CMAPADH 2003; SIMAPAG 2003; SMAPAM 2003; SAPAM 2003; SAPAF 2003

Figure 5.4: Tariff levels 1995-2002

Whereas SIMAPAG is the best-performing utility in terms of unaccounted-for-water and in terms of generating income to meet the requirements, the utility performs relatively poorly in terms of the number of employees per 1,000 connections. All other utilities have between 2.5 and 4.5 staff per 1,000 connections, whilst SIMAPAG has almost 8 staff per 1,000 connections. Also of interest is that the figure for SAPAM has increased considerably between 2001 and 2002.



Sources: CMAPADH 2003; SIMAPAG 2003; SMAPAM 2003; SAPAM 2003; SAPAF 2003

Figure 5.5: Staff per 1,000 connections 1995-2002

Although the value of 8 staff per 1,000 connections places SIMAPAG at the limit of being a 'well performing utility', as defined by this research in chapter two, not too much emphasis will be placed on this issue. First of all, as Tynan and Kingdom (2002:1) mention in their presentation of performance of a utility operational efficiency is defined as the "lowest cost use of labor, energy, water and materials in the day-to-day operation of a utility, *with the most efficient combination partly dependent on local input prices* and prior capital investment decisions" (emphasis added). If local input prices for labor are relatively low, then staff per 1,000 connections may be relatively higher than in locations in which labor costs are relatively high, without losing operational efficiency. The second argument is that the importance of operational efficiency lies in the fact that it influences the level of cost recovery of the utility. Increasing efficiency, in other words, is a means of improving the financial performance of the utility. Efficiency gains could then be used for a variety of purposes such as decreasing tariffs if the utility operates at cost recovering levels, increasing investment, or other goals that the utility may want to achieve. However, as we have seen from the level of actual income versus required income, SIMAPAG is the only utility which has income levels close to the required levels. Moreover, if we compare the salary costs in relation to total expenses, SIMAPAG turns out to be placed in between the other utilities. The ratio of salary costs to total expenditure for 2001 was as follows: SAPAM (30%), SMAPAM (32%), SIMAPAG (35%), CMAPADH (42%) and SAPAF (50%) (CEAG 2001; CEAG 2002).

On the basis of the comparison in performance, two distinct groups can be distinguished. One group consists of SIMAPAG, which displays the best performance of these utilities. The other group consists of the remaining four utilities. Of these four utilities, however, the case of SAPAM deserves some extra attention. The reason being that within the water supply and sanitation community in Guanajuato, the water utility was recognized as having dramatically improved its performance over the 2000-2003 period and for this reason received an award from the State Water Commission in Guanajuato in 2003. Elements of the improvement can be seen in terms of the financial viability of the water utility, which increased sharply in this period.

5.3 The Water Sector in the State of Guanajuato

As mentioned in chapter two, when looking at the water supply and sanitation sector it is important to observe which entity is responsible for what step in the service provision process, what the characteristics are of that organization and if the responsible organization(s) contract third parties to undertake parts or all of the steps for which they bear responsibility. In this section the legal framework and the institutional set-up of the water services sector in the state of Guanajuato will be discussed in greater detail. This framework is the same for each of the five utilities, which will be the focus in the remainder of this chapter.

5.3.1 Legal Framework for the Provision of Water Services in Mexico

In identifying how the responsibilities for providing water services have been attributed to the different organizations, it is necessary to understand that Mexico is a federation

in which a hierarchical relationship exists between the different levels of Government and the legislation that is produced at the different levels. In the case of Mexico, the responsibilities for providing water services are first addressed in the Mexican Constitution. The most important articles in the Constitution with respect to the water supply and sanitation sector are article 27 and article 115. Article 27 arranges that the Federal Government has ownership of the country's water resources and they have the authority to provide water rights and concessions to third parties. Article 115 arranges the responsibilities of the municipalities. Article 115 was modified in the early 1980's to attribute increasing powers to the municipalities, including the responsibility for providing public services such as water supply, drainage, sewerage, treatment of wastewater, and disposal of wastewater.

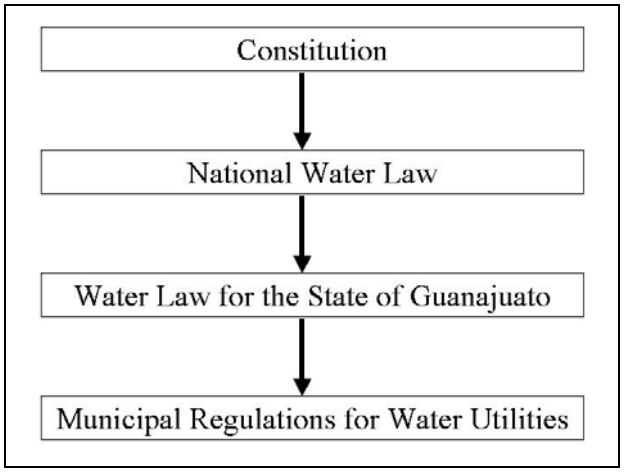


Figure 5.6: Legal framework for the provision of water services in Mexico

5.3.1.1 The National Water Law

The National Water Law, which comes forth from Article 27 of the Constitution, provides for the general institutional framework in which the water sector is managed in Mexico. The National Water Law was enacted in 1992, revised in 1998 and was under revision again in 2003. The National Water Law states that it is the role of the Federal Government to manage the national water resources (dams, rivers, etc.) and to sell these resources to four categories of users. These four categories are irrigation districts, hydropower systems, industrial users and municipalities. Article 45 of the National Water Law further stipulates that it is the responsibility (*competencia*) of the municipal authorities to arrange the exploitation and use of water resources that are attributed to them[60]. The National Water Law furthermore attributes specific responsibilities to the National Water Commission (*Comisión Nacional del Agua* - CNA).

[60] It should be noted that only a fraction (6%) of the total water resources are used for urban water supply (Capital Advisors 1999)

5.3.1.2 Guanajuato State Water Law

The State Water Law was developed by the State Water Commission (*Comisión Estatal del Agua de Guanajuato* - CEAG) of Guanajuato together with CNA and was published in the Official Newspaper of the State of Guanajuato in 2000. The State Water Law reiterates article 115 of the Constitution and explains that the municipalities are to create an autonomous public agency or another form of organization stipulated in the Law of Municipal Organizations. The law furthermore stipulates that service providers should charge tariffs, which are sufficient for covering the costs of service provision and provides guidelines for the municipalities, which are to determine the actual tariffs. In addition to providing these guidelines the State Water Law spells out the obligations (and the resources) of the State Water Commission.

5.3.1.3 Guanajuato State Law on Municipal Organizations

The Guanajuato State Law on Municipal Organization has the objective of regulating the government, structure and functioning of the Municipalities. Article 141 of this Law attributes the responsibilities of "drinking water, drainage, sewage collection, treatment and discharge". This Law also makes the creation of 'autonomous agencies' (*organismos decentralizados*) possible that become responsible for undertaking part of the responsibilities attributed to the municipalities. In fact article 146 of this Law finds the autonomous agency to be the preferred option for organizing the provision of water services at the municipal level. The creation of these autonomous agencies, which remain subject to the coordination and supervision of the municipal government, is subject to a set of specific requirements, which are stipulated in Article 127. Amongst others, these requirements include:

- The goals of the organization;
- Relationship with the municipal government;
- Establishment and characteristics of a monitoring entity;
- Anything else that needs to be arranged to perform its functions.

Another important aspect is that the Law states that in case an autonomous agency is responsible for the provision for a 'public service', the Municipal Government will, based on a proposal of the relevant agency, set the tariffs and publish them in the official State Journal. This means that for the municipal water utilities of Guanajuato the municipal government, which in Mexico is strongly dominated by the municipal president, has the authority to set tariffs. Furthermore, this law arranges the reporting requirements of the agency. The agency is to report to the Municipal Government every three months and the Municipal Government can request information at any time it feels it is necessary.

5.3.2 Institutional Set-up of the Water Sector

The legislation described above provides the legal backbone for the service provision process in the State of Guanajuato. The water services sector in the State of Guanajuato is characterized by a wide array of organizations, which play a role in the water sector of Guanajuato. What complicates matters is that these actors and organizations operate at federal, state and municipal level. What results is a complex overview of organizations as depicted in figure 5.7. The role of the organizations mentioned in this figure will be elaborated upon below.

5.3.2.1 Federal Level

At the federal level 6 main actors or organizations play a role in the water sector. As figure 5.7 shows, some of these federal organizations are also deconcentrated to state and even municipal level. Below the main responsibilities of the actors and organizations at the federal level is briefly described.

5.3.2.1.1 The President

According to article 27 of the Constitution, the Mexican President has the authority to regulate the abstraction and use of the nation's water. The President also has the possibility to propose new laws relating to the water sector. Moreover, the President has considerable influence on the national water policy as he is authorized to appoint the Minister of the Ministry of the Environment and Natural Resources (*Secretaría de Medio Ambiente y Recursos Naturales* - SEMARNAT) and the National Water Commission.

5.3.2.1.2 The National Congress

The National Congress has the responsibility of approving the annual federal budget as well as approving national legislation related to the water sector. As such, they have influence on the national water policy as it passes through the two chambers of the National Congress.

5.3.2.1.3 Ministry of Environment and Natural Resources (SEMARNAT)

The main objective of SEMARNAT is to constitute a national policy for environmental protection in order to establish a foundation for sustainable development of the country. The National Water Commission, whose tasks are elaborated upon below, officially falls under the umbrella of SEMARNAT.

5.3.2.1.4 National Water Commission (CNA)

The National Water Commission is supervised by a Technical Council, in which a number of Federal Ministries are represented. The CNA is organized as a deconcentrated organization with offices at the central level (1), regional levels (13) and state levels. The national CNA office develops the national water policy and supports the operation of the regional and state offices. The regional offices are organized on a hydrological basis, having a strong focus on the management of water resources. The state offices apply the policies, strategies and programs developed by

CNA in their respective states. The main responsibilities attributed to the Commission in relation to the water supply and sanitation sector include:

- To propose the national water policy to the President;
- To set norms relating to the quantity and quality of water use;
- To support the development of water supply and sanitation systems;
- To issue concessions for the abstraction of water resources and the discharge of effluents;
- To issue and monitor water rights;
- To monitor the application of the National Water Law.

Norms set by the CNA are applicable to all water utilities and include:

- NOM-003-CNA-1996: regarding requirements for the construction of groundwater wells;
- NOM-004-CNA-1996: regarding protection of aquifers during maintenance, rehabilitation and cancellation of wells;
- NOM-001-ECOL-1996: regarding standards for wastewater discharge to water sources
- NOM-002-ECOL-1996: regarding standards for wastewater discharge to sewer systems

5.3.2.1.5 Ministry of Health (SS)

The Ministry of Health sets the standards for drinking water quality. Like most federal organizations the Ministry of Health operates at various levels, having offices at both the state and municipal level. The national Ministry sets the national norms for drinking water quality, whilst the state and municipal offices of the Ministry of Health undertake inspection of adherence to these norms. These norms, which are applicable to all water utilities include:

- NOM 012-SSA1-1993: regarding standards that must be met by drinking water supply systems;
- NOM 013-SSA1-1993: regarding standards that must be met by transport and distribution of drinking water by truck;
- NOM 014-SSA1-1993: regarding procedures for taking samples of drinking water;
- NOM 127-SAA1-1994: regarding quality and treatment standards for drinking water;
- PROY-NOM-179-1998: Regarding monitoring, evaluation and control of drinking water quality distributed by the water supply systems

5.3.2.1.6 *Banco Nacional de Obras y Servicios Públicos* (BANOBRAS)

In light of the importance of public infrastructure for the economic development of the country, a development bank for public infrastructure projects was created in 1933. This bank was later transformed into BANOBRAS and operates under the Ministry of Finance (*Secretaría de Hacienda y Crédito Público*). Similar to other national agencies, BANOBRAS also has agencies operating at the state level.

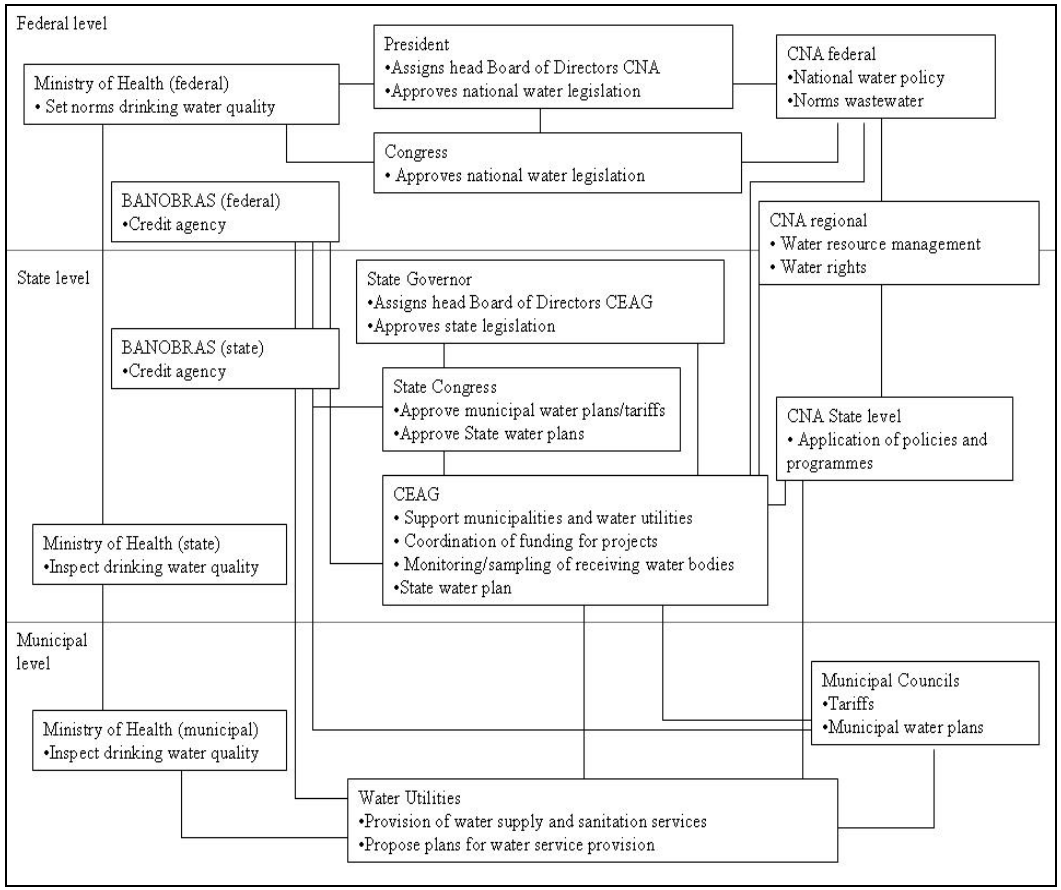


Figure 5.7: Overview of the organizations in the water sector of Guanajuato

5.3.2.2 The State Level

Every state government is structured according to its own constitution and administrative laws. The most important state law in Guanajuato concerning the water supply and sanitation sector is the Water Law for the State of Guanajuato, which was promulgated in the year 2000. This law organizes the planning, management, conservation and preservation of water in the State. Moreover, it establishes the general basis for the municipalities to provide the services of water supply and sanitation. As such, this law arranges the roles and responsibilities of the different actors in the water sector of the State of Guanajuato.

5.3.2.2.1 State Government

Apart from monitoring the performance and functioning of the State Water Commission, the Role of the State Government is officially relatively limited. The main role played by the State Government is that they are able to control the access that water utilities have to financial resources. This control is done in a number of ways. First of all, the State Government is able to provide guarantees for loans from the development Bank, BANOBRAS and other possible financiers. Secondly, the utility is also able to influence the budget available for the State Water Commission, which in turn can allocate funds to municipal utilities. Finally, the municipalities let their tariff proposals pass through the State Legislature for approval, although this is generally nothing more than a formality.

5.3.2.2.2 State Water Commission (CEAG)

As stipulated by the Water Law for the State of Guanajuato the State Water Commission is an organization with a separate legal status, which is headed by a Commission of Directors, chaired by the State Governor or a representative of the Governor. In addition to the chairman the Commission consists of representatives from a number of state ministries, six representatives from municipal councils, one representative for each use of the water (i.e., domestic, commercial, industrial, etc.) and the executive secretary of the State Water Commission

The State Water Commission has among others the following responsibilities[61]:

- To implement policies, strategies, objectives, programs and norms that lead to the optimal use of water in the state;
- To take concrete actions to preserve and conserve water in the State;
- To promote a 'culture of water', which considers water a vital and scarce resource that must be used rationally and efficiently;
- To advise, following a request from the municipal councils, in the development of municipal programs for water services, such as providing support and technical advice to water utilities;
- Anything else that is stipulated in the State Water Law and its regulations.

[61] *Ley de Aguas para el Estado de Guanajuato: article 6*

The funds that CEAG has at its disposal form the main instrument by way of which it can influence the development of the state's water supply and sanitation sector. Rather than influence the functioning of utilities by way of sanctions and penalties, CEAG applies an incentive system based on the access to the grants that are part of the programs that it manages. However, because many of the funds received by CEAG are earmarked as well as the fact that CEAG's budget must receive prior approval from the State Congress, CEAG has limited flexibility in the way it wishes to allocate the funds that it possesses.

5.3.2.3 Municipal Level

Apart from the deconcentrated federal agencies, the municipal level has two main organizations that play a crucial role in the provision of water services. These organizations are the Municipal Government and the Municipal water utilities.

5.3.2.3.1 Municipal Government

In the state of Guanajuato the municipalities are the owners of the water supply and sanitation utilities. Each municipality adopts and publishes statutes, which stipulate the institutional set up of the utility (including the role of the Board of Directors, the Managing Director, the Municipal Representative in the Board, etc.). According to the State Water Law of Guanajuato the municipal councils have the following responsibilities:

- Develop, implement and evaluate policies aimed at the promotion of sustainable water development in the municipality;
- Approve the tariffs for the provision of water services;
- Implement actions in order to prevent the pollution of water and improve its quality in accordance with relevant regulations;
- Approve, publish and to follow up on municipal water services programs;
- Negotiate with other municipalities about the creation of intermunicipal service providers;
- Anything else that is mentioned by law or regulations.

5.3.2.3.2 Water utilities

Actual service provision is done by the municipal water utilities. In the cases studied these were all 'autonomous agencies' as described in the State Law on Municipal Organization. Each utility has its own set of statutes that specify how the utility is set-up, administrated and functions. The regulations also specify in greater detail how the tariffs are to be set and any other matter the municipal government decided to arrange in the regulations.

5.4 Cross-case Comparison for the Five Utilities in the State of Guanajuato

In this section the findings of the five case studies are presented. The findings relate to the different dimensions of the bureaucratic model and the New Public Management highlighted in chapter three. For each dimension the main observations will be presented first in bullet form. Then the main observations will be discussed in greater detail. Each section ends with a short summary of the cases in the form of a large table, which illustrates important features for that dimension.

5.4.1 Autonomy and accountability of the utilities

The autonomy of the utility essentially relates to the degree to which the management of the utility is able to make decisions regarding the provision of water services. The discussion below, however, also provides information regarding the degree to which the utilities can be seen as being apolitical or not, the permanence and stability of the organization, and the degree to which the organization follows internal regulations. Accountability, which will be discussed following the discussion about autonomy, relates to the degree to which the management of the utility is held accountable for the decisions they make.

5.4.1.1 Autonomy

Prior to discussing the findings, this section starts with an overview of observations made from the case studies. Instead of discussing all findings extensively, the discussions focus on what I consider to be the most important issues. A detailed discussion for each individual case study can be found in Annex 3. The main observations are as follows:

- For all utilities, the Ministry of Health and the CNA set the norms for water supply quality and wastewater discharge;
- SIMAPAG appears to be better able to attract qualified staff, though this better ability is limited. The main advantage that SIMAPAG has is that as a bigger organization it can provide (limited) opportunities for growth that the smaller utilities cannot.
- The municipality controls pay scales. The only utility that was able to implement its own pay scales was SAPAM in the 2000-2003 period.
- SIMAPAG is the only utility able to generate sufficient income to meet the required income.
- In all cases the municipality controls the tariff level and structure.
- With the exception of SIMAPAG increase in tariffs do not appear to be in line with the level of inflation. Moreover, apart from the tariff indexation in SIMAPAG, the tariff increases are not systematic (meaning that proposed increases continuously require approval from the municipal president).

- All utilities remain dependent on external funds from CEAG, CNA and, in some cases, the municipality.
- Almost all utilities face difficulties with respect to water resources. SMAPAM appears to be the only exception.
- SAPAF and SIMAPAG appear to have been the most 'stable' organizations in terms of changes in management and the Council. However, in the case of SIMAPAG this has changed since 2003 and SAPAF experienced some turbulence in 2001.

5.4.1.1.1 Financial Autonomy and Tariff Levels

First of all, the major observation is that what distinguishes SIMAPAG from the other utilities is its level of financial autonomy. This finding largely supports existing research, which finds the level of financial autonomy to be of crucial importance for the performance of public utilities (Cullivan et al. 1988; Islam 1993; Hoffer 1994; Bately 1999). Although it is clear that none of the utilities come close to full cost recovery, and the assistance of CEAG and CNA are of critical importance for all utilities, SIMAPAG is the only utility which has tariff levels which are sufficiently high to meet its required expenditure. What is also relevant in this context is the way in which tariffs are increased. In SIMAPAG a system of automatic monthly tariff increases exists. In the period 1997-2003, the tariffs would automatically increase by 1.1%. In this time period, tariff increases were automatic unless the municipality would intervene actively. In the case of the other utilities, tariff increases, in so far as they took place, all took the form of requests sent to the municipality, which then had to approve the requested tariff increase. As no elected official likes to raise tariffs, the consequence is that in all utilities, apart from SIMAPAG, the tariffs lagged behind the level of inflation, meaning that the real tariffs were dropping. Perhaps the most striking example of this hesitation of increasing tariffs is provided by SAPAM. The doubling of the tariffs in 2000 was the first increase in tariffs in a nine-year period. This means that in 1999, the utility was only able to charge the same tariffs it had been charging in 1990. It would appear that the lack of tariff increases in this nine year period conflicts with the State Water Law, which stipulates that service providers should charge tariffs, which are sufficient for covering the costs of service provision.

What this discussion about tariffs also indicates is the enormous dependency that the utility has on the municipal president. Assuming that the municipal president does not decide to replace the entire management (or a large part thereof), and decides to work with the existing management, for that management everything depends on the degree to which the municipal president understands and is willing to support realistic tariff levels and, as such, the functioning of the utility (regardless the stipulations of the State Water Law). If the management is lucky, they will receive this support and at least have a period of three years, until the next election and the next municipal president to try to improve performance. If they are not, then they just have to make do with what they have. Even if the utility has had a period of support, such as in the case of SIMAPAG between 1995 and 2003, nothing guarantees that this will not change once the next elections come around. In fact in 2003, just prior to the municipal elections, the municipality of Guanajuato decided to reduce the level of inflation from 1.1% per month to a level of 0.01% per month. This level of 0.01% is well below the

level of inflation meaning that since October 2003, the real tariff levels have been dropping. In time, if this situation persists, it will erode SIMAPAG's financial viability.

Not only is municipal support relevant for tariff levels. The cases show that almost all issues relating to potential costs that could be incurred by the utility (pay scales, loans, etc.) all require the approval and support of the municipal president. In a way, this is understandable. Because it is basically inconceivable that a water utility would be allowed to go bankrupt and that service provision to the citizens of that municipality would cease, the municipality, as the owner, has to provide the guarantee that the utility will be able to meet its expenses. If necessary, this may require transfers from the municipal government to the utility. As a result, the municipality would want to ensure that the management of the water utility does not enter in any expensive obligations, without prior approval of the municipal president.

5.4.1.1.2 Stability of the organization

A second observation that can be made from analyzing the cases is that few of the cases have achieved a high degree of stability in the management of the organization. This stability depends greatly on the municipal president. Upon the election of a new municipal president, the incoming president often replaces the management (or a large part thereof) of the water supply and sanitation utilities. Table 5.2 below shows the changes in general managers for the five case studies.

Table 5.2: Changes in general managers of the utilities

Utility	**Changes**
SIMAPAG	One general manager from 1995-2000. Replaced by someone who lasted less than a year. From 2001-2003 another general manager, who was replaced in 2003 by another general manager.
SAPAF	Very stable until 2000 when the general manager for more than 20 years was replaced by a 'friend' of the mayor. After a year, the new general manager resigned and the 'old' general manager took up his old position again.
SAPAM	Following the municipal elections in 2000, the entire management team was replaced. In 2003, the entire management team was again replaced following municipal elections.
CMAPADH	Up to 2000, the managing director was replaced frequently with almost no managing director lasting more than a year. Between 2000 and 2003 the same general manager held office.
SMAPAM	Relatively stable between 1995[62] and 2002, when the municipality forced changes in the Council (making the vice-president the president of the Council[63]) and appointed a new general manager. The changes in the Council and the appointment of a new general manager were subject to challenge.

Source: Interviews with the Managing Directors, October 2003.

Important in the case of SIMAPAG is that despite changes in the general manager in the 2000-2003 period, the management team itself remained relatively stable.

[62] In 1995, a new managing director was appointed but he was replaced six months later by the managing director who would keep that position until 2002.

[63] The position of President of the Council in SAPAF is the only position in the Council for which financial compensation is available.

Illustrative is that the general manager between 2001-2003 was also on the management team under the general manager who served from 1995-2000. However, the change in general manager in 2003, who resigned under pressure from the Council, is different as it was preceded by three members of the management team 'resigning'[64]. What is even more striking, however, is that the chairman of the Council, overseeing the functioning of SIMAPAG, subsequently took over the position of general manager. This shifting of positions, in which a Council member first presses the general manager to resign and then fills the vacant position does seem to present some conflict of interests. The conflict of interests becomes even more pronounced when one realizes that the 'new' general manager is also the cousin of the municipal president who was elected in 2003.

The main performance improvement achieved by SIMAPAG over the 1995-2003 period, is accredited to the general manager who managed the utility between 1995-2000, Raul Silva, and whose work was subsequently continued by the general manager from 2001-2003. Despite the changes of the managing director over this period, the management itself remained relatively stable. From the interviews held during the fieldwork, this stability is considered to be a pre-requisite for improving performance in the long-term. In that sense a comparison with SAPAM is useful. In 2000, following a period of exceptionally poor performance, the incoming municipal president in the municipality of Valle de Santiago decided to remove the Council and the general manager of the water utility. The new general manager brought in an entirely new management team from the municipality of Salamanca. The new management of the water utility managed, with support from the municipality[65], to start improving performance, to the degree that the State Water Commission of Guanajuato officially recognized the improvement in performance in 2003. However, the management team did not survive the municipal elections held in 2003. In the immediate aftermath of the elections, the municipal president, who up to the point of his election had run a butcher-shop in Valle de Santiago, decided to replace all members of the management team. What is even more striking is that they were replaced by people with very little experience in the water supply and sanitation sector. The main contrast between SIMAPAG and SAPAM in this sense is that whereas SIMAPAG had the time, and relatively stable environment, to improve performance, no such stability existed for SAPAM, despite their recognized performance in the 2000-2003 period.

In the Mexican public sector, it is possible to broadly distinguish two levels of employees[66]. The description below, taken from Arellano and Guerrero (2003:165) provides a useful elaboration on the nature of the Mexican bureaucracy.

> "First, there are low-level employees (*empleados de base*), who are unionized and cannot be fired, including drivers, maintenance staff, secretaries, archivists, and lower technical staff who generally lack a university education. Second, there are the medium- and high-level public officials, called *funcionarios de confianza* (literally, "confidence officials", similar to political appointees in the United States) who are responsible for all the substantive areas of public

[64] In very few cases someone is actually fired. Rather the manager in question is strongly persuaded to 'resign for personal reasons'.
[65] Again, support was evident in the tariff increase that was allowed by the municipal president.
[66] In this distinction the levels of medium and high public officials have been combined.

> administration. These appointees traditionally have been accountable for their performance only to the official who appointed them and can also fire them without difficulty when they cease to be useful or when they no longer have the trust of their boss. The low-level employees have little chance of being promoted or making a career […], while political appointees are in charge of making decisions and controlling budget and resource allocation. For the first group, the benefits are job security and stability. For members of the second group, benefits are better salaries and resources, as well as political protection and access as long as they are useful to their superiors […]."

Although, management (the 'confidence officials') of the water utilities is subject to frequent changes, the opposite seems to apply to the non-management employees of the organization. Most of the utilities tend to have very stable workforces with very little staff turnover. In fact, apart from SIMAPAG, which had turnover levels of 4.3%, the other utilities had levels well below 1%. The main reason for these low turnover rates seem to be the relatively favorable working hours and the security of employment (as also mentioned by Arellano and Guerrero). Especially in municipalities such as Moroleón and San Francisco del Rincon, which are struggling with global competition for their industrial products, the security of employment is appealing.

Table 5.3: Labor conditions for staff of the five utilities

Utilities	**Comparative Salary level**	**Work schedule**	**Development and promotion possibilities in the utility**	**Job security**
SIMAPAG	High	8:00-16:00	High	High
CMAPADH	Low	8:00-16:00	Low	High
SAPAF	High	8:00-16:00	Low	High
SMAPAM	Low	8:00-16:00	Low	High
SAPAM	Low	8:00-16:00	Low	High

Having said this, two important qualifications need to be made. The first qualification is that although stability appears important, it should also be emphasized that what initiated performance improvements in SIMAPAG and SAPAM was a change in management. Part (perhaps even a large part) of the reason why these two utilities were able to improve performance was that a new manager/management entered the utility with new ideas, and who was able to implement these ideas with support of the municipal president. In other words, keeping poor management stable basically does little more than prolong poor management.

Secondly, although stability is a pre-requisite for improving performance over time, it is in itself not a sufficient factor. This can be illustrated by comparing the most stable of the utilities, namely SAPAF with SIMAPAG. Both organizations have been relatively stable, but whereas SIMAPAG appears to have the capacity (both financial and in terms of human resources) to improve performance SAPAF seems to lack this capacity[67]. Even though SAPAF has the required authority, is headed by what appears

[67] To some extent, this would mean that the level of labor productivity should be seen within the context in which the organization operates. For very small utilities, such as SAPAF, labor

to be a capable general manager and is not subject to frequent political intervention, it simply does not have the capacity to really improve service provision. In other words, without capacity, in terms of financial capacity (generating sufficient income) as well as in terms of human resources (having sufficient man-power to improve performance), stability of management appears to have little impact.

In summary, it can be observed that the researched water utilities in Guanajuato seem to be characterized by the friction between the management's long-term goals of performance improvement (assuming that the management follows the aims and objectives of providing water services) and the short-term (political) goals of the municipal presidents. The frequent changes in many of the utilities studied, both in management positions and in the Council, mean that it is virtually impossible to develop and implement a medium- to long-term plan for the improvement of water services provision. The incoming municipal president has a time frame of three years before he/she leaves office and as such does not have strong incentives to support a plan or program that will produce benefits years after he or she will have left office.

5.4.1.1.3 The *Consejos* (Councils)

In light of the powerful position of the municipal president the role of *Consejos* is quite important in the functioning of the utility. In all five cases were the utilities supervised by *Consejos* (or Councils). The tasks of these *Consejos* are stipulated in the internal regulations (*Reglamento*) of the utilities and as such show small differences from one *Consejo* to the next. However, broadly they have the same responsibilities. These are:

- Monitor the functioning of the utility;
- Discuss and approve the annual budget;
- Supervise the use of resources;
- Formulate and approve the tariffs;
- Address relevant user complaints;
- Formulate infrastructure projects, which are required to guarantee service provision;
- Inform the municipality every three months about the results produced by the utility;
- Any other activities required by rules or regulations.

Although the role of the *Consejo* would appear to be similar to that of a Board of Directors, in that they are overseeing the functioning of the utility, the *Consejos* do have a stronger role in the day-to-day management of the utility. Illustrative is that in some of the cases researched at least one of the *Consejo*-members literally has to sign off on every cheque that is paid by the utility. This means that in contrast to Boards of Directors in countries such as the Netherlands, which have a very strong focus on the

productivity levels are well below 5, which is more or less the generally accepted guideline. However, this may also represent an obstacle to further performance improvement. The utility may simply not have the staff to undertake extra activities with are aimed at improving the performance of this utility.

medium- and long-term functioning of the utility, the *Consejos* concentrate on a shorter time horizon. It also means that some of the *Consejo* members have to be present at the utility much of the time, which is also fundamentally different than Boards and Councils in countries such as the Netherlands.

The role played by the *Consejo* is of importance because it operates between the general manager of the utility and the municipal president. As such, it fulfills the role of a vital linchpin in the governance of the organization, looking outwards to the government-owner and other stakeholders and inwards to its management and staff (Schwartz and Blokland 2002). In this sense the Consejo can act as a buffer between the municipal president and the utility, shielding the utility from too much political interference in the day-to-day management of the utility. In fact, one of the reasons why SIMAPAG was able to make considerable progress from 1995 to 2000 was that the *Consejo* and the management of the utility collectively worked to limit the influence of the municipal president. The extent to which the *Consejo* can fulfill the role of buffer, however, depends on the membership of the *Consejo* and, as such, on the way in which the members are appointed to the *Consejo*. Table 5.4 provides an overview of the ways in which the selection of *Consejo* members is arranged in the regulations of the utility and contrasts this to the way in which it has occurred in reality.

The table presented shows that only in two of the five cases the *Consejos* were constituted in the way they were supposed to according to the statutes of the company (meaning that *Consejo*-members were selected from groups representing civic society and without management of the utility doubling as *Consejo*-members). And in one of these two cases, the actual selection was subsequently subject to legal action. In the other three cases, the municipal president has more or less directly appointed the *Consejo.*

Moreover, for the utility to manage to limit political interference, the *Consejo* and the general manager need to work together. Often, however, the general manager and the *Consejo* may have conflicting objectives. At such times, also the *Consejo* does not hesitate to deviate from the regulations. Illustrative are events relating to the 'resignation' of the Head of the Commerce Department in SIMAPAG just prior to the second research visit in October 2003. According to article 49 of the *Reglamento* the managing director is responsible for submitting appointments or dismissals of managerial staff to the *Consejo*, which the *Consejo* can then approve or not. However, in 2003 the Head of the Commerce Department 'resigned' following pressure from the *Consejo*, without the managing director being involved. What made the matter more curious was the 'public secret' that the Head of the Commerce Department and the managing director were romantically involved.

In summary, it appears that the appointment of the *Consejo* is very much a politicized process. Moreover, the members of the *Consejo* subsequently have their own interests and objectives they follow, which do not always stroke with the objectives of the water utility. Moreover, with direct appointment of the *Consejo* it is questionable if the *Consejo* will act as buffer between the management of the utility and the municipal president. Furthermore, the appointment of the *Consejo* as it takes place in reality also shows the limitations of formal rules and regulations as a means of impacting the functioning of water utilities in Guanajuato.

5.4.1.1.4 The Role of the CNA and CEAG

Finally, what is interesting is the role played by the CNA and CEAG. All utilities depend on CNA and CEAG for covering investment costs. It seems, however, that the CNA and CEAG use the leverage created by the possibility of awarding funds, in order to steer developments in the water supply and sanitation sector. This steering is done by offering funds only for specific investments, which these organizations consider priorities within the sector. Both CEAG and the CNA tend to offer funds only when their contribution is matched by a contribution from the receiving water utility. Moreover, most of these funds have specific allocations (the CNA funds, for example, must be used for the development of wastewater treatment facilities). In the case of CEAG, the funds and their spending are largely managed by CEAG themselves. This means that many of the contractors and consultants undertaking an activity will actually be contracted by CEAG. CEAG then also supervises and monitors these contracts. In this way, these organizations are able to 'steer' the utilities towards investments that they consider worthwhile. As such, these organizations have a strong strategic role in the water supply and sanitation sector. In table 5.5, different aspects of the autonomy of the five utilities are displayed.

Table 5.4: *Consejo* characteristics in 2003

	***Consejos* according to the regulations**	***Consejos* in practice**
CMAPADH	The secretary of the *Consejo* is named and removed by the Municipality. Other members are to be elected from a variety of organizations representing civic society[68].	The municipality appointed the members directly. Moreover, three out of five members are employees of CMAPADH
SMAPAM	*Consejo* members (including the President and the Treasurer) are to be elected by an Assembly of Users	The municipality has directly appointed the *Consejo* since 1998. In the 1998-2000 term, the municipality decided to extend the term for the previous *Consejo*. In 2000, the municipality tried to assign political supports to the *Consejo*. The existing *Consejo* members opposed this. In response, the municipality decided to remove the president of the *Consejo* and appoint someone who would agree with their selection of *Consejo* members. From 2000-2002 the functioning of *Consejo* members was relatively stable until 2002 when the municipality decided to remove the president of the *Consejo* and replace him with the vice-president of the *Consejo*.
SAPAM	The selection of *Consejo* members is done by the municipality on the basis of recommendations of associations, chambers and other professional organizations. The municipality analyzes the recommendations of these organizations and then selects the most suitable six candidates	Instead of selecting *Consejo* members on the basis of proposals from professional organizations, the municipality decided to appoint the general manager as the chairman of the *Consejo* and the heads of the different departments of the utility as the other *Consejo* members. In October 2003, following a municipal election and a change in municipal president, the entire management team of SAPAM that had been installed in 2000 was removed (and as such also the entire *Consejo*).
SAPAF	The municipality assigns the chairman, the secretary and the treasurer of the *Consejo*. The municipality also elects the four external members or *vocales* on the basis of proposals submitted by a variety of organizations	The procedures as stated are followed
SIMAPAG	*Consejo* members are to represent organizations from civil society. The Commission of Public Works will consider the profiles of the proposed *Consejo* members and present the results of their analysis to the municipal president. He will then select the *Consejo* members	Procedure more or less followed. Selection of the *Consejo* was subject to legal challenge, however.

Sources: Regulations of the water utilities; Interviews with utility managers in 2003

[68] These organizations include: chamber of commerce, neighborhood associations, banks, professional organizations, unions, user groups.

Table 5.5: An Overview of autonomy

Pattern for external autonomy	**CMAPADH**	**SMAPAM**	**SAPAM**	**SAPAF**	**SIMAPAG**
Utility is able to attract and maintain qualified staff on its own account	Limited	Limited	Limited	Limited	Yes
Utility and the Council can set the pay scales for the utility	No	No	Between 2000-2003	No	No
Level of actual income is equal to required income	No	No	No	No	Yes
Utility is able to set its own tariffs	No	No	No	No	No
Utility has access to sufficient raw water resources	Limited	Yes	Limited	Limited	Limited
Income generated by the utility can only be used for provision of water services by the utility.	Yes	Yes	Yes	Yes	Yes
Tariffs have increased in line with inflation	No	No, no tariff increases between 1995 and 2002	No, tariff increase in 2000 was first in 9 years	Since 2001	Up to 2003
Tariffs have been sufficient to meet O&M costs	Yes	Yes	Yes	Yes	Yes
Tariffs have been sufficient to meet O&M and investment costs	No	No	No	No	No
Few changes in management of the utility have occurred over the past years	No, since 2000	Yes	No	Yes	Between 1995-2000
Few changes in the Council have occurred over the past years	No	No	No	Yes	Yes
The utility is able to cut off service provision to consumers who have not paid their bills	No, service is reduced	No, service is reduced	Yes	Yes	Yes
Is the utility able to take out loans without prior approval from the owners?	No	No	No	No	No

5.4.1.2 External Accountability

Based on the case studies we can note the following observations concerning the five water utilities in Guanajuato:

- The degree of accountability for results to external organizations shows very little difference between the cases

- Apart from the standards and norms promulgated by the Ministry of Health and the CNA none of the utilities really have performance targets for which they are accountable to external organizations.
- The accountability that does exist to external organizations is largely to official government agencies

It is noteworthy that apart from the standards and norms for water supply and wastewater discharge none of the utilities are subject to meeting performance standards set by either the owner, other government agencies or through other mechanisms such as a customer charter. The absence of performance targets would seem to limit the degree to which the utility can be held accountable. After all, if the results that the utility is to achieve are not specified, the account given by the utility appears to be based on relatively unclear and undefined notions of what the utility should have been doing.

Having said this, it is clearly recognized that every utility remains strongly accountable to the municipal president. In a way this is to be expected as ultimately the municipal president can control the functioning of the utility. In addition to the strong accountability to the municipal presidents, the utilities have a strong accountability to organizations such as the CNA or CEAG from which they received grants or loans.

In none of the cases did organizations exist which had the specific purpose of representing the interests of the customers. In essence, what this means is that the account given by utilities tends to be 'upward-looking' (to the municipal president, to the CEAG, CNA, and the Ministry of Health) and not very focused to the customers of the utility. In fact, apart from individual complaints the customers can only work 'through' the municipality or the federal government by approaching the *Controlaría Municipal* or the *Procuradoria Federal del Consumidor*, which are ombudsman-type organizations. Basically what this means is that accountability between the utility and the consumer is limited whilst 'legal and political forms of accountability'[69] predominate. What was rather interesting to observe, however, is the accountability relationship to individual customers. In examining the accountability of the various utilities to their customers, a sharp difference was observed between SIMAPAG and the other utilities. Interestingly enough, this difference appeared to be strongly related to the relatively high tariff levels that SIMAPAG was charging. As mentioned SIMAPAG introduced a monthly tariff increases in the late 1990s. Every month the tariffs were increased by 1.1%. The customers were willing to pay these high tariffs, as they remembered the water crisis in Guanajuato in the 1980s that left the city without potable water for almost two weeks and which even resulted in the University of Guanajuato having to close its doors. Between 1996 and 2001 the income received from users increased by 280% from approximately $141,000 to over $400,000 (Aguiñaga 2003).

Although the customers were willing to pay this relatively high tariff, they also started forcing the water utility to become accountable to them for the service they were providing. This link was also echoed by Ruben Nieto, the chairman of the Council of SIMAPAG in 2003, during a presentation at the World Bank Water forum in 2003. In

[69] The term "legal and political forms of accountability" is taken from Minogue (2002:7).

this presentation he explained that although SIMAPAG's customers were willing to pay relatively high tariffs they are also becoming more demanding, insisting upon higher service standards that SIMAPAG must meet[70]. In this light it is interesting to re-introduce one of the concerns raised against the New Public Management in chapter three. In that section it was mentioned that a key element of the NPM is a "shift in value priorities away from universalism, equity, security and resilience, and towards efficiency and individualism" (Pollitt 2003:28). The impact of such a shift is quite strong as "it alters the nature of the concept of citizenship from one relating to participation in the public realm to one referring to consumption in the private realm" (Walsh 1995:xvi; also Law 1999). The increased pressure on SIMAPAG to give account to its customers (on an individual basis) would indicate that such as shift has occurred. However, this 'shift', if it can be called that, has not been accompanied by a shift away from 'legal and political' accountability. In fact, if anything it can be observed that the stronger accountability to the customer can be viewed as involving an *additional* accountability on top of the strong accountability to the municipal president and the other government agencies. It seems that the SIMAPAG's accountability to the 'public realm' stays strong and *in addition* accountability to the individual customer (in the private realm) exists. This observation does not support that "hierarchical control [is replaced] with the market as the means of coordinating activity" (Deakin and Walsh 1996:36). Rather, it supports Hogget's finding that instead of "witnessing the replacement of hierarchy by market, what we observe is the development of a 'plural mode of governance' in which elements of the market are combined with elements of hierarchy" (Hogget 1996:16). The table below provides an overview of the level of accountability for each of the studied utilities.

[70] The link between customer orientation and the income of the utility is also reflected in Awortwi's (2003) research into service delivery in Ghana. Awortwi (2003:278) illustrates that link by quoting a contractor, who finds that "[p]eople's attitude towards the service is not my problem at all because they do not pay me. It's [local government] which pays, so if people show apathy, that is their problem."

Table 5.6: An overview of external accountability

Pattern for external accountability	**CMAPADH**	**SMAPAM**	**SAPAM**	**SAPAF**	**SIMAPAG**
Regulator sets specified performance targets,	Yes	Yes	Yes	Yes	Yes
Failure to meet these targets can result in penalties being applied.	Yes	Yes	Yes	Yes	Yes
Have these penalties ever been applied	No	No	No	No	No
The utility reports frequently to these regulators	Yes	Yes	Yes	Yes	Yes
Owner sets performance targets	No	No	No	No	No
Failure to meet these targets will result in penalties being applied.	Not applicable	Not applicable	Not applicable	No applicable	Not applicable
Utility reports to owner periodically	On paper every three months but in practice this is less	Yes	Yes	Once per year	Yes
A representative of the owner is present at council meetings	Yes	Yes	Yes	Yes	Yes
Financial institutions, which have donated/lent money to the utility, require specified performance targets to be achieved.	No	No	No	No	No
The utility is actively accountable to customer organizations	No	No	No	No	No
The customer's rights and obligations are clearly stated in a customer charter	None exists	None exists	None exists	None exists	None exists
The customer's rights and obligations are stated in the customer contract	Yes	Yes	Yes	Yes	Yes
The charter or contract contains performance targets which the utility must meet	No	No	No	No	No
The utility is actively accountable to non-governmental organizations	No	No	No	No	No

5.4.2 Hierarchy and Levels, The Market and Customers

The previous section on autonomy and accountability discussed the utilities in terms of the relationship between the utility and the outside environment. In this section, the focus is more on the internal organization. Although it is realized that dimensions such as 'markets' and 'customers' are also external to the organization, this section focuses specifically on how the utility views the market and the customers. In other words, this section focuses on the utility policy (implicit or explicit) with respect to the market and customers. As such, this section addresses issues such as the market-orientation of the utilities, the customer-orientation, decentralization of decision-making authority within the utility, internal accountability for results, the issue of internal regulations, and the remuneration of staff.

5.4.2.1 Hierarchy and Levels

The theme of hierarchy and levels essentially has two components, which show similarity to the discussion of autonomy and accountability. The aspect is to identify which level decides what. The second aspect is to identify how the employees (at different levels) are accountable for the decisions they then make. On the basis of the five case studies in the state of Guanajuato, the following observations were made regarding hierarchy and levels within the organization:

- There does not appear to be much difference between the level of decentralization in SIMAPAG and that of the other utilities. If a difference does exist, it would appear to be more one related to the size of the organization than to the actual decentralization of authority.
- All decisions which have a strong financial dimension or are likely to have a financial impact, such as decisions about tariffs, procurement of goods and services, remain highly centralized and require at minimum the approval of the general manager. Often, however, not even the general manager has sufficient authority to make these decisions.
- Decisions relating to human resources also remain highly centralized. Approval of the general manager is always required and in many cases that of the Council as well.
- The only area in which decision-making is relatively decentralized is in customer management. In the case of customer management a set of policies are in place to deal with complaints, which the employees follow without having to consult the management.

As mentioned, all of the utilities are strongly centralized. SIMAPAG appears to be somewhat more decentralized in the sense that it has a separate legal section and a separate section for institutional development, which have limited decision-making powers. However, this appears to be more a function of the size of the utility (in terms of number of employees) than a deliberate company policy. With 200 employees, the functions within the utility are likely to be more differentiated than in a utility with 32 employees. Increased differentiation of tasks can then lead to increased decentralization

of decision-making responsibilities. For the rest, any decision that is either not addressed in company policy/protocol or has any financial consequences, requires at the very least approval of the general manager. However, as mentioned above, in most cases, even the general manager's approval is not enough, and the approval of the *Consejo* (or the president of the *Consejo*) is also required.

First of all, within the utilities there exists an explicit or implicit work protocol, which has been approved by the general manager and the *Consejo*. When an employee is confronted with an issue that is dealt with in that protocol, the employee can make a decision following that protocol and inform his superiors of the decision made. If the issue is not addressed in that protocol, than the employee is to refer the issue to his superiors.

Secondly, all decisions which have financial consequences, which basically include all decisions regarding procurement, human resources or any other activity that may result in costs to the utility, requires approval of the general manager and *Consejo*. What this basically means is that in all utilities, including SIMAPAG, the employees operate following strict procedures.

Because the policies/protocol for the area of customer management has been developed, by necessity, in more detail, more decisions regarding customer management are taken at lower levels within the organization. However, here too the principle applies that employees are only allowed to apply existing company policy to a particular case that is brought forward by a customer. As long as the specific problem is covered by this policy the employee can address the situation himself by strictly following company policy (and subsequently informing his superiors about the decision he made). If the case brought forward by the customer is not covered by the existing company policy, the employee will have to refer this issue to his superiors. As such, employees in all utilities have very limited discretionary powers.

An overview for hierachy and levels in the five utilities in Guanajuato is presented in table 5.7.

Table 5.7: An overview of hierarchy and levels

Decentralization of responsibility	**CMAPADH**	**SMAPAM**	**SAPAM**	**SAPAF**	**SIMAPAG**
Decisions about tariff levels are made by the utility	No	No	No	No	No
Procurement of goods and service requires approval of the general manager	Yes	Yes	Depends on the amount of money.	Yes	Yes
Procurement of goods and services requires approval of the *Consejo*	To some extent[71]	Yes	Depends on the amount of money[72]	Yes	Yes[73]
Decisions about promotion, hiring or firing of employees requires approval of the general manager	Yes	Yes	Yes	Yes	Yes
Decisions about promotion, hiring and firing of employees requires approval of the *Consejo*	Yes	Yes	Yes	To some extent[74]	To some extent[75]
The utility has decentralized decisions relating to customer management to lower levels in the organization	Yes	Yes	Yes	Yes	Yes

5.4.2.1.1 Internal accountability for results

The second dimension of hierarchy and levels concerns the level of (internal) accountability for results. Based on the case studies a number of observations can be made regarding the degree to which employee are accountable in the utilities. These observations are as follows:

- SIMAPAG has a stronger internal accountability for results than the other utilities. This is mainly on the basis of their standard evaluation system and their use of a balanced scorecard.

[71] Because the managing director is also the chairman of the *Consejo*, approval of the managing director automatically entails approval of one of the *Consejo* members.
[72] Since the management change in 2003, procurement decisions require approval of the municipal president.
[73] Officially some decisions only require approval of the managing director. However, the fact that each cheque needs at least one signature from the either the treasurer or the president of the *Consejo* means that *de facto* one *Consejo* member must approve the acquisition.
[74] In case of firing and for hiring when the position is not in the budget
[75] On paper, the managing director is responsible. In practice, the *Consejo* does have some influence in hiring and firing of employees.

- None of the *Consejos* impose performance targets on the management of the utilities.
- Evaluation and rewarding of employees are not necessarily related to the performance of the individual employees.
- Employees are more accountable for following procedures than for the results obtained by following those procedures.

A comparison of the different utilities shows that SIMAPAG does have the highest levels of accountability for results. However, the question is if this is because SIMAPAG's internal system of accountability is so well developed or because of the very low level of accountability for results in the other organizations. Although SIMAPAG has a system for evaluating management and employees, the actual implementation does not seem very convincing. First of all, in the 1995-2000 period all managers always received the full 100% monthly bonus. From 2000-2003, however, the general manager decided not award the full bonus to everyone, but rather usually between 70%-90% of the monthly bonus was awarded. What remains unclear, however, is what exactly the bonus was awarded for and how the amount was determined. Essentially, the evaluation was largely dependent on the appreciation that the general manager had of the management employee and was not based on any objective criteria. One of the former managers at SIMAPAG referred to the bonus as a 'bonus of appreciation', in which, in the 2000-2003 period, a lot depended on how the particular employee got along with the general manager at the time of deciding the magnitude of the bonus. If there existed some friction or a difference of opinion between the general manager and the employee at the time the bonus was decided upon, the bonus was likely to be less than if no such friction or difference of opinion existed.

Also the non-managerial employees are evaluated monthly. The employee can earn a bonus on the basis of this evaluation. In essence the employee is evaluated on the basis of two criteria: attendance and punctuality (30% of the bonus) and performance (70% of the bonus). The category of performance is subdivided into five sub-categories, which each represent 14% of the overall bonus. These five sub-categories are knowledge of work done, quality of work done, quantity of work done, initiative, and attitude and cooperation. Each employee is evaluated by his or her immediate boss. As no clear guidelines exist on how to implement the evaluation, it appears that the evaluation may be rather subjective. Moreover the categories of performance are not really related to specific results that the employee must achieve.

Within SIMAPAG a balanced scorecard was used for setting targets and measuring the performance of the utility. The balanced scorecard incorporates a series of indicators, which provide four different 'perspectives' on the utility, which together are considered to provide a good picture of the overall functioning of the utility. These perspectives include a 'client's perspective' (considered to be the most important), a 'financial perspective', a 'process perspective' (which includes a number of efficiency indicators) and a 'learning perspective' (which covers indicators such as absenteeism and rotation of personnel). The indicators measuring the four perspectives of the scorecard are compiled on a monthly basis by the Department of Institutional Development and reported to the Council. The idea was that the balanced scorecard would serve as the performance measurement system in the utility and that in time, the

evaluations of managerial employees would be linked to indicators in the balanced score card. This has, however, not occurred yet. As such, although the balanced scorecard distinguishes SIMAPAG from the other utilities, the question is how the use of this performance measurement system translates into accountability? At current, the most likely answer seems to be that it doesn't. During recent management changes the managers most supportive of the balance scorecard have left the utility and as such, it is unlikely that it will be used for accountability in the near future.

Having discussed SIMAPAG's system for (internal) accountability and raised questions about its functioning, it should also be noted that it is still better than the systems in place in the other utilities.

CMAPADH established a 'best worker of the month' award in 2003. Every month, one person is selected from the administrative staff and one person is selected from operational staff as 'best worker of the month'. 'Best workers of the month' are honored in a small monthly event during which they receive their award. There are no clear indicators and there is no set procedure for selecting the 'best worker'. Partly as a result of the non-transparent way of awarding this monthly prize, there are some who feel that selection of the award winners is partly based on 'personal feelings' rather than objective indicators. In addition, a system exists to evaluate employees, but the evaluation is mainly focused on issues such as absenteeism and sick days and does not take into account the results produced by the employees

In SMAPAM, the employees do not have to meet specified performance targets and also there is no system in place to evaluate the performance of the employees. Similarly, there is no way of rewarding an employee for good performance. Each employee receives a bimonthly bonus of MXP 300 regardless his or her performance.

In SAPAM, the management of the utility can decide to give a reward for employees, which have shown impressive performance. Giving such a reward requires a decision by the general manager in consultation with the Head of Department in which that employee is working. The rewards are generally between MXP 300 and MXP 500[76] and the actual allocation of such a reward is not a frequent occurrence. The Heads of Department are not eligible for such rewards. The employees of the utility are not evaluated against set performance targets. The general manager evaluates the Heads of Departments every year.

In SAPAF, the only system in place for rewarding the 'performance' of employees relates to a bonus for punctuality and attendance. In essence everyone that arrives at work before 8:00 a.m. can receive a bonus of 10% on top of their salary. In practice, however, every employee gets this bonus. There is no system in place to evaluate the performance of employees of the utility.

It appears that within the researched water utilities in Guanajuato there is no accountability for results. Rather, the way the employee is expected to operate and for which he may be held accountable is by following set procedures and especially by making sure that he is at the office on time.

Also noteworthy, with respect to accountability, is that no performance targets have been imposed by the *Consejos* on the general managers. Apart from the utilities in which the management also controls the *Consejo*, in which setting targets would

[76] Between US$30 and US$ 50.

basically the management setting targets for itself, this is perhaps explained by the role played by the *Consejo* in 'autonomous agencies' in Guanajuato. As mentioned previously, these *Consejos* tend to have a relatively strong involvement in the day-to-day functioning of the organization.

Table 5.8: An overview of internal accountability for results

Internal accountability for results	**CMAPADH**	**SMAPAM**	**SAPAM**	**SAPAF**	**SIMAPAG**
A system is in place to evaluate the performance of employees periodically	Mainly focused on absenteeism and sick days	No	No	No	Yes[77]
Employees are held accountable for achieving specified results	No[78]	No	No[79]	No[80]	No
Salary adjustments are based on performance of the employee	No	No	No	No	No
The utility systematically analyzes its performance in relation to set targets	No	No	No	No	Yes
Management oversight and management of the services provider are separate functions	No	Yes	No	Yes	Yes
Management of the service provider has regular meetings with the *Consejo*	Yes*	Yes	Yes*	Yes	Yes
Management of the service provider is subject to meeting specified performance targets	No	No	No	No	No
Management of the service provider is held accountable for meeting the specified targets	n.a	n.a.	n.a.	n.a.	n.a.

* - The management is also represented on the Council

5.4.2.2 Market-orientation

Based on the case studies and the overview above, the following conclusions can be drawn with respect to the market-orientation of the selected utilities:

- SIMAPAG does not have stronger market-orientation than the other utilities;
- The level of outcontracting varies from about 5% to 30%;

[77] The system in place is partly (30%) based on absenteeism and partly (70%) on performance. However, no guidelines for implementation exist and almost always the full bonus is awarded.
[78] The utility does award a monthly 'employee-of-the-month' award. However, these are not awarded on the basis of 'specified' targets.
[79] There is a possibility of providing a reward between MXP 300 and MXP 500 for impressive performance. This is not a frequently awarded reward, however.
[80] The utility does provide a 10% bonus to all employees who are on time for their work. In practice, every employee gets this award.

- All utilities partake in the annual benchmarking exercise for which they submit bi-monthly reports to the State Water Commission;
- None of the utilities appear to systematically use the data generated by this exercise in the management of the utility;
- None of the utilities engage in market-testing exercises.

None of the utilities appear to have a strong market-orientation and SIMAPAG is no exception. Although the utility outcontracts about 20% of its operational budget, two utilities have higher outcontracting shares and 2 have smaller outcontracting shares. Although it must be stated that the level of 3%, as reported by the utility in Valle de Santiago seems very small for a water supply and sanitation utility. Perhaps more importantly, the utilities do not purposely use outcontracting as a tool (or company policy) to achieve specific objectives such as efficiency gains, access to new technology and management expertise. Rather outcontracting appears to be more undertaken on an ad-hoc basis when the situation of the day requires the utility to do so.

Although all of the utilities partake in benchmarking exercises organized by CEAG, the results are largely used on an ad-hoc (rather than a systematic) basis. In other words the generated data is not used systematically.

Table 5.9: An overview of market-orientation

Market-orientation	**CMAPADH**	**SMAPAM**	**SAPAM**	**SAPAF**	**SIMAPAG**
What is the level of outcontracting as a percentage of the operational budget (in 2002)	24%	7%	3%	30%	20%
The utility actively pursues a policy of outcontracting services and tasks to third-parties[81]	No	No	No	No	No
The utility engages in periodic benchmarking exercises	Yes	Yes	Yes	Yes	Yes
The utility systematically uses the results of the benchmarking exercise for improving performance of the utility	No	No	No	No	No
The utility engages in market-testing exercises to improve efficiency of service provision	No	No	No	No	No

5.4.2.3 Customer-orientation

The final dimension of the case studies concerns the level of customer-orientation. Based on the five case studies and the overview presented above we can draw the following conclusions:

- SIMAPAG does appear to have the strongest customer-orientation;

[81] With this mean that the utility does not ad-hoc undertake outcontracting activities, but actively pursues outcontracting as a company policy based on the belief that outcontracting can provide benefits to the utility.

- Only two utilities actively try to obtain the opinions and views of their customers. The other utilities appear to have a more reactive approach to their customers;
- In all cases bills can be paid in a variety of ways;
- Apart from SIMAPAG, training of staff for the other utilities appears to be relatively infrequent and dependent on outside opportunities.

SIMAPAG does appear to be the most customer-oriented of the utilities. In order to obtain the views and opinions of the customers, SIMAPAG undertakes daily surveys. These surveys cover about 210 to 220 users per month. This survey measures the following dimensions:

- If the user is satisfied with the service provided by SIMAPAG. This includes indicating how they were attended to by personnel of SIMAPAG (plumbers, meter readers, reception, customer service)
- What their opinion is of the service provided. This includes giving their views on the provision of potable water, quality of water delivered, attention to leakages, and sewerage)
- An assessment of how important the service that SIMAPAG provides is for the respondent.

On the basis of the survey the 'image' that SIMAPAG has with its users is calculated on a scale from 1 to 5. This 'image' is the most important indicator of the Balance Scorecard that SIMAPAG uses to measure its performance. At the beginning of 2003, the utility had a score of 3.4 and the target was to reach a score of 4.5 by the year 2005. Illustrative of SIMAPAG's customer-orientation is the fact that the 'image' that the consumer has of the company is considered the most important indicator to measure performance. With the recent changes in management, however, the use (and development) of the balanced score card appears less of a priority of the organizations.

According to the chairman of the *Consejo* of SIMAPAG in 2003, the reason why SIMAPAG developed its strong customer orientation is because the customers have become more demanding as a result of the relatively high tariffs. Users were willing to pay higher tariffs, but became much more vocal in demanding better services. As s result, the utility had to develop more customer-friendly practices. As mentioned previously, SIMAPAG introduced monthly tariff increases in the 1990s. Although the customers were willing to pay this relatively high tariff, they also started forcing the water utility to adopt more customer friendly billing and collection methods. The existing system for payment of bills in the 1990s was very customer-unfriendly. In order to mitigate this situation, SIMAPAG established an automated system to charge for water services and made it easier for consumers to pay their bills (Aguiñaga 2003).

In comparison with the customer management system and customer focus developed and implemented by SIMAPAG, the other utilities do not appear to have a strong customer orientation. In the case of SAPAM, the utility undertakes customer services twice a year and in 2002 the utility implemented a complaint tracking system. It should be remembered that in years just prior, the utility also sharply increased its tariffs. Other utilities, however, have no system in place to actively obtain the views and opinions of the customer, apart from suggestion boxes, which are rarely used.

Table 5.10: An overview of customer-orientation

Customer-orientation	**CMAPADH**	**SMAPAM**	**SAPAM**	**SAPAF**	**SIMAPAG**
The utility is dependent on its customers for its revenue	For O&M and matching funds	For O&M and matching funds	For O&M and matching funds	For O&M and matching funds	For O&M and matching funds
The utility offers different levels of service provision to its customers	Yes	Yes	Yes	Yes	Yes
In what ways can the customer pay their bills	CMAPADH Office, Banks, *Cajas Populares*, selected small businesses	SMAPAM's Office, Banks, *Cajas Populares*, selected small businesses	SAPAM's office, Banks, *Cajas Populares*	SAPAF's office, Banks, *Cajas Populares*	SIMAPAG Office, Banks *Cajas Populares*[82], selected small businesses
The utility undertakes surveys to proactively obtain the customer's views and perceptions of the services provided	No	No	Yes, twice per year	No	Yes, 200 per month
What other means exist to obtain opinions from users	None	Suggestion box	None	Town hall meetings, suggestion box	Suggestion box
Customer complaints are addressed	Yes	Yes	Yes	Yes	Yes
Customers are engaged in decision-making procedures in the utility	Partial representation on the Council	Representation on the Council	No	Representation on the Council	Representation on the Council
The utility trains its employees to manage customers	Infrequent training of staff	No	Infrequent training of staff	Infrequent training of staff	Frequent training of staff
In what ways does the utility inform its customers about relevant issues for service provision	Radio	Flyers added to the receipt, radio, *perifoneo*	Flyers added to the receipt, newspaper, radio, *perifoneo*	Flyers added to the receipt, radio, on rare occasions newspapers	Flyers added to the receipt, newspaper, radio, *perifoneo*[83]

[82] Small local banks
[83] A *perifoneo* is a car with speakers that drives around the city providing information through its speakers.

5.5 Preliminary Conclusions of the Cross-case Comparison

In this section the preliminary conclusions regarding the propositions stated in chapter three are presented. In the first part of this section, the findings of relevance for drawing preliminary conclusions about the propositions are summarized and the preliminary conclusions regarding specific propositions are presented. In the second part of this chapter these conclusions are briefly interpreted.

5.5.1 Autonomy, Stability, Politics and Vocation: Propositions 1, 7, 9 and 12

One element that surfaces in all cases is the role played by the municipal president and the *Consejos.* As was mentioned in chapter two, it is difficult to separate politics from the service provision process. But with utilities operating at the municipal level, municipal elections each three years, the powerful position of the municipal president, and the ability of the municipal president to influence the composition of the *Consejo* (even in violation of the utilities regulations) mean that for the cases of Guanajuato the provision of water services is highly politicized and will continue to be so in the future. Even if a utility is able to escape the strong interference from the political realm as SIMAPAG did between 1995-2003, there is no guarantee (or institutional safeguard) that the utility will not be subject to political capture in the very near future. Although in many middle and low-income countries it is unlikely that separation of politics from service provisions is possible, the institutional mechanisms at work in the State of Guanajuato seem to culminate in a very severe politicization of management.

As discussed in chapter three, Schick (1998) and Wallis and Dollery (2001) found that a shift from external to internal control is only realistic if certain 'basics' have been mastered by the public organization. Other authors have highlighted the importance of the legal framework. Although this perspective is convincing, and I for one would agree with it, the findings in Guanajuato highlight another dimension. Added to the basics identified by these authors, one must highlight the institutional settings and add, at least for the provision of water services, that without relatively stable public water utilities, which have the chance to develop and implement reforms, no reforms, be they NPM-style reforms or not, will succeed. The benefits of such stability were illustrated by SIMAPAG in the 1995-2003 period. In this period the level of autonomy that SIMAPAG enjoyed, and especially its financial autonomy, was crucial in improving service provision. This autonomy contrasts sharply to the level of autonomy of the other utilities.

As such, proposition 1, which reads that well performing public utilities have a large degree of external autonomy has not been not falsified by the research findings. Of specific importance appears to be the degree of financial autonomy, as was also illustrated by the performance improvement of SAPAM in the 2000-2003 period.

At the same time, proposition 7, which states that poorly performing utilities are apolitical has been falsified. In the case of Guanajuato, all poorly performing utilities proved to be highly politicized, whilst the only utility able to escape this politicization was SIMAPAG in the aforementioned period.

Furthermore, little evidence was found to support proposition 9, which proposes that poorly performing utilities are characterized by permanence and stability. Three out of the four poorly performing utilities in Guanajuato were relatively unstable organizations with frequent changes in the management of the utility. The well performing utility, SIMPAG, on the other hand was relatively stable in the 1995-2003 period.

In terms of vocation, it was found that the main reasons why the poorly performing public utilities were attractive employers was their favorable working hours and the promise of job security, which was especially valued in the more industrialized towns, which were experiencing the stress of global competition in their industries. As such, little support could be found for proposition 12.

5.5.2 "Upward" Accountability: Proposition 2

All utilities in Guanajuato have a strong accountability to the municipalities who remain firmly in control of the utility. Also accountability to financial institutions that have lent or granted money to the utility is considerable. In this sense there is no difference between a well performing utility like SIMAPAG and the poorer performing utilities in the State of Guanajuato. Furthermore, this accountability was not based on achieving specified results. The accountability to regulatory agencies, to customer agencies and to NGOs is similar for all cases. In all cases, this accountability appears to be very limited.

What should be added, however, is that what distinguished SIMAPAG was its accountability to individual customers. The relatively high tariff levels result in a strong accountability to individual customers, who demand a relatively high level of service for the tariffs they are paying. This accountability exists in addition to the 'upward' accountability to the municipal president and the other government agencies.

Proposition 2 stipulates that a well performing utility is strongly accountable for results to external organizations. As such, in the understanding that individual customers do not represent external organizations and in light of the fact that the utilities were not subject to meeting specified results, this proposition is falsified.

5.5.3 Levels and Hierarchy: Proposition 5, 6, 8, 10 and 11

In all researched cases the employees working in the public utilities operated within and according to the limits set by the established procedures. Making decisions was largely limited to applying the exiting procedure for a specific decision. If the issue to be decided upon concerned something not covered by existing procedures and policies, the matter would need to be referred to the superiors of the employee. As such, proposition 5, which suggests that a well performing utility has a strong decentralization, is falsified, as the level of decentralization in SIMAPAG is not very high.

Although SIMAPAG was more advanced in developing and implementing (internal) accountability mechanisms, these mechanisms did as of yet not hold the employees, be they management employees or not, accountable for results. Both the evaluation of management employees as well as non-management employees was relatively subjective. In the understanding that the accountability system in SIMAPAG

does not hold the employees accountable for results, no evidence was found in the case of SIMAPAG to support proposition 6, which finds that well performing public utilities have a strong accountability for results within the organization.

Proposition 8 puts forward that poorly performing utilities are characterized by hierarchal levels and organized on a rule-governed basis. When analyzing the poorly performing cases, all cases were indeed characterized by hierarchical levels in which lower offices were subordinate to higher offices. As such, the proposition as stated is not falsified.

In terms of the remuneration of employees the research found that poorly functioning utilities indeed mainly remunerated the employees according to a fixed salary. Although a few schemes for bonuses were established, remuneration overwhelmingly follows fixed salaries or the bonus schemes were such that they were de facto part of the fixed salaries. This means that proposition 11 has not been falsified.

This then brings us to one of the more problematic propositions (number 10), which states that poorly performing utilities operate following internal regulations. On the one hand, this proposition has been falsified as the discussion concerning, for example, the appointment of the *Consejo* shows that the regulations on paper are not necessarily enacted in practice. In fact, in quite a few decisions made by the owner and/or the *Consejo*, the regulations have not been followed. On the other hand, at lower levels within the organization, the regulations are more strictly adhered to. These regulations basically form the guideline for the employees and these generally follow these regulations. As such, if the proposition had been limited to lower levels within the organization, the proposition would not have been not falsified. Within the context of this research, however, the proposition, which is assumed to cover the entire organization, is considered falsified.

5.5.4 Market-orientation: Proposition 3

The level of market-orientation is low for all organizations, be they poorly performing or well performing. SIMAPAG's level of outcontracting is at a level (about 20%) that is quite common for water utilities. Although the utility submits performance data to CEAG for annual performance comparisons, this information is mainly used on an ad-hoc basis and not incorporated systematically in the (strategic) management of the utility. The utility does not engage in market testing. Based on these considerations the proposition (number 3) that a well performing utility has a strong market-orientation is not supported by the findings from the cases.

5.5.5 Customer-orientation: Proposition 4

SIMAPAG is certainly the most customer-oriented of the utilities. As the chairman of the *Consejo* of SIMAPAG highlighted in 2003, the reason why SIMAPAG developed its strong customer orientation is because the customers have become more demanding as a result of the relatively high tariffs. This customer orientation is best visible in the monthly surveys that are held and the use of the company's 'image' as the most important indicator in the balanced scorecard. These observations lead to the conclusion

that proposition number 4, regarding the level of customer orientation of well performing utilities has not been falsified.

5.5.6 Preliminary conclusions

If the preliminary conclusions based on the five cases are summarized, the result is the table listed below. Essentially, only proposition 1, 4, 8 and 11 have been supported by the research findings.

Table 5.11: Preliminary conclusions based on the narrow testing of propositions

Proposition	**Preliminary conclusion**
1. Well performing public utilities have a large degree of external autonomy	Not falsified
2. Well performing public utilities are strongly accountable for results to external organizations.	Falsified
3. Well performing public utilities have a strong market-orientation.	Falsified
4. Well performing public utilities have a stronger customer-orientation.	Not falsified
5. Well performing public utilities have decentralized decision-making within the organization.	Falsified
6. Well performing public utilities have a strong accountability for results within the organization.	Falsified
7. Poorly performing utilities are apolitical.	Falsified
8. Poorly performing utilities are characterized by hierarchal levels and organized on a rule-governed basis.	Not falsified
9. Poorly performing utilities are characterized by permanence and stability	Falsified
10. Poorly performing utilities operate following internal regulations	Falsified
11. Employees in poorly performing utilities are remunerated according to fixed salary levels	Not falsified
12. Employees in poorly performing utilities opt for working in water supply and sanitation companies in terms of vocation or sense of duty	Falsified

However, an important qualification needs to be made regarding these preliminary conclusions. Apart from the aforementioned doubts regarding proposition 10, the preliminary conclusions say little about the comparison between poorly functioning and well functioning utilities. This is because the propositions have been interpreted in a narrow sense. What that means is that although the proposition says something about either well performing or poorly performing utilities, it does not really compare the two. Without this comparison it is not possible to see if a particular proposition sufficiently discriminates between a poorly performing utility and a well performing utility.

This is perhaps best explained by looking at proposition number 8, which concerns the remuneration of employees. If this proposition is not falsified, it does not necessarily mean that in well performing utilities employees are not remunerated according to fixed salary levels. If a proposition is not falsified or falsified for both poorly performing and well performing than the only conclusion can be that the particular dimension highlighted by that proposition does not contribute towards explaining differences in performance.

In order to gain more insight in the comparison of poorly and well functioning utilities, the propositions have been slightly altered and tested for both well performing and poorly performing utilities. The preliminary results are displayed below.

Table 5.12: Preliminary conclusions based on comparing all utilities

Proposition	**Preliminary conclusion for poorly performing utilities**	**Preliminary conclusion for well performing utility**
1. The utility has a large degree of external autonomy	Falsified	Not falsified
2. The utility is strongly accountable for results to external organizations.	Falsified	Falsified
3. The utility has a strong market-orientation.	Falsified	Falsified
4. The utility has a stronger customer-orientation.	Falsified	Not falsified
5. The utility has decentralized decision-making within the organization.	Falsified	Falsified
6. The utility has a strong accountability for results within the organization.	Falsified	Falsified
7. The utility is apolitical.	Falsified	Not falsified
8. The utility is characterized by hierarchal levels and organized on a rule-governed basis.	Not falsified	Not falsified
9. The utility is characterized by permanence and stability	Falsified	Not falsified
10. The utility operates following internal regulations	Falsified	Falsified
11. Employees in the utility are remunerated according to fixed salary levels	Not falsified	Not falsified
12. Employees opt for working in water supply and sanitation companies in terms of vocation or sense of duty	Falsified	Falsified

What table 5.12 clarifies is that on only four propositions did the two categories of utilities, well performing and poorly performing, score differently. These are:

- The level of autonomy;
- The degree of customer orientation;
- The separation of the political realm from management of the service provider; and
- The stability and permanence of the organization.

5.5.7 Interpretation of the Preliminary Conclusions

The preliminary conclusions above highlight four differences between the well performing case and the poorly performing ones in the 12 'dimensions' that were covered by the propositions. In analyzing these four differences, it appears possible to identify an explanation why these four dimensions are important and how these dimensions are connected.

As mentioned in the discussion of the findings the degree of autonomy, and especially financial autonomy, was found to be highly important. It was also argued that this (financial) autonomy had strong implications for the level of customer-orientation. Customers were willing to pay a higher tariff, but demanded better services. This forced the well performing utility to adopt a stronger customer-orientation.

Linked to the issue of autonomy is the degree to which the political realm can influence the day-to-day functioning of the water utility. If a utility is autonomous, this influence is likely to be limited. In other words, the combination of having a high degree of autonomy and a relatively strong separation of the political realm from the management of the service provider seems quite logical. The nature of Mexico's political institutions provides an explanation why an organization in which the political realm has relatively limited influence on the management of the utility is characterized by relative stability and permanence. Much of the instability witnessed in (specifically the poorly performing) utilities can be linked to changes in the municipal government. A new municipal president often replaces the management and *Consejo* of a utility. If the influence of the political realm is limited, however, then most likely the possibilities for replacing existing management becomes more difficult. The result would be a more stable organization. As such, it appears that the four dimensions that distinguish the poorly performing utility from the well performing utility are connected.

Another interesting conclusion coming out of the findings is that, interestingly enough, the results also seem to indicate that the well performing utility adheres more strongly to the bureaucratic model as identified in chapter three of this study than the poorly performing utilities. In other words, SIMAPAG seems to operate closer to the bureaucratic model than the poorly performing utilities.

5.6 Additional Salient Findings

In this section, salient findings from the cases, which are of importance for this research, but which do not directly relate to the formulated propositions are presented. The importance of the findings presented below is that they impact the performance of the research water utilities. The first of these issues relates to the scale at which the water utility is operating. In the case of the water utilities in Guanajuato, it appears that municipal water utilities may be too small to allow for good performance. The second section looks at the sequence of reforms as they took place in the case of SIMAPAG. The sequence of reforms highlights the roles of crisis, new management and financial autonomy.

5.6.1 Too Much Decentralization?

It has been mentioned earlier that the municipalities in Mexico derive their authority for providing water services from article 115 of the Constitution. It has also been mentioned that the decentralization policies in Mexico, like those in many other countries, were implemented for largely political reasons. The impact of these decentralization processes on the water services sector cannot be underestimated, as it has truly placed municipal water utilities for an almost impossible task. First of all, the strong position of the municipal president means that only a formidable coalition of the *Consejo* and the management of the utility could limit political interference in the utility. With the municipal president changing every three years, and the tradition of replacing the management of public organizations, does not make the creation of such a coalition any easier. Secondly, even if the utility is able to ward off the municipal president, the utilities in the State of Guanajuato are so small that the capacity of these water utilities to really improve services is very limited[84]. Yepes (1990) already found that in the water services sector in Latin America substantial economies of scale existed in construction, research and development, and operation of water services. In the Netherlands the national government insisted as far back as 1975 that all water utilities have "at least 100,000 connections in order to produce potable water on a larger and more efficient scale" (Dane and Warner 1999:50). An analysis of the water services sector in Guanajuato cannot lead to any other conclusion than that the water utilities are too small to improve services.

In this sense, it would seem appropriate for the water services sector in the State of Guanajuato to consider reorganization for especially the smaller municipalities. This reorganization would mean aggregating several smaller municipalities to form a regional water supply company. Recognizing that political control over water services remains important and unavoidable, ownership of such a regional water utility would remain in the hands of municipalities that are served by this organization. If the limit of 100,000 connections were adhered to, it would mean for the case of Guanajuato that a regional utility would cover five or six municipalities. Apart from providing a degree of insulation against political interference, such a water utility would also have a significantly larger capacity to improve services, both in financial terms (assuming that tariff levels are realistic, meaning that they cover at least operation and maintenance costs and a part of the investment costs) as well as human resources.

5.6.2 The Sequence of Reforms

Another interesting observation coming from the five cases and especially the case of SIMAPAG is the sequence of reforms in these water utilities. In the case of SIMAPAG, the first step in the reform process appears to be the arrival of a new general manager in

[84] The scale of utilities is not only a problem for the State of Guanajuato, but rather a nation wide problem. Mexico counts 2427 municipalities, of which only 7% are inhabited by more than 50,000 people. 61% of the municipalities have less than 2,500 inhabitants (Cabrero 2005:81). If the scale of the utilities is a problem for municipalities as those five researched in the state of Guanajuato is a problem, it will be even worse for the 93% of municipalities which have less than 50,000 inhabitants.

1995. The first emphasis of the new management was to improve the financial situation of the utility. This meant increasing tariffs and improving the billing and collection system. Important for the ability to improve tariffs was the water crisis in the 1980s, which confronted the inhabitants of the municipality of Guanajuato with the importance of water services and which tremendously increasing their willingness-to-pay for water services. Although the higher tariffs were accepted, the customers also forced the utility to improve the service level provided, which forced the utility to adopt a stronger customer focus. In the case SIMAPAG, the utility had started the implementation of the balanced scorecard as a main system for measuring performance and holding the employees accountable for the results they produced in their job. However, with the changes in 2003, in which a large part of the management team left the utility, the momentum for strengthening this system appears to have disappeared.

In the case of SAPAM, the first two steps appear similar. New management arrived following a period of extremely poor performance and the initial emphasis in improving performance was by increasing the financial autonomy of the organization. However, before the utility could progress to other reforms, management was replaced in 2003. The other three utilities seem to be largely stuck in the low-level equilibrium as described by Spiller and Savedoff (1999) in chapter one.

6 Four Cases of Well Performing Utilities

As mentioned in chapter three, this research follows a two-step approach. The first step consisted of analyzing five case studies in the State of Guanajuato, Mexico and drawing preliminary conclusions regarding the formulated propositions. In this chapter, the preliminary conclusions are checked by analyzing four cases of utilities, which have been recognized and promoted by (inter)national agencies as being well performing.

The cases presented below were all researched either for the BNWP Public Modes of Engagement project or as part of MSc. Theses or a combination of these two. In all cases the same guideline was used for data collection. What makes these cases interesting for this research is that they allow for a comparison with the findings in the previous chapter. One of the conclusions of the previous chapter was that the poorly performing utilities did appear to be stuck at a low-level equilibrium. These well performing cases, however, can be viewed as either having maintained a high level equilibrium for a long period of time (SADM) or which have managed to escape the low-level equilibrium and progressed to a higher-level equilibrium (NWSC, HPWSC, SANASA). What also makes these cases interesting is that they represent utilities operating in different institutional environments. If these cases provide findings similar to those of Guanajuato, then it would greatly enhance the generalizability of the findings. Do these well performing cases confirm the findings in the previous chapter or do they provide a completely different picture?

One observation, however, can be made at the outset. This relates to the scale of the utilities. All these utilities, which have received recognition as well performing utilities, have close to 100,000 connections. Only NWSC is below this threshold. This in itself may appear surprising, as the N in NWSC indicates that the utility has a national mandate in the country of Uganda. However, the characteristics of service provision in Uganda (and in much of sub-Saharan Africa for that matter) differ from those in Mexico. This becomes clear if the population served in relation to the number of connections is compared. For the NWSC, 1.3 million people are served by 87 thousand connections, meaning that a connection serves almost 15 people. In the case of SADM, 3.5 million people are served by 850 thousand connections meaning that each connection serves just over 4 people per connection. There appear to be very few urban water utilities (in fact, none to my knowledge), which have less than 20,000 connections and which are recognized and promoted as being exemplary public water utilities.

In this chapter, the well performing utilities will first be presented briefly. The second part of this chapter consists of comparing the utilities to one another. The third part of the chapter consists of some conclusions regarding the propositions.

6.1 Case descriptions of the Four Well Performing Cases

The cases presented in this section have all received recognition at a variety of fora for their performance or their performance improvements over the past years. The National Water and Sewerage Corporation has received considerable attention regarding its

achievements in improving the provision of water services. Indicative is that the utility was requested to present itself as a 'turn-around' company during the Water Forum at the World Bank in 2003.

SANASA has been recognized by a variety of sources as being a 'turn-around' utility. The *Correio Popular* newspaper recognized it as being an outstanding public organization in 2003. It was acknowledged by 'Environmental Sanitation' Magazine as the municipal operator of the year in 2004 and was recognized for its performance by the Campinas municipal council in 2004.

The Hai Phong Water Supply Company was presented as a 'turn-around' case at the 24th WEDC Conference, held in Islamabad in Pakistan in 1998. In addition, the utility received recognition in 2003 from the Vietnamese national government for being an outstanding public organization. Furthermore a benchmark study of the Vietnamese water services sector and monitored by independent auditors found that HPWSC was one of the best performing utilities in Vietnam.

The water utility serving the State of Nuevo Leon (SADM) in Mexico was recognized as being one of the best run in the sector as far back as 1990 (Yepes 1990). In 2003, the Mexican Commission of Environmental Infrastructure and the National Water Commission undertook a performance assessment of 72 utilities, which served more than 100,000 people. The criteria used for this assessment included, amongst others, indicators on service coverage, wastewater treatment coverage and efficiency of service provision. In the final ranking the SADM was ranked first (Rangel 2005).

6.1.1 National Water and Sewerage Corporation, Uganda[85]

In Uganda, water management is a task of the Ministry of Water, Lands and Environment (MWLE), whose mandate is "to promote and ensure the rational and sustainable utilization and development and safeguard of Land and Water Resources and Environment, for social and economic welfare and development as well as for regional and international peace"[86]. The MWLE consists of one Minister and three so-called Ministers of State.

These Ministers of State include one State Minister for Water, one State Minister Lands and one State Minister for the Environment. At the operational level the ministry's structure consists of two Directorates, The Directorate of Water Development[87] and the Directorate of Land and Environment. The Heads of these Directorate report to the Permanent Secretary, who is the Chief Executive and Accounting Officer. The MWLE supervises three statutory bodies. One of these statutory bodies is the National Water and Sewerage Corporation (NWSC) (Philips 2003). The NWSC was established in 1972[88] with the responsibility of delivering

[85] The case of NWSC is based on Mwoga (2003), Mwoga (2004) and Philips (2003).
[86] www.mwle.go.ug
[87] Water services in rural areas and urban areas not entrusted to the NWSC are managed by the Directorate of Water Development (Philips 2003).
[88] The NWSC was founded by Decree no. 34 of 1972. This Decree was repealed by Statute No. 8 of 1995. This Statute, also known as the NWSC Statute governs all operations of the NWSC (Mwoga 2004)

water supply and sewerage services in 15 large urban centers[89]. The 15 centers in which the NWSC provides services count a population of 2.1 million people, which represents about 75% of the population in urban centers (Mwoga 2004).

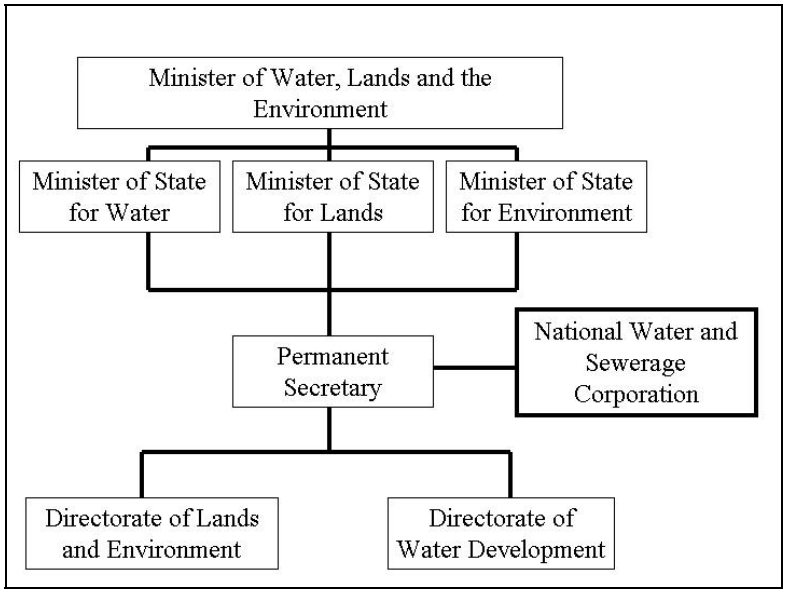


Figure 6.1: Governance structure of the National Water and Sewerage Corporation

The functioning of the NWSC is overseen by a Board of Directors, which is also the policy making body of the NWSC. The Board of Directors consists of 8 people including the Managing Director of the NWSC[90]. Of the seven other members, one must be the Director of the Directorate of Water. The other six members are appointed by the MLWE. These 6 Board members serve terms of 3 years and may be re-appointed for a second term. Selection of the Board members takes place on the basis of expertise in the fields of water utility management, public finance, engineering or public health Mwoga (2004). Although appointment of the Directors is on the basis of expertise, it is noteworthy that most of the members have a political background or are in some way involved with the Government of Uganda (Philips 2003). The Managing Director is appointed on the basis of competitive selection. In principle the Managing Director serves a contract term of five-years, but the contract can be renewed after the contract term has expired.

[89] The 15 towns served by the NWSC: Kampala, Jinja, Njeru, Entebbe, Mbale, Mabarara, Masaka, Tororo, Gulu, Lira, Kasese, Fort Portal, Kabale, Bushenyi, Soroti and Arua

[90] Philips (2003) states that the Board consists of 11 members. The other members are a Corporation Secretary and a member of the Utility Reform Unit within the Ministry of Finance and Economic Development and the chairman.

Table 6.1: General characteristics NWSC 2000-2003

Indicator	**2000/01**	**2001/02**	**22002/03**
Population served			1,315,000
Connections			87,172
No of employees			950
Unaccounted for Water	43%	40%	39%
Working ratio	0.85	0.79	0.79
Staff per 1000 connections	17	12	11
Staff per 1000 population served			0.72
Accounts receivable as a share of annual revenue, expressed in months sales	4.9	5.6	4.7
Service coverage – water supply	n.a.	n.a.	63%
Average domestic tariff (US$/m^3)	0.38	0.38	0.40

Source: Mwoga 2004

During the 1970s and early 1980s Uganda was subject to considerable political and economic turmoil and the performance of NWSC, like that many other institutions, declined significantly. Between 1986 and 1997, NWSC embarked on major rehabilitation and expansion of its water supply and sewage systems with the support of international donor agencies. Although water supply and sanitation infrastructure was rehabilitated and expanded, performance of the utility was still lacking. This resulted in poor service provision despite improved infrastructure.

In 1998, a new Board of Directors was appointed. The Board, in turn, appointed a new Managing Director, after the position fell vacant upon the expiry of the contract of the previous Managing Director. With a new Board and management a rare opportunity existed to review past performance and implement new strategies for improving performance of the utility. At the same time, external pressure was applied to improve performance. This external pressure came from:

- Donor agencies who wanted NWSC to improve performance levels in order for it to be able to meet its debt obligations and be more credit worthy;
- The Government who wanted the NWSC to service the customers better; and
- The possibility of increased private sector participation, meaning that the NWSC had to show it could perform as well as a private operator.

6.1.2 Sociedade de Abastecimento de Água e Saneamento S.A., Campinas, Brazil[91]

The city of Campinas is located in the Brazilian State of Sao Paulo. The water services in this city of about 1 million inhabitants are provided by the *Sociedade de Abastecimento de Água e Saneamento S.A* (SANASA). SANASA, which was formed in 1974, is a so-called '*empresa-mixta*'[92]. Although the *empresa-mixta* usually involves

[91] The case of SANASA is based on Aguiñaga (2004) and Ramos (2004).
[92] The 'empresa mixta', or 'mixed ownership company', originated in Spain. It has subsequently spread to other countries in Latin America (Ringskog 2002).

substantial private ownership, in the case of SANASA, the overwhelming majority of shares are owned by the Municipality of Campinas, which owns 99.99% of the shares[93]. Other persons and organizations, varying from the Mayor of Campinas in 1973 to the Municipal Company for Development of Campinas, own the remaining 0.01% of the shares. As mixed-ownership company, SANASA has both an Administration Council as well as an Inspection Council.

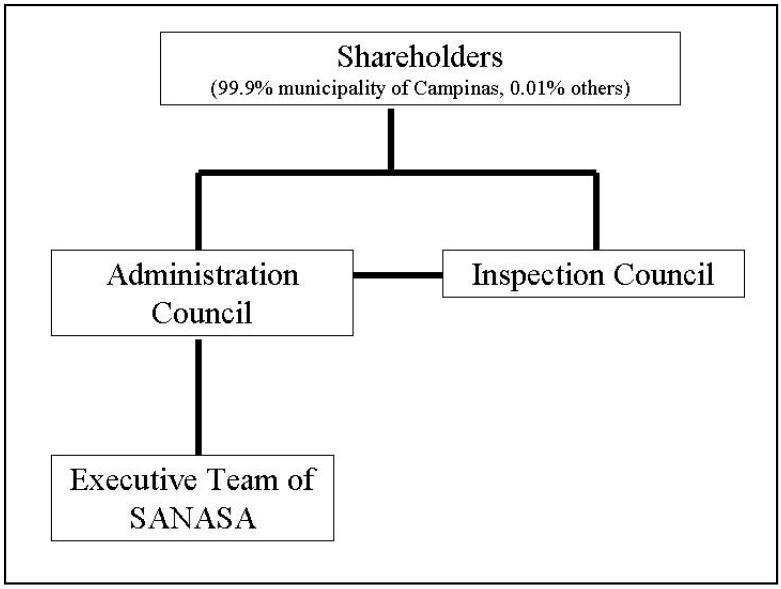


Figure 6.2: Governance structure SANASA

The Administration Council sets the general direction that SANASA follows, approves the annual plan and supervises the Executive Team. The Inspection Council is a consultative body that analyses proposals and decisions on a range of issues. The Inspection Council reports to the Administration Council and once a year to the Shareholders Meeting. The Administration Council has a minimum of three and no more than five members who are elected or dismissed by the shareholders. The members of the Administration Council represent the executive team of SANASA (two members appointed by the Municipality), the employees of SANASA (one member) and two members are external members who are appointed on the basis of professional experience. The majority shareholder, in this case the Municipality of Campinas, appoints the president of the Administration Council who is also the president of SANASA.

[93] Although SANASA is on paper an '*empresa mixta*', the fact that shares are so heavily concentrated with the Municipality of Campinas, means that it functions more like a government-owned company than a joint-stock company. Potential benefits that are often cited by promoters of the '*empresa mixta*' (such as access to private sector capital and private sector expertise) are unlikely to be achieved with the current ownership structure.

Management of the utility is the responsibility of a four-member Executive Team, which is appointed by the Administration Council every year. The Inspection Council is a consultation body without decision-making powers. They report their views to the Administration Council and at least once per year to the shareholders meeting.

Table 6.2: General characteristics of SANASA

Indicator	**2000**	**2001**	**2002**
Population served			982,977
Water supply connections			209,091
Sewerage connections			186,652
No Of Employees			1,609
Unaccounted for Water	26.66%	26.62%	26%
Working Ratio	0.65	0.81	0.79
Staff per 1000 connections	4.16	4.11	4.13
Staff per 1000 population served	1.65	1.73	1.68
Accounts receivable as a share of annual revenue, expressed in months sales	2.5	3.5	3.2
Service coverage – water supply	98.54%	98.60%	98.89%
Service coverage – sewerage	87.06%	87.47%	88.09%
Average domestic tariff (US$/10m^3)	1.75	2.39	2.62

Source: Aguiñaga 2004

6.1.3 Hai Phong Water Supply Company, Hai Phong, Vietnam[94]

Located on the northeastern coast of Vietnam, Hai Phong is the third largest city in Vietnam and it is one of four cities with a provincial status[95]. The Hai Phong Water Supply Company (HPWSC) has the responsibility of providing water services to the 1.7 million inhabitants of the city of Hai Phong. The HPWSC is a statutory body owned by the Hai Phong Provincial People's Committee (HPPC).

As a state-owned enterprise, the HPWSC has to observe the Law on State Enterprises of April 20th, 1996. According to this law, state-owned enterprises are granted larger autonomy in decision making, to procure inputs, to introduce new technologies, to borrow, to acquire or less assets, to hire and fire employees, and to allocate after-tax profits. On the other hand, it has the obligation of using capital and other resources provided by the government for production and delivery of services with tariffs regulated by the government.

[94] The case description of the Hai Phong Water Supply Company (HPWSC) is based on the Master of Science thesis of mr. Do Nhat Hoang, which was undertaken in the period September 2003-April 2004. In addition, the HPWSC was visited in November 2003, during which interviews were held with managers and the former managing director.

[95] The provincial status means that the Hai Phong People's Committee reports directly to the national government

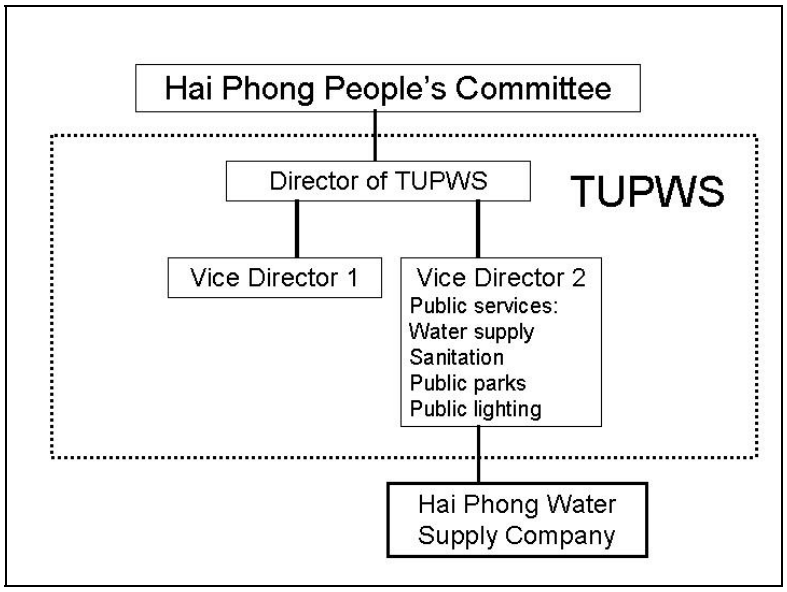


Figure 6.3: Governance structure Hai Phong Water Supply Company

The Transport, Urban and Public Works Department (TUPWS), which operates under the HPPC, oversees the management of the service provider. The vice-director of TUPWS, who is responsible for overseeing the management of HPWSC, is appointed by the HPPC. HPWSC employs 762 employees divided over 5 main departments (production, construction, support, project management and consumption). The largest of these departments is the consumption department, which is responsible for water distribution and customer relations.

Table 6.3: General characteristics HPWSC 2000-2002

Indicator	**2000**	**2001**	**2002**
Population served	460900	480000	538,600
Water supply connections	94724	112,427	131,136
No of Employees	713	730	762
Unaccounted for water	44	41	32%
Working Ratio = (Annual Operating Costs – Depreciation – Funding Charges)/ Annual Gross Revenues)	0.82	0.67	0.62
Staff per 1000 connections	7.20	6.49	5.66
Staff per 1000 population served	1.55	1.382	1.27
Accounts receivable as a share of annual revenue, expressed in months sales	1	1	0.1
Service coverage – water supply	75% (estimated)	80%	85%
Average domestic tariff (US$/$m^3$)	0.18	0.18	0.18

Source: Hoang 2004

In the summer of 1993, the city of Hai Phong was faced with an acute water shortage resulting in rioting directed against the utility (which even resulted in the death of a company employee). As a result, the owner (HPPC) changed the utility management team and gave a clear mandate to the new director to produce results. Pressure from both the owner and the customers were the initial driver for change in management of the utility, with the new managing director as a major instigator of change. The first institutional reform was made in 1993.

The first step in reforming the utility really consisted of a number of steps. The managing director received support from the HPPC (as is illustrated by allowing three tariff increases in the 1993-1997 period) and received the leeway to implement a new model for managing the utility (the 'phuong' model) (Ahn Thu and Luy 1998). The 'phuong' is the smallest administrative unit in the Vietnamese administration system and encompasses between 10,000 and 15,000 inhabitants. In the 'phuong' model, on a phuong by phuong basis, the network in the phuong is upgraded and rehabilitated and the household connections in that phuong are provided with meters. Each phuong is connected to the main network by no more than 3 connections. The limited number of connections between the phuong and the main network allow the utility to accurately establish the amount of water going into a phuong and the meters at the household connections allow the utility to determine the actual consumption by the users. As a result the utility is able to accurately monitor the unaccounted-for-water levels per 'phuong'. At the same time, customer agencies are established at the 'phuong' level. These customer agencies both collect the bills that users have to pay as well as receive complaints from users.

In addition to introducing the 'phuong model', the new management worked hard on changing the corporate culture of the utility (basically convincing everyone of the need for change). Training of utility staff, by using international donor support, formed an important component of this change process. As a result of the reforms in Hai Phong, performance of the HPWSC showed impressive improvements over the 1993-2002 period as is illustrated by table 6.4.

Table 6.4: Performance Improvements for HPWSC 1993-2002

Indicator	**1992**	**2002**
Unaccounted for water	73%	32%*
Service coverage	68%	85%
Metering	0%	91%
Staff per 1000 connections	n.a.	5.3

* - Figure for 2003 (Hoang 2004); *Source*: Hoang 2004

6.1.4 Servicios de Agua y Drenaje de Monterrey, Nuevo Leon, Mexico[96]

The state of Nuevo Leon is located in the North of Mexico, on the border with the United States. Although the State counts 51 municipalities, political and economic life in the State is dominated by the city of Monterrey, which state houses 85% of the State's inhabitants. The *Servicios de Agua y Drenaje de Monterrey* (SADM) initially

[96] The case description of SADM is largely based on Rangel (2005).

was responsible for providing service only to the Monterrey Metropolitan Area. However, in 1995, its mandate was extended to cover the entire state of Nuevo Leon. In addition to providing water services to the population of Nuevo Leon, the utility was attributed storm water management functions in 2000. SADM provides these services to approximately 3.5 million people.

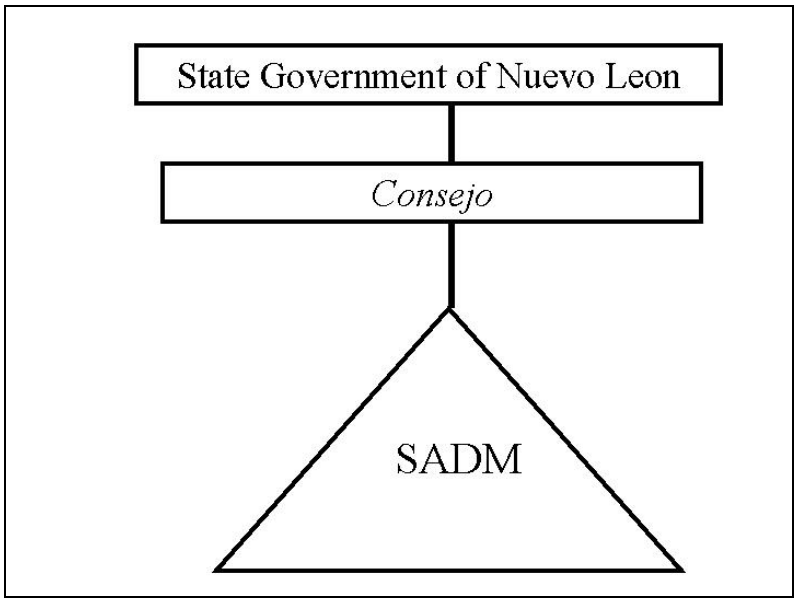


Figure 6.4: Governance structure SADM

SADM is a statutory body, owned by the State of Nuevo Leon. As a statutory body, the utility is monitored by a *Consejo* consisting of 7 members. In addition to being on the *Consejo* himself, the State Governor appoints one other representative of the state government and one representative of the water users[97]. Different Stakeholders appoint the other four members. One member represents the municipalities and is appointed by the municipality of Monterrey in which 85% of the population resides. The Nuevo Leon Real Estate Owners Chamber appoints one representative, one representative is appointed by the Nuevo Leon Industry Chamber and the regional office of the National Commerce, Services and Tourism Chamber appoints the final representative. The terms of the members of the *Consejo* vary depending on their appointment. For the members appointed by the State Governor their terms coincide with the 6-year term of the Governor himself, the *Consejo* member for the municipalities has a three-year term (coinciding with the terms of the mayors) and the Chambers are able to replace their representatives at any time.

[97] There is no standard procedure by way of which the governor appoints the other two Board members. They typically tend to be "people of the Governor's confidence" (Rangel 2005:89)

Table 6.5: General characteristics SADM

Indicator	**2003**	**2002**	**2001**
Population served (in millions):			
Water supply	3.428	3.363	3.327
Wastewater	3.373	3.373	3.263
Water supply connections	853,752		
No of Employees	3,220	3,187	3,082
Unaccounted for water	24.9%	23.5%	27.5%
Working Ratio	0.73	0.73	0.68
Staff per 1000 connections (water supply)	3.77	3.83	3.85
Staff per 1000 population served (water supply)	0.94	0.95	0.93
Service coverage – water supply[98]	99.18%		
Average customer bill water and wastewater	US$10.40		

Source: Rangel 2005

6.2 Cross-case Comparison of Four Well Performing Utilities

Having introduced the four case studies, which are considered well performing, this section makes a comparison between these cases. The first part of this section discusses the autonomy and accountability of the utilities. This discussion also touches upon elements such as the degree to which the utility is 'apolitical' and the permanence and stability of the utility. The second part of this section focuses on elements such as hierarchy and levels within the utility, the degree of market-orientation and the level of customer-orientation.

6.2.1 Autonomy and Accountability of the utilities

The section on autonomy and accountability is subdivided in two main parts. The first parts concerns findings related to the autonomy of the utility. Points of discussion that will be raised in this section include financial autonomy and tariff levels, the role of external financiers, the stability of the organization, the role of crises for the utility and how this impacts the reform process, and the decline of political support following a crisis or external shock. The section dealing with accountability discusses the accountability of the utilities for the quality of water services provided, the use of performance targets in the management of the utilities, and the degree to which the service providers are accountable to financial institutions.

6.2.1.1 Autonomy

Based on the case studies the following observations can be made:

[98] Although SADM has the authority to provide water services to the whole state, there are areas where SADM has no infrastructure. In these areas, SADM provides (metered) bulk water to the municipality, which further distributes the water to the local inhabitants (Rangel 2005:86).

- None of the utilities are able to determine their tariffs;
- All utilities seem able, at least to a large extent, to attract and maintain qualified staff;
- All utilities are relatively stable in the sense that the management of the utility and the Board of Directors do not change frequently;
- All utilities have a relatively high degree of financial autonomy, although external funding for investment purposes remains important in at least two of the cases;
- The availability of water resources does not pose a major problem for the utilities;
- All utilities received considerable political support over the past years.

6.2.1.1.1 Financial Autonomy and Tariff Levels

The four utilities are all characterized by a high degree of autonomy. In fact, the only two areas where the utilities do not appear to have much autonomy relates to the tariff levels and the ability to take out loans without prior approval of the owner. The fact that the utilities cannot address these issues is perhaps not without reason. The level of the tariffs remains a highly political issue and as such, it is not surprising that the government-owners want to keep control over the tariffs. The issue of being able to take out loans would appear to be related to the risks that are run by the government-owners when the utility takes out loans. Basically, a water utility is almost never allowed to go bankrupt and cease its operations, as this would have a devastating effect on the well being of the local population. As such, when a utility would default on their loans, the government-owners would have to intervene and bail out the utility. This essentially means that a large part of the risks involved in taking out loans lies with the government-owners.

All utilities had tariff levels, which at least covered operation and maintenance costs and part of the investment costs. Although, the utilities do have a high degree of financial autonomy, some of the utilities face some difficulties in their attempts to increase tariff levels in line with inflation levels. In an interview with the former managing director of HPWSC in November 2003, he expressed a need to raise tariffs in order to ensure expansion of the water and sanitation network to currently unserved areas in the Hai Phong area. However, although realizing that without tariff increases this expansion could not take place he also acknowledged that the Hai Phong People Committee (HPPC) would not approve this tariff increase. Between 1994 and 2003 there had been 5 tariff increases and getting the HPPC to accept a sixth tariff increase would be highly unlikely. More so, because the current level of water services provision is not bad and quite impressive in comparison with the performance in 1994. This has meant that the issue of water services has been losing ground on the public agenda. With water services being surpassed by other issues (roads, education, etc.) on the public agenda, the support from the HPPC for further tariff increases for water services dwindles. Illustrative for the diminishing willingness to increase tariffs is when and why the five tariff increases in the period between 1994 and 2003 took place. Three out of the five tariff increases took place in the first three years, meaning that in the last six years only two tariff increases were implemented (Hoang 2004). Furthermore, the last two tariff increases were partly or wholly implemented as part of a commitment in order to ensure a World Bank project loan (Hoang 2004), leading to the question if the tariff increases would have occurred at all were it not for this outside pressure.

Whereas HPWSC has to wait and see if its proposed tariff increases are accepted, the tariff charged by SADM is automatically adjusted every month using a formula stipulated in the State Water Law of Nuevo Leon. The formula incorporates the inflation of operating costs for the utility (especially electricity and salary costs) and the national inflation index (as reported by the Mexican Central Bank). Adjustments in the tariff based on this formula do not require the approval of any authority. However, the Board has intervened a few times when they considered further increases inappropriate. In 1995, when national inflation levels increased drastically, the Board refused to let that increase translate into large tariff increases. A second example of intervention took place in 2004, when it was proposed that SADM would not apply the monthly tariff increases as long as its surplus finances were healthy enough to absorb the lower real tariff rates. SADM started applying the automatic increases again in December 2004 (Rangel 2005). Also in Uganda the water tariff has been indexed since April 2002. The tariff is indexed annually and takes into account inflation, and the depreciation of the Uganda Shilling against foreign currency.

6.2.1.1.2 Stability of the Organization

In contrast to the utilities in Guanajuato, most of the utilities are relatively stable in the sense that management and the management oversight entity (the Board of Directors or Councils) do not change frequently. This should allow the management of the utility to develop a medium-term to long-term strategy for improving performance or maintaining a high-performance level. In Hai Phong the managing director held his function from 1993 until 2002, when he was promoted. The deputy director subsequently succeeded him. In the case of NWSC, the current managing director has held his office since 1997. The exceptions to this are the Latin American cases. In the case of SADM, the appointment of the general manager does appear to be influenced by political changes as "the general manager usually changes when the State Governor does" (Rangel 2005:91). In fact, the general manager can be removed by the State Governor at any time the State Governor desires to do so. This essentially ensures that the general manager will be loyal to the State Governor. However, although the General Manager tends to alternate with changes in the State Government, other managers in the organization do not change that frequently, not even when the political party in power changes. This provides a measure of stability to the management team of the utility. According to the management of the utility this is one of the success factors of the utility (Rangel 2005). According to the management of SADM, the utility has not been the subject of large-scale political intervention, as electoral candidates have not used the utility to promote their own image. The management believes that this 'insulation' from political influence is a result of an awareness campaign started in the 1980s, which aimed to inform the population about providing water services (and the need for them to pay their water bills). Another way of mitigating political influence is that the SADM tries to fill vacancies internally prior to offering these vacancies external candidates. This system of giving preference to internal candidates also acts as a buffer against political interference as politicians have limited means to offer 'supporters' jobs at the SADM.

In the case of SANASA, the utility has been subject to more turbulence. As with the Mexican utilities, the management of SANASA is also impacted by the change in

municipal government. Instead of elections every three years, however, municipal elections are held every four years.

6.2.1.1.3 The Role of External Financiers

Similar to the cases in Guanajuato, external financing remains crucial for these four utilities. Many 'turn-around' utilities, which showed impressive performance improvements, would not have been able to do so without outside financial assistance. In the case of Hai Phong for example, the World Bank and DANIDA provide considerable assistance (although it should also be emphasized that the utility of Hai Phong proved capable of making the most of that assistance). In Uganda the NWSC received financial assistance from the World Bank, the German Government through KfW and GTZ and the European Union through the European Development Fund. In Nuevo Leon, SADM managed to obtain a loan from the Inter-American Development Bank for US$180 million in the early 1990s. SANASA has also depended on financial resources from government agencies. Contributions and loans were received from the State Fund for Water Resources (FEHIDRO), the Federal Economic Bank (CEF) and the National Bank for Economic and Social Development (BNDES).

Linked to the issue of external assistance is that of the role played by the government of the country in which the utilities operate. In most cases, external assistance is only possible if the government provides support and guarantees to the external agency providing the assistance[99]. As a result, without political support a utility is unlikely to have access to external assistance and as such is unlikely to be able to 'turn around' performance. As an example we can refer to the discussion of the tariffs in Hai Phong above. Raising tariffs appears to have been a condition in order for HPWSC to gain access to a World Bank loan. The HPPC supported the water utility in order to obtain this external financing.

6.2.1.1.4 Crisis and Punctuated Equilibria

A review of the cases shows that reform processes to turn around utilities are frequently preceded by some form of crisis or external shock. Crisis appears to both generate a need for change and also to open up windows of opportunity by throwing the normal rules of the game into flux (Bately and Larbi 2004)[100]. The reason why normal rules are thrown into flux appears to be that crises weaken or undermine supporters of the status quo (Tomassi 2002). With the position of the supporters of the status quo weakened, more room is available (at least for a limited time) for the proponents of reform.

The nature of that crisis can vary. In the case of Hai Phong for example, the crisis consisted of a water service crisis in 1993 in which the utility had tremendous difficulty supplying the citizens of Hai Phong with water. The crisis lead to civil unrest and during protests one employee of the utility even lost his life. This put enormous pressure on the Hai Phong People Committee to improve service provision. In the

[99] This not only applies to funds from international lending agencies and donors, but also to private banks. In case a utility would want to take out a loan with a private bank, the government-owner is likely to have to provide guarantees to the

[100] These findings concerning reform processes in nine countries illustrate the importance of crisis prior to reform as they found that 'economic' crisis was "a key catalyst in bringing about reform" (Batley and Larbi 2004:39).

'window of opportunity' a new managing director, Mr. Thuy, was allowed to implement his ideas concerning the 'phuong model' and received both political support and support from international agencies to do so.

In Uganda the NWSC was under threat of being privatized by way of a lease contract in the late 1990s. This put a lot of pressure on NWSC to show that it could turn around performance in order to avoid plans of introducing a lease contract. In 1997, a new managing director entered the utility, and with government support and that of external agencies, initiated a series of reforms in the utility.

In some utilities, reform starts with the arrival of a new municipal government, which makes improvement of service provision one of its priorities. In essence a change in municipal government then forms the crisis (or external shock) that can initiate the reform process. An example of such a utility is SANASA, which made major improvements in service provision in the 1996-2000 period. Over the 2000-2004 period the policy of the previous administration was largely continued. What is noteworthy is that here too, the arrival of a new managing director in 1996 signaled the beginning of the 'turn-around' of the water utility.

In this sense, these findings confirm the findings for the case of SIMAPAG, where the decentralization of service provision to municipal government and the arrival of a municipal government in 1996 preceded a period of considerable performance improvement, again under the guidance of a new managing director.

In fact, it is possible to identify a number of 'triggers' for reform. These include water sector crises (such a droughts and low service levels), political shifts (such a decentralization programs or changes following an election) and outside threats and opportunities (such as the threat of privatization or possible donor assistance). What is also noteworthy is that political support immediately following the external shock is high. However, as the tremors of the external shock fade and diminish, so does political support for further reforms. Immediately after a crisis or major event there is a 'window of opportunity' to implement a wide range of relatively radical reform measures. But as the memory of the crisis fades, this window of opportunity disappears. The closing of the 'window of opportunity' is perhaps best illustrated by the support for further tariff increases. Immediately after a crisis, broad political support exists for implementing measures such as tariff increases as the issue of water services provision figures prominently on the public agenda, as was seen in Hai Phong and SIMAPAG. However, as time passes and a 'sufficient' level of performance is achieved, other issues (housing, roads, employment, healthcare, etc.) surpass water services in prominence on the public agenda[101]. When that happens, political support for the water services sector is likely to

[101] In this sense it is important to realize that it would seem that the 'crisis' should be sufficiently large to not only affect the low -income households often living in informal settlements, but also affect the middle and higher-income households. Only then is the crisis sufficiently severe to be a trigger for reform and lead to political support for the water utility. As long as the crisis is limited to low-income households, with little political power, it is not likely that the issue of water services will figure prominently on the political agenda. Only when interests of middle and higher income consumers, who are likely to wield considerable political influence, become threatened does the issue of water services really become prominent on the political agenda. Political support will then decline once the interests of the middle and higher-income households have been safeguarded.

dwindle and the utilities face much more difficulty in getting approval for tariff increases. This process, as identified in a number of utilities, seems to give support to the theory of seeing institutional evolution or change as punctuated equilibria rather than steady, gradual change[102]. The idea behind the theory of institutional evolution as punctuated equilibria is that "[o]nce a particular system (institutional or biological) is established, it tends to sustain itself. Change in the system may more likely be initiated by a large external shock that triggers the activation of internal change, cumulative or new, rather than something continual or gradual" (Aoki 2000:29). Strongly linked to the idea of institutional evolution as punctuated equilibria is the idea of resilience. Resilience can be defined as "the amount of disruption needed to transform a system from one stability domain (characterized by a configuration of mutually reinforcing processes and structures) to another" (Ostrom and Janssen 2002:14). If we link these two ideas with Spiller and Savedoff's 'low-level equilibrium', as discussed in chapter one, we can perhaps view the turn-around of utilities such as the one in Hai Phong, SIMAPAG, SANASA and the NWSC in Uganda as examples were a low-level equilibrium was punctuated and a higher level equilibrium resulted. In Hai Phong the civic unrest, in SANASA the onset of a new municipal government and in Uganda the threat of privatization could then have provided 'the amount of disruption required' to reach a higher-level equilibrium.

Having said this, questions remain about the exact role of the noted external shocks. Although, external shocks could be identified, the role played by these shocks is not clear. The question is if the external shocks are 'necessary' for successful reform to take place, if they are 'sufficient' in themselves to cause reform or if these shocks can be seen as no more than 'facilitating' reform (Drazen, as cited in Tomassi 2002).

6.2.1.1.5 Punctuated Equilibria and Declining Political Support

In the previous section the existence of external shocks prior to utility reform was discussed. It was argued that external shocks often preceded the achievement of a 'higher-level' equilibrium (i.e. a situation of improved performance). Although this may be the case, similar to performance improvements being triggered by a crisis or external shock, so can a performance decrease be triggered by an external shock. In other words, the question is how stable the higher-level equilibrium is. Can the higher-level equilibrium not be 'punctuated' again and lead to a shift back to a lower-level equilibrium. For example, the municipal elections of 2003 left SIMAPAG with a level of monthly-tariff increases, which is well below the rate of inflation and with a largely new management team (headed by the municipal president's cousin). Similarly, SANASA, which managed impressive performance improvements in the 1996-2004 period, witnessed an almost complete change in management following the 2004 elections. Although, it is at the moment too soon to state that these events will lead to a decline in performance (and, as such, to lower-level equilibria), the main point is that external shocks can work in all directions triggering not only performance increases, but also decreases.

[102] "The actual process of institutional evolution may thus be seen analogous to the biological evolutionary process that biologists Stephen Jay Gould and Niles Elridge […] conceptualized as punctuated equilibria" (Aoki 200:28). Aoki does indicate that biological metaphors and analogies cannot be perfect. He does find them, however, highly relevant and appropriate.

Noteworthy in this context is the 'vulnerability' of public water utilities to external shocks. The fact that many public water utilities are strongly controlled by the government-owners would lead to the conclusion that in many cases public water utilities may be quite vulnerable to external shocks relating to the owner. This would especially be the case if ownership were concentrated in one person or organization. In SIMAPAG and SANASA ownership essentially rests with the municipal government, which is dominated by the municipal president. This concentration of ownership makes the utility highly vulnerable to the impact of external shocks, as is illustrated by the frequent changes in management. In SIMAPAG, the collaboration between the general manager and the *Consejo* was able to 'insulate' the utility against external shocks in the 1995-2000 period. But since then successive municipal governments have slowly eroded the 'layer of insulation'.

Interestingly enough, the one utility that does not fit the mold is SADM, which has been recognized as a well performing utility at least since 1990. The fact that it is recognized as a well performing utility basically means it operates at a high-level equilibrium (to use Spiller's and Savedoff's terminology) and has done so for a very long time. As such, what is interesting in the case of SADM is not so much identifying an external shock, which preceded reform, but rather to identify how the utility has managed to insulate itself against external shocks, which may precede a sharp decline in performance. In other words, whereas SIMAPAG and SANASA have, as a result of external shocks, entered an era of instability, which may have severe consequences on the levels of water services provided, SADM has managed to remain stable. As mentioned, the management believes that this 'insulation' from political influence (and as such from the external shock of political origin) is a result of an awareness campaign started in the 1980s, which aimed to inform the population about providing water services. It would appear that, over time, SADM has managed to establish an institutional culture, not only internally but also among its clientele and its owners, that essentially insulates it against the external shocks deriving from changes in the State Government of Nuevo Leon.

Table 6.6: An overview of autonomy

External Autonomy	HPWSC	SANASA	NWSC	SADM
The utility is able to attract and maintain qualified staff on its own account	Yes	Yes	To a large extent	To a large extent
The utility and the Board can set the pay scales for the utility	Yes[103]	Yes	Yes	Yes
The level of actual income is equal to required income	Yes	Yes	Yes	Yes
The utility is able to set its own tariffs	No	No	No	No
The utility has access to sufficient raw water resources	Yes	Yes	Yes	Yes
The income generated by the utility can only be used for provision of water services by the utility.	No[104]	Yes	Yes	Yes
The tariffs have been sufficient to meet at least O&M costs	Yes	Yes	Yes	Yes
There have been few changes in management of the utility over the past years	Yes	Yes[105]	Yes	Yes
There have been few changes in the Board of Directors over the past years	Yes	Yes	Yes	Yes
The utility is able to cut off service provision to consumers who have not paid their bills	Yes	Yes	Yes	No
The utility is able to take out loans without prior approval from the owners?	No	No	Yes	Yes

6.2.1.2 External Accountability

The most salient findings regarding the level and nature of accountability are as follows:

[103] Although the government sets the official salary, the utility can set the 'soft' salary, which can make up two-thirds of the employee's income.
[104] At least part of the income needs to be used for a "contribution to the budget" of the HPPC (Hoang 2004:25). As such, not all of the income is used for the provision of service delivery.
[105] Considerable changes were made in the beginning of 2004.

- All utilities are accountable to the agencies regulating the quality of potable water. However, none of the utilities has ever been fined or sanctioned by these agencies. All utilities are also strongly accountable to the government-owners;
- The utilities are also accountable to financial institutions from whom they have received or loaned funds. In three out of four cases, the agreement between the funding institution and the utility incorporates performance targets that the utility is to meet;
- Although the rights and obligations of customers tend to be stipulated in contracts or customer charters, few utilities promise to meet specific performance targets and compensate failure to meet such targets financially;
- None of the utilities is very accountable to local non-governmental organizations.

6.2.1.2.1 Accountability for Quality

The finding that none of the utilities have ever been fined or sanctioned by any regulators responsible for regulating water quality is somewhat surprising. It also leads to the question how strong the accountability for water quality really is?

A number of reasons can be brought forward to explain why no fines have been imposed. One reason, which is the case in Hai Phong, is that the regulator is simply not able to impose fines. The Hai Phong Preventive Medical Center is the regulator for water quality. This agency takes water samples in various locations and tests these in their laboratory. If these samples fail to meet national standards, the agency has no authority to apply any penalties on the utility. They can only inform the utility and TUPWS, which is the entity monitoring the performance and functioning of HPWSC.

In the other cases, as in the Mexican cases, regulators are able to impose sanctions but have never done so. A second reason why no sanctions have been imposed is because the regulator does not actually monitor the quality of the drinking water produced. In the case of the NWSC, a set of clear criteria exists for the quality to which the drinking water produced by the NWSC must adhere. These criteria are set by the Uganda National Bureau of Standards (UNBS) and are considered realistic by the NWSC. The monitoring of NWSC's performance in comparison to these standards falls under the responsibility of the Directorate of Water Development. However, although the DWD is officially responsible for monitoring NWSC's performance on meeting these water quality targets, this monitoring effectively does not happen. As such, also no sanctions are imposed. A third reason why sanctions have never been imposed is that the regulators simply did not have a reason to impose sanctions. The idea being that either the utility has always managed to meet standards set by the regulator (which appears unlikely) or the utility has addressed any shortcomings within the time demanded by the regulator. A fourth reason would be that the instrument of imposing fines is for government agencies either makes little sense or is (politically) undesirable. In essence, having one government agency sanction or fine another government agency may make little sense, as the government would then be basically fining itself. This would appear to specifically be the case when the regulator and the utility operate at the same level government.

In any case the fact that none of the utilities studied ever have been sanctioned by the regulator for water quality, raises some questions about the actual level of accountability of these utilities.

6.2.1.2.2 The Use of Performance Targets

Also noteworthy, is that the relationship of accountability to the owner does not appear to really be based on specific performance targets that the utility must meet. In the four well performing cases studied, only two actually were officially subject to achieving performance targets that were set by the owner. However, a careful analysis of the way these performance targets are implemented and monitored reveals that in actuality, the performance targets are not used to hold the management of the utility accountable for the results that produce. The two utilities subject to performance targets set by the owners are the HPWSC and the NWSC.

The Hai Phong People Committee sets annual performance targets that the HPWSC has to meet. These targets include total revenue, water production, water consumption, new connections and contribution to the owner's budget. However a review of the actual targets shows that these targets appear to be quite low in comparison with actual achievements. It appears that the Hai Phong People Committee does not view performance targets as an instrument to pressure the HPWSC to achieve greater efficiency. The table below shows the performance targets for revenue collection for 2002 that the HPWSC has to achieve. The table provides the achieved result for 2001, the target for 2002 and the actual achieved result for 2002.

Table 6.7: Performance targets and achievements of the HPWSC for revenue in 2002

Indicator	**Unit**	**Achievement 2001**	**Target for 2002**	**Actual achievement 2002**
Revenue collected	VND (millions)	60,813	60,100	84,800

Source: Hoang 2004

What the table shows is that the performance target set for revenue collection in 2002 is actually lower than the achieved revenue collection in 2001. Not surprisingly the HPWSC was able to meet the targets set. Setting targets, which are easy to achieve is not uncommon in government-owned organizations. In discussing why contracts often fail to improve performance in the public sector, the World Bank (1995) mentions evidence that performance targets are often 'soft' and set at levels that are easy to achieve.

In the case of the NWSC, the system works a bit differently. In Uganda, the Ministry of Water Lands and Environment (MWLE) sets clear and measurable targets for service that that the NWSC has to achieve. Since 2000, a performance contract between the MWLE and the NWSC was introduced. The performance contract brought considerable benefits to the NWSC as, at the suggestion of the World Bank, the NWSC was allowed to postpone repayments of loans to the Government of Uganda during the running time of the performance contract. The idea was that the NWSC would only be able to obtain the required level of performance required by the contract if the debts of the NWSC could be frozen (Philips 2003). Annually the NWSC reports the performance in relation to these targets in the annual report, which is submitted to the Minister. The recourse that the Minister has in case the NWSC fails to meet the specified standards is that the MWLE can remove the Board or pressure the Board into removing the Managing Director. However, the actual implementation of the

Performance Contract raises some questions about the effectiveness of this contract. Formally, a review committee should exist to monitor and review the contract. However, this Review Committee was never established and as such, performance of the NWSC has never really been monitored (Philips 2003).

6.2.1.2.3 Accountability to Financial Institutions

In addition to a strong accountability to the owners of the water utility, a number of the utilities also had a strong accountability to financial institutions, which donated or loaned money to the utility. What makes the 'well performing' cases interesting is the use of performance targets in the loan or grant agreements. In the cases of the NWSC, SANASA and HPWSC the utilities have to meet certain performance targets or report in detail in their performance.

In the case of SANASA, for example, the water utility is able to obtain funds from the Federal Economic Bank (CEF). The CEF is part of the Ministry of Finance and has the objective to improve the quality of life for the citizens of Brazil by stimulating the development of urban infrastructure. When SANASA enters into a loan with CEF, however, performance targets for service are specified. These performance targets are included in the loan agreement. Possible performance targets can relate to unaccounted-for-water, operational margin, margin of staff expenditure, uncollected bills, labor productivity, number of water and sewage connections and percentage of treated wastewater. If SANASA does not manage to achieve the specified targets, they become ineligible for further funding from CEF. Table 6.8 provides an overview of the performance of SANASA in previous years and how past performance is use for developing performance targets, which are specified in the loan agreement with CEF.

Table 6.8: Example of performance targets set by CEF for SANASA in 2002

Indicator	**Formula**	**Previous performance**		**Targets**	
		2001	**2002**	**2003**	**2004**
Non revenue water	Water billed/water produced	24.47	24.5	24.4	23.3
Margin of staff expenditure	Staff costs/Operational expenses	0.37	0.35	0.35	0.34
Labor productivity	Total number of connections/number of employees and contracted services	247.09	240.41	240.42	243.3
Increase in # of water connections	Water connections at the end of the year -Number of water connections at the beginning of the year	2.58	2.22	1.85	2.11
Increase in # of sewage connections	Sewage connections at the end of the year -Number of water connections at the beginning of the year	2.11	2.18	1.41	1.58
Percentage of treated wastewater	Volume of sewage treated/volume of sewage collected	0.06	0.08	0.1	0.11

Source: Aguiñaga 2004

Also in the case of the NWSC, agencies, which lend money to the NWSC, impose performance targets on the utility. These targets can include requirements of matching funds, such as including a minimum of 20% of funds from internal sources to be used for either capital investment or counterpart funding, reducing employee related costs by 18%, and timely submission of audited accounts to the lender. Different loans and grants will have different requirements (Mwoga 2004).

In the Mexican water services sector, financing institutions similarly try to use access to funds as an instrument to promote service improvement. One such program is called PROMAGUA and is managed by the CNA. Under the PROMAGUA program a utility can apply for funds as long as they have a 'global efficiency rate' above 60%. The global efficiency rate is based on both physical efficiency (physical water losses) and commercial efficiency (billing/collection ratio). In essence, a Mexican water utility that manages to collect revenue for 60% of the water it produces qualifies for the program. Of the poorly performing Mexican cases, however none qualified (or have not applied) for this program.

What is evident, however, is that whereas the owners may not hold the utilities accountable for results, in a number of cases, this task is subsequently administered by the financial institutions active in the water services sector.

Table 6.9: An overview of external accountability

External Accountability	**HPWSC**	**SANASA**	**NWSC**	**SADM**
The regulator sets specified performance targets, which the utility must meet.	Yes	Yes	Yes	Yes
Failure to meet these targets can result in penalties being applied.	No	Yes	No	Yes
These penalties have also been applied	No	No	Not applicable	No
The utility reports frequently to these regulators	Yes	Yes	Yes	Yes
The owner sets performance targets, which the utility must meet.	Yes	No	Yes	No
Failure to meet these targets results in penalties being applied.	No	n.a.	Yes, in principle	n.a.
The utility reports to the owner periodically	Yes	Yes	Yes	Yes
A representative of the owner is present at Board meetings	No	No	Yes	Yes
Financial institutions require specified performance targets to be achieved.	Yes	Yes	Yes	No
The utility is actively accountable to customer organizations	No	No	No	No
The customer's rights and obligations are stated in a customer charter or contract	Yes	Yes	Yes	Yes
The charter or contract contains performance targets which the utility must meet	No	No	Yes	No
The utility is actively accountable to non-governmental organizations	No	No	No	No

A review of the findings in the four well performing cases lead to the conclusion that, in the understanding that individual customers do not represent external organizations, well performing public utilities are not strongly accountable for results to external organizations. Only external financial agencies seem to impose performance targets for which the utility can be held accountable.

6.2.2 Hierarchy and Levels, the Market and Customers

In the section below, the focus shifts to the internal functioning of the utility. As mentioned before, it is realized that dimensions such as 'markets' and 'customers' are also external to the organization. However, the focus of this section is more on the policies and practices of the organization in dealing with customers and markets. The first section looks at hierarchy and levels, which can be distinguished in two parts. First of all, attention is paid to the distribution of decision-making powers in the organization and the roles played by different levels within the organization. The second aspect looks if and how the employees (in different levels) are accountable for their performance.

6.2.2.1 Hierarchy and Levels

Based on the case studies the following observations can be drawn:

- Considerable variation exists in the degree of decentralization within the organization
- The utilities tend to keep decisions, which can have significant financial consequences relatively centralized, at least to the point that the managing director/general manager needs to be informed and needs to approve a certain expense.
- Customer management appears to be relatively decentralized and in most cases seems to follow established processes and standards.

6.2.2.1.1 Centralized Decision-making

Although, the degree of decentralization shows considerable variation between the utilities, it seems likely that part of this variation is caused by the administrative level at which the utilities operate. The four 'well performing' cases have different mandates, in the sense that a utility like the HPWSC serves only the city of Hai Phong, whilst the NWSC has a national mandate. The HPWSC serves one city and the network it operates and maintains can be viewed as one single network. In order to execute their national mandate in Uganda, however, the NWSC incorporates fifteen separate service areas, which are spread out over the country. As such, these service areas, in operational terms, are not connected, but can be seen as separate operational units. These differences obviously have an impact on how the utility is managed and especially on the way decision-making authority is distributed over the various levels within the utility. Not surprisingly, the NWSC seems to have decentralized more decision-making powers to lower levels within the organization. The area service providers (ASPs) have their billing centers and produce their own bills. They can also

outsource activities and functions, below a certain amount, without the interference of the Head Office in Kampala, including hiring of guards and collectors, maintenance of premises, office equipment or vehicles. The ASPs also carry out expansion and minor rehabilitation of the network and existing facilities in their area. The ASPs also formulate and implement strategies for reducing unaccounted for water. And finally, the ASPs have the power to disconnect non-paying customers and they can determine the way in which customer complaints are dealt with, provided they achieve the response time targets. Also decisions regarding the procurement of goods and services are made at different levels depending on the monetary value. The ASPs procure goods and services up to values of US$2,500. The NWSC Head Office Management procures goods up to values of US$9,000 and the Board of Directors procures goods and services up to values of US$25,000. Beyond this latter threshold, the Solicitor General must clear the NWSC Management procurement decisions before the NWSC Board can endorse them. Currently the managers of the ASPs can hire and fire contract staff as well as staff below a specified salary position. The staff on higher salaries are hired and posted to the ASPs by the Head Office in consultation with the managers of the ASPs.

It should be recognized, however, that also between the three utilities operating at city and state level there is also some variation exists in the distribution of decision-making powers over various levels. Specifically, SANASA, which operates according to system of working groups, appears to be more decentralized than the utilities in Hai Phong and Nuevo Leon. In general, decisions within SANASA are prepared by working groups. These working groups consist of employees from various departments, which are considered important to be involved in a particular decision. Ideally, these working groups or working committees will incorporate the most qualified personnel for that particular issue. These working groups tend to work on one specific issue. Once the working groups have agreed on a decision, the group submits a proposal regarding that issue to the Executive Team and/or Administrative Council for approval and endorsement. Although, the ‘higher levels’ in the organization still need to approve the proposal submitted by the working group, it is quite rare that management rejects proposals of working groups.

Also of interest is to see in which areas the utilities remain strongly centralized and in which they have decentralized decision-making authority. Similar to the utilities in Guanajuato, decisions, which have direct or indirect financial consequences, tend to be centralized within the four utilities. The fact that such decisions are centralized is not surprising. Ultimately management is responsible for keeping the utility financially viable, and doing so means that it does not want to be surprised by the consequences of decisions taken in lower levels of the organization. Decisions in the customer management on the other hand tend to be decentralized to lower levels. Here too there is a similarity with the cases from Guanajuato. It is also easily understandable why the utilities have done so. When a customer approaches the utility with a problem and complaint, the utility will want to address this as quickly as possible. This means there is little time to ‘send’ the decision up the hierarchy to higher levels of the organization. As such, the decisions have to be made at lower levels in the organizations. However, also employees in the four well performing utilities have very little room for discretion when they do make decisions. The company policy or protocol leads the employee to

the decision. If the issue or problem is not covered by existing guidelines, the employee will refer the decision to his/her superiors.

Table 6.10: An overview of decentralization within the utility

Decentralization of authority within the utility	**HPWSC**	**SANASA**	**NWSC**	**SADM**
Decisions about tariff levels are made by the utility	No	No	No	No
Procurement of goods and service does not require approval of the managing director	No	Yes	Depends on the amount	Depends on the amount
Procurement of goods and services does not require approval of the Board/Council	Yes	Yes	Yes	Yes
Decisions about promotion, hiring or firing of employees does not require approval of the managing director	No	Yes	For some positions	No
Decisions about promotion, hiring and firing of employees does not require approval of the Council/Board	Yes	Yes	Yes	Yes
The utility has decentralized decisions relating to customer management to lower levels in the organization	Yes	Yes	Yes	Yes

6.2.2.2 (Internal) accountability for results

On the basis of the case studies and the overview provided above, the following conclusions can be drawn with regard to the level of (internal) accountability for results of the researched well performing utilities:

- The degree to which employees are held accountable shows some variation. In some cases (HPWSC and NWSC) this accountability is quite strong. In another case (SANASA) this accountability is virtually non-existent.
- The impact of performance on the salaries that the employees receive also shows considerable variation.
- All utilities have a separate oversight agency. These do not appear to set realistic, clear and measurable targets for the utility, however. Moreover, management does not always appear to be held accountable for meeting specified performance targets.

6.2.2.2.1 A Mixed Picture of Accountability

Overall, the picture emerging from the level of (internal) accountability appears to be mixed. The utilities seem to have developed mechanisms for accountability for results to varying degrees. HPWSC and NWSC seem to have developed a high level of accountability for results and SANASA and SADM seem to have a weaker accountability for results.

Of particular interest is the case of the HPWSC. Firstly because the utility has developed a strong system of internal accountability for results and secondly the way in

which this system works. In state-owned enterprises in Vietnam, the income of an employee consists of two parts: an official or 'hard' part and an unofficial or 'soft' part of the salary. Nationally, the Ministry of Labor and Social Affairs sets the 'hard' part of the salary. This pay scale is applicable for all employees of state-owned enterprises and a water utility has little option but to follow the levels set by that Ministry. 'Soft' salary comes from internal cash of the company. 'Soft' salary levels vary from company to company depending on the specific policy of each company. According to a study by the Ministry of Finance, the 'soft' salary is on average two to three times higher than the 'hard' part of the salary (Hoang 2004:23). What makes the HPWSC different is that they have taken an existing practice of Vietnamese public enterprises (the existence of a hard and soft part of the salary), and developed it into a system for (internal) accountability for results. In the case of the HPWSC, the management of the utility has connected the 'soft' part of the salary to individual performances. In the production sector, for example, individual performance is measured based on an agreed set of indicators such as chemical and energy consumption, and monthly water production. Achievement of set targets will decide the magnitude of the 'soft' salary. The better the performance, the higher the 'soft' salary given to the employees working in that particular area. The income of bill collectors, for example, is connected to the amount of money collected by these collectors. The more money collected by these bill collectors, the higher the 'soft' part of their salary will be. This provides a considerable incentive for individual employees. An interesting detail is that the system is applied to all employees and as such is applied at different levels within the organization. At the same time, the system of the 'soft' salary can be questioned, as the criteria for establishing the magnitude of the 'soft' salary are not always transparent and are not documented. In the case of the HPWSC, the management has elected, as a company policy, to link the 'soft' part of the salary to performance. Moreover, the individual employees know on what basis the level of their salary will be determined (despite the fact that the criteria are not officially documented). However, company policy can change as quickly as the management of the utility and it remains to be seen if future general managers will be implementing the same system in the same way. The lack of transparency in the existing system would seem to make it vulnerable to corruption, meaning that the effectiveness of this system is very much dependent on who is managing the organization.

In Uganda, the NWSC has introduced two main systems for accountability for results. Firstly, the Head Office in Kampala has developed 'internal' performance contracts between the Head Office and the fifteen areas that make up the operational part of the NWSC. These internal performance contracts are based on the performance contract that the NWSC has with the government of Uganda. The principle used by the NWSC Head Office is to set higher targets for the area service providers than stipulated in the performance contract between the NWSC and the government of Uganda. Therefore, when the ASPs achieve or exceed their individual targets, NWSC will automatically achieve the targets as stipulated in the performance contract. In addition to the internal performance contracts between the ASPs and the Head Office, the performance of employees is also evaluated annually using standardized performance appraisal systems. The recently introduced 'One Minute Management Concept' has strengthened this process: Every employee has an individual 'pseudo contract' outlining

specific key verifiable tasks and deliverables. Achievement of the performance targets is accompanied by incentive payments that can be as high as 50% of the basic salary. On the other hand, under-achievement of the performance standards below a certain threshold may lead to members of the ASPs forfeiting 25% of their basic pay.

In contrast to the HPWSC and the NWSC are the practices of SADM and SANASA. In SADM, the nature of evaluating performance of the employees depends on the position of the employee. Employees working in operational positions are required to strictly follow the work procedures and instructions that they are given. As such, they are strictly accountable for following set procedures. Employees in managerial positions are evaluated more on the results that their sections or Departments produce. Although no performance contracts exist within the utility, each Department and section do have performance indicators (such as electricity use, chemicals use, trained employees per year, etc.), which are monitored to evaluate the performance of the utility's managers. The managers are furthermore evaluated by their superior every year. The performance evaluation by the superior determines the bonus (of up to one month's salary) that the employee may receive. The evaluation of managerial staff is not only based on performance but also on aspects such as responsibility, productivity and willingness to work overtime (which is not paid). In the case of SANASA, there is no set mechanism for evaluating the performance of the employees. Although some managers undertake evaluations at their own initiative, these evaluations are not structured or standardized. All employees have a contract detailing their duties and tasks, but not the performance that is expected of them.

Table 6.11: An overview of (internal) accountability

Internal accountability for results	**HPWSC**	**SANASA**	**NWSC**	**SADM**
A system is in place to evaluate the performance of employees periodically	Yes	No	Yes	Yes
Employees are held accountable for achieving specified results	Yes	No	Yes	Yes
Salary adjustments/promotions are based on performance of the employee	Yes	No	Yes, partly	No
The utility systematically analyzes its performance in relation to set targets	Yes	Yes	Yes	Yes
Management oversight and management of the services provider are separate functions	Yes	Yes	Yes	Yes
Management of the service provider has regular meetings with the management oversight entity	Yes	Yes	Yes	Yes
Management of the service provider is subject to meeting specified performance targets	Yes	Yes	Yes	No
Management of the service provider is held accountable for meeting the specified targets	Limited	No	Yes	No

6.2.3 Market-orientation

Based on the case studies, the following conclusions can be drawn:

- There is a wide range in the level of outcontracting;

- None of the utilities appear to pursue outcontracting as a company policy;
- Almost all utilities partake in benchmarking exercises, but only one actually uses benchmarking systematically as a tool for performance improvement. The other utilities appear to be involved in benchmarking mainly because the benchmarking exercises are arranged by an umbrella-organization.
- Market testing is virtually non-existent.

6.2.3.1.1 Outcontracting

The level of outcontracting shows some utilities outcontracting less than 6% of its operational budget whilst a utility like NWSC reaches between 30% and 40%. The level of outcontracting appears to be partially linked to particular characteristics of the utility.

In the case of HPWSC, which only has an outcontracting level of about 6%, the management of utility considers the staffing levels too high. However, an overview of staffing levels between 1998 and 2003 shows that every year the number of staff has increases, as table 6.11 shows.

Table 6.11: Staffing levels in the Hai Phong Water Supply Company

Year	Number of Staff	Staff increase	Staff decrease
1998	652		
1999	667	19	4
2000	679	23	11
2001	713	53	19
2002	729	30	14
2003	762	40	7

Source: Hoang 2004

The increase in staffing levels, despite the fact that management already considers the utility overstaffed, is largely an effect of what the management of the utility described as “outside pressures”, basically meaning that the government-owner, in this case the HPPC, insists that the utility absorb additional staff. Faced with high staffing levels and pressure to increase these levels even further, the utility has, in the past, actually pursued a policy of paying employees not to show up for work. As mentioned previously, Vietnamese public enterprises adhere to a salary system in which the salary is consists of a ‘hard’ part and a ‘soft’ part. By paying employees the ‘hard’ part of their salary to stay away, these employees do not have to be paid the ‘soft’ part of the salary. In the context of this situation, the HPWSC obviously has little incentive to actively pursue of outcontracting tasks and activities to the private sector. As such, the only reasons for the HPWSC to engage in outcontracting would be for specialized tasks and to have access to new practices and technologies. This would explain the relatively low outcontracting percentage of 6%.

The case of Hai Phong is perhaps a bit extreme, but it appears that existing staffing levels and the issue of job security are quite important in determining the level of outcontracting. Public sector employees often have considerable job security. The water supply sector is no exception and the four well performing utilities are not an exception to that either. With outcontracting, tasks and activities are shifted to the private sector.

However, if the utility were not able to decrease staffing levels at short notice, the main result of outcontracting would be that salary costs stay the same whilst the water utility has additional costs for the outcontracted activities. This would mean that the main benefits of outcontracting for a public utility under these circumstances would be to meet peak demands and cater to specialized tasks.

The main exception in this list of four utilities is the NWSC, which has a relatively high level of outcontracting at approximately 35% of the operational budget. It should be noted, however, that 40% of this is related to management contract that the NWSC has awarded for the city of Kampala (Mwoga 2004). Except for the NWSC's management contract for the city of Kampala, none of the utilities pursue a company policy on outcontracting. What this means, is that the outcontracting is usually based on ad-hoc decisions, rather than a strategic policy of the utility.

6.2.3.1.2 Benchmarking

Apart from SADM, all utilities partake in annual benchmarking exercises. These benchmarking exercises cover a wide array of performance indicators. Although three out of four utilities partake in benchmarking exercises, the utilities do not appear to use the results of these exercises in a very systematic manner.

In the Vietnamese water sector benchmarking was in an infant stage in 2003. That year was the first time HPWSC participated in a national benchmarking exercise. In this exercise data is collected from all 67 Provincial Water Companies in the country. Participation in the exercise was voluntary. This benchmarking exercise covered technical, financial and commercial performance. The nature of this exercise is to analyze the range of performance currently achieved across the urban water sector, in preparation for a proposed World Bank Project. The outcomes of the exercise would be used for the World Bank to identify what utilities it will engage itself with. The data collected also serves to create a national and centralized database of Provincial Water Companies of Vietnam. For the management of the HPWSC, however the reliability of data submitted by other water companies is questionable. They are of the opinion that some of other water companies are submitting data, which does not reflect the actual state and performance of the companies. As a result, the data included in the benchmarking exercise is not used by the HPWSC[106]. In a sense, the experience at the HPWSC highlights some of the difficulties that benchmarking may encounter. Benchmarking exercises can have a 'political' origin and a 'political' purpose (Schwartz and van Dijk 2005). These benchmarking exercises tend to place emphasis on performance dimensions which are of particular importance in the political arena and may be arranged in such a way that the results appear more positive than an objective in-depth analysis would permit[107]. Apart from political motives, benchmarking exercises may make an organization more vulnerable as its performance becomes more transparent (de Bruijn 2002). In order to save face, some utilities may then decide to portray themselves better than their actual performance may allow. In the case of Hai Phong, the management has resorted to using performance comparisons

[106] It should be noted that the World Bank has hired independent auditors to check the data submitted by the water companies for their purposes.

[107] Personal interview with a source of a Dutch water supply company who was critical of the annual VEWIN benchmarking exercise.

with utilities in neighboring countries like Malaysia. Although these comparisons do take place on an ad hoc basis no system exists to translate the results of such a benchmarking exercise into strategic or operational policy (Hoang 2004). The only utility, which really uses the outcomes of benchmarking exercises systematically to develop (strategic) policy, appears to be SANASA. SANASA partakes in the 'analysis of water and sewage services', a national benchmarking exercise undertaken annually by the National Information System of Sanitation Companies (SNIS). SANASA uses the results of the benchmark exercise prioritize its future plans.

Table 6.12: An overview of market-orientation

Market-orientation	**HPWSC**	**SANASA**	**NWSC**	**SADM**
What is the level of outcontracting as a percentage of the operational budget (in 2002)	<6%	20.8%	Between 30%-40%	<10%
The utility actively pursues a policy of outcontracting services and tasks to third-parties[108]	No	No	No	No
The utility engages in periodic benchmarking exercises	Yes	Yes	Yes	No
The utility systematically uses the results of the benchmarking exercise for improving performance of the utility	No	No	Yes	No
The utility engages in market-testing exercises to improve efficiency of service provision	No	No	Partially	No

6.2.4 Customer-orientation

Based on the case studies, the following conclusions regarding the extent of customer-orientation of the cases are drawn:

- All utilities depend on their customers for the income of the utility
- All utilities offer its customers a variety of ways to pay their bills
- HPWSC and SADM offer only in-house connections and bulk water to selected customers. SANASA and (especially) NWSC show more variety in the levels of service they offer their customers.
- All utilities proactively try to obtain the opinions of the customers. The way in which this is done varies from location to the next.
- The utilities also implement a wide variety of measures in order to inform the customer of changes in service provision.
- All utilities train staff who deal with customers in the field of customer management.

[108] This mean that the utility does not undertake outcontracting activities in an ad-hoc manner, but actively pursues outcontracting as a company policy based on the belief that outcontracting can provide benefits to the utility.

- Only in the case of SADM are representatives of civic groups represented in decision-making bodies of the utility.

6.2.4.1.1 Levels of Service

One of the few areas, where there is some variation in the findings is the level of service provided to the customers. It would appear, however, that this variation might be more a reflection of the particular characteristics of the local service provision process then of the degree of customer-orientation of that particular water utility.

In Hai Phong, the 'turn-around' of the utility in the 1990s followed the so-called 'phuong-model'. As part of this 'phuong model' existing infrastructure was rehabilitated in a zone-by-zone (or phuong-by-phuong) manner. Existing infrastructure was rehabilitated and meters were installed for individual household connections. Following rehabilitation of a 'phuong' all households had a (metered) individual or block connection. As such the levels of service within that Hai Phong are relatively few.

In the case of SADM, one has to realize that the state of Nuevo Leon is one of the higher-income states in Mexico with a per capita income of US$ 13,033. If the state of Nuevo Leon would be considered in itself, its per capita GNP would even place it outside the categories of middle and low-income countries. In comparison, the municipality of Guanajuato has a per capita income of less than US$ 7,000 per year and the state average for Guanajuato stands at US$5,376 (Instituto Nacional para el Federalismo y el Desarrollo 2003). Water utilities serving areas with a relatively high-income tend to have a more limited array of service levels, as most consumers will prefer to have in-house connections. As such, the

In the case of SANASA, the variety of service levels appears to be partly explained by some peri-urban areas in the municipality, where service provision through public stand-posts takes place.

6.2.4.1.2 Customer-involvement in decision-making

Three out the four utilities have a way of allowing customers to express their voice concerning the provision of water services. The way in which the customers are involved differs considerably, however.

In Uganda, customers are involved in the decision making in NWSC mainly through what is known as "strategic alliance meetings". Within NWSC different customer segments have been identified, such as water vendors, water kiosk and public stand pipe operators, urban authorities, large government consumers, urban poor communities, restaurant operators, industries, education/academic institutions, etc. The management of the ASPs conducts regular strategic alliance meetings with the different customer segments. From the strategic meetings customers make statements of what they require from NWSC. These requirements are taken as action items for the management of that particular area. The action items sometimes require the management of an ASP to discuss the ideas from the strategic alliance meetings with the NWSC Head Office as their assistance and support may be needed in order to implement these ideas.

In SANASA, customers are able to express their views and influence decision-making by way of the 'Participatory Budget' initiative. The Participatory Budget

initiative revolves around public meetings in the municipality of Campinas in which the community can prioritize the allocation of public resources in the municipality of Campinas for urban infrastructure. The outcomes of the Participatory Budget initiative are binding in the sense that SANASA is expected to address the issues raised and agreed upon during these meetings.

In SADM, customers are represented (to a certain degree) on the *Consejo* overseeing the functioning of the utility. Of the seven members of the Board, the State Governor appoints one other representative of the State Government and one representative of the water users in addition to sitting on the *Consejo* himself. The other four members are appointed by different stakeholders. One member represents the municipalities and is appointed by the municipality of Monterrey in which 85% of the population resides. The Nuevo Leon Real Estate Owners Chamber appoints one representative, one representative is appointed by the Nuevo Leon Industry Chamber and the regional office of the National Commerce, Services and Tourism Chamber appoints the final representative.

6.3 Salient Findings from the Four Well Performing Utilities

Prior to comparing the results of the four well performing utilities to those found in the five cases of Guanajuato, a number of salient findings from these cases will be discussed. Following these salient findings, which largely relate to the 'characteristics' of 'turn-around' utilities, attention will be drawn to the preliminary conclusion in chapter five and the comparison of these conclusions with those drawn from the four well performing cases. The importance of discussing the salient features lies in the fact that they shed light one of the original research questions, which sought to answer if public water utilities perform better because they adhere to the New Public Management.

6.3.1 The Importance of External Shocks

Earlier in this thesis, the situation of many public water utilities, especially in low- and middle-income countries, was described as being stuck in a low-level equilibrium. The idea being that these utilities are stuck in state from which it is very difficult to escape. In fact, the findings from the three 'turn-around' cases (HPWSC, NWSC, and SANASA) all share an external shock prior to the turn-around of the utility. This external shock came in various forms, such as the threat of privatization in Uganda, a water crisis in Hai Phong and a change in the municipal government in SANASA. Although the shocks may have had different forms, they do appear to have had a similar result, namely the creation of a window of opportunity, in which relatively radical reforms could be implemented with the (political) support of the owners. The findings in these three utilities reflect the findings in SIMAPAG.

Table 6.13: An overview of customer-orientation

Customer-orientation	**HPWSC**	**SANASA**	**NWSC**	**SADM**
The utility is dependent on its customers for its revenue	Yes	Yes	Yes	Yes
What different levels of service provision does the utility offer to its customers	In-house connections and block connections	In-house connections, block connections and some public standposts	In-house connections, yard taps, public standposts, water kiosks, bulk connections and water vending	In-house connections, bulk water delivery to some municipalities
In what ways can the customers pay their bills	Bill collector, bank transfer, 'ward' offices	Banks, lottery selling points	NWSC offices, banks, ATMs	SADM offices, convenience stores, supermarkets, internet, banks
The utility undertakes surveys to proactively obtain the customer's views and perceptions of the services provided	Suggestion boxes	Customer surveys	Annual surveys, suggestions boxes and strategic alliance meetings	Suggestion boxes, annual survey, comments through internet.
Customer complaints are addressed	95%	100%	Between 95% and 100%	100%
Customers are engaged in decision-making procedures in the utility	No	Yes	Yes	*Consejo* members represent civic groups
The utility trains its employees to manage customers	Yes	Yes	Yes	Yes
In what ways does the utility inform its customers about relevant issues for service provision	Newspaper advertisements, radio, letters	Newspaper, internet, radio, 'speaker car'	Flyers, Newspaper advertisement, radio and strategic alliance meetings	Newspaper advertisements, radio, and leaflets

6.3.2 Leadership

In a way linked to the issue of external shocks is that of leadership or competent management. Whereas it is important to realize that external shocks have preceded the turn-around in all utilities, an external shock or crisis in itself is by no means a guarantee that service provision will improve following this shock. What also distinguished these utilities is the fact that immediately after the shock, a new general manager was appointed who, through a combination of charisma and professional leadership, managed to make the most of the window of opportunity created by the shock. In the NWSC, dr. Muhairwe drastically changed the way the utility was managed following his appointment in 1997. In Hai Phong, mr. Dam Xuan Luy, was appointed as general manager and was able to implement the 'phuong model' with impressive results. In SANASA, Vicente Andreu Guillo initiated the 'turn-around' in 1996 following his appointment after a municipal election. In the case of SIMAPAG, Raul Silva has been credited as initiating a sweeping change within the utility following his appointment as general manager in 1995. All 'turn-arounds' started with new general managers who made the most of the opportunities provided in that particular situation. As such, the findings from these cases appear to support Halligan (2002), who finds that fundamental change inevitably means new leadership[109].

6.3.3 Capacity

Having highlighted the importance of the external shocks and advent of a capable new management it should be noted that the combination of these two is in itself also no guarantee that service provision will improve. As mentioned in the introduction, the four well performing utilities all share that they have a large number of connections. Three out of four have more than 100,000 connections. The only exception being the NWSC, which seems to be limited by the fact that there simply are not any more connections in Uganda. Moreover all well performing utilities had tariffs, which at least covered operations and maintenance and some investment. What that means is that these are relatively large utilities, whose customer base allows them to generate considerable financial resources. These in turn provide substantial financial capacity. In addition (but also linked to this) is that these utilities tend to have considerable capacity in terms of human resources. In this sense the findings from these utilities largely support Israel (1994) who highlights the importance of at least a minimum level of financial and especially human resources.

[109] In a more general comment, this finding also raises a question, which revisits Weber's 'ideal types' as presented in chapter three. Weber distinguished between rational-legal authority, traditional authority and charismatic authority as the basis for 'legitimacy'. In light of the finding about leadership the question is to what extent charismatic authority is necessary (or facilitating?) for the reform of public water utilities and how this impacts the staff in the utility. Unfortunately, however, this question is beyond the scope of this research.

6.3.4 External Support

But even in cases where there is a window of opportunity for reform, and there are charismatic and knowledgeable management and the utility has the human resources to implement changes and tariffs are such that they cover operations and maintenance and some investment, then still there would be no guarantee that service provision would improve. What all turn-around cases have shown is that they would not have been able to reach a higher-level equilibrium, if it were not for external support. This external support included donor support and loans from international lending agencies. The rehabilitation of the infrastructure in the various 'phuongs' in Hai Phong, and the extensive metering could not have been accomplished without outside financing. Even SADM, the one utility that has long been recognized as being well performing, has not been without external assistance.

6.3.5 Political support

Last, but most certainly not least is the role of the government-owner. Simply stated, without political support any reform effort is doomed to fail. An external shock *can* provide a window of opportunity. However, there is no guarantee that it actually will. For the existence of a window of opportunity, and the magnitude of this opportunity, is for the public water utilities studied in the context of this research, first and foremost decided upon in the political realm. This finding very much supports the existing evidence that major change requires the intervention of politicians (Christensen and Laegreid 2002: see also Aucoin 1990)

6.4 Conclusions of the Cross-case Comparison

In this section the conclusions drawn from the four cases regarding the propositions are presented and compared with those from SIMAPAG in the State of Guanajuato, Mexico. This comparison is done in the form of Table 6.14. As the utilities are all considered well performing utilities, it is only possible to test the first six propositions. Those propositions concerning poorly performing utilities and the elements of the bureaucratic model of public management cannot be tested.

The table shows that the findings from the case of SIMAPAG are largely supported by the findings from the four well performing utilities. However, some qualifications regarding this broad conclusion should be made. These qualifications relate to four out of six propositions and are presented below.

Table 6.14: Comparison of conclusions from the well performing cases

Proposition		Conclusion from SIMAPAG	Conclusion well performing cases
1	Well performing public utilities have a large degree of external autonomy	Not falsified	Not falsified
2	Well performing public utilities are strongly accountable for results to external organizations.	Falsified	Falsified
3	Well performing public utilities have a strong market-orientation.	Falsified	Falsified
4	Well performing public utilities have a stronger customer-orientation.	Not falsified	Not falsified
5	Well performing public utilities have decentralized decision-making within the organization.	Falsified	Falsified
6	Well performing public utilities have a strong accountability for results within the organization.	Falsified	Mixed

6.4.1 Comments regarding external autonomy: proposition 1

Although the proposition regarding external autonomy has not been falsified, this conclusion is subject to some comments. The concept of (external) autonomy as used in this research is composed of a few dimensions and some dimensions appear to be more important than others. Most important appear to be financial autonomy of the utility and stability in the management of the utility (which can be interpreted as a reflection of political support for the management of the utility). Also all 'well performing' utilities were able to attract qualified staff to work for the utility. This indicates that both in terms of financial resources and human resources the utilities had considerable capacity for providing water services[110].

Dimensions of autonomy that seemed less important relate to the availability of water resources and the role played by regulatory agencies. Although, one could argue that problems relating to insufficient availability of water resources will become much more severe in the long-term, the cases indicate that, at least at current, they do not inhibit good performance as defined in section 4.2 of this thesis[111].

6.4.2 Comments on external accountability: proposition 2

Well performing public utilities do appear to have a strong accountability to the government-owners who remain firmly in control of the utility. However, this control does not incorporate the use of performance targets to hold the management of the

[110] Although none of the utilities are able to set tariffs and take out loans without approval of the owners.

[111] It is possible to argue that, from an environmental perspective, performance is inhibited. However, this environmental dimension was not included in the definition of good performance as used for this research.

utility accountable for results produced. Moreover, accountability to regulatory agencies (who have never imposed sanctions), to customer agencies and to NGOs appears to be very limited.

The only real accountability for results found was accountability to financial institutions that have lent or granted money to the utility. In the well performing cases these institutions often did impose performance targets. However, once a utility is able to operate without continued assistance of external financial agencies (such as SADM), then this accountability automatically diminishes.

6.4.3 Comments on decentralization of decision-making authority within the utility: proposition 5

The reasoning behind the conclusion that well performing utilities have not decentralized authority for decision-making is that in many areas, such as procurement, hiring and firing of staff, all of the utilities are highly centralized. In summary, decisions, which have financial implications, remain centralized. Moreover, in the areas where decision-making has been decentralized, i.e. customer management, employees can do little else than apply existing guidelines. For this reason, the conclusion is that the proposition about decentralization of authority has been falsified.

6.4.4 Comments on internal accountability for results: proposition 6

Similar to the preliminary conclusions at the end of chapter five, interpreting the findings for internal accountability for results presents something of a challenge. This is because the findings do not lead to a clear-cut conclusion regarding the proposition. In the State of Guanajuato, SIMAPAG had the strongest level of internal accountability on the basis of the employee evaluations and the balanced scorecard, which presented the utility with targets they were to meet. At the same time the actual implementation of these mechanisms raised some doubts about the actual level of accountability. For the 'well performing' cases the picture is mixed, with some utilities having strong levels of accountability related to performance, whilst the remaining utilities have fewer mechanisms for accountability.

6.5 Comparison with the Bureaucratic Model

In the preliminary conclusions of chapter six it was mentioned that the propositions, if viewed in a narrow sense, say little about the comparison of poorly performing utilities with well performing utilities. In order to address that, an overview was provided in section 5.5.6 based on an adjusted propositions, which allowed SIMAPAG to be compared with the bureaucratic model. Below, the adjusted propositions for the bureaucratic model are presented for the four poorly performing cases from Guanajuato, SIMAPAG and the four well performing cases highlighted in chapter 6 (i.e. HPWSC, NWSC, SANASA and SADM).

Table 6.15: Preliminary conclusions for all cases

Proposition	**Poorly performing utilities**	**SIMAPAG**	**Well performing cases**
The utility is apolitical.	Falsified	Not falsified	Not falsified
The utility is characterized by hierarchal levels and organized on a rule-governed basis.	Not falsified	Not falsified	Not falsified
The utility is characterized by permanence and stability	Falsified	Not falsified	Not falsified
The utility operates following internal regulations	Falsified	Falsified	Not falsified
Employees in the utility are remunerated according to fixed salary levels	Not falsified	Not falsified	Mixed
Employees opt for working in water supply and sanitation companies in terms of vocation or sense of duty	Falsified	Falsified	Falsified

Although the four cases do show some differences in comparison with SIMAPAG, the comparison indicate that the well performing cases adhere more strongly to the bureaucratic model than poorly performing utilities. The consequences of this finding are discussed in the next chapter.

7 Bureaucracy, the New Public Management and Utility Reform

In this chapter, the main findings from the research are discussed and analyzed. These findings mainly relate to the reform of public water utilities, the bureaucratic model and the New Public Management. The chapter starts with revisiting Niskanen's theory of budget-maximization and tries to establish if it is supported by the findings from the public water utilities research in this thesis. The second section comments on the principal-agent relationship in Mexican municipalities. The argument made is that, contrary to the views forwarded by the Public Choice School, the agent in Mexican municipalities does not have a strong advantage over the principal. The third section addresses the question of the impact of the New Public Management for public water utilities. The findings suggest that the New Public Management, by itself, may not be sufficient to improve performance. The fourth part of this chapter briefly covers the use of contracts in the water services sector. Although in some sectors contracts may be viewed as being 'the medium of communication', this certainly does not seem to apply to the water services sectors researched for this thesis. The fifth section revisits the required pre-requisites for implementing NPM-style reforms. The Mexican cases indicate that necessary pre-requisites do not currently exist. Add to this the finding that well performing utilities adhere more strongly to the bureaucratic model than poorly performing utilities, and the question is raised if public water utilities are sufficiently bureaucratic? The sixth part of this chapter discuses the issue of accountability for results. The seventh section focuses on the question if a 'paradigm shift' from the bureaucratic model to that of the New Public Management has taken place. The research presented in this thesis suggests such a shift has not taken place. The eighth section touches upon the importance of crises prior to the implementation of reform. All 'turn around' cases faced some form of crisis prior to 'turning around', and this section discusses the implications of this finding. This chapter concludes by highlighting the issue of politics in the provision of water services. Contrary to what has been promoted by some international agencies, such as the World Bank (2004b), this section argues that achieving a stringent separation between politics and service provision is unrealistic.

7.1 Water Utilities and Niskanen's Budget-Maximization

In chapter three, Niskanen's criticism of the bureaucratic model was presented. Niskanen's argument was that weak monitoring of the bureaucracy's activities and little incentive to improve efficiency would stimulate bureaucrats to strive for budget-maximization leading to an oversupply of a certain good or service.

Although the issue of oversupply has been a cornerstone in the criticism of Weber's bureaucracy, the question is how relevant it is for the water supply and sanitation sector in low- and middle-income countries. The relevancy can be questioned on both a theoretical as well as an empirical basis.

The theoretical argument is based on Niskanen's assumption that the output of a (public) good is based on levels of activities from which the actual output must be inferred. This assumption simply does not hold for the water supply and sanitation sector. An important reason is that the provision of water supply and sanitation services are subject to generally accepted indicators for measurement of the output. Although questions may persist about what achievement of these indicators constitutes 'good performance' (see section 3.3), the measurement of outputs for water supply and sanitation is much less problematic as for goods such as peace, security, and law and order. With outputs being measurable, the potential for budget-maximization becomes much more limited.

The empirical argument is provided by the current levels of service provision in low- and middle-income countries. Niskanen's criticism predicts oversupply of services. However, the reality of the water supply and sanitation sectors in many low- and middle-income countries is one of undersupply. As mentioned in the introduction, 1.1 billion people still do not have access to safe water and 2.4 billion people lack access to sanitation services (WHO UNICEF 2001). Also, the cases elaborated upon in this research do not indicate oversupply of services. In fact, only one of the utilities (SADM) had service coverage of 99% or higher. The main issue for public water utilities is not one of reducing output (or input activities), but rather one of increasing output in order to serve those who are currently not being served.

7.2 Water Utilities and Principal-Agent Relationships

Although public choice may be seen as being part of the parentage of the NPM, the question is how applicable the logic of the principal-agent problem that underlies many of the public choice arguments is for public water utilities in the case of Mexico and particularly Mexican municipalities with responsibilities for providing water services. The crux of the principal-agent problem is formed by the question how to get the public organization, or 'the bureaucracy', to implement the policies of the principal when the bureaucrats have an informational advantage and have interests, which are different from implementing the policy formulated by the politician. Much of the criticism of the Public Choice School assumes that the agent will shirk from the responsibilities attributed by the principal.

The Mexican municipal water utilities researched challenge this perception. In other words, the idea that the agent, benefited by informational advantages and securities provided by the position in the bureaucracy, has been able to develop a strong position vis-à-vis the principal does not hold for the Mexican utilities studied. Rather the opposite would seem to apply. If anything, the relationship between principals and agents in the water utilities was characterized by dominance of the principal vis-à-vis the agent. This relationship is largely explained by the nature of the political institutions in Mexican municipalities.

In Mexican local governments, the municipal presidents have far reaching powers. Essentially, the Mexican municipal government can be viewed as 'presidential government' as described by Lijphart (1984). What distinguishes the Mexican municipalities (and the national government, for that matter) is that the executive powers of the (municipal) president are so strong that the legislative and judicial

branches have had to accept presidential dominance[112] (Arellano and Guerrero 2003). As a result of the dominance of the municipal president, the political system revolves around loyalty to the person in office. This means that most of the staff of the municipal government come and leave with the municipal president. Because the municipal president is only elected for a term of three years, and re-election is not possible, it means that a large part of the municipal government changes every three years (Capital Advisors 1999). The fact that managers in the utility owe their position on the basis of loyalty to the municipal president means that the 'need to reestablish the primacy of representative government over bureaucracy' does not exist in Mexican municipalities. If anything the municipal president is too powerful and can request things of the utility managers, which go well beyond the objectives of the organization. This would mean that rather than a need to reestablish the primacy of representative government over bureaucracy, a need for an apolitical public service would seem to exist which could operate at arms-length of the representative government. Also, other cases studied in this research, such as Hai Phong and Campinas, were characterized by a principal-agent relationship in which the principal had a considerable power over the agent.

7.3 Impact of the NPM

The cases illustrate that autonomy and especially financial autonomy is crucial for well performing water utilities and in this respect the impact of the NPM seems significant. Customer-orientation, it appears, must be viewed as a necessary consequence of the increased (financial) autonomy, rather than a purposely-developed organizational objective. Simply put, if you are dependent on the customers for your revenue, you have no choice but to orient yourself towards them. As such, the importance of these elements is considerable. However, reforming poorly functioning utilities is a bit more complicated, involving a multitude of factors, which not only influence the success of the reform process, but also appear to be interdependent. Moreover, financial autonomy may not so much be a reform element as much as it is the outcome of other reforms. In other words, financial autonomy may be the 'outward manifestation' of other reforms.

In the researched cases, the role of leadership surfaced prominently. The 'turn-around' utilities were all, at the time of the 'turn-around', led by charismatic and capable general managers, who had just been appointed, and who were able to steer the utility towards improved performance. The utilities all received or were able to conjure up political support (or at least tolerance) during the initial stages of the turn-around. This support was, among others, visible in terms of approval of tariff increases. The utilities were (and still are) dependent on external financing in order to rehabilitate and expand infrastructure. Without these elements, it is unlikely that financial autonomy would be achieved. And without these elements it is unlikely that substantial performance improvements would have materialized. As such, although, the elements of (financial) autonomy and customer-orientation are of crucial importance, achieving these elements requires other elements to have been implemented first.

[112] The weak legislative and judicial branches are not something that is specific for Mexico but is a characteristic of many developing countries (World Bank 1997a).

Moreover, the research has illustrated that some elements of the NPM model have not played a large role in turning around performance. Most notably market-orientation and decentralization of authority within the organization did not figure significantly in the cases studied. Also external accountability (apart from that to the financing institutions) was limited.

7.4 The Use of Contracts

The cases have highlighted that in the water services sector of the locations studied, contracts are not 'the medium of communication'. The only case, which would perhaps qualify for such a description is the NWSC, which over the past years has developed a system of performance contracts both between the utility and the government as well as within the utility. However, the actual implementation of the contract between the utility and the government raises some questions about the effectiveness of this contract. Formally, a review committee should exist to monitor and review the contract. However, this Review Committee was never established and as such, performance of the NWSC was never really monitored.

7.5 Pre-requisites for Implementing the New Public Management

In this research little evidence was found which supported the idea that poorly performing utilities adhered to the bureaucratic model. This finding in itself is not necessarily a very interesting observation. If this finding, however, is combined with analyzing the degree to which well performing water utilities adhere to elements of the bureaucratic model, the conclusion that can be drawn becomes more interesting. The adherence of well performing utilities to a selection of the elements of the bureaucratic model can be presented as follows:

- External Autonomy/Apolitical Civil Service - One of the main differences was the level of (external) autonomy. This autonomy means that the utility has both the resources and the managerial freedom to arrange for the provision of water services in line with its mandate. In a sense this autonomy resembles the apolitical civil service that figures prominently in the bureaucratic model, in which the civil service executes the policy (the mandate for service provision) formulated in the political realm.
- Stability and Permanence - The case studies from the State of Guanajuato highlighted that the period of performance improvement of SIMAPAG was characterized by relative stability at the management level, whilst most of the other poorly performing utilities were subject to considerable turbulence at that same level[113]. The cases of well performing utilities also illustrated the importance of stability in management. During the 'turn-around' in Hai Phong the managing director held his function from 1993 until 2002. In the case of NWSC, the current managing director has held his office since 1997. Even in the case of SADM

[113] In both well performing and poorly performing utilities the turnover among non-managerial staff is very low, meaning that at those levels the utilities are all stable.

where, “the general manager usually changes when the State Governor does”, does stability within the managerial level of the organization persevere as other managers in the organization do not change that frequently, not even when the political party in power changes (Rangel 2005). From this perspective, well performing utilities are more stable than poorly performing utilities.

- Hierarchy and Levels - It has also been established in the case studies that well performing utilities, like the poorly performing ones, are characterized by hierarchical levels.

For these elements, well performing utilities showed a stronger adherence to elements of the bureaucratic model than poorly performing utilities. In chapter three Jaques (1990) was quoted as he found the bureaucratic model to be the most efficient and the most natural structure for large organizations. Moreover, he continues to explain that the problems facing many public sector organizations are not because they are too bureaucratic, rather the problem is that they are not bureaucratic enough. The findings in this research would suggest that Jaques has a point. Poorly performing utilities may not suffer from being too bureaucratic. Rather poorly performing utilities may not be bureaucratic enough.

Moreover, this finding also provides support for Shick’s observations in chapter three regarding the pre-requisites of implementing NPM-style reforms. Before elements of the New Public Management become feasible options for reform, the utility in question should have already ‘mastered the basics’. The findings from this research suggest that in poorly performing utilities these basics have not been mastered. Apart from supporting Shick’s statement on the pre-requisites for NPM-style reforms, the consequences of this finding are far-reaching, in the sense that they can also be translated to practical reform measures for poorly performing utilities. What these findings suggest is that rather than view the NPM as a way of improving performance of poorly performing utilities, elements of the bureaucratic model, such as permanence and stability and internal regulations, would appear to be a more promising first step in the reform process. Cabrero (2005:85) also acknowledges the usefulness of strategies of ‘bureaucratic reform’ in the Mexican context. In his analysis of Mexican municipalities he finds that “[b]ureaucratization is still necessary in a large number of municipal governments across the country, because they strengthen and clarify a formal point of reference of local administration”.

In this context the frequent changes in management following elections in Mexico appears of importance. In Mexico, public managers always understand that their job is only guaranteed until the next election (if things go well). Once the election has taken place the chances are that the public manager will be replaced by one of the loyalists of the incoming public official. Often this means that around election time (and especially in the immediate aftermath) an informal carrousel takes place of public managers seeking new positions for the coming period (or possibly positions with private companies). Because all public managers know that this will happen and that their time in a certain position is limited, these public managers will, over time, develop a large and well-developed network of contacts in order to obtain good positions for when the

need arises[114]. In other words, a career civil service does not exist in Mexico at any level of Government (Arellano and Guerrero 2003). If, as Schick argues, a formal civil service system that governs how public employees are hired and paid is an essential precondition for NPM-style reforms to succeed, then the municipal water supply and sanitation companies in Mexico perhaps do not 'lend' themselves for NPM reforms as much as Nickson and Franceys (2003) claim.

7.6 Accountability for results

The cases presented a mixed view of 'accountability for results'. On the one hand utilities such as the HPWSC and the NWSC had developed mechanisms to hold the employee accountable for the results produced. At the same time, other well performing utilities kept more emphasis on accountability for procedure.

What was visible in many of the cases is that 'the results' that were to be obtained by a utility were often not linked to actual levels of service provision, but rather emphasized the construction of infrastructure. Illustrative of this tendency to focus on the construction of infrastructure as a measure of performance is provided by the annual '*Informe de Gobierno*' in Mexico. The '*Informe de Gobierno*' serves a similar purpose as the 'State of the Union' address in the United States, namely that of informing the electorate of the performance of the government, with the main difference that the '*Informe de Gobierno*' takes place at all levels of government, including the municipal level. The second '*Informe de Gobierno*'[115] held by the Municipal President of the Municipality of Valle de Santiago was held in 2005. In it the achievements for the municipal government's second year are summarized. The section regarding water services reads as follows:

> "Regarding drinking water supply, more than 10 kilometers of distribution network have been constructed, four elevated tanks were built, six wells were fully equipped and 12 more were drilled. Moreover, the drainage network has been expanded by 37 kilometers […]"[116] (Arredondo Franco 2005:2).

As this section shows, the municipality emphasizes the construction of infrastructure measured in kilometers and the number of wells equipped and dug. Not only is it unclear if this infrastructure is actually operational, but these figures also say little about the actual service level received by the citizens of Valle de Santiago.

The emphasis on the construction of infrastructure is interesting for a number of reasons. First of all, it could be viewed as supporting Niskanen's and Tullock's criticism of the bureaucracy. However, the consequences they predict (budget-maximization, oversupply and uncontrollability) have not been observed. Second the

[114] The importance of informal networks is not only limited to the public sector. Also in the private sector such networks are crucial.
[115] With municipal presidents being elected for a three year period spanning 2003-2006, each president holds three 'Informes del Gobierno'. The second 'Informe' was held in 2005.
[116] Author's own translation

finding is interesting as, from the perspective of water professionals and as illustrated by the cases of HPWSC and NWSC, more output-based indicators exist. A possible explanation would be that the emphasis on construction is largely aimed at impressing the electorate who are unlikely to understand (or be impressed by) the output-based indicators used by water professionals.

7.7 The Paradigm Shift?

In chapter three, Hughes (2003) was cited to present the view that the bureaucratic model is obsolete and has effectively been replaced by the New Public management. These views are echoed by an array of other authors who find the replacement of the bureaucratic model with that of the NPM to constitute a 'paradigm shift' (Barzelay 1992; Borins 1997; Aucoin 1990; see also Hood 1995). Interestingly enough, this research not only did not find evidence of a 'shift', this research not even found evidence for the original 'paradigm', meaning that none of the public utilities studied operated in accordance with the bureaucratic model. As Pollitt (2003) was quoted earlier in this research, the idea that the traditional bureaucratic organization ruled the earth, 'like some ponderous dinosaur', prior to the advent of NPM, is to be challenged. In line with Pollitt's statement, the results of this research show that the bureaucratic model certainly did not and does not rule the water services sector.

In fact, the only location where evidence of a 'paradigm shift' was observed during this research is in the literature reviewed for this study. Whereas the reality of public water utilities (and perhaps public sector organizations in general) is one of mixed models and forms, the literature tends to present and highlight 'mirror images' which, at least in the water sector, simply do not exist.

The only indication of a shift was found in relation to an increased accountability to individual customers. With customers having to pay higher tariff levels in order to improve the financial viability of the company and its ability to provide water services, the water utilities were forced to adopt a stronger customer orientation. This shift would, at first glance, appear to be in line with a shift to the NPM model, namely that hierarchical control is replaced by the market as the means of coordinating activity (Deakin and Walsh 1996:36). In this sense, hierarchical control refers to the role played by the government-owner and the market to the role played by the customers. However, the findings indicated that hierarchical control did not diminish. Rather the shift was not from hierarchy to market, but from hierarchy to hierarchy *and* market. Or as Hogget argued, instead of "witnessing the replacement of hierarchy by market, what we observe is the development of a 'plural mode of governance' in which elements of the market are combined with elements of hierarchy" (Hogget 1996:16).

7.8 Reform as Punctuated Equilibria

In much of the literature regarding the 'turn around' of public sector organizations it is often assumed that performance improvement varies with the content of management strategies. As such, 'turn around' is seen as being driven by internal choices rather external constraints. A new management style or practice will then, *ceteris paribus*, lead to performance improvements. To some extent the case studies support the

importance of internal factors. The importance of leadership, for example, has been highlighted a number of times in this research. At the same time, the case studies also displayed striking similarities in how the turn-around occurred and these findings not only nuance the idea that turn around is driven by internal choices, rather, these findings suggest that changes in the external environment must occur before internal forces can contribute to performance improvement.

In all of the turn-around cases, external shocks occurred which generated both a need for change and also provided a 'window of opportunity' by throwing the normal rules of the game into flux (Bately and Larbi 2004). The 'need for change' in this context can be read in different ways and, in fact, 'the need for change' did differ from one case study to the next.

Although the research results obtained from the case studies are insufficient to shed light on the exact impact and role of the external shocks and how they interact with internal choices, they do hint towards viewing external shocks as a trigger for reforms rather than being 'sufficient' in themselves to cause successful reform. Successful reform seemed to encompass a mix of ingredients including capacity, external financial and political support, and charismatic leadership, which come together in the aftermath of an external shock.

7.8.1 Sustaining High-level Equilibria

In this research, the importance of external shocks and the resilience of public water utilities have been highlighted. The findings suggest that cases of drastic performance improvements were preceded by external shocks, which forced the water utility, under new management, to address the issue of service provision. These external shocks had a dual effect. On the one hand, these shocks resulted in political support for the utility, allowing the water utility to implement measures which were necessary for improving performance but which were unlikely to have received support without the preceding crisis. On the other hand, the shocks likely led to a convincing wake-up call to the employees of the utility, who often found themselves being led by a new manager in the immediate aftermath of these shocks.

Interestingly enough, however, there does appear to be something of a contradiction in the potential for 'turning around' performance and the potential for sustaining improved performance. As mentioned, 'turning around' performance requires an external shock and sufficient 'vulnerability' to allow "the disruption needed to transform a system from one stability domain" to another, as Ostrom and Janssen (2002:14) expressed it. So for the initial performance improvement, vulnerability to external shocks was a good thing. However, as the four well performing cases and the case from the city of Guanajuato highlighted, political support for improving performance declines as the issue of water services becomes less prominent on the political agenda. As political support dwindles, the utility, despite improving performance, may become more vulnerable to external shocks and pressures. In order to sustain higher-level equilibria, that same organization, be it under new management, would have to be insulated from shocks of the external environment, which may negatively impact performance. In other words, an improved level of performance can only be maintained if the utility is sufficiently resilient to withstand external pressures

and shocks, which can adversely impact its performance. This tightrope act would appear to be a difficult feat to accomplish and the findings of this research suggest that it is questionable if all the public water utilities, presented in this study, as well performing utilities will manage to sustain high-level equilibria. The fact that many public water utilities are strongly controlled by the government-owners would lead to the assumption that in many cases public water utilities may be quite vulnerable to external shocks deriving from the owner, and as such, these utilities are unlikely to be able to stay on the tightrope long.

7.9 The Politics of Service Provision

The NPM model places strong emphasis on autonomous organizations and agencies providing services. Although it is recognized, as has been discussed in the first chapter, that political interference (or politicization of management) is considered by many to be one of the main causes of poor performance, the research has highlighted the impossibility of isolating the functioning of a water utility from the political realm. Moreover, the research highlighted the important role played by the political realm in 'turning around' utility performance.

The cases researched were all examples of organizations that, at least on paper, were meant to operate as autonomous organizations under the public sector umbrella. However, as these cases show the creation of autonomous agencies does, in itself, not mean very much. Apart from the research observations a number of other arguments can be presented to argue that a stringent separation of the water utility from the political realm is unrealistic.

The most convincing of these arguments is that the reality of the water services sector is that there are numerous interest groups and stakeholders who have an interest of some kind in the sector. These stakeholders concern the powerful producer stakeholders (politicians, trade unions and engineers) mentioned by Nickson (2002), but also consumer stakeholders and groups such as private service providers (from small-scale vendors to multinationals). All these stakeholders will guard and promote their interests. Brown (2002:126), in arguing why privatization does not lead to a separation of politics from service provision, provides the following observation:

> "It is absurd to think that a private [operator] will sink a large amount of capital into an enterprise and then unilaterally disarm himself politically. Obviously investors will use all legal means, including political, to protect their interests. Similarly, it is unreal to expect that social expectations will terminate or diminish merely because [responsibilities] have been transferred to the [private sector]. It seems obvious that investors will seek to manipulate a system to their benefit, and equally obvious that politicians, interest groups, advocacy organizations, and others will continue to push for their own objectives".

The arguments raised by Brown not only hold for private stakeholders, but apply to all stakeholders, including consumers. In pursuing their interests consumers may draw

politicians "back into the debate" leaving it "difficult [for the politicians] to escape being called to account for the performance of services" (Deakin and Walsh 1996:35). Even if the tasks of service provision and regulation were allocated to a separate agency, politicians would still be held accountable by the general public with respect to the actual services provided. These citizens would demand action if they consider the quality of services provided to be inadequate. This accountability draws the politicians back into the actual provision process of water services. Pollitt and Bouckaert (2000:146-147) seem to echo this sentiment when they find that:

> "[A]ny suggestion that public management can be radically depoliticized […] is either a misunderstanding or flies in the face of evidence from many countries. The allocation of say, health care resources or decisions about educational standards or major public infrastructure projects are all inherently 'political' decisions, whether they are taken by powerful politicians or tough public managers […]. The public will often see the political authority as ultimately responsible – or at least sharing responsibility – however many ministers may protest that these are technical or professional decisions which have been taken by the appropriate officials."

The only situation in which a stringent separation of politics from service provision seems realistic (and sustainable over a longer period of time) is where water services are not a prominent issue on the political agenda and where the income of the utility is stringently separated from the political realm. An example of such a situation is the provision of water supply in the Netherlands (Blokland and Schwartz 1999; Schwartz and van Dijk 2005). However, for water not to be prominently on the public agenda, a utility would have to have:

- Service coverage of 100%
- Reliable service provision to the extent that customers are highly satisfied with the level of service provided to them; and
- Tariffs at cost-recovery levels whilst still being low enough that consumers cannot only afford them, but are also willing to pay them.

But even satisfying these criteria may not be enough as other elements can be identified which have 'depoliticized' water services in countries such as the Netherlands. In the Netherlands, the mayor of a municipality is still not elected by the electorate, but rather appointed by the national government for a term that does not run congruently with those of elected municipal council members[117]. This means that the mayor has little incentive to use the water services sector for political gains. Moreover, the Netherlands has never had a 'free-water' legacy meaning that there is a long tradition charging cost-recovering levels (which influences the willingness-to-pay of consumers).

[117] Interesting to note is that Awortwi (2003) argues that appointed mayors in the case of Ghana have a negative impact on (solid waste) service provision. The reason he gives is that these mayors would be less accountable to the citizens for the services provided.

Unfortunately, the situation that holds for the Netherlands is not universal. In fact, basically all middle and low-income countries, including Mexico, do not meet the criteria sketched above.

8 Conclusions

In this concluding chapter we will combine the results obtained from the two clusters of case studies presented in chapters five and six and on the basis of those results draw final conclusions regarding the validity of the propositions stipulated in chapter three. In addition, the question if the water supply and sanitation sector in low- and middle-income countries 'lends' itself NPM reforms will be discussed in greater detail.

8.1 Conclusion

In the introductory chapter to this research, the problems facing public water utilities were highlighted. Furthermore, the questions were raised if poorly performing utilities are managed in-line with the 'traditional' bureaucratic model of public management and if well performing public water utilities adhere more to the New Public Management model of public management. The underlying reason for answering these questions is to establish if performance of poorly performing utilities can be improved by introducing NPM-style reforms.

The researched case studies did not provide a coherent picture of well performing utilities implementing the NPM model as defined earlier. Rather the well performing utilities appear to adhere to only a few of the elements of the NPM (in particular external autonomy and customer-orientation). An important qualification that has to be raised in relation to this finding is the question if these elements can only be traced back to the NPM. The main point here is that a dimension such as 'autonomy' may be an important element of the NPM model, but the NPM does not have a monopoly on the concept of 'autonomy'. The conclusion, which I draw, reads that the hypothesis that well performing utilities adhere to the NPM model is falsified.

In addition to finding that well performing utilities have only implemented a few of the elements of the NPM model, the research showed that the only elements of the bureaucratic model that poorly performing utilities adhere to is that they are characterized by hierarchy and levels and operate according to internal regulations. However, this also applies very much to well performing utilities and as such, this characteristic does not differentiate between well performing and poorly performing utilities. As such, the hypothesis that poorly performing utilities adhere to the bureaucratic model of public management is also falsified.

8.2 Financial Autonomy and Customer Orientation

The dimensions of external autonomy (specifically financial autonomy) and customer orientation were strongly visible in the well performing utilities and noticeably absent in the poorer performing utilities. The finding concerning the importance of financial autonomy supports earlier research (Cullivan et al. 1988; Islam 1993; Hoffer 1994; Bately 1999; Eybergen 2005). The case of SIMAPAG, in turn, has shown the strong link between financial autonomy, meaning dependency on the consumer for financing a large part of the utility's income, and customer orientation. The customers of

SIMAPAG were willing to pay tariffs which cover a large part of the costs but insisted on receiving better services in return. This required SIMAPAG to adopt a strong customer orientation.

Having emphasized the importance of financial autonomy and its relationship with customer orientation, these findings should not be overstretched to conclude that well performing utilities operate on the basis of full cost recovery. All of the cases of well performing utilities studied in this research at one time or another depended on external financing to fund investments. In fact, apart from SADM, all of these well performing cases still have and need regular access to external financing. As such, although increased financial autonomy is important, this does not mean that national and international financial institutions have no role to play in assisting public water utilities. The fact that almost all well performing utilities studied in this research are still dependent on outside financing suggests that without such assistance it is difficult to improve performance or maintain good performance.

8.3 The Suitability of NPM Reforms

In the Introduction of this research, it was highlighted that the New Public Management is viewed by many as way of improving service provision by public water utilities. The clearest illustration of this perspective is the conclusion from Nickson and Franceys, two respected academics whose area of expertise is that of the water supply and sanitation sector water in developing countries. They conclude that "the [water supply and sanitation] sector lends itself to the introduction of NPM reforms" and that "it is proving to have a significant impact on improving service provision the world over" (Nickson and Franceys 2003:182). In the two sections below, this conclusion is challenged as the research documented in this thesis suggests that Nickson and Franceys' finding is not as generally applicable as they claim it to be. Though it is not possible to refute or support the possible contribution of the New Public Management in improving service provision in general, this research suggests that the impact of the NPM is likely to be limited, in cases where the principal-agent relationship is such that the power of the bureaucracy (the agent) is small in comparison with that of the agent. Moreover, in many countries, an approach combining Weberian reform measures with NPM reforms may hold greater promise for improving service provision than simply focusing on the New Public Management reforms.

8.3.1 Principal-Agent Theory and the New Public Management

The criticisms deriving from Public Choice theory have in common that they share a particular perception of the principal-agent problem. This perception "is one in which the problem is bureaucratic power" (Aucoin 1990:126). Thus the power of the agent, which is seen as being inherent in public sector agencies, leads to poor service provision because of rigidity and inflexibility of the organization, an uncontrollable organization which pursues its own survival rather than organizational goals, and an internal orientation of staff who focus more on maximizing budgets and chasing their self-interests rather than serving the public (Metcalfe and Richards 1990; Kettl 2000; Lane 2000).

In light of the fact that Public Choice theory sees the power of the agent as underlying inefficiency in the public sector it is not surprising that the aim of the reforms deriving from this theory aim to "reestablish the primacy of representative government over bureaucracy" (Aucoin, 1990:115). Reestablishing this primacy of the principal over the agent is to be achieved by way of reducing or restricting the power of the agent, rather than by increasing the power of the principal. As such, the reforms emanating from Public Choice theory and featuring prominently in the New Public Management aim to reduce or restrict the power of the agent (or in the case of the water supply and sanitation sector, the power of the public water utility). For example, decentralization of service provision leads consumers or users of a particular service to better hold the service provider accountable for the services provided. This increased accountability essentially entails a restriction of the utility's power (or discretion). In a similar vein, introducing competition and quasi-competition essentially reduces the (monopolistic) power of the water utility. Competition forces the agent to ensure that they are following the goals set by the principal at the risk of being replaced by a competitor who is better able to do so.

If the argument that the NPM reforms deriving from Public Choice theory are aimed at weakening the power of the agent is accepted it would seem that strong bureaucratic power and relatively weak elected officials who have difficulty in steering and controlling the bureaucracy are an important presupposition for implementing NPM reforms. After all, these reforms are aimed at mitigating this situation. In this research, however, it was found that this presupposition does not necessarily hold for the provision of water services in low- and middle-income countries. The example of the State of Guanajuato in Mexico illustrated that the political institutions in these municipalities are such, that a primacy of the principal (elected official) over the agent (management of the utility) exists. Similar conclusions can be drawn for the cases of Hai Phong in Vietnam, Campinas in Brazil and SADM in Mexico. The question is then how beneficial New Public Management reforms, which result in weakening the position of the agent further, will be in these countries? Do the water supply and sanitation sectors operating in the context of such political institutions 'lend themselves to NPM reforms'? This research suggests that they may not.

8.3.2 The Bureaucratic Model – New Public Management Dichotomy

Linked to the principle-agent discussion is the issue of viewing the NPM as a "mirror image" of the bureaucratic model. Such sentiments are shared by a considerable number of proponents of the New Public Management, some of whom have even argued that the bureaucratic model is obsolete and has effectively been replaced by the New Public Management.

The findings of this research provide something of a different perspective as they suggest that viewing the NPM and the bureaucratic model as competing models is not very useful when addressing the reform of public water utilities in low- and middle-income countries. In this sense the research supports Kaufman's findings (2003:284) who suggests that the 'competition' between the New Public Management and Weberian reforms is more relevant for 'developed countries' and less so for the countries of Latin America. The main issue is that, as Kaufman (2004:284) argues, the

problems "posed by rigid Weberian bureaucracies are less serious than those created by highly politicized and patrimonial structures, in which hiring and dispensing of resources is part of particularized exchanges of support for services". In the five public water utilities studied in the Mexican State of Guanajuato, the problems associated with the role played by the municipal president do appear to be much more significant than often-heard complaints about rigid bureaucratic organizations. In fact, one of the most salient findings of this research is that well performing public utilities tend to display a stronger adherence to the Weberian ideal-type than poorly functioning public service providers. This lead to the perspective that instead of seeing the NPM as the mechanism to improve service provision in public water utilities in Latin America, perhaps Weberian reforms need to be revisited?

In fact, it would seem that the utilities in Guanajuato would benefit from Weberian reforms, which emphasize "entrance by examination or other professionally sanctioned qualifications, promotion by merit, job tenure, reasonable and predictable salaries, and administration based on written rules" (Schneider and Heredia 2003:7). Such reforms, if implemented successfully, could have the effect of addressing the politicized and patrimonial structures of the public water utilities in Guanajuato. Cabrero (2005:85) also acknowledges the usefulness of strategies of 'bureaucratic reform' in the Mexican context. In his analysis of Mexican municipalities he finds that "[b]ureaucratization is still necessary in a large number of municipal governments across the country". Such reforms essentially strengthen the position of the public agency vis-à-vis the elected politician, i.e. strengthen the position of the agent vis-à-vis the principle.

However, in the water services sector particular attention needs to be paid to the 'outputs' of a water utility. These cannot be assessed, as the municipal president of Valle de Santiago did in his second *'Informe de Gobierno'*, in terms of the expansion of distribution network or the number of elevated tanks. Rather, these outputs must be appraised in terms of the level of service delivered to the consumer (which includes the tariffs charged for that particular level of service) and the overall consumer satisfaction for the services provided. It is particularly in this sense, i.e. in holding the utility accountable for the quality of services it produces (i.e. the services provided to the consumers, customer satisfaction with the services, etc.), that I consider the New Public Management to hold promise for public water utilities in Guanajuato (and in many low and middle income countries for that matter).

As such, when addressing the reform of public water utilities in Mexico, or in many other low- and middle-income countries, rather than viewing Weberian reforms and NPM-style reforms as 'opposite' or 'competing' reform strategies, they are better viewed as complementary, focusing on the one hand on reducing patronage and depoliticizing the management of the utility, whilst at the same time emphasizing the levels of service that must be delivered by the utility.

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9 Annex 1: Case Studies Guanajuato

In this Annex, the five case studies undertaken in the Mexican State of Guanajuato are presented.

9.1 Comité Municipal de Agua Potable y Alcantarillado de Dolores Hidalgo[118]

In presenting the case of CMAPADH, first an overview of the governance structure is provided. Then we present the general characteristics of the utility. Finally we present the findings in relation to the two models of management discussed in chapter three.

The general characteristics of the CMAPADH are presented in table 9.1. The number of connections appears to be quite low in relation to the total population of the municipality of Dolores Hidalgo. This could mean that the utility is providing bulk water to the more rural areas of its municipality.

Table 9.1: General characteristics CMAPADH

Indicator	**2000**	**2001**	**2002**
Annual water abstraction (million cubic meter)	4.9	3.7	4.1
Water supply connections	15,094	16,266	16,050
Sewerage connections	14,635	15,771	14,522
No. Of Employees	61	64	64
Service coverage – water supply	95.6%	n.a.	n.a.
Service coverage – sewerage	53%	n.a.	n.a.
Average domestic tariff (MXP/m^3)	1.27	1.47	1.88

Sources: CMAPADH 2003; CEAG 2002

9.1.1 Governance Structure CMAPADH

Water services to the 129,000 inhabitants of Dolores Hidalgo are provided by the *Comité Municipal de Agua Potable y Alcantarillado de Dolores Hidalgo* (CMAPADH). The utility was established as a statutory body in 1992 by way of the *Reglamento de la Junta de Agua Potable y Alcantarillado para el Municipio de Dolores Hidalgo*. These statutes not only established the CMAPADH but also arrange the internal functioning of the utility. Article 6 of the statutes of CMAPADH state that management of the utility shall be overseen by Council consisting of a chairman, a secretary, a treasurer and 2 external members. The tasks of the Council include:

- Management of CMAPADH according to general guidelines, which are to be respected by the members of the Board and the personnel of CAMAPDH;
- Discus and approve the annual budget, which is subsequently submitted for approval to the municipal government;

[118] Unless otherwise mentioned, the information contained in this document derives from interviews held with management of the CAMAPDH.

- Formulate and approve the proposal for tariffs of water services as well as of fess and fines that may charged by the utility;
- Address complaints received from consumers about the services provided to them;
- To determine the conditions of collective or individual work agreements with personnel in the utility;
- Formulate the infrastructure projects for the maintenance and expansion of service network;
- Monitor the use of resources by the utility;
- To monitor the provision of water services in accordance with the corresponding laws, regulations and tariffs

Council members have a term for two-years with a possibility of re-election. The secretary of the Council is named and removed by the Municipality. Council members are officially supposed to be elected from a variety of organizations representing civic society, such as:

- Chamber of commerce
- Neighborhood associations
- Banks
- Professional organizations
- Unions
- User groups

However, in reality, the Municipality has not adhered to this process. An assembly for selecting Council members was held in 2000, but became so politicized that the municipality decided to suspend the election of Council members and eventually decided to appoint the members directly.

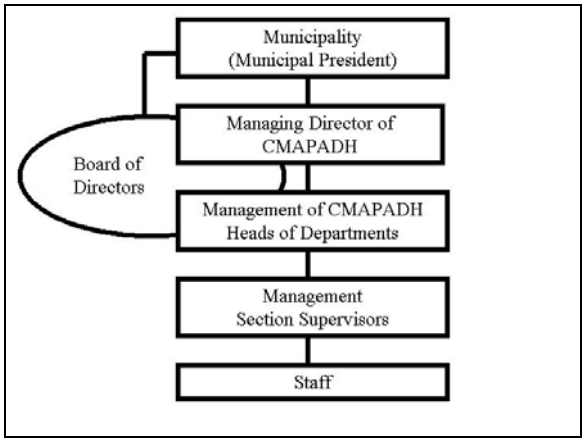


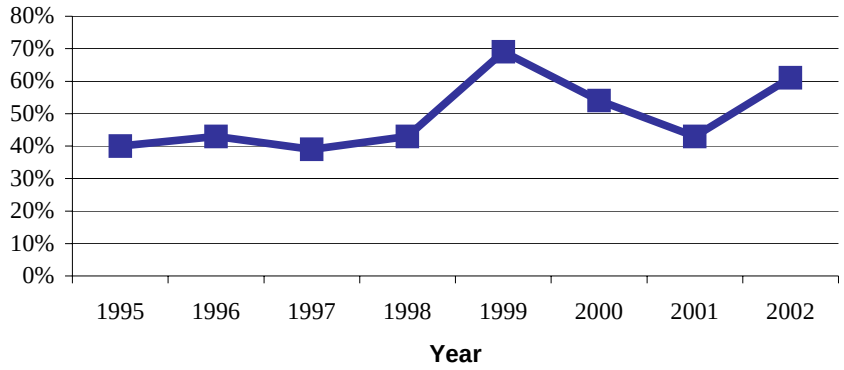
Figure 9.1: Governance structure CMAPADH

The actual functioning of the Council is arranged in the *Reglamento del Consejo Directivo Comité Municipal de Agua Potable y Alcantarillado de Dolores Hidalgo.* These regulations reiterate the composition of the Council as specified in Article 6 of the *Reglamento de Junta*, but also specify in greater detail the obligations of the Council in general and the individual Council members. All of the members of the Council have one vote and decisions are to be taken by majority voting. Decisions by the Council are to be executed by the general manager of the utility. Although the *Reglamento de Junta* does prescribe a separation of functions between management oversight and management of the actual service provider, this separation in reality does not exist. Reason for this is that the chairman of the Council is currently also the general manager of the utility. Moreover, also the secretary and the treasurer are employees of CMAPADH. Above an overview of the governance structure of CMAPADH is provided. The chart takes into account that the management of CMAPADH also holds the majority of the seats on the Council of Directors.

9.1.2 The Degree of Autonomy and Accountability of CMAPADH

9.1.2.1 External Autonomy

CMAPADH is subject to the official norms for water supply and sanitation issued by the Ministry of Health and the National Water Commission. CMAPADH has sufficient access to raw water resources. CMAPADH uses only groundwater resources, which it abstracts by way of 12 wells. Annually between 4 and 5 million cubic meters of groundwater is abstracted by these wells. At full capacity CMAPADH can abstract up to 6.9 million cubic meters per year. However, there are some problems with depletion of the aquifer however. It is estimated that the water level in the aquifer is dropping by about one meter per year.



Source: CMAPADH 2003

Figure 9.2: Actual versus required income CMAPADH 1995-2002

In 2002, CMAPADH has a working ratio of 1 (CEAG 2002) indicating that its operational expenditure matched its operational revenue. In essence, this means that the utility generates sufficient funds to operate the existing system but that it is dependent on outside financiers for new investments in the system. The operational income derived mainly from tariffs, arrears, new connections, and penalties/reconnections[119]. External funds in 2001 amounted to MXP 5.4 million, all of which came from the State government. In 2002, the utility received MXP 1.67 million from external agencies of which 42% derived from the municipal government and the remaining 58% from the State Government. In 2002, the internally generated funds for CMAPADH were approximately MXP 8 million. With the external funds, this puts the total budget for CMAPADH at about MXP 9.7 million. This means that ca. 18% of CMAPADH's funds comes from external agencies. What is also evident is that the amount of external funds shows considerable fluctuation, as is illustrated by the fact that external funds in 2002 were less than one-third of what they were in the previous year. This means that there is considerable insecurity for the utility regarding the availability of future funds. In 2002, the utility tried to take out a private loan. However, they were unable to satisfy the requirements for obtaining that loan.

CMAPADH cannot take out loans without prior approval from the municipal government, as the municipal government has to provide guarantees for the loan.

Although CMAPADH offers relatively good benefits and convenient working hours (from 8:00-16:00) the utility still has some difficulties attracting qualified personnel as the salaries are relatively low compared to other sectors. Moreover, the utility is relatively small and as such there little room for promotion and development of staff. Most employees tend to keep the same position for years. Salaries are proposed by the general manager based on a comparison with other water utilities. The proposal is then forwarded to the Council for approval. The general manager is able to hire staff for existing positions without prior approval from the Council or the municipality. Only when a new position is created is approval from the Council required.

Prior to 2000, there was considerable political interference in the utility. Most illustrative is that up to 2000, the general manager was replaced frequently with almost no general manager lasting more than a year. In the beginning of 2003 the general manager changed again in 2003. The current general manager appears to have a good relationship with the municipal president. The level of support provided by the municipal president is also visible in the degree to which tariff increases are supported. In the period 1995-2000 the average tariff increased by 33.8% with considerable fluctuations from year to year[120]. However, over this same period, the rate of inflation measured 110% (CEAG 2001). In other words, the increase in the tariff level is considerably less than that of inflation over the same period.

The utility is officially not allowed to terminate service provision to defaulting consumers. However, according to the statutes of CMAPADH the level of service can be reduced to a basic minimum. The current policy is to limit service provision to

[119] It is noteworthy that article 115 of the Mexican Constitution states that government organizations at the federal, state and municipal level do not have to pay for water.

[120] For example, an increase of 18% in 1997 was offset by a reduction of 26% in 1998 and much of the increase over the 1995-2000 period is due to an increase in the average tariff of 46% in 2000 (CEAG 2001).

consumers who owe more than MXP 100 or are more than 3 months behind on their payments.

Table 9.2: An overview of external autonomy

Indicator	Value
Who determines the pay-scales for the various levels within the utility?	Municipality
What is the basis for appointing members to the Council?	Management team dominates Council
Is the utility able to take out loans without prior approval from the owner?	No
Is the utility allowed to limit service delivery to defaulters?	Yes
Who is responsible for setting tariffs?	Municipality and the State Congress
Does the utility follow public sector procurement rules?	Yes

9.1.2.2 External Accountability

The NOM's issued by the Health Ministry and the National Water Commission contain the standards to which CPADAH must adhere. CMAPADH undertakes daily sampling and monitoring to ensure that the standards. The results are sent to the local office of the Ministry of Health once a month. In addition, they send water samples to the local office of the Ministry of Health, which are checked by that office. The reporting requirements to the National Water Commission mostly concern the amount of water abstracted[121]. These reports are sent to the CNA every 3 months. Reports for the ministry of Health and the CNA are not publicly accessible. In addition to receiving reports from CMAPADH, the Ministry of Health (daily) and the CNA (twice per year) undertake inspections in Dolores Hidalgo.

In case CMAPADH does not meet the prescribed standards the Ministry of Health sends a notification to the utility with recommendations to address the problem. If CMAPADH does not take the necessary steps to mitigate the problem they can be fined. Until now, no fines have been applied by the Ministry of Health.

No service standards are set for CMAPADH. On paper, the utility is to send a report to the Municipality every three months, regarding performance of the utility. However, at the time of the interviews the last report had been sent to the Municipality five months previously.

One way in which the utility is stimulated to produce results is by way of a program named PROMAGUA that is managed by the CNA. Under the PROMAGUA program a utility can apply for funds as long as they have a 'global efficiency rate'[122]

[121] Utilities are to pay the National Water Commission for the water they abstract. At current, however, based on a 2002 Decree, the National Water Commission returns these payments as long as they are used (on a matching-fund basis) for the construction of wastewater treatment facilities.

[122] The global efficiency rate is based on both physical efficiency (physical water losses) and commercial efficiency (billing/collection ratio).

above 60%. The utility has not submitted applications for funds under this program, however, as they do not monitor their 'global efficiency'.

The financing institutions do impose covenants on the utility. Both CEAG and the CNA tend to offer funds only when their contribution is matched by a contribution from CMAPADH. Moreover, most of these funds have specific allocations (the CNA funds coming from groundwater charges for example, must be use for the development of wastewater treatment facilities). In the case of CEAG, the funds and their spending are largely managed by CEAG themselves. This means that many of the contractors and consultants required to undertake an activity will actually be contracted by CEAG. CEAG then also supervises and monitors these contracts. When the CMAPADH uses its own funds for investment they manage the spending of these funds themselves.

The utility is not audited by an external auditor. Only the treasurer of the Council checks the accounts. Two municipal agencies have the authority to check the accounts as well. These are the *Controlario Municipal* and the *Controlaría Mayor de Hacienda.*

CMAPADH does not have a customer charter. However, the contract that the consumer signs when requesting service provision does contain rights and obligations of both CMAPADH and the users.

There is not a formal customer organization to which CMAPADH is accountable. Generally consumers will approach the Customer Department of CMAPADH if they encounter any problems of service provision. In case their complaint is not solved the consumer can choose to present their complaint to a Municipal Control Agency[123] or in rare cases to the federal consumer agency[124]. These agencies, which do not have a specific focus on water, represent the consumers if their complaints are considered valid. Also, neighborhood associations exist and these, at times, address the issues relating to the provision of water services for that particular neighborhood. However, these associations do not discuss individual difficulties of consumers.

Table 9.3: An overview of external accountability

Indicator	**CMAPADH**
Does the utility have a customer charter, which specifies performance targets and are there any financial penalties for non-performance?	No
Does the utility have to meet specified performance targets set by or agreed upon with the owners?	No
Is an annual report produced, which is audited by an external accountant?	No
Are external groups represented in advisory or management oversight bodies of the utility?	Yes
Has the utility secured loans in the commercial market on its own credentials/ability?	Yes[125]
Does the utility participate in some form of credit rating scheme?	No
Does the lender impose financial covenants on the utility?	Yes

[123] *Controlaría Municipal*
[124] *Procuradoria Federal de Consumidor*
[125] It should be noted that these loans were secured considerable time ago. With the (financial) performance of recent years securing such a loan would be more difficult and in 2002 was unable to secure a loan with a private bank.

9.1.3 Hierarchy and Levels, the Market and Customers

9.1.3.1 Decentralization of Authority

Most of the financial decisions are made by the management of the company. Although in a number of cases the approval of the Council is required, this requirement is largely a formality as the management of CMAPADH also controls the Council. Tariffs and loans need to be approved by the municipality (and in case of tariffs also go through the State Congress). The Manager of Human Resources in CMAPADH arranges procurement of goods and services. Other Departments send their requests to the human resources manager and she will arrange procurement. For this purpose she will find three quotations from which the best one is selected. As long as the request is for less than MXP 20,000[126] and if the amount is within the established budget the human resources manager can arrange procurement after approval from the general manager. If the amount is higher than MXP 20,000 or if the amount is not considered in the budget approval is required from the Council.

Hiring of staff is done by the general manager after consultation with the relevant department where the new employee is to work. For firing of staff the general manager consultation with the Council in order to ensure that no misunderstandings exist about why that step was taken. The promotion of staff members is also the responsibility of the general manager in consultation with the treasurer and the secretary. The Council is then informed of this decision. The general manager can determine financial incentives for employees as long as the amount is less than MXP 500[127]. Salaries are defined by the Council and are mentioned in the budget, which needs to be approved by the Municipality and the State Congress.

Reducing the level of service provision to consumers who have not paid their bills is done automatically. The billing and collection section sends a notification to the consumer, and if the consumer has not either paid his debts or agreed with the treasurer about a solution to the payment problems, the technical department will limit service provision.

Table 9.4: An overview of decentralization of authority

Indicator	**CMAPADH**
What is the purchasing ceiling for procurement of operational departments as a percentage of operational budgets?	Above MXP 20,000[128] approval of the *Consejo* is required
Does the hiring of staff members in departments require prior approval from the general manager?	Yes
How many layers of management separate the general manager and the entry-level workers?	Two Levels
At what level are internal work processes and standards defined?	Management and department level
In what areas does field-staff have decision-making powers?	Customer-service, maintenance, billing and collection, storage of materials

[126] US$ 2,000
[127] US$ 50
[128] Approximately US$ 2,000

9.1.3.2 Internal Accountability for Results

The relationship between the Council and the general manager in terms of accountability is a bit complicated as the general manager is the same person as the chairman of the Council. Moreover, two other employees of CMAPADH are in the Council, meaning that in essence the management of the utility also controls the Council. The Council must meet al least once per month, although on average there will be two Council meetings per month. The frequency of these meetings is very much dependent on the need for having such meetings. The Council does not establish clear and measurable targets for the management of the utility.

In June 2003, CMAPADH established a 'best worker of the month' award. Every month, one person is selected from the administrative staff and one person is selected from operational staff as 'best worker of the month'. 'Best workers of the month' are honored in a small monthly event during which they receive their award. There are no clear indicators and there is no set procedure for selecting the 'best worker'[129].

At current there is a system to evaluate employees, but the evaluation is mainly focused on issues such as absenteeism and sick days and does not really take into account the results produced by the employees[130]. There is also no system of penalties for poor performance.

Table 9.5: An overview of internal accountability for results

Indicator	**CMAPADH**
How often does the Chief Executive meet with the Council?	Twice per month
Are penalties and rewards applied to the Chief Executive and Directors for achieving specified performance targets?	No
Are penalties and rewards applied to the staff by the management for achieving specified performance targets?	No
Is staff subject to annual evaluations on their functioning in the utility?	No

9.1.3.3 Market-orientation

CMAPADH outcontracts approximately 23% of its operational budget. It does not have a specific outcontracting policy. Activities for which it outcontracts include rehabilitation and expansion of the network, tariff studies, installing new computer software, collecting uncollected bills and producing an operations manual.

The utility sends a bi-monthly report to the State Water Commission concerning various (performance) indicators. On the basis of these reports, which are submitted by all utilities in the State of Guanajuato, the State Water Commission then publishes an annual overview of the performance of the utilities[131], which allows the various utilities

[129] Partly as a result of the non-transparent way of awarding this monthly prize, there are some who feel that selection of the award winners is partly based on 'personal feelings'.
[130] Plans do exist for establishing an annual bonus for productivity of the employee, but this has not been implemented yet.
[131] *Diagnostico Sectorial*

to compare their own performance with that of their neighbors. However, although this benchmarking information is available every year, it is not used in a systematic way[132].

The utility does not undertake any market-testing exercises.

Table 9.6: An overview of market-orientation

Indicator	Value
What is value of contracts outsourced as a percentage of the operational budget?	23.73%
What is the nature if the functions that are outsourced?	Construction works, engineering projects, legal services, ICT, tariff study, operations manual, etc.
How often does the utility engage in benchmarking exercises?	Once per year
In what areas are benchmarking activities undertaken?	Technical, commercial, financial and administrative activities
Does the utility engage in market testing and does it develop internal markets?	No

9.1.3.4 Customer-orientation

CMAPADH is dependent on the tariff it collects for covering its operations and maintenance costs. Payment of the bills can be done at a variety of locations including the CMAPADH Office, Banks, and selected small businesses.

The utility does not have any real system of finding out what the opinions of their customers are regarding the service provided to the customers. There is a daily radio program in which citizens can call in to complain about government services (in other words, not only water services) and sometimes the consumers call in to complain about the provision of water services. Also there are plans to install a suggestion box, but this has not been implemented yet.

As mentioned before, the customers do have the possibility to complain. Complaints can be addressed to the Customer Department of the utility, the Municipal Control Agency or the Federal Consumer Agency. The customer can get access to CMAPADH by visiting their offices, phoning or sending a letter. Although there is no tracking system for complaints, almost all complaints are addressed within one week. The lack of a tracking system means that there is no exact information about the number and nature of complaints coming in each month. It also means that the complaints are not analyzed with the aim of improving service provision. It is estimated, however, that between 180 and 300 complaints are submitted each month. These complaints mainly concern:

- High bills
- Service interruptions
- Leaks
- Meters, which are not functioning
- Requests for new connections that have not been installed yet.

[132] Illustrative in this sense is that of the seven managers interviewed at CMAPADH two indicated that no benchmarking exercises existed.

Table 9.7: An overview of consumer-orientation

Indicator	**CMAPADH**
In what ways can the bills be paid?	CMAPADH Office, Banks, *Cajas Populares*, selected small businesses
In what ways does CMAPADH pro-actively seek the opinions/views of its customers?	None
What is the menu of options for service delivery that the CMAPADH provides?	In-house connections, block connections
In what ways does the CMAPADH actively inform its customers about changes related to service provision?	Radio
What is the percentage of complaints that is addressed?	100%
What are the average response times to complaints?	N/A

9.1.4 Conclusion

During the time of the interviews in July and October 2003, CMAPADH appeared to be relatively stable following a prolonged period of instability in which general managers seemed to change every year[133]. Part of the stability has been achieved by *de facto* by neutralizing the Council as an oversight agency by allocating a majority of seats to people who are also part of the management of the utility and by bypassing some of the stakeholders in the service provision process when it comes to allocating members of the Council.

Availability of water resources does not appear to be a very constricting issue at this time. CAMAPDH uses about 70% of its abstraction capacity. The declining groundwater levels are a reason for concern for the medium to long term. Attracting qualified personnel is subject to some difficulties.

In terms of access to financial resources, the general manager does not appear to have much room for maneuvering. The tariff levels cover no more than operation and maintenance costs and have seen considerable fluctuation over the past years (indicating that they are subject to political interference). This means the utility is dependent on external funds for capital expenditure and availability of these funds is difficult to predict.

In terms of accountability, CMAPADH appears to have considerable accountability to the Ministry of Health and the National Water Commission for meeting drinking water standards and reporting on the abstraction of water resources. Accountability to external financiers is to some extent limited, as these organizations tend to supervise the spending of these funds themselves. Reporting requirements to the Municipality do not

[133] The impact of instability was further strengthened by the fact that CMAPADH had very little written and standardized procedures. This meant that every time a new managing director would enter the operating procedures would change.

appear to be followed meticulously. However it is likely that informally the general manager will have a very strong accountability to the municipal president[134].

CMAPADH appears to be a highly centralized organization with very few decision-making powers decentralized to lower levels. Even when decision-making powers have been decentralized, the people making these decisions often still need approval from the general manager.

Internal accountability for results is also very limited. Managerial accountability towards the Council is little more than a formality as the management dominates the Council. In the organization, apart from the selection of a monthly 'best-worker' no incentive structures are in place to reward or penalize good or bad performance.

The level of market-orientation also does not appear to be quite high. Although the level of outcontracting is reasonable at about 23%, there is no systematic use of outcontracting as a utility policy. Also, the use of benchmarking is relatively limited, despite the fact that the State Water Commission annually publishes a 'sectoral analysis'. Market-testing does not take place.

Like the internal accountability for results, decentralization of authority and market-orientation, also the level of customer-orientation appears limited. Although customers can pay their bills in a variety of ways, their opinions are not proactively sought. Moreover, although customers can complain, these complaints are not tracked and as such are not used for improving service provision

9.2 *Sistema Municipal de Agua Potable y Alcantarillado de Moroleón*[135]

In presenting the case of SMAPAM, of which table 9.8 presents a brief overview, the governance structure of the utility is first presented. Once the governance structure of the utility has been discussed, the case study focuses on the different dimensions of adherence to the two models of management.

Table 9.8: General Characteristics SMAPAM

Indicator	**2000**	**2001**	**2002**
Annual water abstraction (million cubic meter)	4.3	4.5	4.1
Water supply connections	12,495	12,823	13,119
No. Of Employees	32	34	38
Service coverage – water supply	96.5%	n.a.	n.a.
Service coverage – sewerage	90%	n.a.	n.a.
Average domestic tariff (MXP/m^3)	1.85	1.51	2.36

Sources: SMAPAM 2003; CEAG 2002

Interesting about the general characteristics is that despite the fact that SMAPAM has significantly fewer connections than CMPADAH, the amount of water it abstracts per

[134] This assumption is based on the fact that the municipal president is able to remove the managing director from his position (and has done so numerous times over the past decade) and the fact that municipal presidents have far reaching powers at the municipal level (Capital Advisors 1999).

[135] Unless otherwise mentioned, the information contained in this case derives from interviews held with the management of SMAPAM.

year (and subsequently also the per capita consumption) is at the same level of CMAPADH. This could perhaps be attributed to the presence of the textile industry.

9.2.1 Governance Structure of SMAPAM

SMAPAM was established on July 19th, 1994 by way of the *Reglamento del Sistema Municipal de Agua Potable y Alcantarillado*. Like the water utility in Dolores Hidalgo, SMAPAM this *Reglamento* establishes SMAPAM as autonomous agency or an *organismo decentralizado*, which has a legal status separate from that of the municipality. Article 7 of the *Reglamento,* stipulates that the utility will be supervised by a Council, which is to consist of no less than 3 members. The responsibilities of the Council are stated in article 11 and include:

- Monitor the functioning of the utility;
- Discuss and approve the annual budget
- Supervise the use of resources;
- Formulate and approve the tariffs;
- Address relevant user complaints;
- Formulate infrastructure projects, which are required to guarantee service provision;
- Inform the municipality every three months about the results produced by the utility;
- Any other activities required by rules or regulations.

The terms of the Council members are for a period of two years with the possibility of re-election. The appointment procedure for the Council is laid down in article 8, which finds that the Council members (including the President and the Treasurer) are to be elected by an Assembly of Users[136]. This Assembly is to be organized by the municipality and organizations, which are to attend such an Assembly, include organizations such as:

- Chamber of commerce
- Labor Unions
- Banking Institutions
- Neighborhood associations
- Ministry of Health

[136] The exception is the Secretary of the Council who is appointed by the municipality

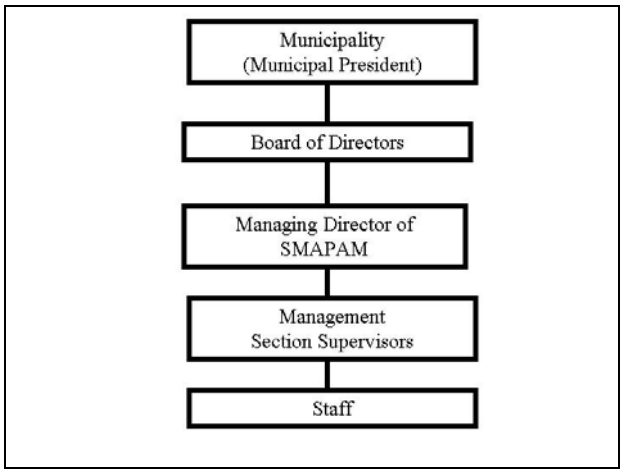


Figure 9.3: Governance structure SMAPAM

Although the procedure for electing a Council is stipulated in the *Reglamento*, in practice the municipality has bypassed the Assembly and has decided to appoint the Council themselves since 1998. In the 1998-2000 term, the municipality decided to extend the term for the previous Council. In 2000, the municipality tried to assign political supports to the Council. This was opposed by the existing Council members. In response, the municipality decided to remove the president of the Council and appoint someone who would agree with their selection of Council members. From 2000-2002 the functioning of Council members was relatively stable until 2002 when the municipality decided to remove the president of the Council and replace him with the vice-president of the Council[137].

The *Reglamento* also arranges the functioning of the Council. The general manager attends the Council meetings but has not vote. Each member of the Council has one vote and for a meeting (and the voting) to be legal a majority of Council members must be present. Decisions can be made by simple majority. In case the votes tie, the chairman of the Council has the final say.

Figure 9.3 provides an overview of the governance structure of the utility.

9.2.2 The Degree of Autonomy and Accountability of SMAPAM

9.2.2.1 External Autonomy

Similar to the water utility in Dolores Hidalgo, SMAPAM is subject to the official norms and standards issued by the Ministry of Health and CNA.

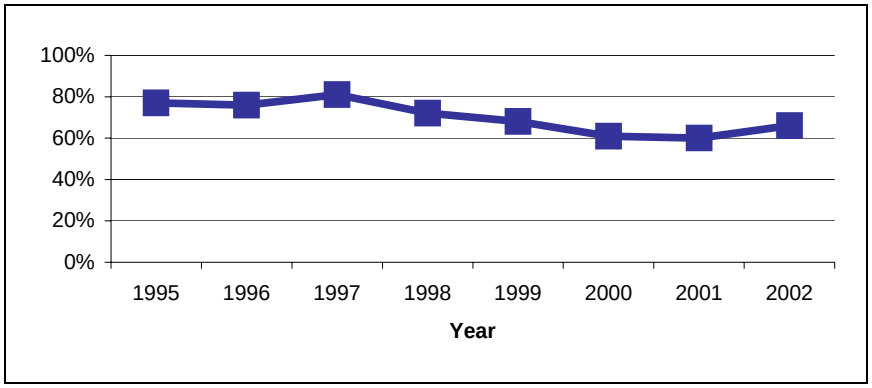
SMAPAM uses only groundwater for the production of potable water and has access to sufficient amounts of water resources. By way of 11 groundwater wells, the utility abstracts approximately 4.1 million m^3 per year from the Moroleón Cienega

[137] Important in this respect is that the position of chairman of the Council is the only position on the Council for which compensation is received.

Aquifer. The utility has a capacity to abstract 4.7 million m^3 meaning that SMAPAM is utilizing 87% of its abstraction capacity, which is quite high (SMAPAM 2003). The utility estimates that the Moroleón Cienega Aquifer will at least be able to supply water for the next 30 years and as such, the utility does not feel it faces difficulties in accessing sufficient amounts of raw water resources.

Assessing the ratio between income generated by the utility and the income required to provide water services shows that over the past years the difference between what is generated and what is required is increasing. In the mid-1990s SMAPAM was generating about 80% of its required income. In the late 1990s and early 2000s, this has slipped to about 65%. The balance sheets of SMAPAM for 2002 and the first 8 months for 2003 indicate that the working ratio's 0.96 and 0.82 respectively, which means that the utility is covering operation and maintenance costs. However, even with working ratios close to 1 is the utility dependent on external financing for its capital investment. In 2001 SMAPAM received external funds from the State Government (CEAG) amounting to MXP 80,000. In 2002, external financing amounted to MXP 1.75 million (SMAPAM 2003)[138]. As such in 2001 external financing made up 1.1% of the annual budget in 2001 and 16.2% of the budget in 2002[139].

In case the utility would want to secure loans, they would require prior approval from the municipality. However, since 1995 the utility tries to avoid obtaining loans from lending agencies as their past experience with such loans have not been positive. Rather they prefer to rely on matching funds schemes, which are supported by the CNA and the State Water Commission. It appears that the utility adheres to a policy of depending on the revenue it generates from its customers for operational expenditure and on the CNA and CEAG grants for investments in infrastructure. This is perhaps most strongly illustrated by the fact that the utility did not have a budget for the 2003 year.



Source: SMAPAM 2003

Figure 9.4: Actual versus required income SMAPAM 1995-2002

[138] In the period between 1995 and 2002 the percentage of external financing varied from 0% to 30% with an average of about 10%.

[139] The fact that SMAPAM's working ratio seems to hover around 1 and the relatively low share of external funds would seem to indicate that the utility has not undertaken a lot of large scale infrastructure project over the past years.

In terms of political support for the utility, it appears that despite the turbulence with respect to Council membership, the management of the utility is relatively stable. However, the general manager has expressed that political support from the municipal president is not necessarily a given. This is most visible in the reluctance of the municipality to approve increases in tariffs over the past decade. In fact, following a tariff increase of 50% in 1995, the next tariff increase (of 30%) was not until 2002. In January of 2003, a monthly tariff increase of 2% was implemented, which allows the tariffs to run more in line with existing inflation levels.

All income generated by the utility must be spent on providing water services. As such, the municipality cannot use the revenues generated from the provision of water services for other purposes.

Article 23 of the *Reglamento* provides SMAPAM the possibility reducing the provision of water services to users to a basic minimum (which would still allow the users to fulfill their basic needs) in case these users have failed to pay their bills.

The utility has some difficulties attracting and retaining qualified staff. The main reason for this is that the salaries at SMAPAM, which are in accordance with existing legislation, are relatively low in comparison with those offered in the textile industry. A worker in the textile industry can earn in one week, what an employee at SMAPAM receives in a month. Over the past years, however, the textile industry has been in decline, and SMAPAM is becoming a more attractive employer as it offers relative job security and a convenient working schedule (8:00-16:00). Pay scales are proposed by the management of the utility and after approval from the Council the proposal is sent to the municipality for final approval (along with the budget of SMAPAM). Another drawback of working at SMAPAM is that, because it is a relatively small company, there is very little room for promotion within the utility.

Table 9.9: An overview of external autonomy

Indicator	**Value**
Who determines the pay scales for the various levels within the utility?	Municipality
What is the basis for appointing members to the Council?	Community representatives
Is the utility able to take out loans without prior approval from the owner?	No
Is the utility allowed to limit service delivery to defaulters?	Yes
Who is responsible for setting tariffs?	Municipality and the State Congress
Does the utility follow public sector procurement rules?	Yes

9.2.2.2 External Accountability

SMAPAM does not take any samples regarding the quality of water supply and wastewater. SMAPAM only monitors the amount chlorine in the groundwater wells. The monitoring of the wells is done daily and the results are submitted to the local office of the Ministry of Health. The Ministry of Health does perform inspections of water quality and sometimes informs the State Water Commission of the results. In case the samples taken by the Ministry of Health fail to meet the prescribed standards the

Ministry informs the utility of the measures that it is required to take to mitigate the identified problem. In case SMAPAM does not implement these measures the utility can be fined. However, no fines have been put on SMAPAM so far. Like CMAPADH, SMAPAM must submit a report to the CNA every three months regarding the amount of water they have abstracted. In theory, SMAPAM should also report on the wastewater quality that it discharges. However, since the utility did not have a wastewater treatment plant operating in 2003, they did no report anything to the CNA regarding the treatment of wastewater.

The Council sends bi-monthly reports to the municipality. These reports include financial statements and memorandums concerning activities that the utility is undertaking. The municipality also requires the utility to submit an annual report. Meetings between the utility and the municipality occur on a basis of need. Whenever a meeting is required (such as, for example, to discuss the construction of a wastewater treatment plant) a meeting will be arranged. In case the municipality is not pleased with the performance of the utility they are able to remove any of the Council members, even though this is not stipulated as such in the *Reglamento.* The municipality removed the Council members in 1994 and in 2000 the municipality removed the chairman of the Council and the general manager of SMAPAM. There are no service standards set which the utility must achieve. As mentioned, SMAPAM mostly uses grant programs managed by CNA and CEAG for obtaining external funding. These grants do with conditions that have to be met. Both CEAG and the CNA tend to offer funds only when their contribution is matched by that of the receiving water utility. As described earlier, most of these funds have specific allocations. In the case of CEAG, the funds and their spending are largely managed by CEAG themselves.

There is a ‘user association’ which not only represents consumers of water services, but of ‘government services; in general. When the tariffs were raised, this association became very active and at one point even occupied the SMAPAM Office to complain against the tariff increase. At current, however, the association is less active. The utility does not engage an external auditor. The municipality and the State Ministry of Finance can audit the utility when the desire. The last audit was by the State Ministry of Finance in 1999. The contract that the consumer signs prior to receiving water services contain a series of obligations and rights to which both the utility and the consumer must adhere. The contract does not specify any targets, however, which the utility is to meet. Like the case of CMAPADH, the consumers can also complain to the *Controlaría Municipal.*

Table 9.10: An overview of external accountability

Indicator	Value
Does the utility have a customer charter, which specifies performance targets and are there any financial penalties for non-performance?	No
Does the utility have to meet specified performance targets set by or agreed upon with the owners?	No
Is an annual report produced, which is audited by an external accountant?	No
Are external groups represented in advisory or management oversight bodies of the utility?	Yes
Has the utility secured loans in the commercial market on its own credentials/ability?	No
Does the utility participate in some form of credit rating scheme?	No
Does the lender impose financial covenants on the utility?	Yes

9.2.3 Hierarchy and Levels, the Market and Customers

9.2.3.1 Decentralization of Authority

Decisions about setting tariff levels and the tariff structure follow a set procedure in which the utility proposes the tariff to the Council, on the basis of a tariff study undertaken by an external consultant. If the Council approves this proposal the proposal is sent to the municipality. If the municipality agrees to this proposal as well the proposal is sent to the state Congress for final endorsement and published in the State Journal[140].

The Billing Department is responsible for negotiating about uncollected bills. In general the policy is to offer a discount of up to 50% for debts smaller than MXP 1,500 and discounts up to 25% for amounts higher than MXP 1,500.

All requests for procurement are submitted to the general manager and the chairman of the Council. If it is an operational expense less than MXP 50,000 the general manager and chairman of the Council can decide. If it concerns an expense larger than MXP 50,000 the complete Council has to give its approval. In such a case, the utility is to request at least three quotations from potential suppliers/contractors.

Decisions about maintenance of assets are done by the general manager in consultation with the chairman of the Council. Generally, these decisions relate to maintenance activities, which cannot wait. Strategies for reducing unaccounted-for-water are proposed to the Council by the general manager. The Council will make the final decision about these strategies.

Also decisions about internal work processes and standards are made by the general manager in consultation with the chairman of the Council.

In case an employee is promoted, hired or fired, the decision is made by the chairman of the Council on the basis of proposals from the general manager. In case it concerns the termination of an employee's contract the decision has to be approved by the complete Council. Salary adjustments, which also require the approval of the full Council, are generally made once per year. The Council will agree to a general increase of the salary level, and the chairman of the Council and the general manager will then decide how this general increase is distributed over the employees.

[140] *Periodico Oficial del Gobierno del Estado de Guanajuato*

In case a user has not paid his bills and the Billing Department has not been able to negotiate a settlement with that user, services provided to that user will be reduced. The ultimate decision to this lies with the chairman and the general manager who jointly decide if services will be reduced based on a report by the Billing Department.

Decisions regarding customer complaints are dependent on the nature of the complaint. If addressing the complaint requires only clarification or providing information the person receiving the complaint addresses the complaint on the spot. If further action is required the complaint will be sent to the relevant Department.

Table 9.11: An overview of decentralization within the utility

Indicator	Value
What is the purchasing ceiling for procurement of operational departments as a percentage of operational budgets?	All decisions are taken by the MD and the Council President. Above MXP 50,000[141] the Council needs to give approval
Does the hiring of staff members in departments require prior approval from the general manager?	Yes
How many layers of management separate the Chief Executive and the entry-level workers?	One level
At what level are internal work processes and standards defined?	general manager/chairman of the Council
In what areas does field-staff have decision-making powers?	Billing and collection

9.2.3.2 Internal Accountability for Results

The general manager meets with the Council once per month or more often if necessity requires additional meetings. During these meetings the general manager submits financial statements and reports on issues related to planning, acquisition of new assets, personnel issues or any other information he considers relevant.

No performance targets for the general manager exist which he must achieve. The Council can decide to reward the general manager and other employees of the utility's management. However, such rewards are not very common. If such awards are given they are more symbolic in nature (such as a diploma, etc.) than a monetary reward.

The employees do not have to meet specified performance targets and also there is no system in place to evaluate the performance of the employees. Similarly, there is no way of rewarding an employee for good performance. Each employee receives a bimonthly bonus of MXP 300 regardless his or her performance.

Table 9.12: An overview of internal accountability for results

Indicator	Value
How often does the Chief Executive meet with the Council?	Once per month
Are penalties and rewards applied to the Chief Executive and Directors for achieving specified performance targets?	No
Are penalties and rewards applied to the staff by the management for achieving specified performance targets?	No
Is staff subject to annual evaluations on their functioning in the utility?	No

[141] Approximately US$ 5,000

9.2.4 Market-orientation

The level of outcontracting in the utility of Moroleón is relatively small and does not exceed 7% of its operational expenditure. In principle the utility has three methods of contracting third parties. The first method is that the Council can directly award the contract to a supplier/contractor. The second way is by way of a restricted tender, in which the utility requests three contractors to present (financial and technical) proposals to the Council. The third mechanism concerns a public tender in which any contractor can submit a proposal. Here too the Council makes the final decision about awarding the contract (in consultation with the general manager). Different tendering mechanisms will be used depending on the amount of the contract.

SMAPAM sends bimonthly reports to the State Water Commission, which publishes the *Diagnostico Sectorial* annually. This publication contains an overview of all water utilities in the State of Guanajuato and covers:

- Technical data relating to the production process: groundwater sources, volume of water abstracted, treated water, metered wells, etc.
- Commercial data: number of metered connections, total volume delivered, etc.
- Financial data: billing and collection rates, total expenditure, total income, etc.
- Administrative data: number of employees, % of managers, etc.

SMAPAM does not, however, use this information in a very systematic way. Partaking in this benchmarking exercise appears to be more with the aim of satisfying CEAG than using the results to spur improvement in SMAPAM[142].
The utility does not engage in benchmarking exercises.

Table 9.13: An overview of market-orientation

Indicator	**SMAPAM**
What is value of contracts outsourced as a percentage of the operational budget?	6.93%
What is the nature if the functions that are outsourced?	Construction works, engineering projects, legal services, ICT, tariff study, operations manual, etc.
How often does the utility engage in benchmarking exercises?	Once per year
In what areas are benchmarking activities undertaken?	Technical, commercial, financial and administrative activities
Does the utility engage in market testing and does it develop internal markets?	No

[142] Although the use of this benchmarking exercise is limited for SMAPAM, the CEAG does use the information from this exercise to determine their main programs of support for the following year.

9.2.4.1 Customer-orientation

Income generated from revenues represents approximately 90% of the total available budget. The customer's can pay their bills in SMAPAM's Office, banks[143] and small businesses (like a convenient store or video shop).

The utility has a few ways of obtaining information about the opinions of its customers, although these methods are not very pro-active. SMAPAM has installed a suggestion box in its office, which is not used very often. Furthermore, SMAPAM's customers can call in to a radio show[144] to express complaints about service provision. The utility also uses that radio program to inform its customers about any service interruptions or other activities that the utility will undertake. The complaints and comments expressed through the suggestion box and the radio program are sent to the relevant Department to be addressed. Generally, the utility will receive about 400 complaints a month. The complaints mainly concern:

- Increases in bills (especially after the recent tariff increase)
- Meter reading mistakes
- Leaks
- Service interruptions

In principle, all of the complaints are addressed. Nothing is done with the complaints once they have been addressed. There have been no customer management trainings organized for employees in recent years.

Officially, the customers should be represented in the Council, by was of elections in an Assembly. However, as mentioned the municipality has decided to bypass this election mechanism and in recent years has opted for appointing the Council members.

Table 9.14: An overview of customer-orientation

Indicator	**Value**
In what ways can the bills be paid?	SMAPAM's Office, Banks, *Cajas Populares*, selected small businesses
In what ways does SMAPAM pro-actively seek the opinions/views of its customers?	Suggestion box
What is the menu of options for service delivery that the SMAPAM provides?	In-house connections, block connections
In what ways does the SMAPAM actively inform its customers about changes related to service provision?	Flyers added to the receipt, radio, *perifoneo*[145]
What is the percentage of complaints that is addressed?	100%
What are the average response times to complaints?	N/A

[143] Including the *cajas populares.*
[144] The radio show is called "If the city would talk" (*Si la ciudad hablara*)
[145] *Perifoneo* is a car with speakers that drives around broadcasting messages through a neighborhood or city.

9.2.5 Conclusion

Like the utility in Dolores Hidalgo, the utility in Moroleón has experienced considerable intervention from the municipality over the past decade. In recent years, however, the utility appears to be a bit more stable. A few aspects of the utility are especially noteworthy. First of all, the chairman of the Council appears to have a prominent position in the day-to-day functioning of the utility. In many cases, decisions are made by the general manager in consultation with the chairman of the Council. This not only means that the utility is very centralized, but also that the influence of the chairman of the Council goes well beyond overseeing the management of the utility. Secondly, the utility's finances appear to be arranged on a relatively ad-hoc basis, in the sense that the utility did not have a budget for the 2003 year. Basically, revenue collected was mainly earmarked for operational expenditure, whilst CEAG and CNA grants were applied for in order to finance investments. Thirdly, the utility is relatively small with 32 employees and the labor productivity is very high with less than 3 staff per 1,000 connections. Although from a labor productivity point of view, such an indicator seems impressive, it does lead to the question if the utility has capacity to develop new activities, which can improve performance.

In general the level of external autonomy for the utility is limited by the difficulty of obtaining qualified personnel, political intervention by the municipal president, and the limited availability of financial resources. However, the adoption of a monthly tariff index in 2003 would, if the index is actually applied and maintained, provide more (financial) room for maneuvering for the management of the utility. In terms of access to water resources the utility does not face any constraints.

The level of external accountability appears to be very much in line with that of CMAPADH. The main organizations to which account is given are the Ministry of Health, the CNA and the CEAG. The role of the municipal president remains very strong and it is likely that accountability to the municipal president is strong.

The level of market-orientation of the utility appears to be very low. Less than 7% of operational expenditure is outcontracted. Although the utility does provide date to CEAG for the annual benchmarking exercise, it does not appear that the utility uses the annual exercise in a systematic way.

Decentralization of authority is very limited in the utility, which could perhaps be explained by the relatively small size of the utility. With just over 30 staff members, it would still be possible for the management to take most of the decisions and inform the rest of the staff relatively quickly about these decisions. What is surprising, however, is the prominent role of the chairman of the Council, as mentioned above.

Internal accountability shows something of a mixed picture. On the one hand, the staff of the utility is neither subject to meeting performance targets nor to performance-based rewards and penalties. On the other hand, the accountability to the Council, and in particular the chairman, is very strong as they are consulted in most decisions.

Although, the utility does not seek the opinions of its customers pro-actively, it has instituted mechanisms for allowing customers to complain and responding to these complaints. Here too, the question can be asked if the utility's size if of influence. With 32 staff members, it is unlikely that a lot of capacity would exist to implement mechanisms for pro-actively soliciting information from the consumers.

9.3 *Sistema Municipal de Agua Potable y Alcantarillado del Municipio de Valle de Santiago*[146]

The *Sistema Municipal de Agua Potable y Alcantarillado del Municipio de Valle de Santiago* (SAPAM) was established as a statutory body[147] responsible for the provision of water services on the 21st of June in 1996 (Orozco 2002). In presenting this case, the governance structure of the utility will first be described, followed by the adherence of the utility to the models as defined in chapter three.

Table 9.15: General characteristics SAPAM

Indicator	**2000**	**2001**	**2002**
Annual water abstraction (million cubic meter)	4.9	4.9	4.6
Water supply connections	15,569	15,487	15.650
Sewerage connections	14,360	14,282	n.a.
No. Of Employees	57	69	80
Service coverage – water supply	94.5%	n.a.	n.a.
Service coverage – sewerage	59%	n.a.	n.a.
Average domestic tariff (MXP/m^3)	1.08	1.62	3.11

Sources: SAPAM 2003; CEAG 2002

9.3.1 Governance Structure of SAPAM

The statutes which determine the governance structure is the *Reglamento del Sistema de Agua Potable y Alcantarillado del Municipio de Valle de Santiago*, which was adopted on the 16th of January 2003. The main tasks of the organization are stipulated in article two and include:

- detection, abstraction, transport and treatment of potable water;
- planning, construction, maintenance, rehabilitation and extension of the networks and equipment necessary to provide this service to the population;
- prevent and control pollution of water sources to which wastewater is discharged;
- treatment and discharge of effluents.

The utility is to be supervised by a Council whose members are to serve for a period of three years and who can be reelected. Among others the tasks of the Council include:

- Monitoring the utility;
- Examine, discuss and approve the annual budget;
- Formulate the infrastructure projects that are to be undertaken;
- Formulate and submit to the municipality the tariffs for service provision;

[146] Unless otherwise mentioned, the information contained in this document derives from interviews held with management of the SAPAM.
[147] *Organismo decentralizado*

- Determine the conditions for collective and individual work agreements with personnel of the utility;
- Inform the municipality every three months or whenever required about the functioning of the utility.

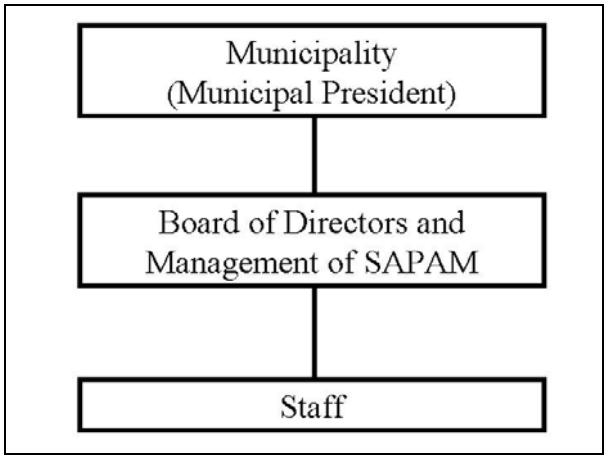


Figure 9.5: Governance structure SAPAM

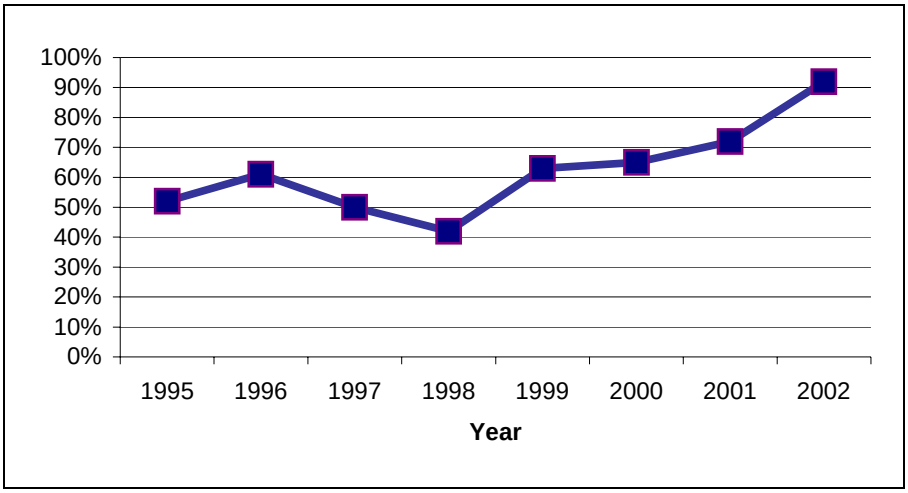
On paper the selection of Council members is done by the municipality on the basis of recommendations of associations, chambers and other professional organizations. The municipality analyzes the recommendations of these organizations and then selects the most suitable six candidates. The Council consists of a chairman, a treasurer, a secretary and three 'externals'. However, in reality, the selection procedure was somewhat different. In 2000, following a period of exceptionally poor performance, the incoming municipal president decided to remove the Council and the general manager of the utility. The new general manager brought in a new management team from the municipality of Salamanca. Instead of selecting Council members on the basis of proposals from professional organizations, the municipality decided to appoint the general manager as the chairman of the Council and the heads of the different departments of the utility as the other Council members. In other words, the management of the utility was also the Council, at least for the 2000-2003 period. In October 2003, following a municipal election and a change in municipal president, the entire management team of SAPAM that had been installed in 2000 was removed (and as such also the entire Council). The new general manager, as well as most of the other new managers of the utility, is not very experienced in the water supply and sanitation sector.

9.3.2 The Degree of Autonomy and Accountability of SAPAM

9.3.2.1 External Autonomy

Like the previous case studies SAPAM is to meet the norms and standards specified by the Ministry of Health and the National Water Commission.

SAPAM uses only groundwater for the production of potable water and abstracts approximately 4.6 million m^3 per year from 8 groundwater wells. SAPAM has a capacity to abstract more than 10 million m^3 per year and as such, utilizes less than 50% of its capacity. The quality of the water abstracted is relatively good. The water level of the aquifer, however, is dropping about 2.7 meters per year[148].



Source: SAPAM 2003

Figure 9.6: Level of income in relation to what is required SAPAM 1995-2002

In 2001, the working ratio of SAPAM was reported as being 1.76 (CEAG 2002), which is quite high and would mean that the utility spent 1.7 times more on operational expenditure than the revenues it generated. An overview of the actual income generated by the utility versus the required income shows, however, that between 1998 and 2002 the utility has been improving its financial position, though it still does not generate the required income. Also visible is the impact of the strong tariff increase in 2001, which results in a jump from meeting 72% of required income in 2001 to generating 92% of the required income in 2002.

As the revenue generated by the utility is not sufficient to pay for investment, the utility is dependent on external financing. In 2002 the utility received a little bit over

[148] Other sources estimate that the average drop in water level is 1.68 meters per year, with declines of 3 to 4 meters in some places. It should be noted that SAPAM is not the only entity abstracting groundwater in the municipality of Valle de Santiago. In total the municipality counts 1,022 wells of which the overwhelming majority (938) is for agricultural use (Orozco 2002).

MXP 2 million of which 29% came from the municipal government and the remaining 71% from the state government. In percentages the external funds made up approximately 16% of the total budget (SAPAM 2003).

If the utility wants to secure loans, prior approval of the municipality is required. As the State of Guanajuato has to ensure the financial viability of the municipality, which would provide guarantees to the bank issuing the loans, the State Congress would also have to approve these loans.

Political support for the utility is not necessarily a given in the municipality of Valle de Santiago. Perhaps most illustrative is the frequent changes in the Council and in the management in the municipality. Between 2000 and 2004 the complete management of the utility has been replaced twice meaning that three different management teams and Council managed the utility over this period. Another indicator for political 'interference' in the utility is the support for tariff increases from the municipal government, which has not been very strong over the past decade. In fact, the tariff increase in 2000, in which the tariffs were doubled, marked the first tariff increase in a period of 9 years[149]. Moreover, at times, the municipality will request the utility to forego collecting bills of certain individuals. Generally, the utility has no choice but to obey such requests. Similar to the other utilities, however, SAPAM is only allowed to use the revenues it collects for providing water services. Article 32 of the *Reglamento* states that all income obtained by SAPAM is to be used exclusively for expenses related to construction, administration, operation, maintenance, rehabilitation and expansion of drinking water, sewage and sanitation services.

Article 39 of the *Reglamento* provides the utility three mechanisms for dealing with consumers who have not paid their bills. First of all, the utility can decide to terminate the contract with the consumer (as the consumer has breached the contract). This means service to that particular connection is suspended. The utility is obligated, however, to inform the consumer of a nearby source for potable water (standpipe, etc.). Secondly, the utility may decide to reduce the level of service provision to the consumer. Thirdly, the utility can decide to take legal action against the consumer.

It is not easy for the utility to attract qualified staff. The utility is relatively small with 69 employees in 2001 and as such does not offer a lot of room for career development. Moreover, the salaries are relatively low. However, the utility does provide job security and the working hours (8:00 – 16:00) are considered favorably.

Up to 2000, the municipal president made all decisions regarding the pay scales within the utility. Between 2000 and 2003 the Council set the pay scales for management and this had to be approved by the municipality (as the Council was also the management). The salaries of the rest of the staff could be determined by the management (in consultation with the labor union) and the municipality only needed to be informed of the agreement between management and the union. With the change in the Council and management in 2003, the old situation in which the pay scales were decided upon by the municipal president was restored.

[149] The absence of tariff increases is also likely to explain the worsening of the working ration in the 1997-2001 period.

Table 9.16: An overview of external autonomy

Indicator	SAPAM
Who determines the pay-scales for the various levels within the utility?	Municipality
What is the basis for appointing members to the Council?	Management team doubles as Council
Is the utility able to take out loans without prior approval from the owner?	No
Is the utility allowed to limit service delivery to defaulters?	Yes
Who is responsible for setting tariffs?	Municipality and the State Congress
Does the utility follow public sector procurement rules?	Yes

9.3.2.2 External Accountability

The NOMs issued by the Health Ministry and the National Water Commission contain the standards to which SAPAM must adhere. Both the Ministry of Health and the CNA perform inspections to ensure that the standards as stipulated in the NOMs are met. Although a possibility exists to issue a fine in case standards are not met, such a fine has not been imposed on SAPAM yet.

The municipality does not provide any clear, measurable targets that the utility must achieve. SAPAM submits a monthly report to the municipality that includes information about the functioning of the utility. Every three months, financial statements are included in these reports. The municipality has the possibility of auditing or inspecting the utility at any time they feel the need to do so. During the Council meetings a representative of the municipality is also present.

Investments in public works are financed by allocating any remaining financial resources at the end of the budgetary year for investment under the previously described matching fund scheme. The nature of infrastructure to be constructed is specified in the Master Plan. In case, funds are obtained from the CNA and CEAG it is often these organizations themselves that spend these funds (essentially on behalf of SAPAM). As such, there are no reporting requirements for SAPAM, etc., for these funds.

The utility is not audited by an external auditor.

Although the utility is not accountable to a formal customer organization, the utility has appointed a person within the utility to represent the users of the services provided by SAPAM. This person reports to the general manager and the municipality concerning issues raised by users of the services. Although this person did not have the power to impose fines or offer compensation to the user, this person can follow up on complaints made by customers. When the management and Council changed in 2003, this position was abolished[150].

According to the statutes (*Reglamento*) the customers should be represented in the Council. However, as mentioned, in previous years the municipal president has decided

[150] The reason for abolishing this position is that it was felt that the '*Controlaría Municipal*' could undertake the role played by this person.

to appoint the Council directly and as such, no customers/organizations are represented in the Council.

The contract, which all customers of SAPAM must sign, contains some obligations and rights, but these do not mention any performance targets, which the utility promises to meet.

Table 9.17: An overview of external accountability

Indicator	Value
Does the utility have a customer charter, which specifies performance targets and are there any financial penalties for non-performance?	No
Does the utility have to meet specified performance targets set by or agreed upon with the owners?	No
Is an annual report produced, which is audited by an external accountant?	No
Are external groups represented in advisory or management oversight bodies of the utility?	No
Has the utility secured loans in the commercial market on its own credentials/ability?	Yes[151]
Does the utility participate in some form of credit rating scheme?	No
Does the lender impose financial covenants on the utility?	Yes

9.3.3 Hierarchy and Levels, the Market and Customers

9.3.3.1 Decentralization of Authority

The way procurement of goods and services is arranged depends on the amount of money involved in procurement. If it involves small amounts, the Head of one of the Departments of the utility can decide to procure something. If the amount is larger, approval is required from the Managing Council. For some goods and services, such as computers, only the Council can decide to procure these goods. Following the change in management and the Council in 2003, the municipal president has indicated that procurement should have the approval of the municipality.

The establishment of internal work processes and standards is initiated by the Heads of the various Departments. These Heads indicate how they would like the work processes and standards to be and they propose this to the general manager. In consultation with the general manager the final decisions are then made regarding the work processes.

In relation to expansion of the service network, maintenance of assets, strategies for reducing unaccounted for water, etc. the Operations Department generally initiates the decision-making procedure by drafting a proposal and submitting this to the Council. The Council then decides to approve or alter the proposal.

Hiring and firing of staff requires prior approval from the Council. For some positions the Heads of Departments can suggest to hire someone, but the Council must approve this suggestion. The salary of management and the Council members are set by

[151] It should be noted that these loans were secured considerable time ago. With the (financial) performance of recent years securing such a loan would be more difficult.

the municipality. The Management can set the salary levels for lower levels within the utility.

A set procedure exists for terminating service provision to consumers who have not paid their bills. Services to users, who are more than 3 months behind in the payment of their bills, and who do not react to announcements sent by the utility, are terminated.

Customer complaints are collected by the Customer Department. This Department then either answers the complaint themselves or distributes the complaint to other Departments, which are better able to address the specific complaint.

Table 9.18: An overview of decentralization of authority

Indicator	**SAPAM**
What is the purchasing ceiling for procurement of operational departments as a percentage of operational budgets?	Not based on amount but on type of expenses[152]
Does the hiring of staff members in departments require prior approval from the general manager?	Yes
How many layers of management separate the Chief Executive and the entry-level workers?	Three levels
At what level are internal work processes and standards defined?	Management and department level
In what areas does field-staff have decision-making powers?	Customer-service, maintenance, billing and collection, suspension of service, storage

9.3.3.2 Internal Accountability for Results

The relationship between management and the Council is not one of accountability as the management is also the Council. The only main difference is that during Council meetings a representative of the municipality is also present. In order to make decisions 'officially' the Council meets twice per month.

SAPAM measures its performance according to annual plan, which it monitors during the year. The Departments monitor elements of the plan that are relevant for them and the performance of the Departments against the indicators in the annual plan are reviewed and analyzed during weekly meetings of the management team.

The management of the utility can decide to give a reward for employees, which have shown impressive performance. Giving such a reward requires a decision by the general manager in consultation with the Head of Department in which that employee is working. The rewards are generally between MXP 300 and MXP 500 and the actual allocation of such a reward is not a frequent occurrence. The Heads of Department are not eligible for such rewards.

The employees of the utility are not evaluated against set performance targets and there is no systematic evaluation of employees. The Heads of Departments are evaluated every year by the general manager. However, there is no systematic method for evaluating their performance.

[152] In 2004 a new mayor took Office who replaced the entire management team. At current that mayor requests that any procurement receives his approval.

Table 9.19: An overview of accountability for results

Indicator	SAPAM
How often does the general manager meet with the Council?	general manager is also chairman of the Council[153]
Are penalties and rewards applied to the Chief Executive and Directors for achieving specified performance targets?	No
Are penalties and rewards applied to the staff by the management for achieving specified performance targets?	No[154]
Is staff subject to annual evaluations on their functioning in the utility?	No

9.3.3.3 Market-orientation

The level of outcontracting in Valle is relatively low. The amount of activities that are outcontracted make up approximately 3% of the operational budget. If the external funds from the CNA and CEAG are also included this percentage increases to about 15% as the CNA and CEAG contract parties 'on the behalf' of SAPAM.

Outcontracting occurs for activities such as developing an operations manual, feasibility studies, legal services, implementation of software, collection of uncollected bills, updating the user's list, tariff studies, etc. The funds from external agencies are generally outcontracted for activities such as construction of large infrastructure projects, and rehabilitation and expansion of the network.

Like the other utilities in the State of Guanajuato SAPAM sends bi-monthly reports to the CEAG with technical data, financial data and management indicators. The CEAG combines the reports of the various utilities in the annual *Diagnostico Sectorial*. The results of this benchmarking exercise are not used in a very systematic way, however, by the utility.

The utility does not engage in market-testing exercises.

Table 9.20: An overview of market-orientation

Indicator	SAPAM
What is value of contracts outsourced as a percentage of the operational budget?	2.72%
What is the nature if the functions that are outsourced?	legal services, ICT, tariff study, operations manual, etc.
How often does the utility engage in benchmarking exercises?	Once per year
In what areas are benchmarking activities undertaken?	Technical, commercial, financial and administrative activities
Does the utility engage in market testing and does it develop internal markets?	No

[153] The Council meets twice per month.
[154] Management can decide to give benefits between MXP 300 – MXP 500, but this does not happen frequently.

9.3.3.4 Customer-orientation

The working ratio of 1.7 in 2001 indicates that although the majority of income generated by the utility derives from its customers, it is strongly dependent on external financing. Customers can pay their bills at the SAPAM office, banks and in the *Cajas Populares*.

The utility carries out a customer survey twice per year. The survey is focused on issues that the management considers relevant or wants to know more about. The survey is implemented at the office of SAPAM as well as by making a random selection of households. The surveys are designed to find weaknesses of SAPAM, so that these weaknesses can be addressed. Usually the surveys will concern topics such as customer service, service levels, quality of service provision, etc. Customers also are requested to complete a survey after they have made a complaint in order to see if the customer is satisfied with the way in which the complaint was addressed. In addition the utility houses a suggestion box, which the customers can also use for making suggestions and comments. The suggestion box is not used very frequently.

Complaints made by the customers are being tracked since 2002. Prior to that no tracking system was in place. In 2003 the utility was receiving about 450 complaints per month[155]. About 2% of the customers file a complaint. Out of these complaints about 30% relate to elderly customers who have not received a discount they are entitled to[156], 48% relate to complaints about the meter readings and the remaining 12% either concern complaints about service interruptions, poor service quality or 'other complaints'.

Employees that are in contact with customers do receive some in-house training from more experienced employees. Also, if CEAG has a training program, employees may also follow that training program on customer management.

Table 9.21: An overview of customer-orientation

Indicator	**SAPAM**
In what ways can the bills be paid?	SAPAM's office, Banks, *Cajas Populares*
In what ways does SAPAM pro-actively seek the opinions/views of its customers?	Customer surveys twice a year
What is the menu of options for service delivery that the SAPAM provides?	In-house connection, block connection, tank trucks
In what ways does the SAPAM actively inform its customers about changes related to service provision?	Flyers added to the receipt, newspaper, radio, *perifoneo*
What is the percentage of complaints that is addressed?	100%
What are the average response times to complaints?	N/A

[155] The number of complaints does fluctuate. In some months as many as 825 complaints were submitted. In other months as few as 242 complaints were received.
[156] Customers over 60 are entitled to a discount on their water bill.

9.3.4 Conclusion

The main interviews held at SAPAM took place in July 2003 and October 2003. At the time of the first interview, the utility was considered by many to be an example of a 'turn-around' utility. The utility was also recognized as such as is illustrated by the fact that it received recognition from the CEAG in 2003 for the performance improvements over the 2000-2003 period (see also Orozco 2002). However, by October 2003 the entire management team had been fired and replaced by a completely new management. The drastic changes in the management of the utility, which happened not only in 2003 but also in 2000, illustrate the prominent role played by the municipal president in the municipality of Valle de Santiago.

In terms of financial viability SAPAM seems to recovering from very poor performance in the late 1990s. In 1998, the ratio between revenue generated and revenue required barely surpassed 40%, four years later this had increased to 90%, indicating that the level of financial autonomy of the utility has increased substantially. Much of this improvement is related to a substantial tariff increase in 2002.

The utility does not face acute shortages of water resources. Although the water level of the main aquifer is dropping, the utility only used 50% of its capacity and the water that is abstracted is of relatively good quality. Attracting qualified staff appears to be more of a problem for the utility.

The level of both external and internal accountability appears to be very much in line with what was witnessed in the cases of Moroleón and Dolores Hidalgo. As mentioned, accountability to the municipal president remained very strong. Internal accountability for results does not appear to be very well developed.

The level of market-orientation is low, with only 3% of the operational budget being outcontracted. Although the utility does partake in a benchmarking exercise, the results are not applied in a systematic way. Customer-orientation has improved over the past years, and also appears to be linked to the tariff increases of 2002, which forced the utility to pay more attention to its customers.

In general, the impression that is obtained from SAPAM is that it is a utility which has shown considerable performance improvement over the past years but which remains also very much a politicized and relatively unstable organization. With the arrival of a new management team in 2000 and the (political) support for tariff increases in 2002, the utility was able to turn around the poor performance of the late 1990s. However, with a change in the municipal president in 2003, political support disappeared and the management of the utility fired. With three different management teams in four years, management is not very stable, meaning that long-term planning may be difficult.

9.4 *Sistema de Agua Potable y Alcantarillado del Municipio de San Francisco del Rincon*[157]

The municipality of San Francisco del Rincon was created by the governor of the State of Guanajuato in 1867. The municipality is located in the western part of the State of Guanajuato. The per capita GDP in the municipality lays approximately US$4,000 above the State average, which is largely explained by the prominence of the industrial and manufacturing sector in San Francisco del Rincon. The main manufacturing activities, for which this municipality is renowned, concern the production of footwear and hats. The prominence of the manufacturing and industrial sector is also visible in an overview of industrial activities in terms of the employment of the municipality's residents. Whereas a municipality like Valle de Santiago had only 10% of its residents working in the industrial and manufacturing sector, more than half the employed population works in this sector in San Francisco. Also of interest is the relatively small share of agriculture in the employment figures for this municipality.

Table 9.22: General characteristics SAPAF

Indicator	**2000**	**2001**	**2002**
Annual water abstraction (million cubic meter)	7.1	7.0	7.4
Water supply connections	15,540	16,987	17,522
Sewerage connections	15,930	16,921	n.a
No. Of Employees	52	56	50
Service coverage – water supply	93.7%	n.a.	n.a.
Service coverage – sewerage	81%	n.a.	n.a.
Average domestic tariff (US$/14m^3)	1.35	1.66	2.69

Sources: SAPAF 2003; CEAG 2002

9.4.1 Governance Structure of SAPAF

The *Sistema de Agua Potable y Alcantarillado del Municipio de San Francisco del Rincon* was first registered in August 1983. In November 1993, the first statutes of the company were published. These statutes were redrafted in 2000 and since June 2000 the governance structure of the SAPAF is laid down in the *Reglamento del Sistema de Agua Potable y Alcantarillado del Municipio de San Francisco del Rincon.* Article 1 of this Reglamento states that the provision of potable water, sewerage and sanitation services shall be done by an autonomous agency with a separate legal status. Article 5 appoints the SAPAF as being the autonomous agency in question, and article 6 spells out the responsibilities of the SAPAF in more detail. These responsibilities include:

- Study, plan, construct, rehabilitate, expand, operate, maintain infrastructure for providing potable water, sewerage and sanitation services
- Prevent and control contamination of water sources assigned for water services
- Establish norms and guidelines for the provision of water services

[157] Unless otherwise mentioned, the information in this case derives from interviews held with management of the SAPAF.

- Develop and maintain a database on consumers of water services
- Develop and maintain a database concerning the wells, goods, resources, hydrological reserves and infrastructure in the municipality.
- Develop and implement programs stimulating the efficient use of water in the municipality

The SAPAF is to be overseen by a Council, which is to consist of seven members. These members include a chairman, a secretary, a treasurer and 4 'external members'. The responsibilities of the Council are stipulated in article 20 and are similar to the responsibilities attributed to the Councils of other water utilities in Guanajuato. These responsibilities include:

- Oversee management of SAPAF according to guidelines established by the *Reglamento* and other regulations;
- Approve the Master Plan for the provision of water services;
- Discus and approve the annual budget, which is subsequently submitted for approval to the municipal government;
- Approve the proposal for tariffs of water services as well as of fess and fines that may charged by the utility;
- Appoint and remove the general manager of the utility;
- Inform the municipality bi-monthly about the functioning of the utility;
- To monitor the provision of water services in accordance with the corresponding laws, regulations and tariffs.

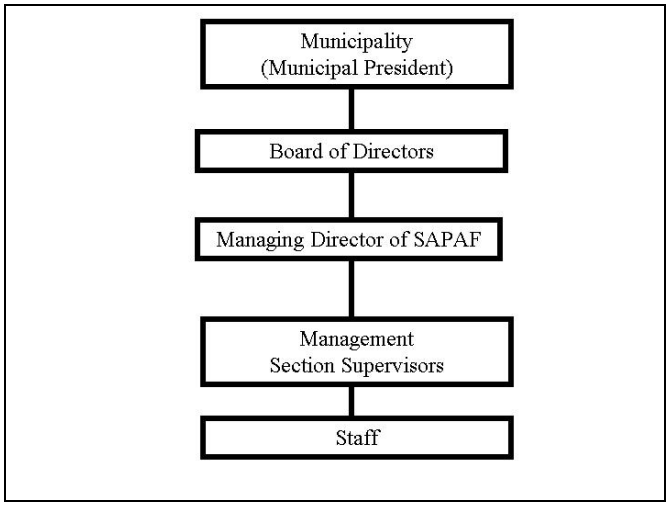


Figure 9.7: Governance structure SAPAF

The members of the Council are elected for a term of three years. Reelection is possible only once. The municipality assigns the chairman, the secretary and the treasurer of the Council. The municipality also elects the external members or *vocales* on the basis of

proposals submitted by a variety of organizations. Article 10 of the *Reglamento* specifically states that the Council should include representatives of different organizations from civic society. These organizations include:

- Chamber of commerce
- Chamber of industry
- Neighborhood associations
- Banks
- Labor unions
- Engineering institutions

Contrary to some of the other water utilities in the State, the procedures as stated in the Reglamento are actually followed in San Francisco del Rincon. The governance structure of the municipality is presented in figure 9.7.

9.4.2 The Degree of Autonomy and Accountability of SAPAF

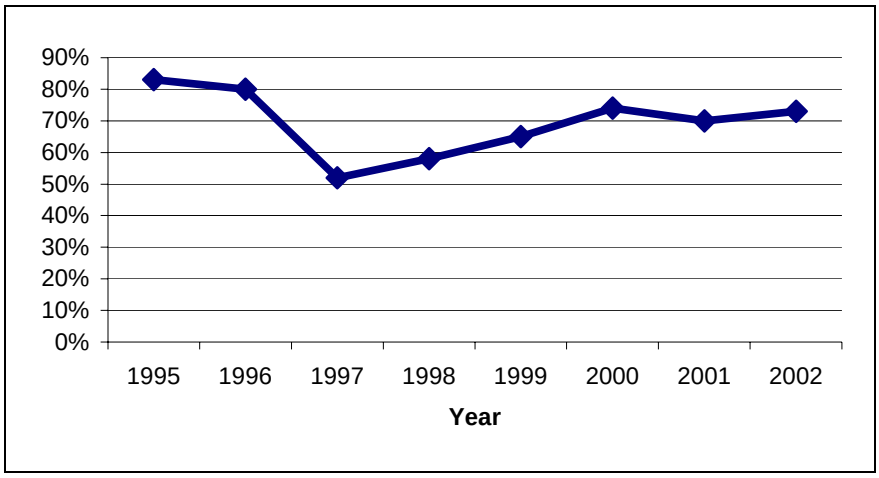
9.4.2.1 External Autonomy

SAPAF is subject to the official norms and standards for water supply and wastewater discharge as issued by the Ministry of Health and the CNA.

SAPAF uses only groundwater for the production of potable water and abstracts its water resources by way of 10 groundwater wells. It abstracts approximately 7.3 million m^3 per year, which represents about 63% of its total capacity. The abstraction of water is not without problems, however. It is estimated that the total overexploitation of the aquifer from which SAPAF abstracts its water is approximately 26 million m^3 per year. Since 1983, it is not allowed to drill additional groundwater wells meaning that any abstraction above the current allocation for SAPAF has to come by way of purchasing 'water rights' from other users (such as farmers). SAPAF estimates that its current capacity is enough for 10-15 years, but in order top meet the required demand beyond that period additional water rights must be bought. SAPAF is already trying to purchase water rights from 'retiring' farmers.

The total income of SAPAF in 2003 was approximately MXP 16 million in 2003. SAPAF has a billing/collection ratio of approximately 68%, which is substantially higher than the 52% of 2000, but still means that 32% of bills are not collected.

Overall, the ratio of income generated from the provision of water services to the level required to provide those services shows that the income from service provision still lags behind the costs of providing those services, although it should also be noticed that this ratio has improved considerably since 1997. In January 2001, a tariff increase of 48% was approved and at current tariff levels are indexed and automatically increased 2% per month.



Source: SAPAF 2003

Figure 9.8: Level of income in relation to what is required SAPAF

In 2001 and 2002 the level of external financing for the utility was 5.8% and 19.5% respectively. All external funds come from the CNA, CEAG or the municipality. As it is never certain, what kind of external assistance to expect, the percentage fluctuates considerably, depending on the type of programs CEAG and the CNA implement. With the working ratio hovering around 1.0 over the past years, the utility is very much dependent on the external financiers for its investment in infrastructure. According to the general manager, however, the financial situation of SAPAF is quite good and they are able to raise the funds required to match possible grants from the CNA and CEAG.

Attracting qualified staff is not without problems, despite the relatively low salaries offered by the utility. The salary levels vary from approximately MXP 2,910 per month for the gardener to a little over MXP 17,000 per month for the general manager. Considering the average per capita income of more than US$ 10,000 it is clear that only three employees of the utility earn above average wages. The average salary is approximately US$ 5,500 per year. The management of the utility proposes salary levels to the Council. After the Council has approved the salary levels, the proposal is forwarded to the municipality for final approval (along with the budget of SAPAF). In addition to low salary levels, another problem is the qualification of the inhabitants of San Francisco del Rincon. Most people will have worked in the shoemaking and hat making industry, and have little formal education. As such, their qualifications are not really suitable for a water supply and sanitation company. The utility is also relatively small (48 employees), meaning that there are few possibilities for career development. On the other hand, SAPAF does provide considerable job security and with the shoemaking and hat making industries in decline, such job security can be appealing. Also the working hours of the utility (from 8:00 – 16:00) are favorable.

The utility in San Francisco del Rincon is characterized by relative stability since its creation in 1983. Until 2000, the general manager had been in office for 17 years. In 2000, however, the incoming municipal president decided to appoint a political

supporter as the general manager. The new general manager did not last long however, and was replaced by the 'old' general manager in 2001. Overall, the Council that oversees the functioning of the utility has also been relatively stable and functioning according to the regulations as prescribed in the *Reglamento.* At the same time, it remains difficult to obtain support from the municipality for tariff levels, which recover costs of service provision as is illustrated by figure 9.8.

The utility is allowed to service provision to consumers who do not pay for their bills. The utility threatens to terminate services to approximately 800 to 1000 connections per month[158]. Article 68 of the statutes provides three possibilities. These are:

1. Terminate the contract between the user and the utility and as such, the provision of services. This requires the utility to inform the consumer of an alternative source for water nearby.
2. Reduce the level of service provided
3. Initiate legal action against the consumer.

Table 9.23: An overview of external autonomy

Indicator	**Value**
Who determines the pay-scales for the various levels within the utility?	Municipality
What is the basis for appointing members to the Council?	Community representatives
Is the utility able to take out loans without prior approval from the owner?	No
Is the utility allowed to limit service delivery to defaulters?	Yes
Who is responsible for setting tariffs?	Municipality and the State Congress
Does the utility follow public sector procurement rules?	Yes

9.4.2.2 External Accountability

The official norms as stipulated in the NOMs issued by the Ministry of Health and the CNA contain the standards to which the water supply and wastewater discharges must adhere. SAPAF does daily testing of water samples both in the water tanks as well as at randomly selected houses. Every week the utility submits a report to the local office of the Ministry of Health, which is also sent to the CNA and the State Water Commission. The Council checks that the standards are met every two months and the results of the samples are published in the local newspapers.

SAPAF can be sanctioned if they do not meet the specified standards. However, to date, fines have not been imposed on the utility. Both the Ministry of Health and the CNA carry out inspections in the municipality of San Francisco del Rincon. The CNA carries out inspections about once per year. The inspections of the Ministry of Health are more frequent.

[158] In general out of 10 cases, 6 customers will choose to immediately pay their outstanding bills, 2 customers will try to negotiate with the utility and 2 customers will try to find alternative sources for water supply (including possible illegal connections)

There are no clear performance targets that the utility must achieve. In fact, it appears that the municipality has limited its involvement with the utility to approving the annual budget of the utility. Even though the utility is to report to the municipality every three months, in reality they only report to the municipal president once per year. This report contains financial statements and projections of income and expenditure for the following year. Any expenditure that is done by the utility has to be within the budget approved by the municipality. Any adjustments in the budget would require approval from the municipality. A representative of the municipality attends the monthly meetings of the Council and as such is informed about functioning of the utility.

The financing institutions do impose criteria to which the utility must adhere. Both CEAG and the CNA tend to offer funds only when their contribution is matched by that of SAPAF. Moreover, most of these funds have specific allocations (the CNA funds coming from groundwater charges for example, must be use for the development of wastewater treatment facilities). In the case of CEAG, the funds and their spending are largely managed by CEAG themselves. This means that many of the contractors and consultants required to undertake an activity will actually be contracted by CEAG. CEAG then also supervises and monitors these contracts. When the SAPAF uses its own funds for investment they manage the spending of these funds themselves.

There is no formal customer organization, which is mainly focused on water services. During the municipal administration, which was in office from 2000-2003, there was a meeting every Thursday, however, called the *Jueves Ciudadanos* (Thursday for Citizens), which resembles a townhall-type meeting in which a representative of every municipal government entity is present. During these meetings, the consumers were able to express their complaints and suggestions to a representative of the water utility. In the administration in the period of 1997-2000, representatives of the various municipal entities would visit a different section of the municipality to receive complaints and suggestions of the citizens of that particular part of the city[159].

The consumers also have a contract with the water utility in which rights and obligations of both parties are stated. These rights and obligations do not contain any performance targets, however, and also do not contain penalties in case one of the parties would not fulfill their obligations.

[159] Events such as *Jueves Ciudadanos* and visiting different sections of the municipality every Thursday are dependent on the ideas of a new incoming municipal president. In other words, when the municipal administration changes, these events are also likely to change, depending on the views of the incoming municipal president.

Table 9.24: An overview of external accountability

Indicator	Value
Does the utility have a customer charter, which specifies performance targets and are there any financial penalties for non-performance?	No
Does the utility have to meet specified performance targets set by or agreed upon with the owners?	No
Is an annual report produced, which is audited by an external accountant?	There is an annual external audit, but no annual report
Are external groups represented in advisory or management oversight bodies of the utility?	Yes, in the Council
Has the utility secured loans in the commercial market on its own credentials/ability?	No
Does the utility participate in some form of credit rating scheme?	No
Does the lender impose financial covenants on the utility?	Yes

9.4.3 Hierarchy and Levels, the Market and Customers

9.4.3.1 Decentralization of Authority

For the procurement of goods and services proposals are developed in the relevant Departments and forwarded to the Finance Department. Depending on the type of good or service procured, a certain procurement policy has to be followed. Generally, three quotations are requested from three different suppliers. Ultimate decisions regarding which supplier to choose are taken in consultation with the general manager. Within the utility three people are allowed to sign for procurement cheques. These are the chairman of the Council, the treasurer of the council and the general manager. Each cheque needs to be signed by at least two people, meaning that either one council member and the general manager sign or two Council members sign.

The general manager and the Head of a Department can hire someone provided that the position for that person is mentioned in the budget that was previously approved by the Council. In case of terminating the contract of an employee prior approval of the Council is required. The general manager is appointed by the Council in consultation with the municipality. The municipality appoints and dismisses the Council members.

The general manager and the Heads of Departments can propose the promotion of staff members. However, the Council must approve these proposals. The municipality has the final say in the salary levels that the utility adheres to.

A general procedure exists within the Customer Services Department with regard to the termination of or limitation of service provision. Service is terminated or limited for any domestic consumer who is more than 3 months behind in paying their bills. Prior to stopping service provision the consumer will receive a letter from the utility informing them about the procedure that will be followed if they do not pay their bills.

Customer complaints are either addressed by the person receiving the complaint, if that person is able to do so. Or if that person is not able to do so, the complaint is forwarded to the relevant department.

Table 9.25: An overview of decentralization of authority

Indicator	SAPAF
What is the purchasing ceiling for procurement of operational departments as a percentage of operational budgets?	Not based on amount but on type of expenses
Does the hiring of staff members in departments require prior approval from the general manager?	Yes
How many layers of management separate the Chief Executive and the entry-level workers?	Three levels
At what level are internal work processes and standards defined?	Management and department level
In what areas does field-staff have decision-making powers?	Customer-service, maintenance, billing and collection, suspension of service, storage of materials

9.4.3.2 Internal accountability for results

The general manager meets with the Council once per month to discuss the functioning of the utility. These meetings do not incorporate standard reporting requirements apart from the financial statements. The general manager will bring whatever information he finds necessary to report.

The utility has a Master Plan, which was adopted in 2002, which contains information and projections for the next 20 years. Although this plan does contain targets and guidelines for the management of the utility, it does not really impose clear and measurable targets that the general manager must meet and for which he can and will be held accountable. The general manager also develops annual plans, which are developed in consultation with the relevant Heads of Departments. However, these too are not really used as basis for which to hold the management accountable for the results they have produced.

The Council does have the ability to remove the general manager and any management employees they consider are not functioning as expected. Over the past years the Council has also resorted to these measures.

The Council can award the management of the service provider for good performance, but this would have to be incorporated in the budget that is to be approved by the municipality. In practice, this reward has not been provided to the management.
The only system in place for rewarding the 'performance' of employees relates to a bonus for punctuality and attendance. In essence everyone that arrives at work before 8:00 a.m. can receive a bonus of 10% on top of their salary. In practice, however, every employee gets this bonus. There is no system in place to evaluate the performance of employees of the utility.

Table 9.26: An overview of internal accountability

Indicator	Value
How often does the Chief Executive meet with the Council?	Once per month
Are penalties and rewards applied to the Chief Executive and Directors for achieving specified performance targets?	No
Are penalties and rewards applied to the staff by the management for achieving specified performance targets?	No
Is staff subject to annual evaluations on their functioning in the utility?	No

9.4.3.3 Market-orientation

SAPAF outcontracts approximately 30% of its operational budget, which appears to be a quite high percentage. The nature of tasks and service that are outcontracted include engineering projects, network rehabilitation, developing an operations manual, undertaking feasibility studies, ICT, undertaking the tariff study, legal services, etc. There does not appear to be a specific outcontracting policy to which the utility adheres.

The utility sends a bi-monthly report to the State Water Commission concerning various (performance) indicators. On the basis of these reports, which are submitted by all utilities in the State of Guanajuato, the State Water Commission then publishes an annual overview of the performance of the utilities[160], which allows the various utilities to compare their own performance with that of their neighbors. However, although this benchmarking information is available every year, it is not used in a systematic way.
The utility does not engage in market-testing exercises.

Table 9.27: An overview of market-orientation

Indicator	**Value**
What is value of contracts outsourced as a percentage of the operational budget?	30.36%
What is the nature if the functions that are outsourced?	Engineering projects, legal services, ICT, tariff study, operations manual, developing a master plan, etc.
How often does the utility engage in benchmarking exercises?	Once per year
In what areas are benchmarking activities undertaken?	Technical, commercial, financial and administrative activities
Does the utility engage in market testing and does it develop internal markets?	No

9.4.3.4 Customer-orientation

The working ratio of the utility fluctuates around 1 indicating that operation and maintenance expenditure can be covered by the revenue generated from the consumers. The customers can pay their bills in SAPAF's Office, in banks and in *Caja Populares*.
The only way in which the utility more or less obtains the opinions of its customers is during the *Jueves Ciudadanos*. The utility does not undertake surveys or try to obtain the opinions of the consumers about the provision of water services in any other way.

The utility also does not track the complaints that are submitted by consumers. As such, neither the opinions of the consumers or the information from complaints are used in determining the focus of the utility[161]. It is estimated that the utility receives about

[160] *Diagnostico Sectorial*

[161] At the time of the interviews the utility was working on establishing a system called 'Mapinfo' which would link the Customer Services Department with the Operations Department, This system would allow the utility to geographically determine the origin of complaints concerning leaks and based on that establish priorities for maintenance and rehabilitation of the network. If the system is implemented at current, however, is not clear.

300 complaints per month and the majority of complaints concern high bills, leakages, service interruptions and termination of service. It is not clear if the number of complaints has increased or decreased over the past years.

Customers can submit their complaints to SAPAF in person at the SAPAF Office, by telephone or in writing. In addition, the customers can approach the *Controlaría Municipal* or the Federal Consumer Agency[162].

The utility does have infrequent training programs for employees in which they learn how to deal with customers and how they can better express themselves.

Table 9.28: An overview of customer-orientation

Indicator	**Value**
In what ways can the bills be paid?	SAPAF's office, Banks, *Cajas Populares*
In what ways does SAPAF pro-actively seek the opinions/views of its customers?	Town hall meetings
What is the menu of options for service delivery that the SAPAF provides?	In-house connection, block connection, tank trucks
In what ways does the SAPAF actively inform its customers about changes related to service provision?	Flyers added to the receipt, radio, on rare occasions newspapers
What is the percentage of complaints that is addressed?	95% for leaks, for other complaints it is not known
What are the average response times to complaints?	N/A

9.4.4 Conclusion

The overall impression that SAPAF leaves is that it is relatively stable utility, which has been able to avoid the impact of political intervention, which characterizes a few of the other utilities. At the same time, the functioning of the utility is also hampered by relatively little political support for tariff increases, difficulties of attracting qualified staff and concern regarding the availability of water resources. As such the utility seems to have a large degree of managerial autonomy, but at the same time the utility appears to be lacking capacity and resources to translate that managerial autonomy into substantial performance improvements. Moreover, the developments in 2001 in which the general manager was temporarily replaced illustrate that continued managerial autonomy is not a given.

Whereas market-orientation of SAPAF appears to be stronger than the previously discussed utilities because of the relatively high percentage of outcontracted activities, the level of customer-orientation appears lower.

The utility remains strongly centralized, with most decision-making powers being attributed to the general manager or Council members. Internal accountability for results appears to be quite limited with a 10% bonus for attendance and punctuality to be the main instrument of internal accountability.

[162] *Procuradoria Federal del Consumidor*

9.5 *El Sistema Municipal de Agua Potable y Alcantarillado de Guanajuato*[163]

SIMAPAG serves a population of approximately 142,000 inhabitants in the municipality of Guanajuato. The per capita consumption is around 97 liters per capita per day, which is relatively low. Guanajuato lies in a relatively mountainous area, which leads to difficulties of ensuring the correct pressure in the distribution network.

Table 9.29: General indicators SIMAPAG

Indicator	**2000**	**2001**	**2002**
Annual water abstraction (million cubic meter)	7.4	8.2	8.2
Water supply connections	22,395	22,997	24,345
Annual income from water sales	22,974	23,953	n.a.
Unaccounted-for-water	23%	27%	18%
No. Of Employees	163	182	185
Service coverage – water supply	94.4%	n.a.	n.a.
Service coverage – sewerage	83.4%	n.a.	n.a.
Average domestic tariff (MXP/m^3)	4.73	5.31	5.47

Sources: SIMAPAG 2003; CEAG 2002

9.5.1 Governance Structure of SIMAPAG

The SIMAPAG was established as an autonomous agency with a separate legal status in 1992. Its responsibility is to provide water services in the municipality of Guanajuato. The current governance structure of the utility is stipulated in the *Reglamento del Sistema Municipal de Agua Potable y Alcantarillado de Guanajuato*, which was last adapted in May of 2001. Article 2 of the *Reglamento* stipulates that the SIMAPAG is responsible for the detection, abstraction, treatment and distribution of water as well as for drainage, sewerage, treatment and discharge of wastewater. Article 10 states that the utility shall be monitored and administrated by a Council, which shall consist of one chairman, one treasurer and seven 'external members'[164]. The members of the Council are appointed for a period of three years and start their term soon after a newly elected municipal president has taken office. The Council members cannot be reappointed the following term. Article 11 finds that Council members are to represent organizations from civil society, including:

- Representatives of rural communities;
- Neighborhood associations;
- Chambers of commerce;
- Established businesses;
- Labor unions;
- NGOs;

[163] Unless otherwise mentioned, the information contained in this document derives from interviews held with management of the SIMAPAG.
[164] *Vocales*

- Institutions for higher education.

Article 15 provides a number of criteria that potential Council members must meet in order to be eligible to become Council members, such as have the Mexican nationality, not have debts with the utility, not hold a management position in a political party and not have participated in elections prior to the election to the Council. Article 16 states that the Commission of Public Works will consider the profiles of the proposed Council members and present the results of their analysis to the municipal president. He will then select the Council members. During the first Council meeting the Council members will decide who will be the chairman and who will be the treasurer. The Council members are paid for their services, although the monthly salary varies considerably. The chairman receives more than MXP 23,000 per month whilst the *vocales* receive a little less than MXP 4,000.

Article 26 of the Reglamento stipulates the responsibilities of the Council. These responsibilities include[165]:

- To manage SIMAPAG in accordance with the general guidelines established by the *Relgamento* and other applicable regulations;
- To draft the annual budget and submit the budget for approval to the municipality;
- Monitor the correct application of tariffs;
- Receive and address complaints by the consumers of water services;
- Inform the Municipality every three months with respect to the functioning of the utility;
- Anything else that is required by rules and regulations.

Interestingly, the description of responsibilities in Article 26 also specifically mentions that the Council under no circumstance must allow for exceptions or subsidies in relation to bills that should be paid.

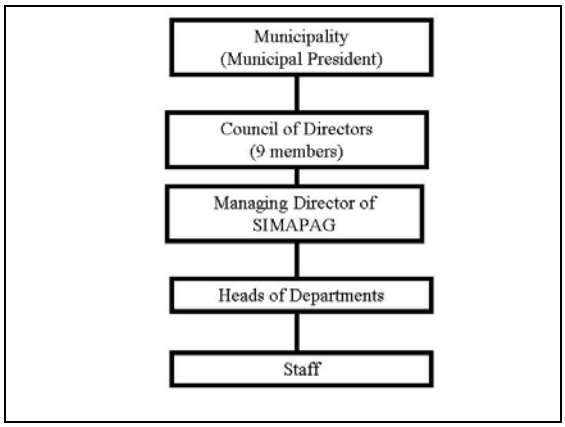


Figure 9.9: Governance structure SIMAPAG

[165] Article 26 mentions 29 different points for which the Council is responsible.

Article 46 states that general manager of the utility is to be appointed by the Council at the proposal of the chairman of the Council. Article 49 stipulates the responsibilities of the general manager. These include[166]:

- Direct, support, coordinate and supervise the activities of the Departments;
- Present to the Council the projected budget;
- Develop the Master Plan for the utility in coordination with the Administrative Department and the Technical Department;
- Attend the Council meetings;
- Present monthly updates to the Council regarding the financial status of the utility;
- Develop a manual for procedures and functions;
- To appoint and dismiss personnel that do not occupy management positions;
- Monitor that income and expenditure is in accordance with the approved budget;
- Any other things required by the Council.

The Reglamento also describes the selection of a so-called Commissioner[167] who is a representative from the municipality and who attends the meetings of the Council. The This Commissioner does not have a vote during the meetings.

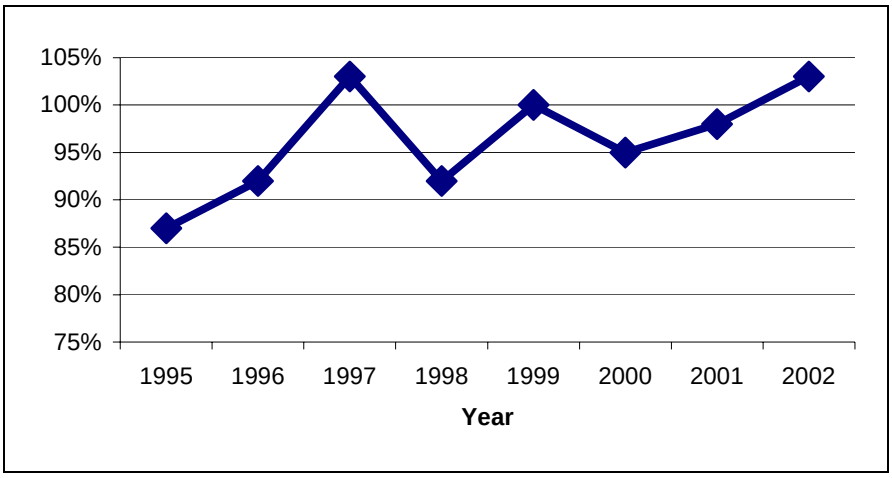
9.5.2 The Degree of Autonomy and Accountability of SIMAPAG

9.5.2.1 External Autonomy

The SIMAPAG is subject to the official norms and standards as issued by the Ministry of Health and the CNA.

Annually the utility abstracts about 8.2 million m^3 of water per year (SIMAPAG 2003). The utility has a capacity to abstract more than 22 million m^3 and as such, the SIMAPAG utilizes less than 40% of its capacity. The water resources used for the production of potable water are surface water (40%) and groundwater (60%). Prior to 1983, the utility used only surface water for the production of potable water. However, the quality of these water resources has deteriorated and now the utility also uses groundwater sources. These groundwater sources are also under pressure as is illustrated by the abstraction depth. In 1983 water was abstracted at 30 meters. Currently water is abstracted from depths of approximately 180 meters, which illustrates that the aquifer is being depleted. It is likely that in the near future the availability of water resources will become a serious problem for the utility.

[166] Article 49 mentions 26 different points of responsibility for the managing director.
[167] Article 52. The term used for Commissioner is *Comisario*



Source: SIMAPAG 2003

Figure 9.10: Actual versus required income SIMAPAG

The working ratio of SIMAPAG has been declining steadily from 1.02 in 1995 to 0.77 in 2002. This implies that SIMAPAG has no problem covering operations and maintenance costs and also can contribute to investment costs. However, it does remain dependent on external financing for meeting part of the investment costs. In comparison with the other utilities presented above the revenues generated by the SIMAPAG are much higher. The annual income of the utility is close to MXP 56 million of which close to MXP 42 million derives from annual water sales. The relatively high-income level is largely due to the tariff level, which lies between 1.6 to 3 times higher than the other utilities mentioned above (CEAG 2002). Not surprisingly the ratio of actual income versus required income lies considerably better for the SIMAPAG than for the other utilities described above. Part of the reason why the SIMAPAG has been able to maintain this tariff level is that prior to the summer of 2003, the tariff was indexed and automatically increased 1.1% per month. Prior to the municipal election of 2003, however, the municipality decided to lower the index rate to 0.01%, which lies well below the rate of inflation. Article 40 of the *Reglamento* dictates that any income generated by the utility is to be destined for the provision or expansion of water services in the municipality of Guanajuato and cannot be used for other purposes.

Like the other utilities, the SIMAPAG uses the matching fund schemes that the CNA and the CEAG offer. Generally, the utility has no difficulty matching the funds they receive from these organizations. In 2001 and 2002, SIMAPAG only received external financing from the State Government (through the CEAG). This amounted to approximately 5% of the total budget (SIMAPAG 2003). In case the SIMAPAG would want to secure loans they would require prior approval from the municipality as the municipality.

Article 45 of the *Reglamento* prescribes the way in which the utility can address non-payment of bills. In case the consumer concerns an industrial connection, service is terminated. In the case of domestic consumers, the utility is only allowed to reduce

service provision to a minimum. Although this would seem to imply that service provision cannot be cut off, in practice the utility terminates service provision to anyone who has not paid their bills and informs these consumers about alternative sources for water.

The utility does not have any difficulty in attracting qualified staff. Salaries for management of the utility are similar to what is offered elsewhere in the municipality in Guanajuato (for similar work) and the working schedule offered is very appealing (from 8:00-16:00). For employees in lower levels of the organization, the salary levels are quite low. However, the job at the SIMPAG offers considerable security. As the utility counts well over 200 staff, there are some areas (especially operations) in which employees can develop their careers. For other areas such as legal services or finance such possibilities are more limited. Another reason why the utility does not have a lot of difficulty attracting qualified staff relate more to the characteristics of the city of Guanajuato. As mentioned, it houses a renowned University with more than 15,000 students, thus providing a large pool of qualified people. Moreover, the city itself, with a lot of cultural events[168], is considered a very pleasant place to live.

The pay scales for the utility are proposed by the management of the utility to the Council. The Council can adapt/approve the proposal and subsequently forward it to the municipality for final approval[169].

Prior to the change of municipal president in 2003 political support for the utility appears to have been considerable. The utility had a tariff that was indexed and increased 1.1% every month. In addition, the utility was allowed to terminate service to defaulters, despite the fact that the *Reglamento* only allows for services to be limited. Moreover, the governance structure, with a separate Council and management of the service provider more or less functions the way it is described in the *Reglamento*. Although the general manager did change quite a few times as is illustrated by the fact that in the 1995-2003 period four general managers were appointed at SIMAPAG, the management of the utility itself has been quite stable, with relatively few changes. Recent changes, however, do raise some questions about the current level of political support. These changes relate to the lowering of the monthly indexation to 0.01%, which is well below the rate of inflation and secondly to the recent changes in the management and Council[170]. In 2003, the Council of the SIMAPAG forced the general manager to resign. The chairman of the Council subsequently took over the position of general manager. This shifting of positions, in which a Council member first presses the general manager to resign and then fills the vacant position does seem to present some conflict of interests.

[168] The most famous of these cultural events is the so-called International Cervantino Festival, which takes place every October. During a period of about 18 days, cultural events involving music, dance, theater, movies, etc. take place throughout the city.

[169] In years prior to 2003, the municipality implemented a policy of increasing the salaries in the SIMAPAG to the same extent as salaries of other government institutions, thus avoiding any friction between employees of different government entities.

[170] Between 1995-2000 the utility was managed by only 1 general manager. In the period 2000 – 2003 three managing directors have been appointed, indicating that in recent years management of the utility has become less stable.

Table 9.30: An overview of external autonomy

Indicator	**Value**
Who determines the pay-scales for the various levels within the utility?	Municipality
What is the basis for appointing members to the Council?	Community representatives
Is the utility able to take out loans without prior approval from the owner?	No
Is the utility allowed to limit service delivery to defaulters?	Yes
Who is responsible for setting tariffs?	Municipality and the State Congress
Does the utility follow public sector procurement rules?	Yes

9.5.2.2 External Accountability

The NOMs issued by the Health Ministry and the National Water Commission contain the standards to which the SIMAPAG must adhere. SIMAPAG takes water samples daily. These samples are collected at the water source, in the treatment plant and reservoir tanks and randomly at different houses. In addition the utility monitors the wastewater it discharges. SIMAPAG adheres to this sampling procedure in order to obtain a Water Quality Certificate from the Ministry of Health, which requires relatively stringent monitoring requirements. The reports for samples are mainly for internal use, but five times a week a report is submitted to the local office of the Ministry of Health. The utility also sends quarterly reports to the CNA regarding the quality of untreated and treated wastewater. Both the Ministry of Health and the CNA perform inspections to ensure that the standards as stipulated in the NOMs are met. Although a possibility exists to issue a fine in case standards are not met, such a fine has not been imposed on SIMAPAG yet.

Apart from reports pertaining to the quality of potable water and the quality of wastewater, the SIMAPAG also reports to the CNA about the amount of water it has abstracted every three months.

The Council sends reports to the municipality every three months. These reports include financial statements, a summary of decisions made by the Council, volume of water produced, progress with infrastructure projects, personnel, customer services and other information the Council considers relevant. In addition each Council meeting is attended by the *Comisario*, which attends the meeting on behalf of the municipality. The *Comisario* also drafts a bi-monthly report for the municipality. The

At the beginning of each year the Council submits a year-plan to the municipality containing an outline of all the anticipated activities that the utility will undertake and the way in which these are to be financed, etc. The municipality forwards this year-plan to the *Controlaría Municipal*. This organization has the tasks of monitoring the fulfillment of the year-plan. For this purpose the SIMAPAG sends bi-monthly reports the *Controlaría.*

Apart from the year plan, which is submitted to the municipality, the municipality does not set clear and measurable performance targets that the utility must meet. The utility is also not obliged to meet any service standards.

The matching fund grants offered by the CNA and the CEAG do come with conditions that have to be met by SIMAPAG. Apart from the requirement of matching

the funds, these funds have specific allocations for which they have to be used. In the case of CEAG, the funds and their spending are largely managed by CEAG themselves.

The utility is not accountable to a separate customer organization, which specifically focuses on the provision of water services in the municipality of Guanajuato. Consumers can approach the *Controlaría Municipal* or the *Procuradoria Federal del Consumidor* who can approach SIMAPAG on behalf of a consumer. In case a consumer contacts the *Controlaría* an employee of this organization approaches the SIMAPAG to address the complaint of the user. The utility does not have a customer charter, but the contract that is signed between the consumer and the utility does contain some rights and obligations of the different parties. These rights and obligations do not specify any performance targets or penalties in case of non-compliance.

The utility is not accountable to any non-governmental organizations. The utility is audited by an external auditor.

Table 9.31: An overview of external accountability

Indicator	**Value**
Does the utility have a customer charter, which specifies performance targets and are there any financial penalties for non-performance?	No
Does the utility have to meet specified performance targets set by or agreed upon with the owners?	No
Is an annual report produced, which is audited by an external accountant?	Yes[171]
Are external groups represented in advisory or management oversight bodies of the utility?	Yes, in the Council
Has the utility secured loans in the commercial market on its own credentials/ability?	No
Does the utility participate in some form of credit rating scheme?	No
Does the lender impose financial covenants on the utility?	Yes

9.5.3 Hierarchy and Levels, the Market and Customers

9.5.3.1 Decentralization of Authority

Tariff levels are set based on the same procedure as the other utilities mentioned before. On the basis of a tariff study of an external consultant, the utility proposes tariff levels to the Council. If the Council approves this proposal, the proposal is forwarded to the municipality. The municipality then decides if they accept this proposal or not. If the municipality supports the proposal it is forwarded to the State Congress, which provides the final approval[172].

All procurement in the utility carried out by the 'procurement coordinator', who resides in the Department of Business and Accounting. All departments submit their request for procurement to that person. He then obtains three quotations from various suppliers and these quotations are then passed on to either the general manager or the

[171] Every year SIMAPAG is subject to an external audit, however not every year an annual report is published.
[172] In general, the approval of new tariff levels and structures by the State Congress is a formality.

Council, depending on the type of good or service that is procured[173]. Some decisions, for example those relating to the procurement of assets, can only be taken by the Council. Other decisions require only approval of the general manager. However, the cheques issues by the utility always require two signatures and with only the general manager and two of the Council members authorized to sign[174], *de facto* at least one of the Council members must approve the procurement of all goods and services.

Internal work processes and standards are proposed by each Department and discussed with the general manager. Once the department and the general manager agree, the proposal is forwarded to the Council for final approval. The monitoring and replacement of meters is defined by a standard policy, which stipulates when the meters should be changed[175] and is the responsibility of the customer services department.

The hiring and firing[176] of individual staff members is a decision taken by the general manager and the Council. The Council is officially responsible for hiring and firing the general manager although the municipal president can also wield his influence in this decision. The general manager and the Personnel department are responsible for the hiring and firing of lower level employees (including other management employees)[177].

Decisions relating to the termination of services to defaulters are done automatically by the customer services department following a set procedure.

Table 9.32: An overview of decentralization of authority

Indicator	**Value**
What is the purchasing ceiling for procurement of operational departments as a percentage of operational budgets?	Not based on amount but on type of expenses
Does the hiring of staff members in departments require prior approval from the general manager?	Yes
How many layers of management separate the Chief Executive and the entry-level workers?	Four levels
At what level are internal work processes and standards defined?	Management and department levels but requires approval of the Council
In what areas does field-staff have decision-making powers?	Customer-service, maintenance, billing and collection, suspension of service, storage of materials

[173] The question of who is authorized to make a decision is mainly based on the type of good or service that is procured and not so much on the amount involved in the procurement. Also of importance is if the procurement of a particular good or service fits within the specified budget to which the utility adheres.

[174] The chairman and the treasurer of the Council are authorized to sign.

[175] This policy is stipulated in the *Procediemento de Aclaraciones 2002*

[176] It should be noted that straightforward firing is relatively unusual. More common is that a staff member (in the management of the utility) is forced to resign.

[177] Although this is the way things are arranged according to the *Reglamento* there have been decisions recently in which the Council 'fired' a management employee. In 2003 the Head of the Legal Department and the Commerce Department were 'fired' by the Council.

9.5.3.2 Internal Accountability for Results

The Council meets twice per month, as is stipulated by article 19 of the *Reglamento*. The meetings is attended by the general manager and, if needed, by the other employees of the utility. During the first meeting, the monthly report is presented. The second meeting every month is more for taking any outstanding decisions that are left.

The Council does not provide clear and measurable targets that must be achieved by SIMAPAG. The SIMAPAG does set goals and targets for themselves and presents these to the Council. The Council can comment on these and suggest modifications.

Within the utility a balanced scorecard is used for setting targets and measuring the performance of the utility. The balanced scorecard incorporates a series of indicators, which provide 4 different 'perspectives' on the utility, which together are considered to provide a good picture of the overall functioning of the utility. These perspectives include a 'client's perspective' (considered to be the most important), a 'financial perspective', a 'process perspective' (which includes a number of efficiency indicators) and a 'learning perspective' (which covers indicators such as absenteeism, rotation of personnel, etc.). The indicators measuring the four perspectives of the scorecard are compiled on a monthly basis by the Department of Institutional Development and reported to the Council.

The performance of employees is evaluated every month and the employee can earn a bonus on the basis of this evaluation. In essence the employee is evaluated on the basis of two criteria: attendance and punctuality (30% of the bonus) and performance (70% of the bonus). The category of performance is subdivided into five sub-categories, which each represent 14% of the overall bonus. These five sub-categories are:

- Knowledge of work done
- Quality of work done
- Quantity of work done
- Initiative
- Attitude and cooperation

Each employee is evaluated by his or her immediate boss. As no clear guidelines exist on how to implement the evaluation, the evaluation may be rather subjective. Moreover, for employees in management positions it is very rare that the bonus is not awarded in full. As long as an employee is not absent the full bonus is awarded.

Table 9.33: An overview of accountability for results

Indicator	**Value**
How often does the Chief Executive meet with the Council?	Twice per month.
Are penalties and rewards applied to the Chief Executive and Directors for achieving specified performance targets?	No
Are penalties and rewards applied to the staff by the management for achieving specified performance targets?	Yes[178]
Is staff subject to annual evaluations on their functioning in the utility?	No

[178] It should be noted that in general the full bonus is awarded as long as the employee is not absent.

9.5.3.3 Market-orientation

SIMAPAG outsources about 20% of its operational budget, mostly for engineering works. Other activities for which they outcontract include developing an operations manual, undertaking feasibility studies, external auditing, ICT, tariff studies, etc. In principle the utility can follow one of three outcontracting procedures as defined by the State and Federal Law. These three procedures are:

- Direct awarding of the contract – Direct awarding can be done up to an amount of approximately MXP 112,000 for goods and services and up to MXP 1.485 million for infrastructure works under State Law. The utility is required to obtain three quotations prior to awarding the contract;
- Restricted tender – Up to MXP 438 thousand for goods and services and MXP 7.4 million for infrastructure works, the utility can follow a restricted tender in which three potential suppliers present their economic and technical bids to the Council.
- Public tender – the water utility invites any company or organization that wants to present a bid to do so.

Like the other water supply and sanitation utilities does partake in a benchmarking exercise carried out every year by the CEAG but SIMAPAG uses the data resulting from this benchmarking exercise mostly for ad-hoc comparisons with other utilities. The results are not used systematically for determining policy priorities or setting performance targets.

There are no market testing exercises carried out by the utility.

Table 9.34: An overview of market-orientation

Indicator	**SIMAPAG**
What is value of contracts outsourced as a percentage of the operational budget?	20.37%
What is the nature if the functions that are outsourced?	Construction works, engineering projects, feasibility studies, external audit, ICT, collection of uncollected bills, tariff studies, etc.
How often does the utility engage in benchmarking exercises?	Once per year
In what areas are benchmarking activities undertaken?	Technical, commercial, financial and administrative activities
Does the utility engage in market testing and does it develop internal markets?	No

9.5.3.4 Customer-orientation

The income SIMAPAG generates from its customers cover operation and maintenance expenses and part of the investment costs. The customers can pay their bills SIMAPAG offices, banks, *Cajas Populares*, and local businesses such as video shops or supermarkets.

In order to obtain the views and opinions of the customers, SIMAPAG undertakes daily surveys. These surveys cover about 210 to 220 users per month. This survey measures the following dimensions:

- If the user is satisfied with service provided by SIMAPAG. This includes indicating how they were attended to by personnel of SIMAPAG (plumbers, meter readers, reception, customer service, etc.)
- What their opinion is of the service provided. This includes giving their views on the provision of potable water, quality of water delivered, attention to leakages, sewerage, etc.)
- An assessment of how important the services that SIMAPAG provides are.

On the basis of the survey the 'image' that SIUMAPAG has with its users is calculated on a scale from 1 to 5. This 'image' is the most important indicator of the Balance Scorecard that SIMAPAG uses to measure its performance. At the beginning of 2003, the utility had a score of 3.4 and the target was to reach a score of 4.5 by the year 2005.

SIMAPAG also has a suggestion box in it main office but this is hardly ever used. Customers can submit complaints in person at the SIMAPAG offices, by telephone, in writing or through the municipal authorities. In addition the customer can approach the *Procuradoria Federal del Consumidor*, but this rarely happens. The average number of complaints received by the utility is 1,460 and this represents about 6% of the total number of connections. The main complaints concern service interruptions, leakages and high bills. In comparison with the other case studies from the State of Guanajuato, the level of complaints is relatively high. Possibly, the number of complaints is linked to the relatively high tariffs charged to the consumers. Between 1996 and 2001 the revenues generated from consumers increased by 280% (Aguiñaga 2003). Although the users were willing to pay increased tariffs they also appear to have become more demanding and insist on having services of better quality (Nieto 2003).

A few years ago, employees working with customers underwent a training program relating to customer management sponsored by the State Water Commission. Employees who underwent that training periodically have to attend refresher courses. In addition the utility organizes training sessions on 'effective stress management' as it was observed that many of the problems experienced with customers were based on the way the customers were treated by the personnel. Also training sessions focusing on the personal image that an employee projects and how they talk and deal with customers are organized[179].

[179] It should be noted that SIMAPAG pays considerable attention to training/capacity building within the organization. In 2002 a total of 33 training sessions were organized which resulted in an average training time of about 25 hours per employee (SIMAPAG 2003b).

Table 9.35: An overview of customer-orientation

Indicator	Value
In what ways can the bills be paid?	SIMAPAG Office, Banks *Cajas Populares*[180], selected small businesses
In what ways does SIMAPAG pro-actively seek the opinions/views of its customers?	Customer surveys (about 200 per months); suggestion box
What is the menu of options for service delivery that the SIMAPAG provides?	In-house connection, block connection, tank trucks
In what ways does the SIMAPAG actively inform its customers about changes related to service provision?	Flyers added to the receipt, newspaper, radio, *perifoneo*[181]
What is the percentage of complaints that is addressed?	100%
What are the average response times to complaints?	For a leak 5 hours, for a reconnection 1 day

9.5.4 Conclusion

The water supply and sanitation utility in Guanajuato provides an interesting case of utility which has been able to improve performance consistently over the past decade. The water crisis in the 1980s provided a context in which water supply and sanitation received considerable political and social support. Consumers, who still had the water crisis fresh in their memory, were willing to pay relatively high tariffs, but only if this would be accompanied by substantial improvements to the level of service they received. What followed appears to resemble a 'vicious circle of performance improvement' in which necessary tariff increases were accepted as long as the utility improved services. The relatively high tariff levels and the presence of critical consumers meant that the utility both had considerable (financial) autonomy as well as a need to develop a strong customer-orientation, which it did.

Despite some changes in the management over this same period, the utility retained a degree of stability, by having existing members of the management team replace a general manager. The utility's capacity (in terms of financial resources and human resources) also appears to place it in a more favorable position then the four utilities discussed previously. At the same time, recent developments, such as the lowering of the monthly tariff indexation to 0.01% and the somewhat unconventional changes in the management of the utility do raise some questions about the sustainability of the performance gains of the past decade.

SIMAPAG also appears to be a bit further with the development of internal accountability mechanisms linked to performance targets. The development of the balanced score card as a guiding instrument for the management of the utility as well as the initiation of a system for assessing the performance of employees are indications of this development.

On the other the hand elements such as external accountability, the level of decentralization within the organization and market-orientation seem to be much more in line with the other four utilities.

[180] Small local banks

[181] A *perifoneo* is a car with speakers that drives around the city providing information through its speakers.

10 Annex 2: Cluster 2 Cases

10.1 National Water and Sewerage Corporation, Uganda

In Uganda, water management is a task of the Ministry of Water, Lands and Environment (MWLE), whose mandate is "to promote and ensure the rational and sustainable utilization and development and safeguard of Land and Water Resources and Environment, for social and economic welfare and development as well as for regional and international peace"[182]. The MWLE consists of one Minister and three so-called Ministers of State. These Ministers of State include one State Minister for Water, one State Minister Lands and one State Minister for the Environment. At the operational level the ministry's structure consists of two Directorates, The Directorate of Water Development[183] and the Directorate of Land and Environment. The Heads of these Directorate report to the Permanent Secretary, who is the Chief Executive and Accounting Officer (Philips 2003). The MWLE supervises three statutory bodies. One of these statutory bodies is the National Water and Sewerage Corporation (NWSC). The NWSC was established in 1972[184] with the responsibility of delivering water supply and sewerage services in 15 large urban centers[185]. The 15 centers in which the NWSC provides services count a population of 2.1 million people, which represents about 75% of the population in urban centers (Mwoga 2004).

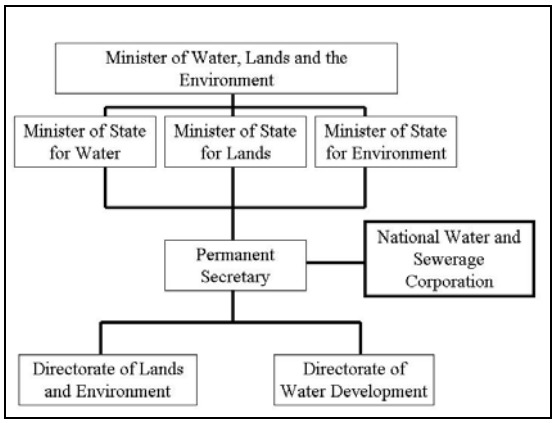


Figure 10.1: Governance structure National Water and Sewerage Corporation

[182] www.mwle.go.ug
[183] Water services in rural areas and urban areas not entrusted to the NWSC are managed by the Directorate of Water Development (Philips 2003).
[184] The NWSC was founded by Decree no. 34 of 1972. This Decree was repealed by Statute No. 8 of 1995. This Statute, also known as the NWSC Statute governs all operations of the NWSC (Mwoga 2004)
[185] The 15 towns served by the NWSC: Kampala, Jinja, Njeru, Entebbe, Mbale, Mabarara, Masaka, Tororo, Gulu, Lira, Kasese, Fort Portal, Kabale, Bushenyi, Soroti and Arua

The functioning of the NWSC is overseen by a Board of Directors, which is also the policy making body of the NWSC. The Board of Directors consists of 8 people including the Managing Director of the NWSC[186]. Of the seven other members, one must be the Director of the Directorate of Water. The other six members are appointed by the MLWE. These 6 Board members serve terms of 3 years and may be re-appointed for a second term. Selection of the Board members takes place on the basis of expertise in the fields of water utility management, public finance, engineering or public health. Although appointment of the Directors is on the basis of expertise, it is noteworthy that most of the members have a political background or are in some way involved with the Government of Uganda (Philips 2003). The Managing Director is appointed on the basis of competitive selection. In principle the Managing Director serves a contract term of five-years, but the contract can be renewed after the contract term has expired.

Table 10.1: General characteristics NWSC 2000-2003

Indicator	**2000/01**	**2001/02**	**22002/03**
Population served			1,315,000
Connections			87,172
No of employees			950
Unaccounted for Water	43%	40%	39%
Working ratio	0.85	0.79	0.79
Staff per 1000 connections	17	12	11
Staff per 1000 population served			0.72
Accounts receivable as a share of annual revenue, expressed in months sales	4.9	5.6	4.7
Service coverage – water supply	n.a	n.a.	63%
Average domestic tariff (US$/$m^3$)	0.38	0.38	0.40

Source: Mwoga 2004

10.1.1 Background: Reforms in the NWSC

During the 1970s and early 1980s Uganda was subject to considerable political and economic turmoil and the performance of NWSC, like that many other institutions, declined significantly. Between 1986 and 1997, NWSC embarked on major rehabilitation and expansion of its water supply and sewage systems with the support of international donor agencies. Although water supply and sanitation infrastructure was rehabilitated and expanded, performance of the utility was still lacking. This resulted in poor service provision despite improved infrastructure.

In 1998, a new Board of Directors was appointed. The Board, in turn, appointed a new Managing Director, after the position fell vacant upon the expiry of the contract of the previous Managing Director. With a new Board and management a rare opportunity existed to review past performance and implement new strategies for improving

[186] Philips (2003) states that the Board consists of 11 members. The other members are a Corporation Secretary and a member of the Utility Reform Unit within the Ministry of Finance and Economic Development and the chairman.

performance of the utility. At the same time, external pressure was applied to improve performance. This external pressure came from:

- Donor agencies who wanted NWSC to improve performance levels in order for it to be able to meet its debt obligations and be more credit worthy;
- The Government who wanted the NWSC to service the customers better; and
- The possibility of increased private sector participation, meaning that the NWSC had to show it could perform as well as a private operator.

10.1.2 The Degree of Autonomy and Accountability of NWSC

10.1.2.1 External Autonomy

Standards for the quality of drinking water are set by the Uganda National Bureau of Standards (UNBS). Standards for wastewater treatment are set by the National Environment Management Authority (NEMA). The Ministry of Water Lands and Environment (MWLE) together with the Utility Reform Unit (URU) that falls under the Ministry of Finance, Planning and Economic Development (MOFPED) jointly set service standards.

The Directorate of Water Development (DWD) issues abstraction permits for raw water and discharge permits for treated wastewater. The NWSC uses surface water for all its operations with the three largest towns (Kampala, Jinja and Entebbe) using water from Lake Victoria as a water source. The NWSC has experienced no difficulties in accessing sufficient levels of raw water, but the quality of raw water varies considerably from season to season.

The NWSC enjoys considerable support from both the Ministries and the local governments. This support has been most evident in support received for obtaining investment funds for expanding services.

The utility is allowed to terminate services to defaulters, although the utility uses these powers selectively. Preferably, the NWSC will try to collect arrears in other ways before resorting to terminating service provision.

The NWSC has three main sources for its finances. The first source of finances is the revenue generated from tariffs charged to customers. The second source of funds is the Government, which at times provides subsidy funds for investments in line with the Governments social policy. The third category of funds concerns the international donor and lending agencies, such as the World Bank, the German Government (through KfW and GTZ and the European Union. The availability of these three sources of funds means that access to financial resources is not a major problem for the NWSC.

NWSC management initiates tariff-setting procedures and proposes changes in the tariff to the Board. After Board review and approval, the tariff changes are forwarded to the MWLE for approval and eventual gazetting. With effect from April 2002, the tariff is indexed annually, to take into account inflation, and the depreciation of the Uganda Shilling against foreign currency.

NWSC has some difficulties attracting qualified staff. The main difficulties relate to the salary structure, which is not as competitive as those from some other corporations in the country. The Board in consultation with the unions sets the salary structure of NWSC. The salary structure is based on the projected income and the

obligations that NWSC has to meet (such as debt servicing, depreciation, asset renewal and counterpart funding of investments). Recruitment takes place only on the basis of the organogram as approved by the Board. This means that the only possibilities for recruitment occur when either an existing position falls vacant or the organizational structure is adapted.

NWSC is subject to and follows public procurement regulations.

Table 10.2: An overview of external autonomy

Indicator	**Value**
Who determines the pay scales for the various levels within the utility?	The Board of Directors
What is the basis for appointing members to the Board of Directors?	Expertise and experience
Is the utility able to take out loans without prior approval from the owner?	Yes, in principle
Is the utility allowed to terminate service delivery to defaulters?	Yes
Who is responsible for setting tariffs?	The Ministry of Water, Lands and Environment
Does the utility follow public sector procurement rules?	Yes

Source: Mwoga 2004

10.1.2.2 External Accountability

A set of clear performance targets exist for the quality to which the drinking water produced by the NWSC must adhere. These targets are set by the UNBS and are considered realistic by the NWSC. Although the DWD is officially responsible for monitoring NWSC's performance on meeting these water quality targets, this monitoring effectively does not happen. NWSC also has to meet wastewater quality targets, but feels the targets set by the NEMA are unrealistic. If the NWSC would have to meet these standards, they would have to invest substantially in wastewater treatment facilities. This in turn would impact the tariffs charged to consumers, and the resulting tariff would be unaffordable for many of the NWSC's customers. Not surprisingly then, the standards are not being enforced.

The MWLE sets clear and measurable targets for service that that the NWSC has to achieve. Previously this was done through the Minister's review and acceptance, or revision of the Corporate Plan. This approach is reported to have been strengthened since 2000 by the introduction of a Performance Contract[187] between the MWLE and the NWSC. The NWSC reports on these reports on the performance in relation to these targets in the annual report, which is submitted to the Minister. The recourse that the Minister has in case the NWSC fails to meet the specified standards is that the MWLE can remove the Board or pressure the Board into removing the Managing Director. However, the actual implementation of the Performance Contract raises some questions about the effectiveness of this contract. Formally, a review committee should exist to

[187] The Performance Contract brought considerable benefits to the NWSC as, at the suggestion of the World Bank, the NWSC was allowed to postpone repayments of loans to the Government of Uganda during the running time of the Performance Contract. The idea was that the NWSC would only be able to obtain the required level of performance if the debts of the NWSC could be frozen (Philips 2003).

monitor and review the contract. However, this Review Committee was never established and as such, performance of the NWSC was never really monitored (Philips 2003).

There are scheduled meetings between the Ministry and the NWSC Board. These meetings are held when needed and deal with performance targets, performance of NWSC against the set targets, NWSC's contribution to the Ministry Policy Statement, and the presentation of the annual report and audited accounts to Parliament.

Generally, the agencies, which lend money to the NWSC, impose financial covenants on NWSC. These covenants can include requirements such as including a minimum target of 20% of funds from internal sources to be used for either capital investment or counterpart funding, reducing employee related costs by 18%, and timely submission of audited accounts to the lender. Different loans and grants will have different requirements.

There is a formal customer organization (Uganda Consumer Protection Unit - UCPU), which represents the interests of consumers and works hand in hand with the National Bureau of Standards. The UCPU, however, covers all services and not only water services. In theory the UCPU can alert the responsible authorities to take action in case certain products or services are not satisfactory. However, the UCPU has not been very active in the field of water supply services.

Table 10.3: An overview of external accountability for results

Indicator	**Value**
Does the utility have a customer charter, which specifies performance targets and are there any financial penalties for non-performance?	Yes but financial penalties are not specified.
Does the utility have to meet specified performance targets set by or agreed upon with the owners?	Yes
Is an annual report produced, which is audited by an external accountant?	Yes
Are external groups represented in advisory or management oversight bodies of NWSC?	Yes
Has the utility secured loans in the commercial market on its own credentials/ability?	No
Does the utility participate in some form of credit rating scheme?	No
Does the lender impose financial covenants on NWSC?	Yes

10.1.3 Hierarchy and Levels, the Market and Customers

10.1.3.1 Decentralization of Authority within the Utility

As mentioned, the NWSC currently operates in 15 towns. Each town has a separate Area Service Provider (ASP). The relatively bigger ASPs have connections above 3,500 while the smaller ASPs have less than 2500 service connections.

Considerable authority has been decentralized to the ASP. Billing and collection for is done at area level. These ASPs all have billing centers and produce their own bills. They can also outsource activities and functions, below a certain amount, without the interference of the Head Office, including hiring of guards and collectors, maintenance of premises, office equipment or vehicles. The ASPs also carry out

expansion and minor rehabilitation of the network and existing facilities in their area. The ASPs also formulate and implement strategies for reducing unaccounted for water. And finally, the ASPs have the power to disconnect non-paying customers and they can determine the way in which customer complaints are dealt with, provided they achieve the response time targets.

The decisions regarding the procurement of goods and services are made at different levels depending on the monetary value. The ASPs procure goods and services up to values of US$2,500. The NWSC Head Office Management procures goods up to values of US$9,000 and the Board of Directors procures goods and services up to values of US$25,000. Beyond this latter threshold, the Solicitor General must clear the NWSC Management procurement decisions before the NWSC Board can endorse them.

Currently the managers of the ASPs can hire and fire contract staff as well as staff below a specified salary position. The staff on higher salaries are hired and posted to the ASPs by the Head Office in consultation with the managers of the ASPs. The salary structure of all staff members is determined and approved by the Board of Directors.

Table 10.4: An overview of decentralization of authority within the utility

Indicator	**Value**
What is the purchasing ceiling for procurement of operational departments as a percentage of operational budgets?	Between 4%-7.5% of the monthly operational budget
Does the hiring of staff members in departments require prior approval from the Managing Director?	Yes, for some positions
How many layers of management separate the Managing Director and the entry-level workers?	Four layers of management
At what level are internal work processes and standards defined?	Internal work processes are defined at Area level; standards are defined at Head Office Management Level.
In what areas does field-staff have decision-making powers?	In maintenance and partially in customer service.

10.1.3.2 Internal Accountability for Results

The Government of Uganda sets performance targets for NWSC through the performance contract, although as mentioned this contract is not really monitored. The NWSC Head Office ensures that targets in the performance contract are consistent with the corporate plan. Based on the performance targets set in the performance contract, the Head Office sets and negotiates performance standards with the Areas. The principle used by the NWSC Head Office is to set higher targets for the Area Service Providers than stipulated in the performance contract between the NWSCV and the Government of Uganda. Therefore, when the ASPs achieve or exceed their individual targets, NWSC will automatically achieve the targets as stipulated in the performance contract. Upon setting targets for the ASPs, workshops are held to determine the logistical requirements needed by the ASPs to meet the targets. Having determined these requirements, a harmonization session with the Head Office is conducted during which commitment of the Head Office to provide the required logistics is secured.

The Board can reward the management for achieving performance targets. These rewards are usually in the form of annual salary increments or bonus payments.

The performance of employees is evaluated annually using standardized performance appraisal systems. The recently introduced "One Minute Management Concept" has strengthened this process: Every employee has an individual "pseudo contract" outlining specific key verifiable tasks and deliverables.

Achievement of the performance targets is accompanied by incentive payments that can be as high as 50% of the basic salary. On the other hand, under-achievement of the performance standards below a certain level may lead to members of the ASPs forfeiting 25% of their basic pay. These rewards or penalties are implemented as frequently as good or poor performance occurs.

Promotions and salary adjustments are usually made on the basis of the following factors: performance review, years of service, collective bargaining and certification. There is an annual staff performance appraisal. Sometimes, the recommendations for promotion made by the Department Heads are implemented. The years of service are recognized alongside good performance.

Table 10.4: An overview of internal accountability for results

Indicator	**Value**
How often does the Managing Director meet with the Board?	Once a month.
Are penalties and rewards applied to the Managing Director and Management for achieving specified performance targets?	Yes, in principle. No penalties applied so far
Are penalties and rewards applied to the staff by the management for achieving specified performance targets?	Yes
Is staff subject to annual evaluations on their functioning?	Yes

Source: Mwoga 2004

10.1.3.3 Market-orientation

The degree of outsourcing ranges from 30% to 40% of the total operating expenses. Most of the outsourcing arrangements are set up as one-year service contracts. The largest contract, representing 14% of total operating expenses, is the management contract for the distribution of water, billing and revenue collection in the Kampala Water Supply Service Area[188].

Procurement is carried out according to the Procurement Act. The available procedures according to this Act range from open competitive bidding with or without pre-qualification, restricted or selective bidding, shopping, to sole sourcing.

NWSC partakes in benchmarking exercises within the African region through the African Water Utility Partnership (WUP). NWSC also indirectly partakes in benchmarking exercises through the World Bank. Additionally, NWSC carries out internal benchmarking amongst its areas of operation. NWSC has also undertaken benchmarking exercises with energy utilities and other industries in the country.

[188] The management contract for Kampala expired in 2004. Although the NWSC was interested in renewing the contract, no agreement could be reached for extension of the contract. After deliberation, the NWSC decided to award another management contract for the city of Kampala to a local company.

NWSC has partaken in market testing activities on an ad-hoc basis.

Table 10.5: An overview of market orientation

Indicator	**Value**
What is value of contracts outsourced as a percentage of the operational budget?	Between 30% and 40%.
What is the nature if the functions that are outsourced?	Premises maintenance, collections, billing, fleet maintenance, works and engineering design.
How often does NWSC engage in benchmarking exercises?	Annually and on an ad-hoc basis if needed
In what areas are benchmarking activities undertaken?	Internal reforms, change management, reducing water losses, optimizing energy/pumping costs, revenue collections, etc.
Does NWSC engage in market testing and does it develop internal markets?	NWSC has partially engaged in market testing especially for non-core functions.

10.1.3.4 Customer-orientation

Although the NWSC receives contributions from international donor and lending agencies and the Government for purposes of capital investment, the utility is fully dependent on its customers for covering its operational expenses.

NWSC has a training program that delivers training to employees, which deal with customers in customer care and service. Initially, the training was carried out for front desk officers only but it was later expanded to include other staff, such as cashiers, field staff and meter readers.

NWSC has a Customer Charter, which specifies the nature of the services that NWSC commits to provide to the customers. However, the Charter does not incorporate compensation payments in case NWSC fails to meet its responsibilities.

Annual customer surveys aim to establish the customers' views regarding areas where NWSC still has to improve. Customers can currently get access to NWSC in person, by phone and through the internet. The first two methods are more common than using the internet. Customers are involved in the decision-making in NWSC mainly through what is known in NWSC as "strategic alliance meetings". The Area Service Providers conduct regular and scheduled strategic alliance meetings with the different customer segments. From the strategic meetings customers make statements of what they require from the NWSC. These requirements are taken as action items for the NWSC Area Service Providers.

Table 10.6: An overview of customer-orientation

Indicator	Value
In what ways can the bills be paid?	NWSC Cash Offices, Banks and at ATMs
In what ways does NWSC pro-actively seek the opinions/views of its customers?	Annual customer surveys, suggestion boxes, and strategic alliance meetings.
What is the menu of options for service delivery that NWSC provides?	In-house connections, yard taps, public stand posts, water kiosks, bulk connections for institutions and water vending.
In what ways does NWSC actively inform its customers about changes related to service provision?	Flyers, newspaper advertisement, radios and strategic alliance meetings.
What is the percentage of complaints that is addressed?	Between 95% to 100%.

NWSC invests substantially in staff training. It is the Corporation's policy to train staff for skills acquisition rather than academic achievements. The Human Resource Manager collects training needs compiled by the Department Heads after the annual staff appraisal and prepares a training program and corresponding budget.

Absenteeism is not tolerated in NWSC. The employees have to register their attendance in the daily attendance register and the register is audited. The staff turn over is very low and is usually limited to the cashiers.

Table 10.7: An overview of corporate culture

Indicator	Value
What factors influence promotion and/or salary adjustment decisions?	Staff performance appraisal, years of service, collective bargaining and academic advancements.
Annual staff turnover?	Below 10%. Predominantly in the lower levels.
What are the training costs per year as a percentage of operational budgets?	Between 1.5% and 3%.
Is the staff informed about meetings of management?	Partially (need-to-know basis)
What is the ratio of support/technical staff to management?	Between 3:1 to 5:1
Is the mission statement internally visible in NWSC?	Yes

10.1.4 Conclusions

The NWSC appears to enjoy considerable managerial autonomy. The strong improvement in performance since 1998 coincides with arrival of a new Board and a new managing director, who under the threat of privatization, had to show that the NWSVC was able to improve its performance. What is also noteworthy is the role played by external financiers. The NWSC enjoys considerable support from donor and lending agencies. Although their assistance is crucial for turning around the utility, the

question is if the NWSC can continue to depend on these organizations if political realities in Uganda change.

The NWSC is the only utility with a detailed performance contract with the owner. Some doubts exist about this contract, however, as the monitoring entity, responsible for monitoring the contract, was not established.

Being a national utility, the NWSC has for obvious reasons had to decentralize considerable decision-making authority to lower levels in the organization. It appears that the Head Office in Kampala is developing the role of a monitoring agency, which monitors the performance of the 15 'areas' that operate under the Head Office. Interesting in this respect is that the NWSC as developed internal performance contracts with the various areas, which 'translates' the performance contract it has with the MWLE to the 15 areas.

Market orientation appears to be considerable in the case of the NWSC. The main reason for this was the fact that service provision in Kampala was subject of a management contract with SUEZ. Customer-orientation was also well-developed.

10.2 *Sociedade de Abastecimento de Água e Saneamento S.A., Campinas, Brazil*[189]

The city of Campinas is located in the Brazilian State of Sao Paulo. The water services in this city of about 1 million inhabitants are provided by the *Sociedade de Abastecimento de Água e Saneamento S.A* (SANASA). SANASA, which was formed in 1974, is a so-called "*empresa-mixta*"[190]. Although the *empresa-mixta* usually involves substantial private ownership, in the case of SANASA, the overwhelming majority of shares are owned by the Municipality of Campinas, which owns 99.99% of the shares[191]. The remaining 0.01% of the shares are owned by other persons and organizations, varying from the Mayor of Campinas in 1973 to the Municipal Company for Development of Campinas. As mixed-ownership company, SANASA has both an Administration Council as well as an Inspection Council. The Administration Council sets the general direction that SANASA follows, approves the annual plan and supervises the Executive Team. The Inspection Council is a consultative body that analyses proposals and decisions on a range of issues. The Inspection Council reports to the Administration Council and once a year to the Shareholders Meeting. The Administration Council has a minimum of 3 and no more than 5 members who are elected or dismissed by the shareholders. The members of the Administration Council represent the executive team of SANASA (2 members appointed by the Municipality), the employees of SANASA (1 member) and 2 members are external members who are appointed on the basis of professional experience. The majority shareholder, in this case

[189] The case of SANASA is based on Aguiñaga 2003 and Ramos, 2004

[190] The "empresa mixta", or "mixed ownership company", originated in Spain. It has subsequently spread to other countries in Latin America (Ringskog 2002:3).

[191] Although SANASA is on paper an 'empresa mixta', the fact that shares are so heavily concentrated with the Municipality of Campinas, means that it functions more like a government-owned company than a joint-stock company. Potential benefits that are often cited by promoters of the 'empresa mixta' (such as access to private sector capital and private sector expertise) are unlikely to be achieved with the current ownership structure.

the Municipality of Campinas, appoints the president of the Administration Council who is also the president of SANASA.

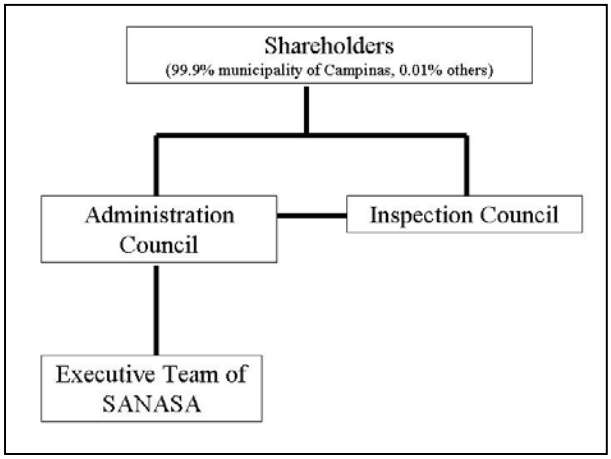


Figure 10.2: Governance structure SANASA

Management of the utility is the responsibility of a four-member Executive Team, which is appointed by the Administration Council every year. The Inspection Council is a consultation body without decision-making powers. They report their views to the Administration Council and at least once per year to the shareholders meeting.

Table 10.8: General characteristics of SANASA

Indicator	**2000**	**2001**	**2002**
Population served			982,977
Water supply connections			209,091
Sewerage connections			186,652
No Of Employees			1,609
Unaccounted for Water	26.66%	26.62%	26%
Working Ratio	0.65	0.81	0.79
Staff per 1000 connections	4.16	4.11	4.13
Staff per 1000 population served	1.65	1.73	1.68
Accounts receivable as a share of annual revenue, expressed in months sales	2.5	3.5	3.2
Service coverage – water supply	98.54%	98.60%	98.89%
Service coverage – sewerage	87.06%	87.47%	88.09%
Average domestic tariff (US$/10m^3)	1.75	2.39	2.62

Source: Aguiñaga 2004

10.2.1 The Degree of Autonomy and Accountability of SANASA

10.2.1.1 External Autonomy

As a joint-stock company, SANASA has a strong (nominal) legal autonomy. However the fact that SANASA has one major shareholder, the municipality of Campinas, makes the utility vulnerable to intrusions on that autonomy. The mayor of Campinas appoints the President and least two members of the Executive Team. These appointments are based on a combination of professional suitability and political affiliation. Changes in the municipal government usually lead to changes in the executive team. The vulnerability to political intervention means that much depends on how the municipality uses its powers as a major shareholder. Illustrative of the influence of the municipality are the developments following the municipal election of 2004. Following the election, which resulted in a change of municipal government, all but one of the management team were replaced by new people.

SANASA is to a large extent financially autonomous. The tariffs that SANASA collects form its main source of income and cover operation and maintenance costs. To cover capital expenses SANASA has taken out loans with both government institutions as well as private banks. The following table provides an overview of the external sources of funds that SANASA has access to.

Table 10.9: Overview of external funds of SANASA (in US$)

External Funds	**2000**	**2001**	**2002**	**2003**
BRADESCO (Private bank)		143,103.45		
FEHIDRO[192]	190,551.01	212,973.54	186,150.36	
CEF-PROSSNEAME[193]	2,428,217.79	6,144.52		
ABN AMRO - Banco Real (Private bank)			1,009,877.06	
FINAME				634,482.76
BNDES[194]				16,064,137.93
TOTAL	**2,618,768.80**	**2,926,563.88**	**4,618,374.25**	**20,118,965.52**
Yearly Budget	62,088,075.60	54,408,591.27	69,314,360.01	68,773,824.35
% of External Funds	4.22%	0.67%	1.73%	24.28%

Source: Aguiñaga 2004:17

[192] The State Fund for Water Resources (FEHIDRO) has as its main objective to provide support to the State's water resources policy by financing water projects.

[193] The Federal Economic Bank (CEF) is part of the Ministry of Finance and has as an objective to improve the quality of life for the citizens of Brazil by stimulating the development of urban infrastructure

[194] The National Bank for Economic and Social Development (BNDES) is a federal institution linked to the Ministry of Development, Industry and International Trade. Its objective is to finance initiatives that contribute to the development of the country.

For SANASA to apply for external funds, approval is required Administration and the Inspection Council. Moreover, the municipality also needs to approve the request for external funds. At the end of 2002, SANASA had a Baa2.br rating from Moddy's America Latina.

Recruitment is not a significant problem for SANASA as Campinas is an industrial city with a well-established university. Apart from having a large pool of professionals to choose from, SANASA also offers relatively good terms of employment, making it easy to attract qualified personnel. Not only is the salary level offered by SANASA above market-levels, also the secondary benefits, such a health-plan, end-of-the-year bonus, training programs, etc., are considered very good. Moreover, SANASA offers considerable job security, as it is very unusual for people to be laid off. Not surprisingly, many employees have been with the utility for 10, 15, 20 or even more years.

All vacancies in SANASA must be open for internal applications first and are opened for external application only after no suitable candidate can be found internally.

The pay scales (for non-executive team members) are determined by a committee within SANASA, created exclusively for the issue of setting salaries and positions. This committee negotiates with the labor union to come to a general agreement. This is subsequently reviewed by the Executive Team, which needs to approve the agreement. The Administration Council determines the salaries of the Executive Team.

SANASA uses mostly surface water for its water resources[195]. Under normal circumstances, water resources are sufficient, however, during dry periods, problems can arise especially because the City of Sao Paulo draws its water from the same sources as SANASA. SANASA currently uses about 83% of quantity of water allocated to it by the State Department of Water and Energy. The utility expects the allocated water resources to be sufficient until at least 2010.

Table 10.10: An overview of external autonomy

Indicator	**Value**
Who determines the pay scales for the various levels within the utility?	Administration Council
What is the basis for appointing members to the Board of Directors?	Political representatives / professionals
Is the utility able to take out loans without prior approval from the owner?	No
Is the utility allowed to terminate service delivery to defaulters?	Yes
Who is responsible for setting tariffs?	Utility
Does the utility follow public sector procurement rules?	Yes

Source: Aguiñaga 2004

10.2.1.2 External Accountability

The Ministry of Health has set standards for potable water that all water utilities must adhere to. By way of Decree No. 1469 from 2000, the Ministry of Health has also

[195] On the perimeter of the city SANASA has 3 wells. The abstraction of these wells represents about 0.03% of the water resources used by SANASA (Aguiñaga 2003b:16)

established the procedures by way of which I regulates that these standards are indeed met. Decree 1469 establishes how and where samples are to be taken and the reporting requirements. SANASA reports monthly to the municipal representative of the Ministry of Health.

The Ministry of Environment at the state level establishes and enforces wastewater standards. State Law 997 from 1976 sets the standards that must be met. Decree No. 8468specifies what needs to be measured and how these results are to be reported to the State Ministry of Environment. Reports are submitted to the State Environment Ministry every 6 months. Although the Ministry of Environment can implement sanctions and fines in case standards are not met, SANASA has, until now, not been fined.

SANASA is not subject to performance targets imposed by the owner. However, annually, a report is submitted to the owners of SANASA detailing the performance of the organization. The report includes the balance sheet, all relevant financial information and an activity report, as well as an annual plan and budget for the following year. The Municipal 'tribunal de contas' (accounts tribunal) evaluates the information that SANASA presents. SANASA must publish their balance accounts annually in a newspaper and must submit them to a federal regulator of joint-stock companies.

Loan agreements between SANASA and the Federal Economic Bank (CEF) have stipulated performance indicators and targets relating to service standards. SANASA reports every six months on these performance indicators. The reports are not published, but are available on request. In case SANASA does not achieve the specified targets, they become ineligible for further financing from CEF.

There is not a special consumer organization to which SANASA is accountable. Dissatisfied consumers can, however, approach the Consumer Agency (PROCON) whose role it is to protect the interest of consumers.

Table 10.11: An overview of external accountability for results

Indicators	**Value**
Does the utility have a customer charter, which specifies performance targets and are there any financial penalties for non-performance?	No
Does the utility have to meet specified performance targets set by or agreed upon with the owners?	No
Is an annual report produced, which is audited by an external accountant?	Yes
Are external groups represented in advisory or management oversight bodies of SANASA?	No
Has the utility secured loans in the commercial market on its own credentials/ability?	Yes
Does the utility participate in some form of credit rating scheme?	Yes
Does the lender impose financial covenants on SANASA?	Yes

Source: Aguiñaga 2004

10.2.2 Hierarchy and Levels, the Market and Customers

10.2.2.1 Decentralization of Authority within SANASA

In general, decisions within SANASA are prepared by working groups. These working groups then submit proposals for decisions to the Executive Team and/or Administrative Council for approval and endorsement. Ideally, these working groups or working committees will incorporate the most qualified personnel for that particular issue. It is quite rare that management rejects proposals of working groups.

Internal work processes and standards are developed within the various departments and are approved by the Executive Team.

The tariff structure that SANASA uses is determined by an in-house commission, which has been established for the sole purpose of developing a proposal for the tariff structure. The Administrative Council makes the final decision about the tariff structure. At present the proposed tariff structure is passed through the municipality for endorsement, even though there is no legal obligation to do so.

Groups from various departments handle procurement. These groups develop a proposal on the basis of a financial, administrative and/or technical analysis that is presented to the Executive Team and the Administrative Council for information, but does not require approval.

Recruitment is carried out through open applications. First the vacancy is announced internally and then externally. The decision about hiring new staff is made by the manager involved and the respective director, who inform the Executive Team of their decision. The termination of service is the responsibility of the Commercial Department and is done according to internal policy.

The termination of service to customers who have failed to pay their bills is the responsibility of the Customer Services Department. Customer complaints are dealt with by the 12 Customer Service Offices or the call center. If the Offices can handle the complaints themselves (for example, clarification of bills, etc.) they can do so. Otherwise the complaint is forwarded to a relevant Department that can address the complaint.

Table 10.12: An overview of decentralization of authority within the utility

Indicator	**Value**
What is the purchasing ceiling for procurement of operational departments as a percentage of operational budgets?	n.a.
Does the hiring of staff members in departments require prior approval from the Managing Director?	No
How many layers of management separate the Chief Executive and the entry-level workers?	4 levels
At what level are internal work processes and standards defined?	Management and Department level
In what areas do field staff have decision-making powers?	All

Source: Aguiñaga 2004

10.2.2.2 Internal Accountability for Results

The Executive Team meets with the Administration Council and the Inspection Council every month. Prior to these meetings, the Executive Team submits all financial information about the utility to the two Councils. The Councils can request any information they desire at any time. The Administrative Council and the Inspection Council jointly approve the budget and tariffs.

There is no set mechanism for evaluating the performance of the employees. Although some managers undertake evaluations at their own initiative, these evaluations are not structured or standardized. All employees have a contract detailing their duties and tasks, but not the performance that is expected of them.

Table 10.13: An overview of internal accountability for results

Indicator	**Value**
How often does the Chief Executive meet with the Board?	Monthly
Are penalties and rewards applied to the Chief Executive and Directors for achieving specified performance targets?	only rewards are applied
Are penalties and rewards applied to the staff by the management for achieving specified performance targets?	only rewards are applied
Is staff subject to annual evaluations on their functioning SANASA?	No

10.2.2.3 Market-orientation

SANASA outsources 21% of its operational budget. Outsourced services include non-core functions, consulting services, billing/collections, works, and certain operation functions. SANASA outsources any activity that would require staff working overtime (peak-demands). When outcontracting, SANASA follows public procurement rules.

SANASA partakes in the 'analysis of water and sewage services', a national benchmarking exercise undertaken annually by the National Information System of Sanitation Companies (SNIS). SANASA uses its benchmark results to prioritize its future plans.

SANASA has not undertaken any market-testing exercises.

Table 10.14: An overview of market orientation

Indicator	**Value**
What is value of contracts outsourced as a percentage of the operational budget?	20.77%
What is the nature if the functions that are outsourced?	non-core functions, consulting services, billing/collections, certain operation functions
How often does SANASA engage in benchmarking exercises?	Once per year
In what areas are benchmarking activities undertaken?	water quality, service, environment, finance and efficiency, other
Does SANASA engage in market testing and does it develop internal markets?	No

Source: Aguiñaga 2004

10.2.2.4 Customer-orientation

SANASA is highly dependent on its customers for financing its operations. In 2001 SANASA contracted an external institution to carry out a survey to know the satisfaction of the users. The results were quite favorable for SANASA though there identified two weak points: quality of water and customer service. After that survey, specific strategies were developed to improve those two points. Since then, no other survey or research has been carried out but now in the Strategic Plan for 2010 'client satisfaction' is considered as one of the indicators. Another survey was held in 2004.

The customers also have the possibility of impacting decisions regarding water supply and sanitation by contributing to the initiative of the "Participatory Budget". In this initiative the population can indicate where they want the money of the Municipality to be spent on. The results of the consultation are submitted to SANASA and they are expected to take actions around the needs expressed by the people in relation to water and sewage services.

In past years, SANASA has strengthened its focus on Customer Service and there are several courses and training programs for staff that are likely to have to deal with customers.

Users can get access to SANASA through their main office or any of the 12 service points available all across the city. There is a mobile unit which travels to different places every day and there is a 24-hour call center that receives complains or requests for services from SANASA. It is also possible for the customer to contact the utility by way of internet, but this communication channel is not used often. SANASA receives between 18,000 and 21,000 complaints through its head office and the 12 service points. Between 38,000 and 55,000 complaints are received monthly through the call centers. All complaints are, in principle, addressed. The worst-case scenario is that it takes longer than expected to address a certain complaint. Throughout the years, the number of complaints has reduced as SANASA has taken specific actions to address the different problems presented in the complaints.

Table 10.15: An overview of customer-orientation

Indicator	**Value**
In what ways can the bills be paid?	In banks and in lottery selling points
In what ways does SANASA pro-actively seek the opinions/views of its customers?	Customer surveys
What is the menu of options for service delivery that SANASA provides?	In-house connection, block connection and some public stand post for the peri-urban communities
In what ways does SANASA actively inform its customers about changes related to service provision?	Newspapers, Internet, radio and "carro de som" (speaker car)
What is the percentage of complaints that is addressed?	100%
What are the average response times to complaints?	New connection - 11 days, Leaks - 17 hours.

Source: Aguiñaga 2004

10.2.3 Conclusions

SANASA is a well performing utility, which embarked on its performance improvement in 1996 with the arrival of a new managing director. SANASA strengths consist of:

- SANASA has considerable autonomy. Its management model of an empresa mixta gives it substantial nominal legal autonomy. However, in reality the Municipality of Campinas, as SANASA's major shareholder, has a decisive influence on the utility. SANASA is partially financially autonomous. Its lenders hold the utility accountable for its performance.
- SANASA has a strong internal management system. It attracts and maintains qualified, experienced and motivated personnel. Its working-group based decision-making process makes use of its most qualified personnel and provides a substantial degree of autonomy to its staff.
- SANASA captures the benefits of competition between suppliers outside the utility through considerable outsourcing. It benchmarks itself vis-à-vis other utilities.

The largest threat for SANASA's future performance is its limited institutional defense against political interference of municipal politicians. Currently SANASA has a very good relationship with the Municipality of Campinas, which supports the direction of SANASA's work. The challenge to SANASA is to continue to be successful after the municipal government will change in 2004. SANASA's management is trying to consolidate its performance improvements through its Strategic Plan 2010 and its quest for ISO 9000 certification. However, only time will tell whether it will be able to institutionalize its good performance by shielding itself from excessive political interference in the long run.

10.3 Hai Phong Water Supply Company, Hai Phong, Vietnam[196]

Located on the northeastern coast of Vietnam, Hai Phong is the third largest city in Vietnam and it is one of four cities with a provincial status[197]. The Hai Phong Water Supply Company (HPWSC) has the responsibility of providing water services to the 1.7 million inhabitants of the city of Hai Phong. The HPWSC is a statutory body owned by the Hai Phong Provincial People's Committee (HPPC).

[196] The case description of the Hai Phong Water Supply Company (HPWSC) is based on the Master of Science thesis of mr. Do Nhat Hoang, which was undertaken in the period September 2003-April 2004. In addition, the HPWSC was visited in November 2003, during which interviews were held with managers and the former managing director.

[197] The provincial status means that the Hai Phong People's Committee reports directly to the national government

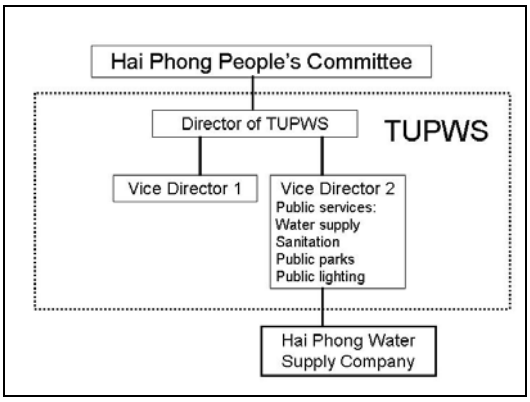


Figure 10.3: Governance structure Hai Phong Water Supply Company

As a state-owned enterprise, the HPWSC has to observe the Law on State Enterprises of April 20th, 1996. According to this law, state-owned enterprises are granted larger autonomy in decision making, to procure inputs, to introduce new technologies, to borrow, to acquire or less assets, to hire and fire employees, and to allocate after-tax profits. On the other hand, it has the obligation of using capital and other resources provided by the government for production and delivery of services with tariffs regulated by the government.

The Transport, Urban and Public Works Department (TUPWS), which operates under the HPPC, oversees the management of the service provider. The vice-director of TUPWS, who is responsible for overseeing the management of HPWSC, is appointed by the HPPC. HPWSC employs 762 employees divided over 5 main departments (production, construction, support, project management and consumption). The largest of these departments is the consumption department, which is responsible for water distribution and customer relations.

Table 10.16: General characteristics HPWSC 2000-2002

Indicator	**2000**	**2001**	**2002**
Population served	460900	480000	538,600
Water supply connections	94724	112,427	131,136
No of Employees	713	730	762
Unaccounted for water	44	41	32%
Working Ratio = (Annual Operating Costs – Depreciation – Funding Charges)/ Annual Gross Revenues)	0.82	0.67	0.62
Staff per 1000 connections	7.20	6.49	5.66
Staff per 1000 population served	1.55	1.382	1.27
Accounts receivable as a share of annual revenue, expressed in months sales	1	1	0.1
Service coverage – water supply	75% (estimated)	80%	85%
Average domestic tariff (US$/m^3)	0.18	0.18	0.18

Source: Hoang 2004

The facilities operated by HPWSC are designed for treating a total of 176,000 m^3 per day. The actual daily production is approximately 125,000 m^3 per day, which is distributed to 87% of the population of Hai Phong by way of a main network measuring 200 kilometers in length.

10.3.1 Background: Reforms in the Hai Phong Water Supply Company

In the summer of 1993, the city of Hai Phong was faced with an acute water shortage resulting in rioting directed against the utility (which even resulted in the death of a company employee). As a result, the owner (HPPC) changed the utility management team and gave a clear mandate to the new director to produce results. Pressure from both the owner and the customers were the initial driver for change in management of the utility, with the new managing director as a major instigator of change. The first institutional reform was made in 1993.

The first step in reforming the utility really consisted of a number of steps. The managing director received support from the HPPC (as is illustrated by allowing three tariff increases in the 1993-1997 period) and received the leeway to implement a new model for managing the utility: the 'phuong' model (Ahn Thu and Luy 1998:1-3). The 'phuong' is the smallest administrative unit in the Vietnamese administration system and encompasses between 10,000 and 15,000 inhabitants. In the 'phuong' model, on a phuong by phuong basis, the network in the phuong is upgraded and rehabilitated and the household connections in that phuong are provided with meters. Each phuong is connected to the main network by no more than 3 connections. The limited number of connections between the phuong and the main network allow the utility to accurately establish the amount of water going into a phuong and the meters at the household connections allow the utility to determine the actual consumption by the users. As a result the utility is able to accurately monitor the unaccounted-for-water levels per 'phuong'. At the same time, customer agencies are established at the 'phuong' level. These customer agencies both collect the bills that users have to pay as well as receive complaints from users.

In addition to introducing the 'phuong model', the new management worked hard on changing the corporate culture of the utility (basically convincing everyone of the need for change). Training of utility staff, by using international donor support, formed an important component of this change process.

As a result of the reforms in Hai Phong, performance of the HPWSC showed impressive improvements over the 1993-2002 period as is illustrated by table 10.17.

Table 10.17: Performance improvements for HPWSC 1993-2002

Indicator	**1992**	**2002**
Unaccounted for water	73%	32%*
Service coverage	68%	85%
Metering	0%	91%
Staff per 1000 connections	n.a.	5.3

* - figure for 2003; *Source*: Hoang 2004:20

10.3.2 The Degree of Autonomy and Accountability

10.3.2.1 External Autonomy

A number of national and local agencies impact the services provided by the HPWSC. At the national level, HPWSC is regulated by the Ministry of Construction (for construction standards), by the Ministry of Planning and Investment (for investment), and by the Ministry of Finance (for financial operations). The Ministry of Labor and Social Affairs set labor policies, to which the utility must adhere. As such, this Ministry determines the official salary levels for employees in the HPWSC. In reality, however, the HPWSC has considerable flexibility in determining its own pay scales as the management of the utility sets the 'soft' part of the salary received by the employees[198]. The Ministry of Public Health sets standards for drinking water. Despite this multitude of organizations, which regulate the functioning of the HPWSC, only a few agencies at the local level influence the functioning of the utility in practice. At the national level, the Ministries predominantly play an indirect role through sector policies and regulations.

The HPPC has considerable influence over the water supply company and is responsible for decisions relating to investments and tariffs. In the past decade the HPPC has provided important support[199] to the HPWSC during the introduction and implementation of the 'phuong' model. This support consisted of providing assistance in accessing financial resources (including international loans from FINIDA and the World Bank), and by allowing HPWSC to increase its water tariffs five times in the past the ten years. Moreover, the HPPC has not interfered much in the day-to-day functioning of the utility as no problems with regard to the provision of water services have arisen. One area where the influence of the owner is noticeable, however, is in the staffing levels of the utility (which continue to increase due to 'external pressures' despite already having sufficient staff).

The process of tariff setting is initiated by the HPWSC, which prepares a tariff proposal and submits it to TUPWS and the Financial Department. These two organizations check the validity of the proposal and then submit it to the HPPC for final approval. With water pricing being politically sensitive, increasing tariffs is a long and complicated process.

Service standards in Hai Phong are set by the HPWSC itself. HPWSC uses pressure in the network, continuity of supply and response time to complaints as indicators for the service standards.

[198] In state-owned enterprises in Vietnam, the income of an employee consists of two parts: an official or 'hard' part and an unofficial or 'soft' part of the salary. Nationally, the 'hard' salary is set by the Ministry of Labor and Social Affairs. This pay scale is applicable for all employees of state-owned enterprises. 'Soft' salary levels vary from company to company depending on the specific policy of each company. Soft salary comes from internal cash of the company. According to a recent study by the Ministry of Finance, the 'soft' salary is on average two to three times higher than the hard salary (Hoang 2004:23).

[199] Also important in this respect is that the managing director of the HPWSC during this period of reform was a member of the People Council. This membership provided a useful platform to generate support from the government for reforms and tariff increases.

The HPWSC uses only surface water for the production of potable water. During the 1993 crisis, the utility had difficulties gaining access to sufficient raw water resources. Since the unaccounted-for-water level dropped from 72% to close to 30%, however, access to raw water sources has not been a problem.

Table 10.18: An overview of external autonomy

Indicator	**Value**
Who determines the pay scales for the various levels within the utility?	Government for the hard part; utility for the soft part
What is the basis for appointing members to the Board of Directors?	Political representatives
Is the utility able to take out loans without prior approval from the owner?	No
Is the utility allowed to terminate service delivery to defaulters?	Yes
Who is responsible for setting tariffs?	Owner
Does the utility follow public sector procurement rules?	Yes

10.3.2.2 External Accountability

The HPPC sets annual performance targets that the HPWSC has to meet. These targets include total revenue, water production, water consumption, new connections and contribution to the owner's budget. The actual targets that are set appear to be quite low in comparison with actual achievements[200]. It appears that the HPPC does not view the performance targets as a way of pressuring the utility to achieve greater efficiency. Rather, as long as the HPWSC accomplishes its task of providing reliable water services, the HPPC will not intervene.

The HPWSC submits annual reports to its owner, which include measurable performance targets. These performance targets are set relatively low. In case the utility performs significantly worse than is expected, the HPPC can dismiss the managing director (this last occurred in 1993). Financial reports, including information such as balance sheets, financial statements, cash flow, contribution to the city budget, are submitted on a monthly and quarterly basis to TUPWS, the local Tax Department and the Local Finance Department. End-of-the-year accounts are audited by the HPPC.

The Hai Phong Preventive Medical Center is the regulator for water quality. This agency takes water samples in various locations and tests these in their laboratory. If these samples fail to meet national standards, the agency has no authority to apply any penalties on the utility. They can only inform the utility and TUPWS. No external agency exists for monitoring service standards.

The utility has to prepare annual reports to international lending agencies (World Bank) concerning: revenue, profit, loss and contribution to the city budget. This report is audited by firms acceptable to the international lending agencies.

[200] Setting targets, which are easy to achieve is not uncommon in government-owned organizations. In discussing why contracts often fail to improve performance in the public sector, the World Bank (1995:123) mentions evidence that performance targets are often 'soft' and set at levels that are easy to achieve.

No formal customer organizations exist to which HPWSC is accountable. The utility does have a standard water supply contract in which rights and obligations of the customers are explicitly mentioned.

Table 10.19: An overview of external accountability for results

Indicator	Value
Does the utility have a customer charter, which specifies performance targets and are there any financial penalties for non-performance?	No.
Does the utility have to meet specified performance targets set by or agreed upon with the owners?	Yes (but financial performance targets are low)
Is an annual report produced, which is audited by an external accountant?	Yes
Are external groups represented in advisory or management oversight bodies of HPWSC?	No
Has the utility secured loans in the commercial market on its own credentials/ability?	No
Does the utility participate in some form of credit rating scheme?	No
Does the lender impose financial covenants on the HPWSC?	Yes

10.3.3 Hierarchy and Levels, the Market and Customers

10.3.3.1 Decentralization of Authority within HPWSC

Decision-making in HPWSC is generally highly centralized, with the Managing Director making most of the operational decisions. Procurement of goods and services is undertaken by the Department of Materials, but any decisions relating to the outcontracting of activities, monitoring and replacement of meters, maintenance of assets and expansion of the network, is the responsibility of the Managing Director. Similarly any decisions concerning the hiring and firing of staff and the possible promotion or demotion of staff are to be taken by the Managing Director.

Table 10.20: An overview of decentralization of authority within HPWSC

Indicator	Value
What is the purchasing ceiling for procurement of operational departments as a percentage of operational budgets?	No level exists. All procurement requires approval from the Managing Director
Does the hiring of staff members in departments require prior approval from the Managing Director?	Yes
How many layers of management separate the Chief Executive and the entry-level workers?	3 layers
At what level are internal work processes and standards defined?	Management and departmental level
In what areas does field-staff have decision-making powers?	None

Source: Hoang 2004

10.3.3.2 Internal Accountability for Results

HPWSC has created attractive pay scales in comparison to other public utilities operating in Hai Phong and it has connected the 'soft' part of the salary to individual performances. In the production sector, for example, individual performance is measured based on an agreed set of indicators such as chemical and energy consumption, and monthly water production. Achievement of set targets will decide the magnitude of the 'soft' salary. The income of bill collectors is connected to the amount of money collected by these collectors. In HPWSC, the average monthly income of a bill collector is about VND 1.2 million. The average income level of employees of state-owned enterprises in Hai Phong is VND 800,000.

The performance of the employees is evaluated at the departmental level on quarterly basis. The outcomes of these evaluations are sent to the management. The management will consider these evaluations based on the nature of work of each individual.

Table 10.21: An overview of internal accountability for results

Indicator	**Value**
How often does the Chief Executive meet with the Board?	Once every month
Are penalties and rewards applied to the Chief Executive and Directors for achieving specified performance targets?	Penalties and rewards are applied (but not financially)
Are penalties and rewards applied to the staff by the management for achieving specified performance targets?	Rewards and penalties are applied (both non- financially and financially)
Is staff subject to annual evaluations on their functioning?	Yes

10.3.3.3 Market-orientation

The level of outsourcing in HPWSC is rather limited with less than 6% of its operational budget being outcontracted. Part of the explanation may lie in the relatively high staffing levels, which minimizes the potential benefits that outcontracting may have.

Benchmarking is in its infant stages in Vietnam. HPWSC does participate in the national benchmarking exercise, which covers technical, financial and commercial performance. However, the management of HPWSC questions the reliability of the data collected from its peers in the sector Therefore, HPWSC does not use the outcomes of the benchmarking exercise in its strategic or operational policy. HPWSC does make use of benchmarking with foreign water supply companies on an ad hoc basis.

HPWSC has not engaged in market testing exercises.

Table 10.22: An overview of market orientation

Indicator	Value
What is value of contracts outsourced as a percentage of the operational budget?	5.8%
What is the nature of the functions that are outsourced?	Some non-core functions
How often does HPWSC engage in benchmarking exercises?	Once a year
In what areas are benchmarking activities undertaken?	Water quality; service standards; finance and efficiency
Does HPWSC engage in market testing and does it develop internal markets?	No

Source: Hoang 2004

10.3.3.4 Customer-orientation

Opinions of customers concerning performance of HPWSC are reflected through public media such as TV, radio and newspapers. In addition, there are customer officers in ''phuong'' offices and suggestion boxes located in the utility main office. These receive comments from customers on various aspects of water services such as water quality, leakage or accuracy of water meter readings. Customer surveys are normally used to obtain opinions from the customers for new projects e.g. expansion of the network to new areas.

In Hai Phong, public media is quite powerful as HPPC is quite sensitive to the public opinion. TV, radio and newspapers all established hot lines to receive comments from Hai Phong citizens. Those comments related to HPWSC are then transferred to HPWSC for clarification.

The relation between HPWSC and its customers are legalized by standardized water supply contracts. The contract specifies rights and obligations of the customers, and stipulates the compensation to be made by the utility in case of interruption of water supply (although this measure has never been used).

HPWSC has developed a set of Customer Service Indicators, which incorporates measurable indicators for water supply, customer relations and customer development. The utility intends to publish this set of indicators to inform all customers about service standards.

Table 10.23: An overview of customer-orientation

Indicator	Value
In what ways can the bills be paid?	Bill collector; bank transfer; ''ward'' offices
In what ways does HPWSC pro-actively seek the opinions/views of its customers?	Suggestion boxes
What is the menu of options for service delivery that the HPWSC provides?	In-house connections; block connections
In what ways does the HPWSC actively inform its customers about changes related to service provision?	Newspaper advertisements, radio, letters
What is the percentage of complaints that is addressed?	95 %

Source: Hoang 2004

10.3.4 Conclusions

In terms of external autonomy, the HPWSC appears to have considerable autonomy in their day-to-day functioning. The utility does not have much difficulty accessing financial resources, human resources and has enjoyed considerable support from the HPPC for tariff increases over the past decade. The main point of interference appears to be in relation to the hiring of additional staff despite already being overstaffed.

On paper, the HPWSC is strongly accountable to a number of external organizations. In practice, however, this accountability appears to be limited. Although the utility does have to meet specified performance targets, these seem to have been set relatively low, making it relatively easy for the HPWSC to achieve them. In relation to water quality the Hai Phong Preventive Medical Center regulates the HPWSC. However, this agency has no authority to apply any penalties on the utility if the tested samples fail to meet the specified standards. Also no formal customer organizations exist to which HPWSC is accountable.

The level of market-orientation also appears to be low. Less than 6% of the operational budget is outcontracted[201] and the utility does not engage in market testing. Although the utility does partake in annual benchmarking exercises, the management of the utility distrusted the figures submitted by the other utilities, severely limiting the usefulness and impact of the benchmarking exercise.

The level of customer-orientation for the utility is high. With the 'phuong model' each phuong has its own customer services office, where the customers can pay their bills and file complaints. As such, the consumers have easy access to the utility.

The utility remains highly centralized in the sense that many of the decision-making powers remain with the managing director and these decisions are also generally made by the managing director. Only in the field of customer management has authority been decentralized to lower levels in the organization.

The utility has developed a strong level of internal accountability for results by letting the level of the 'soft' salary depend on results achieved by the employees. This 'soft' salary, which can make up two-thirds of the salary for an employee provides a strong incentive to achieve the set results.

10.4 *Servicios de Agua y Drenaje de Monterrey*, Mexico[202]

The state of Nuevo Leon is located in the North of Mexico, on the border with the United States. Although the State counts 51 municipalities, political and economic life in the State is dominated by the city of Monterrey, which state houses 85% of the State's inhabitants. The *Servicios de Agua y Drenaje de Monterrey* (SADM) initially was responsible for providing service only to the Monterrey Metropolitan Area. However, in 1995, its mandate was extended to cover the entire state of Nuevo Leon. In addition to providing water services to the population of Nuevo Leon, the utility was

[201] The current staffing levels also provide little incentive for the utility to try to achieve efficiency gains by way of outcontracting.
[202] The case description of SADM is largely based on Rangel (2005).

attributed storm water management functions in 2000. SADM provides these services to approximately 3.3-3.5 million people.

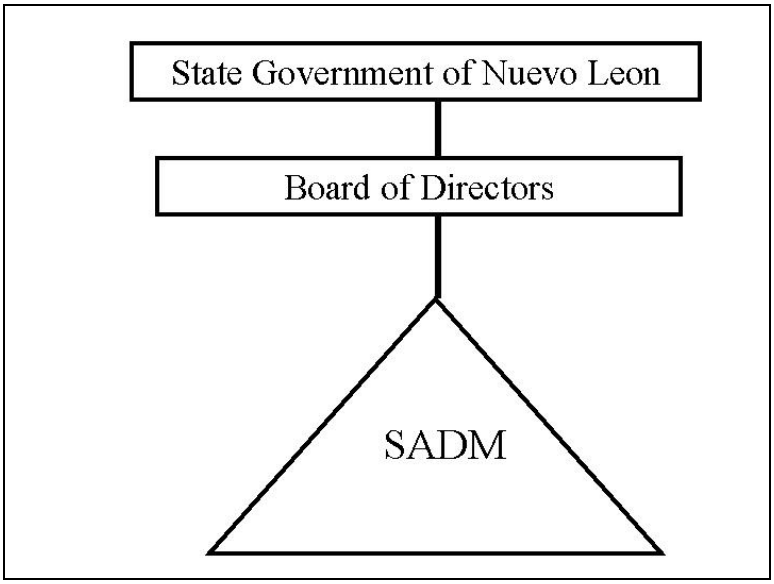


Figure 10.4: Governance structure SADM

SADM is a statutory body, owned by the State of Nuevo Leon. As a statutory body, the utility is monitored by a Board of Directors consisting of 7 members. In addition to being on the Board of Directors himself, the State Governor appoints one other representative of the State Government and one representative of the water users[203]. The other four Directors are appointed by different Stakeholders. One Director represents the municipalities and is appointed by the municipality of Monterrey in which 85% of the population resides. One representative is appointed by the Nuevo Leon Real Estate Owners Chamber, one representative is appointed by the Nuevo Leon Industry Chamber and the final representative is appointed by the regional office of the National Commerce, Services and Tourism Chamber. The terms of the members of the Board vary depending on their appointment. For the members appointed by the State Governor their terms coincide with the 6-year term of the Governor himself, the Board member for the municipalities has a three-year term (coinciding with the terms of the mayors) and the Chambers are able to replace their representatives at any time.

[203] There is no standard procedure by way of which the governor appoints the other two Board members. They typically tend to be “people of the Governor’s confidence” (Rangel 2005)

Table 10.24: General characteristics SADM

Indicator	2003	2002	2001
Population served (in millions):			
Water supply	3.428	3.363	3.327
Wastewater	3.373	3.373	3.263
Water supply connections	853,752		
No of Employees	3,220	3,187	3,082
Unaccounted for water	24.9%	23.5%	27.5%
Working Ratio	0.73	0.73	0.68
Staff per 1000 connections (water supply)	3.77	3.83	3.85
Staff per 1000 population served (water supply)	0.94	0.95	0.93
Service coverage – water supply[204]	99.18%		
Average customer bill water and wastewater	US$10.40		

Source: Rangel 2005

In 2003, the Mexican Commission of Environmental Infrastructure and the National Water Commission undertook a performance assessment of 72 utilities, which served more than 100,000 people. The criteria used for this assessment included, amongst others, indicators on service coverage, wastewater treatment coverage and efficiency of service provision. In the final ranking the SADM was ranked first.

10.4.1 The Degree of Autonomy and Accountability of SADM

10.4.1.1 External Autonomy

The Health Secretariat (SSA) is responsible for setting drinking water quality standards and has done so by way of NOM-127-SSA1-1994. The Environment and Natural Resources Secretariat (SEMARNAT) is responsible for setting standards related to discharge of wastewater. SADM must comply with NOM-001-SERMANAT-1996), which establishes the limits for pollutants in wastewater that is discharged to national water bodies. Although SEMARNAT sets the standards for discharge to national water bodies, the National Water Commission (CNA), which operates under the SEMARNAT umbrella, is responsible for 'managing' of these water bodies, meaning that CNA both grants licenses for abstracting water resources as well as authorizes discharges of wastewater effluents to national water bodies. CNA is also responsible for collecting the payments related to abstraction of resources and discharge of effluents.

Apart from these federal institutional, the Nuevo Leon Water Commission (NLWC) also administers the water sector in the State of Nuevo Leon. The functions of the NLWC include:

- To monitor the provision of water supply and sanitation services in the State;
- To provide advice regarding water projects, policies and tariffs if required;
- To provide advice regarding water concessions (water rights);

[204] Although SADM has the authority to provide water services to the whole state, there are areas where SADM has no infrastructure. In these areas, SADM provides (metered) bulk water to the municipality, which further distributes the water to the local inhabitants (Rangel 2005:86).

- To propose to the state and municipal governments policies, strategies, programs, objectives and standards to optimize the exploitation and use of water in the State.

According to the management of SADM, the utility has not been the subject of large-scale political intervention, as electoral candidates have not used the utility to promote their own image. The management believes that this 'insulation' from political influence is a result of an awareness campaign started in the 1980s, which aims to inform the population about providing water services (and the need for them to pay their water bills). The SADM tries to fill vacancies internally prior to offering these vacancies external candidates. This system of giving preference to internal candidates also acts as a buffer against political interference as politicians have limited means to offer 'supporters' jobs at the SADM.

The appointment of the General Manager does appear to be influenced by political changes as "the General Manager usually changes when the State Governor does" (Rangel 2005:91). The General Manager can be removed by the State Governor at any time the State Governor desires to do so. The General Manager can appoint the other managers in the company without approval from the Board. However, although the General Manager tends to alternate with changes in the State Government, other managers in the organization do not change that frequently, not even when the political party in power changes. This provides a measure of stability to the management team of the utility. According to the management of the utility this is one of the success factors of the utility (Rangel 2005:122).

SADM is not authorized to disconnect domestic consumers who default on their bills. The utility is allowed, however, to reduce the level of service provision by installing valves, which restrict the flow of water. Installation of these valves generally occurs after the consumer in question fails to pay three water bills. The utility can disconnect non-domestic users and does so when the owner of that connection fails to pay his bills.

The human resources manager of SADM indicates that the labor market in Nuevo Leon is mixed. On the one hand, some positions, such as accounts, are relatively easily fulfilled. However, more specialized personnel are difficult to find. In these cases the utility hires staff with the closet possible profile and fills the remaining gaps with training. As the utility is financially autonomous, it has no restrictions on hiring additional personnel apart from budgetary restrictions.

The utility has a good relationship with the labor union. In general the union appears to be open to negotiate modifications in the utility when required. This openness is conditional, however, to the assurances that modifications do not involve retrenchment.

The utility has adequate access to financial resources. It is stated explicitly in the regulations that the utility must be financially self-sufficient by applying cost-recovering tariffs. This also recognized by the management of SADM and the utility depends on tariffs for all its expenses, including financing infrastructure works. In the

past the utility has obtained access to financing from International Lending Agencies[205] and the utility was recently evaluated by Fitch ratings and obtained an AA- rating.

The tariff charged by SADM is automatically adjusted every month using a formula stipulated in the State Water Law of Nuevo Leon. The formula incorporates the inflation of operating costs for the utility (especially electricity and salary costs) and the national inflation index (as reported by the Mexican Central Bank). Adjustments in the tariff based on this formula do not require the approval of any authority. However, the Board has intervened a few times when they considered further increases inappropriate. In 1995, when national inflation levels increased drastically, the Board refused to let that increase translate into large tariff increases. A second example of intervention took place in 2004, when it was proposed that SADM would not apply the monthly tariff increases as long as its surplus finances were healthy enough to absorb the lower real tariff rates. SADM started applying the automatic increases again in December 2004.

SADM uses both groundwater and surface water resources for the production of potable water. Currently, the water availability is enough to provide water services 24 hours per day. However, in the past the utility has faced dry periods, which forced it to reduce the number of hours per day that services were provided. The most recent severe dry period was in 1997.

Table 10.25: An overview of external autonomy

Indicator	**Value**
Who determines the pay scales for the various levels within the utility?	Human Resources Director/General Director
What is the basis for appointing members to the Board of Directors?	State Governor appoints 3 Board members, 4 others are appointed by other stakeholders
Is the utility able to take out loans without prior approval from the owner?	Yes
Is the utility allowed to terminate service delivery to defaulters?	No
Who is responsible for setting tariffs?	The Board of Directors, but approval from the State Governor is required

Source: Rangel 2005

10.4.1.2 External Accountability

The procedure through which the SSA supervises compliance with NOM-127-SSA1-1994 is established in NOM-174-SSA1-1998. The SSA does not closely regulate the water utility. SADM is responsible for collecting and analyzing its own water samples, on which it is then required to report to the SSA. The management of the utility mentions that they analyze water samples according to the stipulated procedure. No penalties are applicable if the utility fails to meet the specified norms[206].

[205] In the early 1990s, it managed to obtain a loan from the Inter-American Development Bank for US$180 million

[206] Although the failure to meet the set standards is not subject to penalties, penalties can be imposed for other reasons such as ‘damaging the health of the population’.

SADM has obtained licenses for discharging its treated wastewater on national water bodies and reports to the CNA every three months regarding the quality of its wastewater effluents and the abstraction of water resources.

Although the Nuevo Leon State Water Law assigns the NLWC the responsibility of proposing standards applicable to water supply and sanitation services, it has, to date, not issued any standards.

The State Government has not set any performance targets that the SADM has to meet. The State Government can supervise the functioning of the utility through its involvement in the Board of Directors. The State Government has also not established any penalties or rewards for meeting any levels of performance.

The SADM is repaying the loan acquired from the IDB in the early 1990s, and during the first years of that loan, SADM had to present its income statement, external auditor reports, and operation and maintenance reports. If, at that time, SADM would have failed to present the required reports, the loan could have been cancelled. However, SADM has not failed to meet the requirements and at current SADM does no longer have detailed reporting requirements to the IDB.

Although SADM does not have any reporting requirements to the agencies with which it has outstanding loans, the utility, being a State Enterprise, is required to report to the State Comptroller. The State Comptroller audits the utility finances and verifies that the utility has used the financial resources in accordance with the applicable fiscal and financial regulations.

There is not a formal organization in Nuevo Leon representing the consumers of the services of SADM. Although an organization for monitoring the provision of public services exists, this organization focuses more on transportation issues.

Table 10.26: An overview of external accountability for results

Indicator	**Value**
Does the utility have a customer charter, which specifies performance targets and are there any financial penalties for non-performance?	No
Does the utility have to meet specified performance targets set by or agreed upon with the owners?	No
Is an annual report produced, which is audited by an external accountant?	Yes
Are external groups represented in advisory or management oversight bodies of SADM?	Yes
Has the utility secured loans in the commercial market on its own credentials/ability?	Yes
Does the utility participate in some form of credit rating scheme?	Yes
Does the lender impose financial covenants on the SADM?	No

Source: Rangel 2005

10.4.2 Hierarchy and Levels, the Market and Customers

10.4.2.1 Decentralization of authority within SADM

In the field of financial management, most of the decisions are made by the management of the company but requires approval of the Board of Directors (and as such also with the owner). Changes in tariff structures are proposed by the Finance

Department in consultation with the general manager and are then submitted to the Board of Directors for approval. In case a loan is required, the general manager presents a proposal, based on information provided by the Finance Department, for the loan to the Board. The Board has to approve the proposal before the utility can apply for the loan.

Decisions in the Operations Department are generally taken by managers in the Department and then communicated to the Head of the Operations Department for approval. If the decision has a major impact on the provision of services, however, such as service interruptions in large areas or for long periods of time, the decisions are made by the Head of the Operations Department in consultation with the General Manager. The procedures to be followed by the managers and employees within the Operations Department are also determined by the Head of that Department. Superintendents, who are one level below the managers in the Operations Department, take day-to-day decisions.

In case new staff needs to be hired, prior approval of the General Director is required. The General Manager, the Human resources Manager and the Financial Department review all new employees. In case an employee is fired, approval from the Head of the Department in which that person is working is required.

Decisions regarding the reduction of water services to customers who have defaulted on their bills are taken automatically by the computer system used for billing and collection. This computer generates a message, which is sent to the Head Office of SADM. From there a message is passed on to the Regional Office for the region in which the premises of the defaulting customer is located. Staff of the Regional Office then installs the valves for reducing the water flow. This process will take between 24 hours to 3 days.

Communication and education campaigns are prepared in the relevant Department within the utility. However, prior to being implemented these campaigns require approval of the Head of the Administrative Department, the General Manager and in some cases the Communications Department of the State Government.

Table 10.27: Key indicators on decentralization of authority within the utility

Indicator	**Value**
What is the purchasing ceiling for procurement of operational departments as a percentage of operational budgets?	Depends on the amount. Direct procurement can be done up to an amount of US$ 1,782
Does the hiring of staff members in departments require prior approval from the Managing Director?	Yes
How many layers of management separate the Chief Executive and the entry-level workers?	n.a.
At what level are internal work processes and standards defined?	Management and Department level
In what areas does field-staff have decision-making powers?	Maintenance, customer service

Source: Rangel 2005

10.4.2.2 Internal Accountability for Results

There are no real accountability mechanisms between the owners, the State Government, and the Board of Directors. Such a mechanism would also seem to be a bit superfluous as the State Government has a very strong representation on the Board with three out of seven representatives being appointed by the State Government. As such, the State Government has not imposed performance targets on the Board of Directors.

There are monthly meetings involving the Board of Directors and the General Manager of the utility. During these meetings the General Manager presents the financial and operational status of the utility and these discussed during the meeting. The Board of Directive has, however, not set a series of clear and measurable targets that must be achieved by the utility. The Board also has no means to reward the General Manager should the utility show outstanding performance.

The evaluation of employees is not subject to a standard one-size-fits-all system. Moreover, the utility does not have a strict results-based evaluation system or a process-based evaluation system. Rather, the nature of evaluation depends on the position of the employee. Employees working in operational positions are required to strictly follow the work procedures and instructions that they are given. Employees working in operational positions can be rewarded by providing them the opportunity to work extra shifts, and in doing so increase their income.

Employees in managerial positions have more room for making decisions and are also evaluated differently. Employees in managerial positions are evaluated more on the results that their sections or Departments produce. Although no performance contracts exist within the utility, each Department and section do have performance indicators (such as electricity use, chemicals use, trained employees per year, etc.), which are monitored to evaluate the performance of the utility's managers. The managers are furthermore evaluated by their superior every year. The performance evaluation by the superior determines the bonus (of up to one month's salary) that the employee may receive. The evaluation of managerial staff is based on performance, responsibility, productivity and willingness to work overtime (which is not paid).

Table 10.28: An overview of internal accountability for results

Indicator	**Value**
How often does the Chief Executive meet with the Board?	Monthly
Are penalties and rewards applied to the General Manager for achieving specified performance targets?	No
Are penalties and rewards applied to the staff by the management for achieving specified performance targets?	Yes
Is staff subject to annual evaluations on their functioning?	Yes

Source: Rangel 2005

10.4.2.3 Market-orientation

In percentages of the operational budget, the SADM outcontracts relatively little. The utility tends to use outcontracting mostly for specialized activities although it does try

to keep sufficient capacity in-house in cases of an emergency. The way in which the utility outcontracts depends on the value of the contract.

SADM performs some benchmarking activities in order to compare itself with other national and international utilities. The benchmarking exercises are generally metric benchmarking exercises. In the past it has been difficult to undertake these exercises with other Mexican utilities, due to the fact that the utilities were either not comparable or essential data for the benchmarking study was missing. SADM usually starts a benchmark study when it receives complaints regarding an aspect of service delivery. As such, it uses benchmarking to address complaints concerning the tariff levels in Nuevo Leon in comparison with other states in Mexico.

The utility has not developed any internal competition between departments

Table 10.29: An overview of market orientation

Indicator	**Value**
What is value of contracts outsourced as a percentage of the operational budget?	<10%
What is the nature of the functions that are outsourced?	Specialized activities only (welding, excavation, construction)
How often does SADM engage in benchmarking exercises?	Not periodically
In what areas are benchmarking activities undertaken?	Equipment/technology, overall performance
Does SADM develop internal markets?	No

Source: Rangel 2005

10.4.2.4 Customer-orientation

SADM is fully dependent on its customers for its finances. In order to ensure that its customers would continue to provide sufficient revenue SADM has developed a very strong customer orientation. Every year, the utility undertakes a survey to measure the level of satisfaction of its customers and to receive feedback about the services they provide. In addition SADM has suggestion boxes in all offices where customers may be in order to receive comments and suggestions from its consumers.

Any employee of the utility that comes in contact with customers is trained in customer management. Training courses include client management techniques that allow the employee to treat the customer "with kindness and courtesy" (Rangel 2005:111).

The utility also proactively informs the customers about developments concerning the provision of water services. Apart from several for a provided by various types of media (such as a weekly one-hour radio program in which customer complaints and suggestions are addressed[207]), SADM has an up to date website, which information about the company, an overview of performance of the company and a possibility to contact the company to send comments and complaints. In addition to these activities, the utility also organizes educational and public relations campaigns including an annual summer program to reinforce water awareness during the dry period of the year.

[207] In this weekly radio program inhabitants of Nuevo Leon can phone the radio program and express their complaints and suggestions on the air.

Also SADM has entered into agreements with supermarkets, pizza stores, and other store chains to include messages related to water saving measures and SADM in general on their packaging material.

The customers also officially have a representative on the Board of Directors. However, the State Governor appoints this representative and it is uncertain how independent this representative is.

Complaints and survey results are organized by specific topics. SADM then designates working groups to determine if a specific topic about which complaints have arrived requires SADM to develop and implement a project in order to address the complaints or if the topic can be addressed in another way. As such, SADM uses the complaints as a means for identifying potential projects and actions that allow the utility to serve its customers better. For example, following received comments and complaints the Human Resources and Commercial Department started scheduling holiday periods for the employees in a stepped way in order to avoid having the customer counters understaffed (and thus reduce waiting times which is the main complaints the company receives). Another way for addressing this complaint was by making arrangements for the customer to pay in a variety of locations such as convenience stores, supermarkets, banks and even through the internet by way of a credit card.

Table 10.30: An overview of customer-orientation

Indicator	**Value**
In what ways can the bills be paid?	At SADM offices, convenience stores, supermarkets, through internet, banks
In what ways does SADM pro-actively seek the opinions/views of its customers?	Through suggestions boxes, a radio-program, annual survey, internet.
What is the menu of options for service delivery that the SADM provides?	In-house connections, bulk water delivery to some municipalities
In what ways does the SADM actively inform its customers about changes related to service provision?	Newspaper advertisements, radio, and leaflets
What is the percentage of complaints that is addressed?	All complaints are addressed within 3 days

Source: Rangel 2005

10.4.3 Conclusion

The SADM appears to enjoy considerable autonomy. The management believes the utility is 'insulated' from political influences by both institutional measures (4 of 7 Directors of the Board are appointed by other parties than the State Government, a preference for filling vacancies internally) as well as cultural characteristics strong consumer awareness, history of limited political intervention). In some ways this insulation also is apparent. Despite the General Manager changing with changes in the State Government, the rest of the managerial staff is relatively stable. With automatic tariff increases based on two inflation indices, the utility also does not have annual struggles for support with the State Government. However, one question that remains is

if this insulation will remain in existence in the future if the State Governor were really to push for increasing his influence over the utility.

Although some difficulties exist with respect to access to suitable human resources and water resource, these are not difficulties that threaten the good performance of SADM in the short run. SADM's impressive track record, and an AA- credit rating, means that access to financial resources is not a real problem for SADM.

On paper, the SADM appears to have considerable accountability to a number of external organizations. These organizations include the State Government Comptroller, the National Water Commission and the Ministry of Health. Accountability between the utility and the owner seems to have been arranged through the Board of Directors in which the Owner is strongly represented.

The level of market-orientation appears to be quite low. Outcontracting levels are well below 10% and the utility appears to specifically focus on outcontracting certain specialized activities. This means the utility does not primarily use outcontracting as tool to increase efficiency by creating competition between suppliers. Although the utility does undertake sporadic benchmarking exercises, the use of these exercises appears to be more ad-hoc in nature. Also, the main reasons for initiating these exercises does not appear to be a comparison with other utilities with the aim of increasing efficiency and performance, but rather to address customer complaints.

SADM's focus on customer-orientation is very high. The utility is fully dependent on the tariffs it charges to its customers for financing its operations and its investments. In addition, the utility goes to great lengths to seek its customer's opinions and to address any complaints and suggestions they receive. The utility also invests in training staff that deals with customers during their work.

The utility remains quite centralized in the sense that many of the decision-making powers remain with the general manager and the Heads of the various Departments in the organization. Illustrative are the hiring procedures, which require the General Manager to review any new recruits.

The utility has developed a level of internal accountability for results by introducing incentives for both employees with operational positions as performance-based bonuses for staff in managerial positions. At the same time, although monthly meetings occur between the Board of Directors and the General Manager of SADM, the management is not subject to any performance targets.

11 Annex 3: Guidelines for Data Collection

11.1 Establishing the Degree of Autonomy and Accountability of the Utilities

11.1.1 Policy Formulation

- Which organization is responsible for setting quality standards for water supply and waste water treatment?
- What are the standards for water supply and wastewater treatment with which the utility must comply?
- Which organization is responsible for setting service standards to which the utility must adhere?
- What service standards are specified?
- Which organization is responsible for the permits concerning the use of water resources?
- Which organization is responsible for determining the institutional set-up of the water supply and sanitation sector?

11.1.2 Regulation

Regulation, as it is used here, in essence relates to enforcing regulations that have been formulated by the organizations responsible for policy formulation

- What organization is responsible for ensuring that the utility meets the standards for water supply and wastewater treatment that have been set?
- Does the organization do its job?
- What organization is responsible for ensuring that the service standards for provision of services have been met?
- Does the organization do its job?
- Which organization is responsible for economic regulation (tariffs) of the utility?
- Does the organization do its job?
- How often do the regulator and the utility meet?

11.1.3 The Legal Authority of the Utility

- Description of the legal status of the utility (what type of organization is the utility?)
- Which type is the utility in terms of taxonomy?
- Which organization owns the utility?
- What is the general governance structure of the utility as specified by laws and statutes?
  - What is the mandate of the Board?
  - How are decisions taken within the Board?

  - What is the basis for selection of the Board Members?
- What are the responsibilities of the utility and to what criteria must the utility adhere (for example financial self-sustainability) as defined by law and statutes?

11.1.4 Political Commitment and Support

- What is the nature of political support and commitment to the utility?
  - Description of the working relationship between the political environment and the utility;
  - Is the Managing Director appointed based on political affiliation?
  - Is the utility allowed to terminate service provision to defaulters?
  - How strong is the influence of the Union?
  - Has the utility received political support for the increase of tariffs over the past years?

11.1.5 Resources

- What is the condition of the labor market?
  - is it possible to attract qualified staff to the utility?
  - Can the utility determine its own pay scales?
  - does the utility face any constraints or obligations on the recruitment of staff?
- What is the availability and quality of natural resources required for providing water and sanitation services?
- From what sources does the utility have access to financial resources?
  - Is the availability of financial resources sufficient?
  - What is the bond rating/credit rating of the utility?
  - What is the proportion of funds coming from: loans, 'grants', 'subsidies', and internal cash?

Key Performance Measures: External Autonomy
1. Who determines the pay-scales for the various levels within the utility? (General managers, Managing Director, Board of Directors, Owner, Government)What is the basis for appointing members to the Board of Directors? (political representatives, representatives of the community, (sector) professionals, other) 2. Is the utility able to take out loans without prior approval from the owner? (yes, until a certain amount, no) 3. Is the utility allowed to terminate service delivery to defaulters? (yes, no) 4. Who is responsible for setting tariffs? (Managing Director, Board of Directors, Owner, Regulator/Government) 5. Does the utility follow public sector procurement rules (yes, no)

11.1.6 Accountability for Results

11.1.6.1 Performance Targets

The questions below, relate to performance targets in relation to the effectiveness as well as the efficiency of service provision.

- Do a set of clear and measurable performance targets exist for the quality of drinking water?
- If so, is there a transparent, adequate and agreed upon system for measuring achievement of these targets?
- Is the system used?
- Do a set of clear and measurable performance targets exist for the treatment of wastewater?
- If so, is there a transparent, adequate and agreed upon system for measuring achievement of these targets?
- Do a set of clear and measurable performance targets exist for the services provided?
- If so, is there a transparent, adequate and agreed upon system for measuring achievement of these targets?
- Do a set of clear and measurable financial performance targets exist for the functioning of the utility?
- If so, is there a transparent, adequate and agreed upon system for measuring achievement of these targets?
- Are the set performance targets realistic and achievable?

11.1.6.2 Accountability to Owner

What are the reporting requirements that the utility must adhere to?

- How often do the owners meet with the management oversight agency?
- Do the owners provide clear and measurable targets that must be achieved by the utility?
- What are the measures that the owners can take if performance is not in line with the expected and agreed upon performance targets?
- Have these measures ever been used?

11.1.6.3 Accountability to Regulator

11.1.6.3.1 Quality

- What is the procedure (reporting requirements, etc.) that is used to regulate the utility's achievement of the specified standards for water supply and wastewater treatment?
- What are the measures (penalties and rewards) that this organization has to ensure that the utility complies with these standards?
- To what extent has the regulator applied these measures to the utility?
- Are the reports publicly accessible?

11.1.6.3.2 Service Standards

- What is the procedure (reporting requirements, etc.) that is used to regulate the utility's achievement of the specified service standards?
- What are the measures (penalties and rewards) that this organization has to ensure that the utility complies with these standards?
- To what extent has the regulator applied these measures to the utility?
- Are the reports publicly accessible?

11.1.6.3.3 Tariffs

- What is the procedure used for establishing tariffs of the utility (i.e. tariff setting procedures)?

11.1.6.4 Investment requirements

- Is the utility subject to minimum investment requirements?
- If so, what are these requirements and what is the procedure in which these requirements are determined?
- What are the measures that can be taken to ensure that the utility complies with these standards?
- To what extent have these measures been applied?

11.1.6.5 Accountability to Financial Institutions

- What are the reporting requirements that the utility must adhere to in order to satisfy the institutions that have provided loans or grants to the utility?
- What are the measures that the financial institutions can take when the utility has not met these requirements?
- To what extent has the application of such measures occurred?
- Does the lender impose financial covenants on the utility?
- If so, which?

11.1.6.6 Accountability to Customer Organizations

- Is there a formal customer organization, which represents the interests of the consumers?
- If so, what are the powers of this organization?
- To what extent are these powers used?
- Are customers in any other (formal) way involved in the functioning of the utility?
- Does the utility publicly report on its performance?
- Are customer organizations represented on the Board?
- Is there a customer charter in which the rights and obligations of the customers are explicitly mentioned?

11.1.6.7 Accountability to Non-governmental Special Interest Groups

- Are there any non-governmental special interest groups, which have involved themselves with the functioning of the utility?
- What has been the nature of their involvement?
- Has the utility been subject of many media reports?
- If so, what has been the nature of these media reports?

Key Performance Measures: External Accountability
1. Does the utility have a customer charter which specifies performance targets and are there any financial penalties for non-performance? (yes, yes but without specified targets/financial penalties, no) 2. Does the utility have to meet specified performance targets set by or agreed upon with the owners? (yes, no) 3. Is an annual report produced which is audited by an external accountant? (yes, yes but not audited, no) 4. Are external groups represented in advisory or management oversight bodies of the utility? (NGO's, customer groups, government, financing institutions, owners) 5. Has the utility secured loans in the commercial market on its own credentials/ability? (yes, no) 6. Does the utility participate in some credit rating scheme? (yes, no) 7. Does the lender impose financial covenants on the utility? (yes, no)

11.2 Hierarchy and Levels, the Market and Customers

11.2.1 Corporate Culture

Aspects of this dimension that should be described in each of the case studies include:

- History of the utility;
- Organizational chart;
- Description of the functional differentiation within the organization and the deployment of staff over the different functions;
- Broad responsibilities of the departments in the utility;
- What are the mission and vision of the utility? Is this mission and vision well known by the employees?
- Are there any mechanisms for information sharing between departments?
- Does the utility invest in the training of its staff?
- What are the factors influencing promotion and/or salary adjustment?
- What are the mechanisms by way of which information is shared between management and the departments?
- What is rate of absenteeism?

- What is the annual staff turnover per year? What are the main reasons for staff turnover?

Key Performance Measures: Corporate Culture
1. Factors influencing promotion and/or salary adjustment decisions? (longevity, performance review, certification, meeting performance targets, collective bargaining, other) 2. Annual staff turnover (as a percentage of total staff)? 3. What are the training costs per year as a percentage of operational budget? (%) 4. Is the staff informed about meetings of management? (yes, partially, no) 5. What is the ratio of support/technical staff to management? (x:y) 6. Is the mission statement internally visible in the utility (yes, no)

11.2.2 Market orientation

- The use of outcontracting of tasks and responsibilities in service provision
    - What is the degree of outcontracting (number of contracts and % of operational budget)?
    - What is the nature of the services and tasks that are outcontracted and what is the nature of these outcontracting arrangements?
    - What are the processes by which services are outcontracted (are there multiple procedures or one standard one, etc.)?
    - What is the company philosophy towards outcontracting?
- The use of bench-marking in the utility
    - Does the utility partake in bench-marking exercises?
    - What areas do these bench-marking exercises cover?
    - What is the nature of these exercises?
    - What is the frequency of these bench-marking exercises?
    - Are the outcomes of these bench-marking exercises translated into strategic and operational policy?
    - What is the company philosophy towards benchmarking?

Key Performance Measures: Market-orientation
1. What is value of contracts outsourced as a percentage of the operational budget? 2. What is the nature of the functions that are outsourced? (non-core functions, billing/collections, treatment operations, works, engineering design, other) 3. How often does the utility engage in bench-marking exercises? (never, once a year, once every two years, once every three years, other) 4. In what areas are bench-marking activities undertaken? (water quality, service, environment, finance and efficiency, other) 5. Does the utility engage in market testing and does it develop internal markets? (yes to both, only market testing, only internal markets, neither)

11.2.3 Customer-orientation

To assess to what extent a utility has adopted a customer-orientation the following aspects are to be investigated:

- To what extent is the utility dependent on its customers for financing?
- Are any instruments/practices employed to establish what the opinions of the customers are concerning the functioning of the utility? (for example, customer surveys, customer councils, focus groups, customer interviews, etc.)
- How are these results incorporated in the operation of the utility?
- Are any instruments in place which arrange for 'rights' of the customers? (for example, customer charters, customer contracts, etc.)
- Do these arrangements also incorporate compensation payments in case the utility fails to meet its responsibilities?
- Are any instruments/practices in place to train employees of the utility in dealing with customers? (customer service training)
- What are the ways in which customers can get access to the utility? (phone, in person, internet, etc.)
- To what extent are customers involved in decision making in the utility? (suggestion boxes, customer councils, etc.)
- What has been the number and nature of complaints over the past years?
- What percentage of these complaints has been successfully addressed?
- Has the number increased or decreased?
- Has the nature of the complaints changed?
- How does the utility use the information generated by the complaints?
- Does the utility organize town hall type meetings for their customers? How often, on which subjects?
- Does the utility perform customer surveys?
- How does the utility reports its performance to its customers.

Key Performance Measures: Customer-orientation
1. In what ways can the bills be paid? (bank, bill collector, shops, bank transfer, other)
2. In what ways does the utility pro-actively seek the opinions/views of the customers? (customer survey, customer councils, focus groups, suggestion boxes, other)
3. What is the menu of options for service delivery that the utility provides? (in-house connection, block connection, public standpost, other)
4. In what ways does the utility actively inform the customer about changes related to service provision? (flyer, internet, newspaper advertisements, radio, letter, other)
5. What is the percentage of complaints that is addressed?
6. What is the average response time to complaints?
7. Does the utility perform customer surveys?

11.2.4 Decentralization of responsibilities within the utility

To assess to what degree the decision-making responsibilities have been decentralized within the utility four broad categories have been selected: financial management, operations management, human resources management and customer management. The idea is to establish at what level in the utility the decisions in each category are made.

11.2.4.1 Financial Management

The case study should document (if applicable) at what level within the utility decisions are made about:

- The billing and collection for services
- The determination of the tariff structure
- The setting of water tariffs and connection fees
- The entering of loan agreements (decisions about capital sourcing)
- The appointment of an external auditor

11.2.4.2 Operations Management

Operations and Maintenance of the facilities for service provision are key activities for every service provider. The case study should provide information about the level at which decisions are made with respect to:

- The procurement of goods and services
- The procurement of assets
- The definition of internal work processes and standards
- The outcontracting of activities
- Rehabilitation of the existing network and facilities
- Expansion of the network
- Maintenance of assets
- The monitoring and replacement of meters
- The strategy for reducing unaccounted for water
- Increasing energy efficiency

11.2.4.3 Human Resources Management

In the category of human resources management, information regarding the level at which the following decisions are made should be included:

- The hiring and firing of individual staff members
- The promotion and demotion of individual staff members
- The determining of the salary and incentive structure of employees
- The hiring and firing of the Managing Director

11.2.4.4 Customer Management

The case study should indicate at what level decisions are made relating to:

- The termination of service provision to defaulters
- The way in which customer complaints are dealt with
- Educational and PR campaigns
- Establishing the alternative ways in which bills can be paid

Key Performance Measures: Decentralization of authority

1. What is the purchase ceiling for procurement of operational department(s) as a percentage of operational budget?
2. Does the hiring of staff members in departments require prior approval from the managing director? (yes, for some positions, no)
3. How many layers of management separate the utility director and the entry level worker?
4. At what level are internal work processes and standards defined? (management level, management and department level, department level)
5. In what areas does field-staff have decision-making powers? (none, billing/collection, disconnection, maintenance, customer services, other)

11.2.5 Accountability for Results

Assessing the internal accountability for results will be done by investigating two 'accountability relationships'. These are the relationship between the service provider and the management oversight agency and accountability within the service provider.

11.2.5.1 Between the Management Oversight Agency and the Service Provider

- What are the reporting requirements that the service provider must adhere to?
- Does the managing director of the service provider sit on the management oversight board (as an observer or a member)?
- How often do the Management oversight agency and the management of the service provider meet?
- How often does the management oversight board meet?
- Does the management oversight agency provide clear and measurable targets that must be achieved by the service provider?
- What are possible measures that the Management oversight agency can take when the service provider does not achieve the agreed upon performance targets?
- Have these measures ever been used?
- Can the Management Oversight Agency reward the Management of the Service providers for achieving performance targets?
- If so, how and how frequently are these rewards used?

11.2.5.2 Within the Service Provider

- How is the performance in the utility measured?
- How is the performance of the employees evaluated?
- To what extent are the accountability mechanisms based on procedural accountability and to what extent on the achievement of performance targets?
- Does the utility use (internal) performance contracts? (either personnel contracts or contracts between departments)
- If performance is evaluated against set performance targets, what measures are available to punish or reward the employee with failing to achieve or succeeding to achieve the performance targets?
- How does that system of penalties and rewards work?
- How often are penalties imposed?
- How often are rewards imposed?

Key Performance Measures: Internal Accountability for Results
1. How often does the managing director meet with the Board? (once every two weeks, once every month, once every two months, once every 6 months, other)
2. Are penalties and rewards applied to the Managing Director/Executive Directors by the Board of Directors for achieving specified performance targets? (no performance targets exist, performance targets exist but no rewards and penalties are applied, only rewards are applied, rewards and penalties are applied)
3. Are penalties and rewards applied to the staff by the management for achieving specified performance targets? (no performance targets exist, performance targets exist but no rewards and penalties are applied, only rewards are applied, rewards and penalties are applied)
4. Staff is subject to annual evaluations on their functioning in the utility? (yes, no)

12 Annex 4: Overview of Interviews in the State of Guanajuato

General

Name	Organization	Position
Ricardo Sandoval	CEAG	Director
Raul Silva	CEAG	Water Supply and Sanitation
Victor Lara	Independent Consultant	Consultant

CMAPADH

Name	Area
Javier Carrizo	Managing director
Dario Romero	Treasurer
Graciela Gonzalez	Human Resources
Margarita Rangel	Computing
Alma Angelica Mtz.	Accountant
Francisco Alvarado	Technical Department
Carmen Rodriguez	Contracts

SIMAPAG

Name	Area
Ruben Rodriguez	President Board of Directors
Marco Antonio Ortiz	Managing Director
Alejandro Torres	Commercial Department
Hugo Mendez	Wastewater
Arturo Magaña	Public Relations
Andres Balderas	Water Supply
Jose Luis	Administration
Silvia Gutierrez Lara	Institutional Development

SMAPAM

Name	Position
Abel Ortega	President Board of Directors
Jesus Esquipulas	Managing Director and Technical Department
Sandra Ramirez	Accounting
Maribel Oseguera	Billing
Martin Ibarra	Pumping
Margarita Calderon	Customer Management

SAPAF

Name	**Area**
Nemecio Armenta	Managing Director
Jose Luis Chagoya	Accounting
Isaias Martinez	Municipality
Sergio Mendez	President Board of Directors
Jose Luz Chavez	Commercial Department

SAPAM

Name	**Area**
Luis Manuel Flores	Incoming Director
Juan Ramirez	Former Director
Sergio Rivera	Administrative Coordinator
Efrain Orozco	Social communication
Marcelina Arredonde	Commercial Department
Juvenal Barron	Technical Coordinator
Martin Donovan Contreras	Customer council

Summary

Despite strong encouragement of many international financing and development agencies to stimulate private sector involvement in the water supply and sanitation sector, the overwhelming majority of water supply and sanitation services are still provided by public sector organizations in most middle- and low-income countries. In many low and middle-income countries, however, public water utilities are not providing adequate water supply and sanitation services to its consumers. The consequences of poor service provision in terms of health and financial costs to especially the low-income households are enormous. At the same time, the disappointing experiences with private sector involvement in the water supply and sanitation sector have lead to the acknowledgement that the overwhelming majority of people will continue to be serviced by public water utilities for many years to come.

In response to the poor performance of many public water utilities, the implementation of New Public Management (NPM) reforms has been promoted heavily by international agencies and sector professionals. The New Public Management, which has its roots in Managerialism and Public Choice theory, originated in New Zealand and the United Kingdom in the early 1980s. Since then, it has become something of a generic term to describe a market-oriented and output-based management model with an increased emphasis on user-orientation, most-commonly by 'business' style measures. Although the actual effectiveness of NPM reforms for developing countries has been questioned and empirical evidence for the impact of the New Public Management in the water supply and sanitation sector remains rather thin, a considerable number of authors contend that it is proving to have a significant impact on improving service provision of public water utilities. The present study examines the potential of reforms associated with the New Public Management and contrasts these reforms with reforms associated with the bureaucratic model of public administration, the so-called Weberian reforms. The main research questions that underlie this thesis are:

- Do urban public water utilities in low- and middle-income countries perform better because they adhere to the New Public Management?
- Do poorly performing urban public water utilities adhere to the traditional 'bureaucratic' model of public management?

Introductory Chapters: Two introductory chapters (chapter two and chapter three) orient the reader to the main theme of this study. The first of these chapters serves to introduce issues in the management of water services which are important to highlight in order to understand the research. Issues examined in this chapter include the organization of water services, the factors underlying the organization of water services, the prevalence of public water utilities and the way in which performance of a water utility can be measured. The second introductory chapter contains an introduction to two models of public management (the bureaucratic model and the New Public Management) which feature prominently in this study. The bureaucratic model is

largely based on Weber's ideal-type bureaucracy. The New Public Management is defined by comparing the definitions provided by a number of authoritative authors. For both models, existing criticism of the model is also elaborated upon. On the basis of the discussions in the introductory chapters the two main hypotheses were translated into 12 propositions, which were subsequently tested in the case studies selected for this study. Six proposition linked good performance to the New Public Management model. Six other propositions linked poor performance to the 'traditional' bureaucratic model of management.

Research Methodology: The research methodology underlying this study is based on case study research of two clusters of case studies. The first cluster concerns five municipal water utilities in the State of Guanajuato, Mexico. As the main hypotheses both revolve around the issue of performance and management models, the five case studies that were selected in the State of Guanajuato had to show varying performance. The idea being that this variation in performance could then be explained by a different pattern of adherence to one of the public management models, as the propositions would suggest. The second cluster of case studies concerns two cases from Latin America, one from Africa and one from Asia. What makes these cases interesting is that all these cases are viewed and promoted as examples of well performing public water utilities. The main purpose of researching these cases is to check if the findings from the five cases in Guanajuato are corroborated by evidence from these four cases.

Findings from the Case Studies in Guanajuato:
Proposition 1, which reads that well performing public utilities have a large degree of external autonomy has not been not falsified by the research findings in Guanajuato. Of specific importance in explaining performance of a utility appears to be the degree of financial autonomy that a utility enjoys.

Proposition 2 stipulates that a well performing utility is strongly accountable for results to external organizations. In the understanding that individual customers do not represent external organizations and in light of the fact that the utilities were not subject to meeting specified results, this proposition is falsified.

The level of market-orientation was low for all organizations, be they poorly performing or well performing. As such, the proposition (number 3) that a well performing utility has a strong market-orientation is not supported by the findings from the cases.

The best performing utility was, by far, the most customer-oriented of the utilities. As the chairman of the *Consejo* of that utility explained in 2003, the reason why the strong customer orientation was developed is because the customers have become more demanding as a result of the relatively high tariffs the utility charges. These observations lead to the conclusion that proposition number 4, which states that well performing utilities have a high level of customer orientation has not been falsified.

In all researched cases the employees working in the public utilities operated within and according to the limits set by the established procedures. Making decisions was largely limited to applying the exiting procedure for a specific decision. If the issue to be decided upon concerned something not covered by existing procedures and policies, the matter would need to be referred to the superiors of the employee. As such,

proposition 5, which suggests that a well performing utility has a strong decentralization, is falsified.

Although the best performing utility was more advanced in developing and implementing (internal) accountability mechanisms, these mechanisms did as of yet not hold the employees, be they management employees or not, accountable for results. Both the evaluation of management employees as well as non-management employees was relatively subjective. In the understanding that the existing accountability systems did not hold the employees accountable for results, no evidence was found in the cases to support proposition 6, which finds that well performing public utilities have a strong accountability for results within the organization.

Proposition 7, which states that poorly performing utilities are 'apolitical' has been falsified. In the case of Guanajuato, all poorly performing utilities proved to be highly politicized.

Proposition 8 puts forward that poorly performing utilities are characterized by hierarchal levels and organized on a rule-governed basis. When analyzing the poorly performing cases, all cases were indeed characterized by hierarchical levels in which lower offices were subordinate to higher offices. As such, the proposition as stated is not falsified.

Little evidence was found to support proposition 9, which proposes that poorly performing utilities are characterized by permanence and stability. Three out of the four poorly performing utilities in Guanajuato were relatively unstable organizations with frequent changes in the management of the utility. The well performing utility, on the other hand was relatively stable in the 1995-2003 period.

Proposition 10 turned out to be one of the more problematic propositions as it stated that poorly performing utilities operate following internal regulations. On the one hand, this proposition has been falsified as findings indicate that the regulations on paper are not necessarily enacted in practice (as, for example, the appointment of the *Consejo* shows). On the other hand, at lower levels within the organization, the regulations are more strictly adhered to. These regulations basically form the guideline for the employees and these generally follow these regulations. As such, if the proposition had been limited to lower levels within the organization, the proposition would not have been not falsified. Within the context of this research, however, the proposition, which is assumed to cover the entire organization, is considered falsified.

In terms of the remuneration of employees the research found that poorly functioning utilities indeed mainly remunerated the employees according to a fixed salary. Although a few schemes for bonuses were established, remuneration overwhelmingly follows fixed salaries or the bonus schemes were such that they were de facto part of the fixed salaries. This means that proposition 11 has not been falsified.

In terms of vocation, it was found that the main reasons why the poorly performing public utilities were attractive employers was their favorable working hours and the promise of job security, which was especially valued in the more industrialized towns, which were experiencing the stress of global competition in their industries. As such, little support could be found for proposition 12.

Findings from the Four Well-performing Utilities:

The findings from previous cluster of cases are largely supported by the findings from the four well performing utilities. However, some qualifications regarding this broad conclusion should be made. Although the proposition regarding external autonomy has not been falsified, this conclusion is subject to some comments. The concept of (external) autonomy as used in this research is composed of a few dimensions and some dimensions appear to be more important than others. Most important appear to be financial autonomy of the utility and stability in the management of the utility (which can be interpreted as a reflection of political support for the management of the utility). Also, all 'well performing' utilities were able to attract qualified staff to work for the utility. This indicates that both in terms of financial resources and human resources these utilities had considerable capacity for providing water services. Dimensions of autonomy that seemed less important relate to the availability of water resources and the role played by regulatory agencies.

Well performing public utilities do appear to have a strong accountability to the government-owners who remain firmly in control of the utility. However, this control does not incorporate the use of performance targets to hold the management of the utility accountable for results produced. Moreover, accountability to regulatory agencies (who have never imposed sanctions), to customer agencies and to NGOs appears to be very limited. The only real accountability for results found was accountability to financial institutions that have lent or granted money to the utility. In the well performing cases these institutions often did impose performance targets.

The reasoning behind the conclusion that well performing utilities have not decentralized authority for decision-making is that in many areas, such as procurement, hiring and firing of staff, all of the utilities are highly centralized. In summary, decisions, which have financial implications, remain centralized. Moreover, in the areas where decision-making has been decentralized, i.e. customer management, employees can do little else than apply existing guidelines.

Similar to the conclusions regarding the cases in Guanajuato, interpreting the findings for internal accountability for results presents something of a challenge. This is because the findings do not lead to a clear-cut conclusion regarding this proposition. For the 'well performing' cases the picture is mixed, with some utilities having strong levels of accountability related to performance, whilst the remaining utilities have fewer mechanisms for accountability.

Conclusions:

The researched case studies did not provide a coherent picture of well performing utilities implementing the NPM model. Rather, the well performing utilities appear to adhere to only a few of the elements of the NPM (in particular external autonomy and customer-orientation). An important qualification that has to be raised in relation to this finding is the question if these elements can only be traced back to the NPM. The main point here is that a dimension such as 'autonomy' may be an important element of the NPM model, but the NPM does not have a monopoly on the concept of 'autonomy'. The conclusion is then that the hypothesis that well performing utilities adhere to the NPM model is falsified.

In addition to finding that well performing utilities have only implemented a few of the elements of the NPM model, the study found that the only elements of the bureaucratic model that poorly performing utilities adhere to is that they are characterized by hierarchy and levels and operate according to internal regulations. However, this also applies very much to well performing utilities and as such, this characteristic does not differentiate between well performing and poorly performing utilities. As such, the hypothesis that poorly performing utilities adhere to the bureaucratic model of public management is also falsified.

Financial Autonomy and Customer Orientation

The dimensions of external autonomy (specifically financial autonomy) and customer orientation were strongly visible in the well performing utilities and noticeably absent in the poorer performing utilities. The finding concerning the importance of financial autonomy supports earlier research.

Having emphasized the importance of financial autonomy and its relationship with customer orientation, these findings should not be overstretched to conclude that well performing utilities operate on the basis of full cost recovery. All of the cases of well performing utilities studied in this research at one time or another depended on external financing to fund investments. In fact, apart from one utility, all of the well performing cases still have and need regular access to external financing. As such, although increased financial autonomy is important, this does not mean that national and international financial institutions have no role to play in assisting public water utilities.

The Suitability of NPM Reforms: Principal-Agent Perspective

Though it is not possible to refute or support the possible contribution of the New Public Management in improving service provision in general, this research suggests that the impact of the NPM is likely to be limited, in cases where the principal-agent relationship is such that the power of the bureaucracy (the agent) is small in comparison with that of the agent. Moreover, in many countries, an approach combining Weberian reform measures with NPM reforms may hold greater promise for improving service provision than simply focusing on the New Public Management reforms.

If the argument that the NPM reforms are aimed at weakening the power of the agent is accepted, it would seem that strong bureaucratic power and relatively weak elected officials who have difficulty in steering and controlling the bureaucracy are an important presupposition for implementing NPM reforms. After all, these reforms are aimed at mitigating this situation. In this research, however, it was found that this presupposition does not necessarily hold for the provision of water services in low- and middle-income countries. The example of the State of Guanajuato in Mexico illustrated that the political institutions in these municipalities are such, that a primacy of the principal (elected official) over the agent (management of the utility) exists. Similar conclusions can be drawn for the cases of Hai Phong in Vietnam, Campinas in Brazil and SADM in Mexico. The question is then how beneficial New Public Management reforms, which result in weakening the position of the agent further, will be in these countries? Do the water supply and sanitation sectors operating in the context of such political institutions 'lend themselves to NPM reforms'? This research suggests that they may not.

The Bureaucratic Model – New Public Management Dichotomy

Linked to the principle-agent discussion is the issue of viewing the NPM as a "mirror image" of the bureaucratic model. Such sentiments are shared by a considerable number of proponents of the New Public Management, some of whom have even argued that the bureaucratic model is obsolete and has effectively been replaced by the New Public Management.

The findings of this research provide something of a different perspective as they suggest that viewing the NPM and the bureaucratic model as competing models is not very useful when addressing the reform of public water utilities in low- and middle-income countries. In this sense the research supports Kaufman's findings (2003:284) who suggests that the 'competition' between the New Public Management and Weberian reforms is more relevant for 'developed countries' and less so for the countries of Latin America.

Samenvatting

Ondanks druk van (internationale) ontwikkelingsorganizaties om de rol van de private sector in de levering van water en sanitatie te vergroten, worden verreweg de meeste mensen in ontwikkelingslanden voorzien van water door publieke drinkwater bedrijven. In vele gevallen zijn de geleverde diensten echter van een zeer slecht niveau. De gevolgen van de slechte dienstverlening zijn enorm, met name voor de allerarmsten in de samenleving. Tegelijkertijd hebben de tegenvallende ervaringen met dienstverlening door private drinkwaterbedrijven duidelijk gemaakt dat ook in de toekomst de levering van drinkwater en sanitatie grotendeels in publieke handen zal blijven in de meeste ontwikkleingslanden.

De slechte dienstverlening door veel publieke bedrijven heeft ertoe geleid dat zowel internationale organizaties als sector experts de implementatie van 'New Public Management' hervormingen hebben aanbevolen. New Public Management (NPM), dat voortkomt uit de 'Public Choice' theorie en 'Managerialism', vindt zijn oorsprong begin jaren tachtig in Nieuw Zeeland en Engeland. Sindsdien wordt NPM veelvuldig gebruikt om een meer prestatie en klant-gericht management model aan te duiden voor de publieke sector. Hierbij ligt de nadruk op het toepassen van management praktijken en technieken die veelvuldig met de private sector worden geassocieerd.

Hoewel NPM in ontwikkelingslanden niet onomstreden is en er weinig empirische onderbouwing bestaat voor de effectiviteit van hervormingen die tot de NPM gerekend worden, wordt door sommigen beargumenteerd dat NPM een bijgedrage heeft geleverd aan de verbetering van dienstverlening door publieke drinkwater bedrijven. Dit proefschrift beoogt de toepassing van NPM hervorming in de water sector te bestuderen. Dit wordt gedaan door NPM te contrasteren met een 'traditioneel' bureaucratisch management model. De centrale onderzoeksvragen die deze studie adreseert zijn alsvolgt:

- Worden goed-functionerende publieke drinkwaterbedrijven in ontwikkelingslanden gekenmerkt door toepassing van NPM?
- Worden slecht-functionerende publieke drinkwaterbedrijven in ontwikkelingslanden gekenmerkt door een bureaucratische management model?

Inleidende hoofdstukken: Twee inleidende hoofdstukken (hoofdstuk twee en hoofdstuk 3) orienteren de lezer tot de centrale themas van deze studie. Het doel van het eerste hoofdtsuk is om belangrijke aspekten van dienstverlening in de water sector uit te leggen en te verduidelijken. Onder meer wordt aandacht besteed aan de wijze waarop de water sector is georganiseerd, de factoren die deze organizatie bepalen en hoe het functioneren van bedrijven in de drinkwater sector gemeten kan worden. Het tweede hoofdstuk gaat dieper in op de twee management modellen (NPM en het bureaucratisch model) die in deze studie centraal staan.

De discussie in de twee inleidende hoofdstukken leidt tot de formulering van een twaalftal proposities die in deze studie worden getoetst. Zes proposities betreffen de relatie tussen het goed functioneren van drinkwaterbedrijven en de NPM. Zes andere

proposities behandelen de relatie tussen slecht-functionerende drinkwater bedrijven en het bureaucratisch model.

Onderzoeksmethodologie: Het onderzoek in deze studie is gebaseerd op 'case study' onderzoek bestaande uit twee clusters van case studies. De eerste cluster betreft een vijftal gemeentelijke drinkwater bdrijven in de staat Guanajuato in Mexico. Aangezien de centrale hypothesen de prestaties van drinkwater bedrijven koppelen aan een bepaald management model, zijn de gemeentelijke drinkwater bedrijven uit de staat Guanajuato geselecteerd op basis van hun verschillende prestaties. Het idee is dan dat de verschillen in prestaties uitgelegd kunnen worden door verschillende management modellen die deze bedrijven kenmerken.

De tweede cluster betreft twee drinkwaterbedrijven uit Latijns Amerika, één uit Afrika en één uit Azie. Deze bedrijven zijn geselecteerd omdat ze allen beschouwd worden als voorbeelden van 'goed-functionerende' drinkwater bedrijven. Het onderzoeken van deze cases maakt het mogelijk om de bevindingen uit de gemeentelijke drinkwaterbedrijven in Guanajuato te controleren.

Bevindingen van de gemeentelijke drinkwaterbedrijven in Guanajuato:
Propositie 1, die stelt dat goed-functionerende publieke drinkwaterbedrijven een grote hoeveelheid autonomie hebben is niet gefalsifieerd door het onderzoek in Guanajuato. In het bijzonder lijkt de financiele autonomie van het drinkwaterbedrijf een belangrijke verklarende factor voor de prestaties van dat bedrijf.

Propositie 2, die luidt dat goed-functionerende bedrijven in grotre mate veranwoording zijn verschuldigd voor hun functioneren is gefalsifieerd. Hoewel, de berdijven wellicht wel verantwoording verschuldigd zijn aan individuele klanten is relatief weinig verantwoording verschuldigd aan externe organizaties.

Alle drinkwaterbedrijven, inclusief de goed-functionerende bedrijven, waren relatief weining markt-gericht. Alszodanig is ook propositie 3, die zegt dat goed-functionerende bedrijven een sterke mate van markt-gerichtheid ten toon spreiden gefalsifieerd.

Daartegenover is propositie 4, die de relatie tussen klant-greichtheid en prestaties betreft niet gefalsifieerd. De beter-functionerende bedrijven lieten allen een sterkere klantgerichtheid zien dan de slecht-functionerende bedrijven. De sterkere klant-gerichtheid lijkt voort te komen uit de hogere tarieven die deze bedrijven aan hun klanten berekenen. Hoewel de klanten deze hogere tarieven wel willen betalen, eisen ze wel betere dienstverlening van de bedrijven.

In alle gevallen werkten de werknemers van de bedrijven volgens bestaande en expliciete procedures. Het nemen van beslissingen ging veelal volgens deze procedures. Wanneer beslissingen dienden te worden genomen die niet beschreven stonden was goedkeuring van hogergeplaatste managers nodig. Hierdoor is propositie 5, die stelt dat goed-functionerende bedrijven beslissingsbevoegdheid in sterke mate hebben gedecentraliseerd gefalisfieerd.

Hoewel de goed-functionerende bedrijven verder waren in het ontwikkelen van interne systemen om werknemers verantwoordelijk te houden voor hun functioneren, werden werknemers van deze bedrijven niet afgerekend op hun functioneren in relatie tot gespecificieerde doelstellingen. Alszodanig waren de beoordelingen nogal subjectief

van aard. Hierdoor is er weinig steun gevonden voor propositie 6, die luidt dat goed-functionerende bedrijven hun werknemers afrekenen op hun functioneren.

Propositie 7 luidt dat slecht functionerende berdijven a-politiek zijn. In Guanajuato bleken alle slecht-functionerende bedrijven zeer gepoliticiseerd te zijn en alszodanig is deze propositie gefalsificieerd.

All slecht-functionerende bedrijven bleken te zijn gekenmerkt door een hierarchische opbouw en het hanteren van duidelijke regels voor het interne functioneren van werknemers. Dit betekent dat propositie 8, die stelt dat slecht-functionerende bedrijven worden gekenmerkt door hierarchie en management middels regels, niet is gefalsificieerd.

Er is weinig bewijs gevonden om propositie 9, die stelt dat slecht-functionerende drinkwaterbedrijven stabiele organizaties zijn. In tegendeel, alle slecht-functionerende bedrijven die in Guanajuato werden onderzocht bleken te worden gekenmerkt door vele veranderingen in de management van het bedrijf.

Propositie 10, die luidt dat slecht-functionerende bedrijven gekenmerkt worden door strikte interne regels bleek een van de moeilijkste proposties om te toetsen. Enerzijds bleek dat met name op bestuurlijk niveau dat bestaande regels veelvuldig werden genegeerd. Anderzijds bleek dat op lagere niveaus in de organizaties, werknemers wel gebonden waren aan interne regels en procedures.

De meeste werknemers bleken een vast salaris te ontvangen dat niet gelieerd was aan geleverde prestaties. Hoewel een aantal bedrijven wel een bonus systeem kende voor werknemers bleek vaak dat dit systeem niet leidde tot salaris op basis van geleverde prestaties. Vaak was de toekenning van de bonussen een automatisme, ongeacht het functioneren van de werknemer. Alszodanig is stelling 11 gefalsificieerd.

De meeste werknemers bleken te kiezen voor een baan bij het drinkwater bedrijf omdat dit bedrijf hen zekerheid bood en tevens gunstige werktijden leverde. Er kon dus weinig steun gevonden worden voor de propositie dat werknemers kozen voor het werken voor het publieke berdijf uit morele overtuiging.

<u>Bevindingen van de vier goed-functionerende bedrijven:</u>

De bevindingen van de vier goed-functionerende bedrijven komen grotendeels overeen met de bevindingen van de vijf gemeentelijke drinkwater bedrijven in Guanajuato. Er zijn echter wel enkele kanttekeningen te plaatsen bij deze brede conclusie. In dit onderzoek is het concept autonomie opgebouwd uit een aantal verschillende dimensies. Het onderzoek heeft aangegeven dat enkele dimensies meer invloed hadden op het functioneren van het waterbedrijf dan andere. Het meest belangrijk lijken finaciele autonomie en stabilitiet van het bedrijf (hetgeen gezien kian worden als politieke steun voor de management van het bedrijf) te zijn. Tevens waren alle goed-functionerende bedrijven in staat om voldoende kundige werknemers aan te trekken. Dit betekent dat deze bedrijven over een ruime capaciteit in termen van financiele middelen en arbeidskracht kunnen beschikken. Dimensies van autonomie die miner belangrijk waren betreffen onder meer de beschikbaarheid van water voor de productie van drinkwater en de rol die gespeeld wordt door regulerende instanties.

Goed-functionerende bedrijven zijn allen verantwoording schuldig aan de eigenaren die over het algemeen aanzienlijke invloed houden in het functioneren van het bedrijf. Echter de verschuldigde verantwoording is niet gebaseerd op objectieve

prestatie indicatoren. Verantwoording aan regulerende instanties lijkt zeer beperkt (zo zijn nimmer sancties jegens de bedrijven geimplementeerd). Tevens zijn de goed-functionerende bedrijven weinig verantwoording schuldig aan klantenorganizaties en andere belangengroepen. Daarentegen is wel weer verantwoording schuldig aan finaciele instellingen die leningen hebben verschaft aan deze bedrijven. Vaak zijn tevens prestatie indicatoren gekoppeld aan die leningen.

In alle organizaties is besluitvorming relatief gecentraliseerd. Alle beslissingen die financiele consequenties hebben (zoals vacatures, uitbesteden van taken, contracten aangaan) blijken de goedkeuring te moeten hebben van de directeur. Bij taken waar wel enige beslissingsbevoegdheid is gedecentaliseerd (met name klantenbeheer) zijn de werknemers verplicht strikt de bestaande regels te volgens.

Evenals in het geval van de vijf gemeentelijke drinkwaterbedrijven in Guanajauto is het moeilijk om duidelijke conclusies te trekken omtrent de verantwoording die werknemers moeten afleggen voor hun functioneren. Bij de goed-functionerende bedrijven levert dit een zeer gevarieerd beeld op. In sommige bedrijven is verantwoording minimaal, in andere juist zeer sterk.

Conclusies:

De onderzochte cases hebben geen coherent beeld opgeleverd omtrent de toepassing van NPM. Het blijkt echter wel dat goed-functionerende bedrijven wel elementen van de NPM toepassen (met name autonomie en klangerichtheid). Hierbij moet echter de kanttekening worden geplaatst dat autonomie en klantgerichtheid niet exclusief tot het domein van de NPM behoren.

Afgezien van deze conclusie, blijkt ook dat slecht-functionerende bedrijven over het algemeen weinig ‘bureaucratisch’ functioneren. In tegendeel, het bleek dat de goed-functionerende bedrijven meer volgens het bureaucratische model opereerden dan de slecht-functionerende bedrijven.

Finaciele autonomie en klantgerichtheid

In alle goed-functionerende bedrijven bleek het bedrijf over een ruime mate van autonomie te beschikken en zeer klantgericht te zijn. Tevens bleken deze elementen afwezig in de slecht-functionerende bedrijven. De bevinding omtrent het belang van financiele autonomie steunt de bevindingen uit eerder onderzoek dat tot soortgelijke conclusies kwam.

Hoewel uit dit onderzoek het belang van financiele autonomie duidelijk naar voren komt, moet uit deze bevinding niet worden geconcludeerd dat goed-functionerende drinkwaterbedrijven op basis van volledige ‘cost-recovery’ (waarbij zowel operationale als investeringskosten gedekt zijn) moeten opereren. Alle goed-functionerende cases hebben op een gegeven moment een beroep moeten doen op externe financiering om investeringen te financieren. Het blijkt zelfs dat afgezien van één bedrijf alle goed-functionerende bedrijven nog regelmatig een beroep moeten doen op externe financiering.

New Public Management: Een ‘principal-agent’ perspectief

Hoewel het moeilijk is om algemene cocnlusies te trekken inzake de impact van NPM of op het functioneren van waterbedrijven blijkt uit dit onderzoek dat de mogelijke

impact waarschijnlijk beperkt zal zijn in omstandigheden waar de macht van het bedrijf klein is in vergelijking met de macht van de eigenaar. Deze constatering kan worden teruggeleid naar het feit dat de NPM voortkomt uit de 'Public Choice' theorie. Deze theorie heeft als leidraad dat 'de bureaucratie' teveel macht heeft verworven en dat het noodzakelijk is om de macht van politici ten aanzien van de bureaucratie te vergoten. Om deze reden worden de hervormingen die tot de NPM gerekend worden ook gekenmerkt door het feit dat ze de macht van de bureaucratie verzwakken ten opzichte van de eigenaren (vaak de politici). NPM zou dan met name impact kunnen hebben wanneer een situatie zich voordoet waarbij een drinkwaterbedrijf een sterke positie heeft vis-à-vis de eigenaar. Uit dit onderzoek bleek echter dat in de onderzochte cases deze situatie niet aanwezig was. De vraag is dan in hoerverre de NPM kan bijgdragen aan het verbeteren van het functioneren van het drinkwaterbedrijf? Dit onderzoek suggereert dat die bijdrage beperkt zou zijn.