HAS URBAN WATER PRIVATIZATION WORKED IN THE GLOBAL SOUTH?

by

Christos Vardacostas

B.A., Simon Fraser University, 1994
B.Comm., University of Northern British Columbia, 1997

THESIS SUBMITTED IN PARTIAL FULFILLMENT OF
THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF ARTS
IN
DEVELOPMENT ECONOMICS

UNIVERSITY OF NORTHERN BRITISH COLUMBIA

May 2013

Library and Archives Canada

Published Heritage Branch

395 Wellington Street
Ottawa ON K1A 0N4
Canada

Bibliothèque et Archives Canada

Direction du Patrimoine de l'édition

395, rue Wellington
Ottawa ON K1A 0N4
Canada

Your file Votre référence
ISBN: 978-0-494-94123-2

Our file Notre référence
ISBN: 978-0-494-94123-2

ABSTRACT

This thesis seeks to determine whether urban water privatization has worked in the Global South. As water is required for domestic purposes, privatization is a contentious reform in most countries. Water privatization is investigated in six different prominent Global South cities to determine whether it has led to improvements over the previous publicly-provided water models. A comparative qualitative analysis of contracts, governance, contextual factors, and outcomes is conducted along with a partial quantitative analysis comparing water coverage, consumption and pricing before and after privatization. The results generally show that water privatization has mainly failed to improve water services beyond levels attained during previous public water services. There are a few exceptions though, highlighting both the complexities of delivering water service and a general lack of easily verifiable information to clearly compare the water models.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

ABBREVIATIONS

ADB	Asian Development Bank
AySA	Agua y Saneamientos Argentinos S.A.
CPI	Consumer Price Index
ECAPAG	Empresa Cantonal de Agua Potable Alcantarillado de Guayaquil
ETOSS	Ente Tripartito de Obras y Servicios Sanitarios (Argentina)
FDC	Freedom from Debt Coalition (Philippines)
GDP	Gross Domestic Product
HIPC	Heavily Indebted Poor Countries
IADB	Inter-American Development Bank
ICSID	International Centre for Settlement of Investment Disputes
IFI	International Financial Institution
IMF	International Monetary Fund
INDH	National Human Development Initiative (Morocco)
INE	Bolivian National Institute of Statistics
IPO	Initial Public Offering
JBIC	Japan Bank for International Cooperation
JWSRB	Jakarta Water Supply Regulatory Body
KRuHA	Koalisi Rakyat untuk Hak Atas Air (Jakarta)
Lydec	Lyonnaise des Eaux Casablanca
MWSS	Metropolitan Waterworks and Sewerage System (Manila)
NGO	Non-Governmental Organization
OCSP	Observatorio Ciudadano de Servicios Publicos (Guayaquil)

PSIRU	Public Services International Research Unit
WATSAL	Water Resources Sector Adjustment Loan (Indonesia)

CHAPTER ONE: INTRODUCTION

Water is an essential ingredient for human life. It is needed for a myriad of uses in improving and maintaining public, environmental and individual human health. Water is a necessary input for production of many goods in various economic sectors. It has been noted that the absolute minimum water required per person to satisfy basic needs is 50 litres per day (Gleick, 1996). Such assessments may be critical in establishing social policies pertaining to urban water availability. Increased industrialization, commercial agriculture and urbanization in the Global South put pressure on available potable water resources. However, historically established water networks and aging infrastructure are insufficient to meet modern urban domestic, commercial and industrial needs. Consequently, cities have searched for ways to improve urban water distribution services in recent decades.

An increasingly common solution has been private sector involvement, also commonly referred to as public-private partnerships or water privatization. Such contractual arrangements, in various forms, have acted to transfer operations, maintenance and improvements of water distribution and related services[1] from governments to private sector parties. Water privatization has been introduced to varying degrees with differing intentions and promises of providing increased efficiency, financial capital, and water access. In all cases, water is treated as a commodity, in so far as there is a charge for access and specific consumption volumes to recover costs. Pricing water is deemed a necessary measure towards achieving state fiscal balance while giving incentive to private sector involvement.

---

[1] Related services include billing collection, infrastructure works, and sewerage services. The latter includes sewer line connections, drainage networks, waste water treatment facilities, and other infrastructure (eg. Piping, lift stations, and materials).

There is considerable debate though as to whether water privatization works and who has been served by such reforms.

1.1 Water Privatization Background

Since the international push for water privatization in the early 1990s, water privatization arrangements have varied across the world in terms of scope of services, level of control of the operator in planning and providing services, financing, contract terms and pricing mechanisms. During the 1970s and 1980s, the US and UK led various market-oriented deregulation and privatization reforms. The International Monetary Fund (IMF) and World Bank aligned with and developed these policies in their respective structural adjustment policies across the Global South which have included the sale of public utilities, fiscal control measures, and deregulation reforms. The United Nations declared the 1980s the 1st international decade for clean drinking water (1981-1990)[2]. As water needs have become increasingly overwhelming despite UN efforts, the World Bank began advocating for a comprehensive framework of water resource management that has included urban water privatization. The IMF has provided ongoing national level structural adjustment supports through loans, fiscal spending conditions, and related policy reforms. In 1989, the US government and international financial institutions (IFI's) developed the Washington Consensus which reiterated the market principles of the World Bank and IMF (See, for example, WHO, 2013). This policy framework has acted to reinforce the principles, promotional efforts and actions to implement water privatization.

[2] Declared in 1977 at United Nations 'Water Conference' at Mar del Plata.

Since the 1990s, water privatization has been implemented in Global South nations on a widespread scale following structural adjustment programs of the World Bank, and IMF, also involving regional development banks. This policy framework has also generally included program management decentralization (as part of fiscal control measures) as part of the privatizations of utilities. The specific water concession model design has included loan and grant financing to governments leading up to privatization, followed by long term capital financing to be provided by the private sector participants. Water pricing under the model is established to ensure full cost recovery.

1.2 Water Privatization Debate

The ongoing water privatization debate has been increasingly contentious and polarized. The arguments for water privatization are that the private sector can more effectively and efficiently deliver the technical, operational, and infrastructure expansion requirements for water supply services. Elements of these assertions include that the private sector is more efficient than the public sector and has greater access to financial capital. These factors all amount to the argument that the private sector has superior capacity to provide services. The private sector's access to capital is dependent on the potential profitability of investments.

The efficiency argument for private sector provision is argued as a contrast to pre-existing public inefficiencies. These include, for example, poor management, inefficient investment, fiscal imbalances, and that the provider and regulator should not be the same entity. Efficiency and addressing state fiscal burdens are noted as two of the most important reasons for private sector involvement in public utilities (Graham, 1998). Shirley and Menard (2002) note that, "Efficient operation keeps

costs down, thereby reducing dependence on government subsidies and freeing resources for investment in expansion and maintenance" (p. 3). Privatization proponents would also argue that the private sector can better respond to specific operational requirements such as increasing labour productivity, reducing water system losses (generally referred to as non-revenue water or unaccounted-for-water), and improving bill collection services[3]. These efficiencies are also cited as potentially helping to alleviate poverty, an objective of water privatization that has been cited by the World Bank. Such notions of efficiency imply that water service improvements can positively impact social welfare in various ways. For example, less time collecting water can free time that could be used for gainful employment. Improved quality of water improves health which also can improve productivity. Both of these effects can potentially reduce poverty.

The World Bank acknowledges that there are consumers unwilling (or unable) to pay for water, and indicate that: "To manage water resources more effectively, a balanced set of policies and institutional reforms should be sought that will both harness the efficiency of market forces and strengthen the capacity of governments to carry out their essential roles" (The World Bank, 1993, p. 10).

Arguments for public provision of water revolve around the notion that elected governments are answerable to the people (i.e. water customers), and that water is necessary for human health and well-being and that its access can only be assured by the state's direct involvement in funding and operating water services. These arguments centre on the notion that a price should not necessarily be charged for water, or that it should be provided without charge to households that cannot afford

[3] Bill collection is not specifically assessed in this thesis.

it. A core part of the argument for public provision of water suggests that access to water is a human right and that the social or cultural value placed on water cannot necessarily or easily be monetized.

In the cases examined in this study, domestic households were paying for potable[4] water from the existing networks prior to water privatization. Pricing reform is just one potential element of water privatization. Realistically, privatization requires various regulatory mechanisms to adjust to a third party water provider.

Public water model arguments might suggest that privatization arguments fail to acknowledge the nature and extent of the essential roles of government and the potential broader social consequences of privatization. These arguments may not necessarily differ from the privatization argument – admitting that many Global South nations have had a poor track record in providing adequate water services to urban populations. The complexities of the public vs. private water debate become apparent when applied to urban water service in the Global South. Issues of allocative efficiency and equitable distribution are not easily addressed strictly within the confines of the public vs. private water debate. As a result, it is simply imperative to assess the merits of the application of the water model and its respective outcomes.

1.3 Research Objective

The objective of this thesis is to examine the question of whether urban water privatization has worked in the Global South. This objective can be pursued by assessing and comparing cases where water privatization has been implemented.

[4] Although network water is intended to be potable, levels of contamination vary, partly relating to water pressure.

The nature and extent of privatization's performance is examined by identifying the underlying factors that have contributed to water privatization's successes and/or failures. Important criteria include whether water privatization has: (1) provided water access to new consumers, while (2) continuing and improving upon service to existing customers. As more information is generally available on the privatization era of water services, contractual and performance target compliance act as proxies to assess water privatization. The overall goal of the study is to identify and articulate meaningful policy lessons and recommendations for the future of water distribution policy frameworks in the Global South. At the same time, the rising trend of water privatization in the Global South in recent decades holds important lessons for future water privatization and water services models in general implemented in regions with comparable levels of urban sprawl and poverty.

1.4 Comparative Case Study Rationale

In order to understand the underlying reasons for water privatization outcomes, it is important to examine the evidence across multiple cases as relating to various influential factors such as contractual arrangements, governance, economic and political contexts, and the direct outcomes stemming from these factors. A broad set of criteria is essential to this analysis. These varied factors reflect the value of a mixed method approach that includes qualitative and quantitative elements.

This thesis examines water privatization in six major urban cities around the world: Buenos Aires (Argentina), Jakarta (Indonesia), Manila (Philippines), Casablanca (Morocco), La Paz-El Alto (Bolivia), and Guayaquil (Ecuador). All six of these cases are water concession agreements, which comprise water distribution system operation,

maintenance and capital investment requirements over an extended 25 to 30 year lease period. These cases were chosen as they meet specific criteria. First of all, they are all water concessions, which are the most comprehensive water privatization arrangements.[5] Contractually, concession agreements by definition all include water operations and maintenance, and private investment requirements. This type of arrangement is considered to be the flagship model of water privatization that was being implemented in the 1990s throughout the world. Secondly, all six cases have been based on long range commitments and have been in place more than five years (and generally much longer). Thirdly, all of the cases represent large urban populations over one million inhabitants. The six chosen water privatization cases all meet these criteria.[6]

1.5 Thesis Contributions

The academic literature to date has covered a variety of topics and has mostly covered specific case findings. The purposes often differ from the intentions of this thesis. Many previous studies' findings are not necessarily robust due to either limited geography (i.e. the number of cases assessed) or varying elements of analysis (in contrast to those suggested above and herein). There does not appear to be an individual study that attempts to broadly understand how water privatization has been implemented across several comparable cases objectively analyzing factors and trends that have contributed to the resulting outcomes. Therefore, this thesis undertakes to systematically examine water privatization in six major urban cities

[5] Sewerage services, waste water management, and regional water resource management issues are only anecdotally assessed in this thesis.

[6] For purposes of this thesis, water privatization is defined as the concession agreement model and its components relating to water provision.

with the purpose of identifying the factors that have contributed to success and/or failure using both qualitative and quantitative analysis.

A comparative qualitative approach is used, sourcing information from academic literature and public sources describing and examining any of the six urban water privatization cases. The categorical information for this analysis includes the elements previously noted: (1) the nature of the contracts, (2) governance and regulation, (3) economic and political contextual factors, and (4) resulting outcomes. As mentioned earlier, far less information is available on the previous public water model for these cases; as a result, the above categories of analysis are the benchmarks used to assess water privatization. A quantitative approach was initially intended, to involve a full analysis of water coverage as well as consumption[7] trends under public and private water models. However, significant data limitations for the various cities have severely limited the degree to which a proper quantitative analysis could be carried out. As a result, only a partial quantitative analysis has been attempted in this thesis. The partial quantitative analysis is based on sporadic information from varying sources, permitting a cursory analysis of water coverage, consumption and pricing, as applicable, to supplement the qualitative analysis. Consequently, the thesis gives more weight to the qualitative analysis. As the general goal of privatization has been broadly cited as to outperform the prior public model, the metrics of this performance should be comprised in the contractual agreements and respective targets.

The key findings of this thesis are that water privatization has not generally worked. The examined cases show that water privatization, as implemented, has not

[7] Analysis of consumption also includes pricing comparison.

effectively improved levels of water service beyond those encountered during preceding public provision models. Water privatization has brought with it various complications to the governance of water services, which have contributed to a lack of water network expansion. Some of the key reasons for such lack of service relate to the contractual design and resulting arrangements, governance and regulatory weaknesses that permit a lack of service accountability and capital outflows (or flight). The competing interests reflected by an internationally predetermined water model, and government policies that maintain national oversight over local administration of urban water models are also identified as contributing to privatization failures. The potential exception to some of these findings relates to Casablanca which has made specific contract remedies to address performance shortcomings during the first ten years of privatization. Furthermore, part of the Manila case, the East Manila concession, appears to operate more successfully than other concessions based on reported water coverage performance, although this is found to include use of pre-existing informal water supply methods.

Again, these findings are subject to various information limitations which are highlighted through the analysis and in the conclusions drawn in this thesis.

CHAPTER TWO: LITERATURE REVIEW

In this chapter, literature assessing water privatization is reviewed, with particular focus on the six cases examined in this study. Although some of the research conducted has aligned with the objectives of this thesis, particularly for Buenos Aires, Jakarta and Manila cases, far fewer research articles and sources are identified for the other three cases, Casablanca, La Paz/El Alto, and Guayaquil. Even fewer studies found on the latter cases have focused on the specific objective of whether water privatization has worked. For guidance, this chapter is broadly organized into three categories that include some topical and perspective overlaps. The first category covers research that finds privatization has worked or can work if specific conditions are met. The second category includes literature that finds water privatization has failed or focuses on identifying its failures and lessons learned. The third category examines issues relating to governance and regulation.

2.1 Water Privatization Can Work

Buenos Aires:

Alcazar et al. (2000) examine the Buenos Aires water concession during its early years (1993 onwards) finding that the concession expanded services and also resulted in lower tariffs[8] (26.9% reduction in bid). Consequently, the authors have concluded that Buenos Aires was better off with water privatization. They conduct a welfare analysis finding that consumers benefited most, although upper and middle-income users benefited disproportionately. They also suggest that contract revisions and renegotiations did not substantially impact consumer welfare (Alcazar et al.,

[8] Water tariff is the common description of the price of potable water, as it is deemed a charge for access to the resource, although in most cases, the water tariff generally refers to a variable price per cubic metre of water.

2000). Various areas of improvement are identified such as, information asymmetries, perverse incentives, weak regulatory institutions, politicizing of the regulator, contract flaws, an obscure tariff system and lack of transparency in the regulation process (Alcazar et al., 2000, p.2). The authors conclude that privatization resulted in better performance, operational efficiencies, and increased investment, but that the areas requiring improvement led to a lack of public confidence (Alcazar et al., 2000, p.1-2).

Alcazar et al. (2000) have conducted a relevant analysis for review, although the data and methodology used to arrive at their findings are not clear. Also, the authors have made broad generalizations that do not appear substantiated. For example, they indicate that those that gained piped water and sewerage services in Buenos Aires, "...will no longer be consuming contaminated well water or polluting groundwater or rivers" (Alcazar et al., p.53). Such statements are questionable considering the short period of observation, which raises questions as to the legitimacy of these findings.

Post (2009) suggests that Buenos Aires water contract provisions designed to increase company revenues, with additional policies to enhance company reputation being added later can have socially beneficial effects. Post concludes that the contract was weakened and time horizon shortened by moves relating to either short term political survival or firms losing confidence in the region, which in turn reduced social benefits. The author identifies the lesson of needing to understand the institutional environment before entering the concession, continuing that the apparent lack of such understanding weakened the Buenos Aires concession. Post suggests that the private sector's lack of service to the poor related to the profit

motive deterring the firm from capital investment in poor areas. The author also identifies the need for information improvements, and that the company needed to address issues previously perpetuated by the state. Consequently, Post implies that water privatization can theoretically have positive social benefits although the Buenos Aires case has failed in some respects.[9]

As with Alcazar et al., Post's analysis, appears to focus on the tenets of privatization, with some illustration of failures that, if avoided, may have helped the concession succeed. Both Alcazar et al. and Post focus on criticisms of the Buenos Aires privatization model as implemented, but with underlying tones being apparent, that support this specific type of service delivery model. Also, both articles give little weight to public opinion, and their respective analyses ignore international factors. Furthermore, public opinion is viewed only from the perspective of its value in garnering acceptance of water privatization policy and the company.

Manila:

Wu and Malaluan (2008) compare the two water concessions in Manila (Manila Water serving East Manila, and Maynilad serving West Manila), exploring the differences in internal factors that have affected concessionaire[10] success. The authors find that, of the two concessionaires, Manila Water, the company serving East Manila has been successful. This success is found to be a result of a combination of factors including corporate governance, financial management and operations management. The authors cite the importance of employing a sustainable method of awarding technical consultant contracts, and find that

[9] Note that the Buenos Aires concession was terminated in 2006.
[10] Concessionaire is used synonymously with consortium and company to describe the private entities contracted to provide the water services under a concession agreement.

Maynilad (West Manila) failed in this respect. The authors identify differences in financial management practices, operational efficiencies, service improvements and capital expenditure decisions between the companies as reasons for Manila Water's success.

Wu and Malaluan focus their analysis on internal company factors in affecting water privatization outcomes.

Chia et al. (2007) also examine Manila's water privatization, concluding that it can work if various challenges are navigated; with government, private sector and the public all playing key roles to make it successful. They find that the concession process was transparent. The authors also find that there were early improvements in water coverage, availability and quality, but had problems with non-revenue water targets[11]. The West Manila (Maynilad) contract failure led to early notice of termination in 2002, and is noted as being the result of an inability to obtain financing, currency devaluation, and ineffective planning and management practices. Specifically, it is suggested that Maynilad did not engage in due diligence with respect to the condition of water infrastructure prior to the concession. The authors acknowledge the lack of capacity of the regulator, whose employees also complained of irregular practices during the concession process (Chia et al. 2007). The regulatory office, created as a result of the concession, did not provide for transparency or public involvement. The authors recommend the importance of: government capacity and regulatory structures, policy, research, public input,

[11] Non-revenue water generally refers to the proportion of water volume produced that is not sold. The proportion that is sold is also referred to as water consumption.

allocation of risk, transparency, financing, and (acknowledge) the challenge of the politics of water (Chia et al., 2007, p.16-17).

Chia et al. (2007) provides a focused analysis on factors that led to the failure of the West Manila concession. This analysis is contrasted to the implied success of the East Manila water concession. The authors are not attempting to assess whether water privatization works though. Although various criteria for success are identified, the authors do not provide a critical examination of how these factors affected both concessions.

Casablanca:

Jamati (2003) examined the first five years of the Casablanca water privatization. The article concludes that the Casablanca utility privatization has been successful given a 20% increase in population served, water loss reductions (24 million cubic metres per year), significant flood risk reduction, and customer service improvements (Jamati, 2003). It appears that the data used to report on these findings came from the Moroccan government or concessionaire[12] although references are not provided for the article. This is the only article identified that finds Casablanca's water privatization a success. Its primary shortcoming, in addition to no verified peer reviewed sources, is that performance targets are simply stated as having been achieved without any critical assessment.

La Paz-El Alto:

Foster and Irusta (2003) examine electricity, telecommunications and water and sewerage privatization reforms in La Paz-El Alto, Bolivia to determine the effects

[12] The term Concessionaire refers to the partnered entity that holds the water concession agreement with the respective government. This term is used synonymously with consortium, partnership or company (although this may also refer to the majority shareholder which is generally the operator of the water services).

on poor households. The authors find that the water and sewerage concession initially showed improvements in service access and improved accountability, with a 20% water tariff increase. The report indicates that network water and sewerage coverage increased in the few years prior to reform, and was then to expand further under the concession specifically in El Alto, which is predominantly poor. The authors find that changes to the block tariff structure, removing a fixed charge but increasing per-use rates, should save water costs for households consuming less than seven cubic metres of water per month (Foster and Irusta, 2003). Foster and Irusta generally conclude that water and sewerage reforms led to positive impacts for poor households.[13]

Foster and Irusta have focused on assessing the contract targets relating to poorer neighbourhoods in La Paz-El Alto. Their results are preliminary given that only a few years of observation were available. Also, the authors are not critically examining the La Paz-El Alto water contract, its circumstances or questioning reported outcomes.

Hailu et al. (2009) also look at Bolivia's water privatization experiences, examining water coverage, equity and affordability. The authors conclude that water access expanded proportionally for La Paz-El Alto, and highlight that the poor in La Paz were spending 2.6% of their income on water, which is considered affordable (Hailu et al., 2009). The authors suggest that the private sector needs public support to meet network expansion obligations. This article is rather cursory and does not critically examine the La Paz-El Alto water privatization.

---

[13] Note that the contract terms for water network expansion in La Paz / El Alto focused on predominantly poor un-serviced areas in El Alto neighbourhoods. This is discussed further in this chapter as well as in Chapter 3.

Dardenne (2006) concludes that La Paz-El Alto is a good example of a water distribution program servicing the poor (Dardenne, 2006, p.9). The author finds that this concession was generally successful until its second five years of implementation when the rise in political unrest responding to poor economic conditions and a stoppage in network expansion deemed the concession not economically viable.[14]

Morales et al. (2006) author a report for CIESS-Econometrica (Centro de Estudios Economicos y Sociales), a Bolivian research institute, which concludes that the La Paz-El Alto water privatization had no impact on consumption, and a possible positive impact on coverage within El Alto, and specifically for its poor (Morales et al., 2006, p.50-51). Specific lessons identified are discussed in the next section.

The literature in this section has included coverage of the Buenos Aires, Manila, Casablanca and La Paz-El Alto cases. Although the studies do not all necessarily conclude that water privatization has or could succeed, it has generally focused on the private sector's potential to succeed without critical examination of direct comparison to potential public sector or alternative modes of water provision. Although lessons or failures have been identified in a few cases, the focus has generally been on internal company factors. Also, the above literature's preliminary shortcomings include a general lack of examining contractual performance failures, governance and regulatory factors, and political and economic factors that have affected water privatization outcomes. The few exceptions to these criticisms include additional coverage in the next section.

---

[14] Specific failures relating to the La Paz-El Alto privatization identified by Dardenne (2006) are discussed in the next section.

2.2 Water Privatization Has Failed

Buenos Aires:

Solanes (2006) draws lessons from the Buenos Aires water privatization (1993 - 2006). The author indicates that privatization was precipitated by a debt crisis that worsened during the privatization reforms. During water privatization, Argentina suffered currency devaluation, doubling of unemployment, and increased poverty and inequality. The author identifies privatization factors and failures: information asymmetries, inefficient, vague and non-transparent pricing, a weak regulatory system, high price impacts on low income households (represented 85% of the unconnected) (Solanes, p.6). The regulatory system was deemed flawed based on contract regulation (rather than law) and a politically appointed regulator with insufficient tools that was circumvented at times (Solanes, p.11-12). Solanes' article highlights that many of Buenos Aires' privatization failures relate to the lacking regulatory model, methods of evaluating the contract, and factors not easily separated from the economic situation in Argentina. The author also finds that monopolistic private sector water management, and full cost recovery up to the medium term, are not feasible policies (Solanes, 2006).

Solanes' report provides a critical analysis of the Buenos Aires case. The author does not cover international influence though. Furthermore, the assessment is not intended to assess whether privatization has worked.

Olleta (2007) assesses the World Bank's role in urban water privatization with specific review of the Buenos Aires case. The author concludes that the Buenos Aires case was a failure since the private consortium, Aguas Argentinas, focused services on areas already covered by the water and sanitation network, and delayed

investments in expansion (particularly with respect to sanitation infrastructure). Olleta discusses the World Bank's unchanging stance that has continued to support private sector participation in water. Olleta (2007, citing Karina Forcinito at the Third World Forum, March 2003) points out that the World Bank managed to change the original contract over a nine year period to transfer risks to users, add new fixed charges and increase tariffs by 88.2%, where by 2003 poorest families spent 9% of their income on water and sewerage.

Olleta provides valuable insight into the World Bank's influence on the Buenos Aires water privatization, but does not assess other privatization factors.

Food and Water Watch (2009a), an NGO focused on the safety of food, water and fish, which advocates for public control, lists the following contextual failures relating to the Buenos Aires water privatization case: (1) internal political pressure and corruption that weakened the regulator's authority, and removed it from subsequent contract negotiations, (2) the direct influence of the World Bank as an advocate and shareholder of the Aguas Argentinas (the company) including a manager being appointed to the company to facilitate the contract renegotiation in 1997, (3) support and pressure for the French water company by the French Government (Food and Water Watch, 2009a). As the Argentinean financial crisis response resulted in denying the company's requests for a new fixed $US-Peso exchange rate and 42% water price increase, the company threatened legal action through the International Centre for Settlement of Investment Disputes (ICSID), which eventually lead to the contract's termination in 2006 (Food and Water Watch, 2009a). Finally, Food and Water Watch report, citing the regulator Ente Tripartito de

Obras y Servicios Sanitarios (ETOSS)[15], finds that over the duration of the contract, the company only met 10% of its contractual obligations (Food and Water Watch, 2009a[16]). Food and Water Watch's report on the Buenos Aires provides some valuable contextual information, although the report is not a comprehensive critical assessment of the privatization.

Castro and Azpiazu (2012) find that the Buenos Aires private water operator failed to comply with contractual expansion and investment targets (as well as environmental protection and service quality); and that government authorities submitted to company interests. The authors add that the company's strategy was to pursue "extraordinary profits" which worked for the company until 2002 when the renegotiated contract model collapsed in the face of a national crisis. They also acknowledge that the impacts from the privatization are not yet fully understood, and such impacts will hinder the state's ability to reach universal access to services in future (Castro and Azpiazu, 2012, p.71). Castro and Azpiazu provide insight into the Buenos Aires water privatization although the primary focus of their article relates to institutional changes transitioning to remunicipalization of the water services.

The Public Services International Research Unit (PSIRU) has produced a number of reports, which surround the international failure of water privatization, power of multinational companies, policies of the World Bank and implied impacts on affected populations reflected by widespread protests (PSIRU, 2005). One of these reports, by Lobina and Hall (2007), finds that the Buenos Aires concession was suffering poor performance even before currency devaluation. They highlight that

---

[15] No citation provided.
[16] Also see Public Citizen (2003).

water prices were renegotiated and the company under invested (Only 61% of projected levels achieved) during the first 10 years (Lobina and Hall, 2007, citing ETOSS via Ducci, 2007). This report provides some compelling evidence, and although previously published PSIRU reports are also cited, the contractual terms, governance and performance outcomes are only briefly highlighted without extensive examination in the individual reports accessed.

Dardenne (2006) finds that two million inhabitants, primarily living in slums, were left out of the water and sewerage concession area. Additionally, the author finds that only 25% of the two million poor which were within the concession area were receiving water services after 10 years (Dardenne, 2006, p.7). He indicates that it was an ambitious plan to connect the un-served 3.5 million inhabitants within the concession area. This report provides valuable insight into the lack of performance on initial targets and the exclusion of peri-urban populations from the concession area.

Jakarta:

Argo and Laquian (2007) find that Kampong[17] (remnants of original villages within the city) conditions in Jakarta worsened because the water privatization forced wells and other sources, including illegal connections, to close (Argo & Laquian, 2007). The authors point out that vendors increased water fees in the face of scarcity experienced in the poor neighbourhoods. They conclude various reasons impacting the Jakarta water privatization: (1) the size and scale of the privatization schemes, (2) incentives based on water volumes, (3) the difficulty in extending into informal settlements contributed to the companies not extending services to the poor

[17] Also spelled *Kampung*.

in hazardous areas (that would have ended informal water arrangements that had been providing water and sanitation options to such areas)[18], (4) political interference, influence, and corruption, (5) the high costs of foreign borrowing and consultants, and (6) concessionaire deals and bailouts contributed to the exorbitant costs of the privatization schemes (Argo and Laquian, 2007, p.245-246). The authors conclude that all of these factors affected the ability of the concessionaires to extend network services (Argo and Laquian, 2007).

Manila:

Argo and Laquian's (2007) article also covers Manila and the conclusions cited above also apply to this case. The authors point out that vendors in Manila also increased water fees affecting poor neighbourhoods. Manila's situation was already bad before privatization, then prices increased ten-fold for the rich while increasing four-fold under vendor schemes (Argo & Laquian, 2007). The authors indicate that water rates in Manila were increased in response to company troubles partly arising from the fallout of the Asian economic crisis, with Maynilad (West Manila contractor) increasing prices by four times and Manila Water (East Manila contractor) increasing prices six-fold. Although water rates increased, the volume of water available also increased, albeit unequally. Argo and Laquian find that the resulting rate increases mostly affected middle and upper classes and private businesses. The authors' previously cited reasons affecting water privatization in Jakarta, also apply to Manila: (1) privatization size and scale, (2) water volume incentives, (3) informal settlement difficulties maintaining informal water arrangements, (4) Political interference,

[18] The authors also note that services in Jakarta (as well as Manila) were extended to the edges of poor neighbourhoods with responsibility transferred to local leaders and vendors to extend network services.

influence, and corruption, (5) High costs of foreign borrowing and consultants, and (6) The concessionaire deals and bailouts contributed to the exorbitant costs of the privatization schemes (Argo and Laquian, 2007, p.245-246). The authors conclude that all of these factors also affected the Manila concessionaires' ability to extend network services (Argo and Laquian, 2007).

Argo and Laquian provide a detailed analysis of the Jakarta and Manila cases, although the nature of the contract model and terms, including regulatory terms and international influence, are not thoroughly examined.

A Public Citizen (2003) report covering the Maynilad Water privatization for West Manila finds that unanticipated high operating costs and price regulation led to disputes and the eventual changeover of company ownership. The report (2003, citing Esguerra, 2001) also highlights contract renegotiations including foreign exchange loss transfers to consumers, so that corporate suppliers and consultants could continue being used.

The Public Citizen report on the West Manila water concession highlights some privatization failures. This report is very brief though and is focused on advocating for public water provision.

The Asian Development Bank (ADB) evaluates its own role in Manila's water privatization and recommends the need for: (1) an appropriate tariff policy, whereby tariffs increase only after service improvements, and (2) financial support during early stage operations (ADB, 2008, p.37). The report identifies key lessons such as (the need for) holding concession designers accountable, flexible terms, independent and effective regulation, and political leadership (ADB, 2008, p.38). The report also

points out that about 65% of connected households surveyed still use other water sources (ADB, 2008, p.51).

Casablanca:

Lahlou (2008), President of ACME-Morocco, a water advocacy group, discusses the negative aspects of water privatization in Morocco. He explains Morocco's background with structural adjustment policies in the 1980s and 1990s, and the rigidity of policies that do not allow for an alternative to privatization. The article points to the magnitude of Moroccan water and electricity privatization in Casablanca, Rabat and Tangier-Tetouan: accounting for 2 - 2.5% of the country's GDP. Lahlou finds that water privatization has a social constraint given that poverty prevents a full cost recovery model from actualizing. The author discusses the results of a state study, which finds that the concessionaire, Lydec, has not met its contractual obligations, and that this is linked to early distribution of dividends (Lahlou, 2008). Lahlou also indicates that Lydec acknowledges its contractual limitations; admitting that key variables such as water volumes, yields and prices have changed since the contract was established. The author concludes with the example of Grenoble, France, where the return to public water provision led to lower prices and increased investments.

An ACME-Morocco (2007) article on Lydec discusses the results of a report reviewed by Casablanca's technical committee in preparing to revise the water contract with Lydec in late 2006. The report summarizes missed contractual obligations that require revision in the contract for 2007 to 2027. Based on that report, ACME-Morocco finds that the 'delegating' authority needs to recover funds under the contract due to: (1) a shortfall in securities investment (including early

dividend issue), and (2) excess of foreign technical assistance fees (ACME-Morocco, 2007, near end of translated report paragraph).

ACME-Morocco (2008) citing the findings of an independent Casablanca study characterizes Lydec services as "failures, overruns and disrespectful behaviour" in reference to contractual obligations (ACME-Morocco, 2008[19]). The article suggests that the original contract negotiation (which bypassed local democratic institutions - negotiated by the Moroccan Ministry of Interior) has likely contributed to these deficiencies (ACME-Morocco, 2008). The article also points to significant contract capital violations: (1) under-expenditure, and that (2) 85% of Lydec's actual capital expenditures comprised transfers to shareholders and "technical assistance" suppliers (ACME-Morocco, 2008).

ACME-Morocco (2011) reports a preliminary investigation over the accusations that Casablanca's mayor and Lydec CEO mismanaged public funds. The article criticizes the World Bank model of capital funding and investment being delegated to the foreign private operator, in contrast to the French model that includes public funding and investment (ACME-Morocco, 2011).

The Lahlou and ACME-Morocco articles comprise most of the non-proprietary accounts of the Casablanca water privatization case that could be obtained for review. Although these documents provide some discussion of water performance outcomes for this case, they do not provide a detailed account of the Casablanca contract terms and the analysis is brief without elaboration on the reasons for the identified privatization failures.

---

[19] The article does not provide a direct citation for the study being referenced. It is indicated that the study was published by ACME-Morocco in November 2007 although it could not be found in the ACME-Morocco website archives.

Olivier (2009) notes that Casablanca's households that do not have property rights are not eligible to access water subsidies. Olivier discusses that Casablanca has a social tariff block of eight cubic metres[20], but that it is not effective since in many cases multiple households share a connection. The author also explains that water authorities' attempts to reduce the social tariff block to six cubic metres were met with protests that returned the tariff to its original level (Olivier, 2009).

La Paz-El Alto:

In its coverage of the La Paz-El Alto water privatization, Food and Water Watch (2006) presents an analysis of the results of an independent audit by Pozo y Asociados. The audit found that the water company's financial statements overstated fixed asset investments. The audit concluded that over US$ 6 million should be levied by the government for contract violations including concession underinvestment (Food and Water Watch, 2006). This report is important as it contradicts figures previously cited suggesting that the company was meeting contractual targets. This report only focuses on specific contract violations though.

In Lobina and Hall (2007), the authors highlight that the La Paz-El Alto concessionaire contract target interpretation included establishing low cost connections and using community groups, micro-credit plans and volunteers to increase profits (Lobina and Hall, 2007, p.26-27). The authors also document results of the audit (mentioned previously in Food and Water Watch, 2006), bringing rise to the end of the contract, which showed that the company continued to earn an actual annual rate of return over 15% during the contract, overstating investment

[20] A 'social' tariff block is the first level of consumption being provided at no cost per use.

asset claims, and resulting in a fine (after termination) by the regulator in 2006 (Lobina and Hall, 2007).

Laurie and Crespo (2007) find that the service area under the La Paz-El Alto contract consisted of the pre-existing network area and did not account for un-served areas at the contract's outset. In examining the pro-poor terms of the contract, the authors find that the contract did not clearly specify the geographic coverage requirements necessary to ensure that poor un-served households would be connected to the network. Consequently, they link this finding to an alleged manipulation of the coverage figures by the company – a view supported by the superintendent and that contributed to protests (Laurie and Crespo, 2007, p.845). Furthermore, although the concessionaire used a *pro-poor* pricing structure based on consumption levels, a 2002 household survey in La Paz and El Alto found that 64% of respondents claimed that prices were beyond their economic capabilities (Laurie and Crespo, 2007, p.847). The authors find that poor households were paying for water regardless of whether they used it, due to being charged average rates established by the company. Water meters were not installed despite being required by the contract (Laurie and Crespo, 2007, p.847). They also identify that the regulatory framework allows for negotiations between the regulator and company without any public participation (Laurie and Crespo, 2007, p.851). The authors conclude that the regulatory system is weak as reflected in ineffective negotiations with the company, including, for example that the company was not held to adhere to a new law calling for public consultation pertaining to rates (Laurie and Crespo, 2007, p.851). Finally, the authors identify problems with the dual roles of the regulator having authority to

grant and monitor the concession, and the World Bank being both an investor and administrator of concessions (Laurie and Crespo, p.852).

Dardenne (2006) suggests that cooperative partnerships to serve the poor work provided capital financing is sourced elsewhere. The author identifies that a portion of La Paz-El Alto's population was excluded from the concession, and highlights that El Alto has a high growth rate (5.1%) and two-thirds of the population are under the poverty line. As a result, the 97% city water coverage claimed as of 2001 was closer to 60%-65% (Dardenne, 2006, p.8).

In addition to its positive view of the La Paz-El Alto concession, Morales et al. (2006) finds that social tensions related to coverage and consumption were exacerbated by rising unemployment and decreasing income and quality of employment (Morales et al., 2006, p.50-51). Policy recommendations suggested include better contracts that consider the geography and distribution (Citing Konives, 1999), a different water tariff system that includes cross-subsidies, and efficient regulatory norms and institutions (Morales et al., p.51).

Guayaquil:

Swyngedouw (2004) discusses factors that have influenced the urbanization of water in Guayaquil, up to privatization. The author outlines Guayaquil's historical background, illustrating how local interests, state and international financier power have constructed water scarcity. The author outlines Guayaquil's geography, emphasizing that poor peripheral neighbourhoods developed quickly and ineffectively on the low lying estuary in the south, and the hills in the north – both with obsolete water and sewerage infrastructure (Swyngedouw, 2004). The author also discusses the growing importance and authorities' acceptance of *tanqueros* (private water

trucks) in serving primarily poor un-serviced areas. Swyngedouw extensively examines the relationships between interest groups, (the controlling of) nature, a chronically deficient management system, the disproportionate emphasis on a productivist view, and the resulting problems leading to privatization (Swyngedouw, 2004).

Swyngedouw provides important insight into the role of societal classes in influencing the direction of policy in Guayaquil which does not support meeting urban water service needs.

Cesar Cardenas (2008) with Observatorio Cuidadano de Servicios Publicos (OCSP, Citizen's Public Service Observatory), a citizen's watchdog for Guayaquil, has written a statement citing reasons that the water contract with the concessionaire, Interagua, should be terminated and replaced with an autonomous municipal service authority that includes consumer and citizen participation. Reasons cited primarily relate to a lack of contract compliance and legal infractions. Cardenas (2008) highlights infractions such as water price increases that violate consumer laws and inequitably affect the poor, collection methods illegally based on estimated consumption, and sewerage services without secondary treatment (Cardenas, 2008).

Cardenas' statement cites several concession failures but is essentially a summary statement, apparently based on the OCSP's work.

Food and Water Watch (2009b) concludes that water privatization in Guayaquil has failed having provided poor service and jeopardized public health, particularly that of children. This article references reports from the press as well as the OCSP. Again, this report is rather cursory. Along with Cardenas' statement, these sources provide compelling evidence, although sources are not necessarily cited.

Joiner (2007) outlines the Guayaquil water privatization's social and environmental impacts, including specific case studies of Guayaquil neighbourhoods: Guasmo Sur, Isla Trinitaria, Flor Bastion and Mapasingue. The author concludes that the water, sewage and drainage concession agreement was poorly written, relieving the concessionaire of clear, measurable performance and social obligations. For example, the author notes that the contract does not consider the need to exclude the non-functioning existing water network from coverage figures (Joiner, 2007, p.35). Furthermore, Joiner finds that the initial and subsequent five year plans neither adequately accounted for social objectives to provide for or improve services in poor neighbourhoods, nor obligated Interagua to provide financial and technical resources to water and sewerage infrastructure activities (Joiner, 2007, Chapter 11). The author discusses OCSP's inception in 2005, for increased transparency and accountability in the administration and regulation of public services. Joiner states that problems are, "deeply rooted in the government's apparent ineffectiveness in addressing the social needs of the remarkably poor population (Joiner, 2007, p.12)." Joiner notes that consumers have been left outside the network water services due to Interagua's inefficiencies. In reference to the regulator ECAPAG's establishment, the author states, "No portion of the [ECAPAG] legally binding documentation mentions specific standards or measurements to evaluate these two [public and environmental health] goals (Joiner, 2007, p.20)."

Joiner's report is the most extensive assessment of the Guayaquil case. It does not provide any quantitative performance data or assessment though. The author's examination of the privatization to date is critical of all aspects as pertaining to consumers, particularly the poor.

The literature reviewed in this section has generally viewed water privatization as a failure or highlighted failed aspects of the privatizations. These authors have identified specific water privatization failures and underlying contributing reasons, such as international influences, political issues, economic problems, weak contracts, ineffective policy and regulation, and specific violations by companies. The reviewed literature has generally focused on individual cases though. Furthermore, governance is generally not included as a critical element of analysis in many of these studies.

2.3 Governance & Regulatory Issues - Lessons & Failures

This section includes literature covering water governance and regulation specific to the water concession contracts and services for the six cases, and/or that provides relevant examination of these topics for these cases. Generally speaking, this literature provides more focus on governance and regulatory issues with less emphasis on the nature of the contracts, political roles (including international influences) and performance outcomes, except where noted.

Water governance can be defined as the relationship between governments, the private sector, political parties, civil organizations, NGOs, international institutions, and other relevant entities with power (Miranda et al., 2011, p.4, citing Castro, 2007). Water governance is also "about dealing with uncertainty, conflict and corruption" (Miranda et al., 2011, p. 6). These authors distinguish between the view of water governance outside of cities, within cities, and a holistic approach accounting for 'up-to-downstream' factors (Miranda et al., 2011, p.9).[21]

[21] For purposes of this thesis, urban water governance is considered in the context of state and other levels of governments' responsibilities in maintaining and regulating urban water resources, services and the relationships between government, private sector contractor(s) and users of water. As water

Buenos Aires:

Laborde (2005) writes on the institutional framework of water tariffs in Buenos Aires. The author notes that the Argentinean economic crisis and Buenos Aires water company's debt could not have been predicted or avoided. She refers to lack of public disclosure by the water company, a significant reduction in water tariffs of 26.9% for a utility already in debt, and the consequent inability to finance network expansion at the prevailing user rates, as well as the lack of accurate information at the time of the bid as the primary reasons for the company's failure (Laborde, 2005). This article discusses some legal aspects of the concession agreement and the complex tariff system.

Porporato and Robbins (2010) discuss the causes of the failure of the Buenos Aires water concession with particular focus on corporate governance. Drawing from the literature, the authors indicate the need for government participation in water governance due to externalities, the need for information due to externalities, and pricing difficulties (Porporato and Robbins, 2010). The authors conclude that the Buenos Aires water privatization had a weak regulatory body with a poorly defined regulatory framework, and weak post-privatization governance mechanisms (Porporato and Robbins, 2010).

Engel et al. (2011) identify lessons for water sustainability in the face of the Global South's continuing urbanization. The authors find that poverty was increasing in metropolitan Buenos Aires (30% in 1995), and that it is estimated that about 30% of urban lands are made up of informal settlements preventing water and sanitation

---

concession agreements are primarily concerned with services and infrastructure within specific boundaries, water governance is also considered within these parameters.

network expansion. Citing Jordan et al. (2010), the authors conclude that, "Governance issues, institutional weaknesses and lack of control mechanisms are responsible for the failure of the [Buenos Aires] concession" (Engel et al., 2011, p.30).

Jakarta:

The Jakarta Water Supply Regulatory Body (JWSRB, 2009) reviews water privatization in Jakarta ten years after implementation. The study makes several recommendations including engaging in adaptive regulation to support performance improvements, coordination between contract parties to allow for benchmarking, monitoring and evaluation, the need for participatory mechanisms that involve the public in decision making processes, and the importance of transparency of the JWSRB and stakeholders (JWSRB, 2009, p.144, 150, 152). Nugroho (2011), a board member of the JWSRB until 2011, finds the creation of JWSRB as an independent and impartial institution potentially influencing good water governance in future (as opposed to changes that would occur in its absence) (Nugroho, 2011).

Bakker et al. (2008) argues that governance failures have created disincentives to connect the poor to water in Jakarta. The authors find that even at higher income levels surveyed, most households used a combination of water sources that did not include network water (Bakker et al., 2008). The study concludes that *all* water providers should be subject to regulation with clear governance standards "such as accountability, transparency, participation, inclusiveness and the rule of law" (Bakker et al., 2008, p.1907). The article in general indicates that the water governance model does not effectively address the formal water network or informal vendor water.

Bakker et al. (2006) highlight the spatial and social differentiation of water access in Jakarta. The authors identify historical precedence responsible for inequities in water provision that perpetuate poverty (through, for example, sourcing alternative water at higher prices). The authors cite continuing disincentives to connect the poor such as: a culture of governance not prioritizing the poor in policy (citing Kusno, 1997, Woodcock, 2005) and no legal requirements to service the poor, full cost recovery objectives (Taylor, 1983), and no formal mechanisms to stop urban expansion even though water network expansion has been limited in scope (Bakker et al., 2006, p.18-19). Bakker et al. (2006) identifies critical governance issues pertaining to water provision in Jakarta.

Similarly, Kurniasih's (2008) review of the Jakarta water privatization highlights governance and regulation as fundamental problems. Governance problems identified include legislation, and lack of tendering, public involvement, and transparency (Kurniasih, 2008). Kurniasih concludes that the monitoring agency, JWSRB has limited authority and resources and is constrained by the water contracts preventing sanctions for non-compliance (Kurniasih, 2008, p.8). In conclusion, the author recommends a model of community-based water management, which is connected to Indonesia's strong traditional roots (Kurniasih, 2008, p.17).

Manila:

Cuaresma (2006) examines the water and sewerage service programs, specifically for the poor in Greater Manila, in order to determine lessons for regulation. The author identifies some loopholes such as high dependence on group taps and non-regulation of pricing. Cuaresma points out the need for regulation

conducted by an independent, trusted institution of government including public and civil society group participation.

A Freedom from Debt Coalition (FDC, 2005) paper discusses the failures of the West Manila concession (Maynilad). The FDC paper discusses a public health failure in 2003 where 600 residents of poor communities became ill from gastro-intestinal diseases, of which six died. An FDC requested laboratory test showed that Maynilad's water supply had E.Coli bacteria of more than 700 percent of the amount allowed under the national standard (FDC, 2005, p.13). The authors find that Maynilad's concession fees payable to the government being converted to equity in 2004, acted to shift the company's creditor debt obligations to the government (FDC, 2005). The paper illustrates that the water authority, Metropolitan Waterworks and Sewerage System (MWSS) incurred US$ 430 million in additional loans from 2001 to 2004, and then arranged for a US$ 125 million loan from the World Bank, of which $31 million was to be provided to Maynilad company operations (p.9). The paper continues that a significant (50%) water tariff increase and departure of the local shareholder from the West Manila concession transferred the concessionaire's debt obligations to the west zone consumers. The FDC concludes with regulatory failures: (1) the MWSS Board is comprised of presidential appointees, (2) the MWSS Regulatory Office's (MWSS RO's) mandate is limited to regulation of the contract, and (3) there is a conflict of interest given that the regulator and companies' offices are in the same building (and that the contract includes terms that disallow such an arrangement) (FDC, 2005, p.14-15).

Freedom from Debt Coalition (FDC, 2009) examines the Manila privatization case in a ten year review, documenting and assessing contract issues, financing

background, regulatory (in) effectiveness and recommending the need for a comprehensive cost-benefit analysis. The report summarizes various impacts of the privatization including: corporate taxes being passed to the consumer, access by the poor being inhibited by connection charges, the poor having to access more expensive alternative sources, and concessionaires charging the resellers the highest rates for bulk water – which are passed on to the poor (FDC, 2009, p.5, 39). The report discusses the issue of 'regulatory capture', suggesting that the regulatory system, its mechanisms and people are susceptible to conflicts of interest and corrupt practices (FDC, 2009, p.38). The report reiterates previous comments that the government had to settle for only partial payment on additional debt obligations resulting from its dispute and termination of Maynilad's agreement (FDC, 2009, p.36). The report discusses numerous court challenges made to attempt to overturn actions taken by the water authority and companies to deem them agents of the water authority rather than classify them as public utilities (which implies various responsibilities to the public). FDC (2009) concludes that the water authority's (MWSS's) actions have acted to 'shield' the companies from their accountability (FDC, 2009, p.48).

Finally, Kumar (2009) explores institutional designs for water privatization in a dissertation that includes a Manila case study. Asian Development Bank (ADB) official interviews indicated that the regulator, MWSS Regulatory Office (MWSS RO), is not independent from government (Kumar, 2009, p.211). Interviews also revealed the opinion that Manila Water's (East concession) practice of selling bulk water and taking credit for increased water coverage should be addressed (Kumar, 2009, p.221). The author finds that the rebasing exercise which controls tariffs and rates of

return puts limits on investment, limiting network expansion (Kumar, 2009, p.223). In reference to an implied lack of consumer participation, Kumar finds that accountability is the "the most serious concern" relating to the water privatization (Kumar, 2009, p.228). He concludes that water privatization can work but requires that the government must first build its technical and financial capacity (Kumar, 2009). Furthermore, Kumar finds that additional state preconditions for privatization are necessary; such as clearer laws, higher regulatory authority and potentially disallowing foreign company involvement (to address domestic public sensitivities) (Kumar, 2009, p.302-303).

The sources reviewed on Manila in this section provide a general critique of the regulator, rebasing process, and court challenges. They provide only a general view of the exposed complexities of the established and lacking regulatory system. However, there could be more attention to the regulatory system's relationship to the changing contract terms and resulting outcomes.

Casablanca

Saadi (2012) identifies various shortcomings and lessons of the Casablanca water and sanitation concession. The author finds that the concessionaire has underperformed on its contract obligations during the first ten years, and that the governance model limits social accountability (Saadi, 2012). As with a few previous authors covering this case, such as (e.g. Lahlou, 2008 and ACME-Morocco, 2008), Saadi reports on audit findings showing company connection installation and investment targets underperformance (2012, p. 382). The audit also identified reporting gaps relating to unbilled revenues (Saadi, p.385). Saadi concludes that power imbalances between levels of government, as well as the company's

experience as a global power, prevent social accountability (Saadi, p.386, 392). Finally, this author also identifies that pricing objectives to alleviate issues for inhabitants of Greater Casablanca are not addressed in the recent renegotiation of the contract (Saadi, p.386). This author has provided some critical assessments of the Casablanca privatization where no other academic literature has been identified.

Guayaquil:

An International Finance Corporation/Multilateral Investment Guarantee Agency (IFC/MIGA, 2008) Ombudsman report outlines the mediation between Guayaquil's water provider, Interagua, and citizens, in response to a complaint by OCSP and another Guayaquil NGO. The key issues raised in the complaint included: residential water cuts, lack of service expansion, contractual non-compliance, and public health problems due to improper water treatment (IFC/MIGA, 2008). Interagua agreed to remedy the situation with respect to affected users, including forgiving customer debts and flexible payment plans. The IFC/MIGA report concludes that a future dialogue has been opened and proposes subsequent multi-stakeholder meetings (IFC/MIGA, 2008).

Carrillo et al. (2006) finds that the Guayaquil water privatization needs a network expansion focus without direct (additional) costs to neighbourhoods. The authors point out that the regulator, ECAPAG, initially controlled water prices, but that an increasing number of complaints arose for poor service with increased charges (Carrillo et al., 2006, p.9-10). The authors identify a 6.1% reduction in water coverage between 1994 and 2004 in rural parts of Guayaquil (Carrillo et al., 2006). While the authors find a lack of improvements in water services during the initial years of privatization in Guayaquil, they caution that water privatization cannot be

identified as the cause of these performance results (Carrillo et al., 2006). In reference to the regulator's water pre-privatization role and the focus on providing services to poor neighbourhoods, Carrillo et al. (2006) conclude that:

> ...less emphasis needs to be placed on whether the provider of that good is public or private and *more* emphasis needs to be directed at improving their institutional capacity to provide those services in an efficient, transparent and accountable manner. (p.56)

This report provides some insight to the Guayaquil privatization; although the regulatory framework is not viewed as an element of privatization.

The literature reviewed in this section raises issues relating to governance and regulation for several of the six case cities. The specific topics have varied by objective and method. The primary gaps identified within this group of literature relate to elements of governance and regulation, with less or no focus on contract terms, contextual influences affecting the contract model and renegotiation (e.g. international influence on governance), and/or service outcomes.

2.4 Summary Comments on the Literature Reviewed

The literature reviewed in this chapter spans a variety of subtopics generally examining the six water privatization concessions on an individual basis. A significant portion of the literature has concluded that specific water privatization cases have been a failure, or that various lessons have been learned from the privatization experience to date. As the objective of this thesis is to draw robust lessons from the critical examination of water privatization, comparative multiple case studies are particularly relevant. However, very few comparative studies were identified and reviewed in this chapter. Studies such as those of the Public Services International Research Unit (PSIRU, Lobina and Hall, Hall et al.) examine different

types of privatization, while generally advocating for public water provision. The ideology inherent in these studies is that private sector involvement and related formal international influences are simply inappropriate. Collectively this source's body of literature *may* critically examine water privatization by case, but this is not readily apparent based on the individual reports reviewed. Additional studies were identified that do not provide value to this thesis, such as Marin (2009), which focuses on the ideological objective of determining what the private sector's role should be rather than asking whether the policy direction to date has been successful.

Individual case literature has generally focused on specific issues such as water tariffs, poor households, or contractual issues. The available literature reviewed does not consistently critically examine the six water privatization cases in a comprehensive manner that outlines the terms of the contracts, the governance model's elements and effectiveness, the 'contextual' factors (e.g. Political and international factors, and economic crises), and water privatization outcomes. Moreover, the literature is generally lacking analysis of these factors across comparable case models in the Global South.

As mentioned in Chapter One, this thesis follows a systematic approach to compare the six water privatization cases from various aspects related to contractual terms, regulation, governance, water coverage as well as external and contextual factors. The following chapter provides some historical background for each of the six water concession cases.

CHAPTER THREE: CASE BACKGROUNDS

The six water concessions examined in this thesis were initially negotiated as 25- to 30- year agreements. Five of the six concessions include sewerage service commitments within the contract scope.[22] The concession implementations have involved ongoing legislative and policy reforms, contract renegotiations and terminations, water network expansions, related capital and technological upgrades, as well as various disputes. Companies have been responsible for obtaining and providing all necessary capital investment.

The following sections provide background on the case cities and their respective nations, including the lead up to and implementation of water privatization, and key relevant aspects of the arrangements. These cases include Buenos Aires, Jakarta, Manila, Casablanca, La Paz-El Alto and Guayaquil, respectively.

3.1 Buenos Aires, Argentina (1993 - 2006)

Argentina is a former Spanish colony, becoming an independent republic in the 19th century. The country has gone through periods of military rule, including from 1976 to 1983. In the 1970s, water sector responsibilities were decentralized to provincial governments. The city of Buenos Aires has been an autonomous district since 1880 and was granted autonomy in a 1994 constitutional amendment. Buenos Aires is one of South America's largest ports, with navigable river waters to the north-east part of the country, accessing Brazil, Uruguay and Paraguay. Buenos

[22] Sewerage services may comprise household sewer connections, drainage systems, sewage treatment, and sanitation services (such as septic tank de-sludging), as well as related capital infrastructure. Jakarta's agreement has excluded sewerage services.

Aires' economy consists primarily of services (76% financial, real estate, advertising, and hotels) and manufacturing (16%).

Following a period of increased unemployment and high inflation, Carlos Menem was elected President in 1989, and with IMF support, passed a law allowing him sole authority to pass a privatization decree for public utilities. The Government fixed its exchange rate and negotiated bilateral agreements to promote and protect foreign investment (Laborde, 2005). In December 1992, with direct loan and advisory support from the World Bank, a 30 year water and sewerage concession was signed for Buenos Aires with Aguas Argentinas, a consortium headed by Lyonnaise des Eaux-Dumez (Now 'Suez') with additional minority ownership from its Spanish partner AgBar, as well as Banco de Galicia, Vivendi, company employees, and Anglian Water. In 1994, the World Bank's International Finance Corporation (IFC) acquired a 5% share. At the time, much of the water and sewerage system was over 60 years old and was experiencing shortages and interruptions. The intention of the privatization was to obtain private financing for physical infrastructure, and to reduce related public deficits (Galiani et al., 2005). Aguas Argentinas offered a water tariff reduction of 26.9% to secure the contract. The contractor committed to increasing water coverage to 100% from 70% and sewerage coverage from 58% to 95%. Information regarding the existing infrastructure was unavailable or not forthcoming during the bid process, although there was a contractual stipulation that the government was not to be responsible for the quality of information provided to the bidding process (Alcazar et al., 2000). Initial contract terms put limits on consumption charges per user which were to be authorized by the new regulator, Tripartite Entity of Works and Sanitation Services' (ETOSS). Within the first year, tariff

rate increases were approved, prior to rate reviews prescribed by the contract (Laborde, 2005).

The institutional framework included national, provincial, and city level officials co-governing the regulator, ETOSS. ETOSS was widely considered to be a weak institution from its inception. The previous non-transparent and complex water tariff structure remained. ETOSS was later moved under Ministry of Environment authority, which removed it from contract renegotiations which took place beginning in 1997. Tariff regulations were changed. Improvement charges for customers were added prior to agreed-to service expansion and quality improvements. Service compensation was to be based on a fixed U.S. dollar exchange rate. At the time, ETOSS warned national authorities that the company had only met one-third of infrastructure expansion targets and spent only one-fifth of the sewage connection investment target. In the late 1990s contract renegotiations permitted water tariffs increases. However, in 2001-2002, a four-fold devaluation of the Argentine Peso led to tariffs being frozen. From 1993 to 2002, average residential water tariffs increased 87.9%, while the corresponding Consumer Price Index had increased only 7.3% (Castro and Azpiazu, 2012).The water company had incurred US$706 million in foreign financial debt, thought to be primarily from outsourcing activities (Laborde, 2005).

In 2006, the concession agreement was rescinded due to contract failure. Public cases against the company and its partners occurred in Argentinean courts. The concessionaire claimants sued the Argentine Republic in the International Centre for the Settlement of Investment Disputes (ICSID) on the basis of failing to adhere to previously agreed tariff adjustments, among other complaints. In 2010, the ICSID

ruled partially in favour of the concessionaire claimants on matters relating to fair and equitable treatment of the companies' investments (International Centre for Settlement of Investment Disputes, 2010).

3.2 Jakarta, Indonesia (1998 -)

Indonesia is a former Dutch colony, gaining its independence after the Second World War. President Suharto ruled the country under a military regime from 1966 until the late 1990s when he resigned bringing back a democratic republic. Indonesia's economy consists of agriculture and manufacturing with a rise in natural resource sectors – forestry, oil and gas, and minerals. Indonesia's colonial past has had great influence on the structure of Jakarta, where the infrastructure developed in the late 19th century around the wealthy colonial settlements. The government has been highly centralized. As of the early 1990s, the World Bank was advising the Suharto government to privatize water, and with it came reforms for decentralization of government involvement in water.

In 1990s, Pam Jaya, the city owned water utility for Jakarta, was running at a loss, had an aging infrastructure, and little access to additional capital financing. The utility was being regulated under city government supervision. In 1995, President Suharto started the process toward water privatization in Jakarta (and other jurisdictions that followed). In 1998, with support from the World Bank, two 25 year private water concession agreements were negotiated and implemented, dividing the city into two concession areas. These agreements included all water services, but excluded network sanitation services. The West Jakarta concession is held by a partnership led by Suez (PT Pam Lyonnaise Jaya or Palyja). Thames Water (UK) initially led the East Jakarta water concession partnership. The West concession

initially included Sigit as a partner, a Suharto family company. The East contract included the Salim Group, linked to a Suharto associate (see for example, Bakker et al., 2006). As of 2007, the West concession's ownership consisted of Suez 51%, Astra International 30% and Citigroup 19%. In the East, Thames withdrew and Acuatico took over 95% share of the water services, with Alberta Utilities holding 5% (referring to the utility as Aetra).[23]

The Jakarta water concessions have been controversial from their inception given a lack of improvement in services and public consultation with significant water price increases. A formal transition included authority to close private water wells. Initially, the private companies earned revenues by billing Pam Jaya (which continued as the city's water authority) based on water volumes sold. The Asian financial crisis (1998) brought a significant devaluation of the Indonesian Rupiah putting the water authority deeper into debt. At the same time, the Suharto government fell. Despite pressures to return to public control, the concessions were renegotiated in 2001. The international companies purchased the local shares, adjusting compensation terms, and influencing subsequent water price increases. The concession agreements protected the companies' rates of return (22% guarantees) through foreign exchange, interest rate and tax protections. Furthermore, service coverage and non-revenue water targets were reduced. Corresponding water tariff increases occurred amidst lobbying from non-governmental organizations, newspapers and the public (Argo & Laquian, 2007).

The concessionaires extended water networks to the edge of poor neighbourhoods; then local leaders arranged for private contractors to extend water

[23] Information on ownership is reported by various sources. See, for example, JWSRB (2009).

to households or standpipes. Many of these poor areas are informal settlements in hazardous zones – riverbanks, along canals and streams, on flood plains, in garbage dumps, and along railroad tracks (Argo & Laquian, 2007).

Jakarta's water model principles are based on achieving full cost recovery with a fair return on investment (ROI), including: consumer affordability, demand management, simplicity, and transparency according to Wyatt (2005), although this view is contested. The contracts did not outline clear monitoring roles for Pam Jaya or the Jakarta Water Supply Regulation Body (JWSRB) which monitors the contracts, customer issues, and administers automatic water tariff increases.

In addition to previous infrastructure and privatization loans, to facilitate necessary legal and regulatory changes and physical infrastructure, the World Bank's Water Resources Sector Adjustment Loan (WATSAL) was arranged in 1999. The Indonesian Government was slow to meet conditions of this loan, such as complying with irrigation management decentralization in its eventual Water Resources Law (2004). Significant protests occurred in response to the new law, including the People's Coalition for the Rights to Water (KRuHA) filing a case in opposition of the Law in the new Constitutional Court; arguing that it is contrary to Constitution terms to turn over the government's responsibilities to the private sector. The legal case was specifically attempting to prevent a 40% water rate hike. Argo and Laquian (2007) reported:

> The court ruled that the companies were not allowed to raise their tariffs 'until they can provide better services and proper information to the customers about their operations' (p. 239, citing Hudiono 2004, Jakarta Post).

The companies also procured private financing. For example, Palyja initially received US $61 million in loans from European and Asian banks, and has continued

to roll over its loan obligations through a bond issue on the Indonesian Stock Exchange and a more recent Asian Development Bank loan intended for capital expenditures.

3.3 Manila, Philippines (1997 -)

Metropolitan Manila is the Philippines' political and economic centre, and its principal port, accounting for one-third of the country's GDP. The city has a diverse economy including various industrial-related goods from chemicals to textiles, coconut oil, tobacco, food-processing, and financial and publishing sectors.

The Philippines was a colony of Spain, and later the U.S. until World War II, which included Japanese occupation. The Philippines gained independence as of 1946, experiencing democracy until 1972 when Ferdinand Marcos ruled under a dictatorship that ended in 1986. Marcos' reign involved highly centralized control of various sector services that would have otherwise been controlled by the private sector (Dumol, 2000). As of 1986, President Aquino started reforms to privatize public services, which were later continued by her successor Ramos. As of the early 1990s, water and sewerage distribution authority, coupled with aging systems, were being decentralized to local government levels. As of 1995, the Water Crisis Act was used to fast track private sector participation in the water sector (PSIRU, 2005). Water privatization plans were introduced to relieve debts from previous IFI loans from the Asian Development Bank, World Bank, and Japan Bank for International Cooperation (JBIC). The World Bank designed and advised on a water concession bid and contract process.

In 1997, the Philippines entered into the largest water privatization in the world, when separate contracts were negotiated for East and West Manila. In 1997,

the privatization of Manila's Metropolitan Waterworks and Sewerage System (MWSS) involved the water authority contracting two private sector water and sewerage concession agreements for East and West Manila. Maynilad Water, owned by Suez and a local company, Benpres, controlled by the Lopez family, became the contractor for West Manila. Manila Water, a partnership between UK-based United Utilities, Bechtel (USA), Mitsubishi Corporation (Japan) and local company Ayala, negotiated a water concession agreement for East Manila. Ownership structure in Manila Water has altered since its inception with Bechtel and Edison (Italy) selling their respective shares in International Water Ltd. to the other two companies in 2003.

In West Manila, water prices increased four-fold between 1997 and 2003; however, Maynilad could neither meet service objectives nor achieve profitable status, which led to contract amendments and court disputes. As of 2002, Maynilad gave early notice of contract termination. In 2004, the government took control of the West concession, bought out the private company shares in 2006, and in 2007 DMCI Holdings and Metro Pacific Investments Corporation successfully bid for an 84% stake in Maynilad Water, replacing the previous concessionaire (see for example, FDC, 2009).

Manila's water concession model continues today with the water authority and its regulatory office overseeing the contracted services (e.g. Negishi, 2010).

3.4 Casablanca, Morocco (1997 -)

Casablanca (Arabic: Ad Dar al Bayda) is Morocco's largest city, economic centre and key port for African-European trade. Most of Morocco was part of the French Protectorate over the first part of the twentieth century, with Spanish occupation in the north, including the Strait of Gibraltar. In 1956, Morocco gained its

independence and transformed into a constitutional monarchy. The southwest area, identified internationally as part of the country, is referred to as Western Sahara, and remains a disputed territory. Morocco's economy relies on agriculture, industry and manufacturing, and tourism and services. Agriculture accounts for 20% of GDP and employs 40% of the labour force. Morocco is the world's largest exporter of phosphates (The Heritage Foundation, 2012). Casablanca is Morocco's main financial centre, and port, and is reliant on industrial activity, manufacturing and tourism. In 2006, Morocco became the only African nation to enter into a bilateral agreement with the United States.

During the 1980s, Morocco received loans from the IMF to initiate austerity measures. During the mid-1990's the country decentralized its river basin management. In 1997, Casablanca's water distribution services were privatized, contracting the consortium Lydec (Lyonnaise des Eaux Casablanca), through a 30 year concession agreement. Lydec is operated by Suez and its subsidiaries (60% shareholder, later 51%), with additional shareholders, private Moroccan companies RMA Watanya (15%), Fipar Holding (20%), and equity subscribers on the Casablanca Stock Exchange (14%, IPO 2005) (MEED, 2005). Initially, the Moroccan private shares were held by French and Spanish utility companies. The scope of the concession agreement included water, sewerage, and electricity provision, and later included additional cities (Rabat, Tangiers, Tetouan). The contract also included terms for water reservoir expansion. The concession contract was awarded without competitive tender. As Casablanca is prone to flooding, drainage network management was included in the contract scope. Casablanca's water and sanitation

regulatory framework includes municipal level regulation.[24] A technical committee made up of municipal and state government and company representation oversees the contract. The Casablanca service area initially included an estimated population of 3.5 million inhabitants. One-third of this population, and the greater city area of about 4.5 million, lives in illegal settlements[25], which were primarily outside the city's water network at the beginning of privatization (Lydec reports; UN-HABITAT, 2008).

Suez (under former names) had previously provided water services during the first half of the twentieth century, during French and Spanish occupation of Morocco. Casablanca's domestic water tariffs differ based on separate subcontracting operators' supply costs.[26] In 2000, Lydec borrowed $80 million in Moroccan Dirhams from Moroccan banks to finance network expansion during the first five years of the concession. The company later initiated a public stock offering on the Casablanca Stock Exchange. Water decentralization has continued in Morocco with full decentralization of Moroccan water management being initiated by the national government in 2002. Several public and private entities provide water services across the country, including a public national entity supplying local regions (See, for example, Jamati, 2003).

In 2006, Casablanca's social water tariff block was reduced from eight to six cubic metres, but protests influenced reversal of this decision and related tariff increases. A year earlier, the World Bank supported the National Human Development Initiative (INDH), focusing on subsidizing basic services for poor

---

[24] Although city power supply is included in the contract, this service aspect is not directly referenced.
[25] This is generally consistent with slum population figures at the beginning of the contracts, as shown later in Table 5.1.
[26] Detailed documentation or reference to subcontractor arrangements or tariff structure could not be identified.

households. Almost 800,000 Casablanca inhabitants were eligible for the program's water and sanitation subsidies. In 2008 and 2009, following an audit, the concession contract was renegotiated limiting the rate of return, revising tariff conditions (removal of automatic increases), and re-establishing investment targets (Saadi, 2012, Olivier, 2009).

3.5 La Paz-El Alto, Bolivia (1997 - 2005)

The La Paz-El Alto urban metropolitan area is the second largest city in Bolivia. El Alto developed as a suburb of La Paz and is today referred to as a satellite city (collectively described as La Paz-El Alto herein). Most published statistics still disaggregate these two parts of the urban area. Bolivia has a high prevalence of poverty and inequality. As of 2002, La Paz had almost 30% of the population below the poverty line, and high inequality (Gini Coefficient of 0.578), while El Alto has experienced over 60% in poverty and more than 25% of the population in extreme poverty (Morales et al., 2006, citing the Bolivian National Institute of Statistics (INE)).

Bolivia's economy primarily consists of mining, agriculture and manufacturing. Bolivia has the world's second largest tin deposits. La Paz-El Alto's economy includes production of food, tobacco, clothing, various consumer goods, construction materials and agricultural tools. Its economy is also dependent on an increasing informal economy.

In the 1980s, Bolivia went through periods of hyperinflation and then macroeconomic policies for stabilization. In the 1990s, structural reforms continued, including IFI debt relief and related conditions under the Heavily Indebted Poor Countries (HIPC) initiatives. In the late 1990s and into the 2000s, economic shocks persisted. Some suggest that weak fiscal and financial sectors combined with only

modest growth in exports have left Bolivia vulnerable to shocks (e.g. Morales et al., 2006). In 1997, La Paz-El Alto's water and sewerage services were privatized through a concession contract with France's Lyonnaise des Eaux (Suez), replacing SAMAPA (the Municipal Autonomous Service for the Provision of Water and Sewer Services), the city's water provider until that time. The concession agreement included specific connection targets, particularly to expand services in El Alto. The concession was regulated by a national government body. Direct financing for the concession process and transfer were supported by the World Bank. As the water concession fell short of expansion targets, coinciding with economic problems ailing La Paz-El Alto's poor, protests began as of 2003, leading to the President's resignation. In 2005, after further civil protests, the Bolivian government agreed to terminate the water concession, which officially ended in January 2007.

As a side note, and as mentioned previously, after the initiation of the concession in La Paz-El Alto, a concession agreement was awarded to a consortium led by Bechtel for Cochabamba, Bolivia. The contract led to immediate significant increases in water rates, but was met with mass social protest which resulted in the contract being almost immediately rescinded.

3.6 Guayaquil, Ecuador (2001 -)

Guayaquil is Ecuador's largest city, in the province of Guayas, on the southern coast. More than 75% of the city's population has migrated over the last 50 years. The fast growth caused the city to develop without urban planning, leading to many informal settlements (Joiner, 2007). Part of Guayaquil's geography includes low lands prone to flooding, which along with a rainy climate, add to the hardships of a lack of water and sewerage services for Guayaquil's poor (Joiner, 2007).

Ecuador was under Spanish rule prior to the 20th Century, before various political phases leading to military rule from 1972 to 1979. In the 1980s, Ecuador was under democratic rule, but with numerous tumultuous periods of presidential turn over. Ecuador has also had a history marred by ongoing military conflicts due to border disputes with Peru, until the late 1990s.

Ecuador's economy is heavily dependent on the export of natural resources, particularly oil, and agricultural commodities. In the 1970s, the oil boom provided a direct financing source and incentive for loan agencies to support water projects. A new public water company was established for Guayaquil in 1960. Several transitions of authority between national and municipal level control occurred up until the amalgamation and shift of water and sewerage utilities to regulatory roles in the late 1990s leading up to water privatization.

Private consultancy and engineering companies were involved in water and sewage planning as of 1961 and again in 1978. Water treatment and main pipeline expansion work occurred in 1963 and 1968. However, as of 1974, 75% of water in Guayaquil was provided by private water tankers or community taps (Swyngedouw, 2004). Following the oil price crash in the early 1980s, the World Bank financed a water loan in 1987. The loan was suspended in 1989 due to breach of required terms for utility management streamlining and improving operational efficiency. The loan was resolved a few years later, as the Ecuadorian Government and Guayaquil utility began the steps required by the loan agreement. In 1992, Ecuador began several economic reforms, pushing modernization legislation through its Congress. The intent was to modernize infrastructure and open the door to privatization of water, electricity and telecommunications. In 1997 and 1998, an economic crisis

resulted, congruent with the Asian and other regional economic crises and El Nino impacting Ecuador's agricultural economy. Oil prices plummeted, the Ecuadorian currency (sucre) fell into hyperinflation, unemployment increased, income fell and the country defaulted on its foreign debt (Wikipedia, 2012, citing numerous sources). By 1999, the banking sector collapsed leading to semi-dollarization and then fully replacing Ecuador's currency with the US dollar. In the process, the government bailed out the financial sector. Water privatization was planned for Guayaquil by the early 1990s but political instability (6 presidents over 6 years) in the late 1990s delayed public service privatization. As of 1994, water and sewage utilities were merged to create Empresa Cantonal de Aqua Potable y Alcantarillado de Guayaquil (ECAPAG). This was seen as positive and necessary given the interconnectedness of the provision of potable water and an adequate rainwater drainage system (Joiner, 2007). As of 1995, ECAPAG had already made the decision to contract water and sewage services in its master plan for services. The concession bid process was guided by a loan agreement with the Inter-American Development Bank, which included transitioning ECAPAG to a regulatory body.

After the bid process resulted in potential bidders being disinterested, given the aging water, sewage and drainage system, unstable environment and initial capital requirements, ECAPAG and Banque Paribas (company advising on the project) decided to soften the requirements to generate interest (Joiner, 2007 citing BPD). In 2001, Guayaquil's water and sewage systems were privatized with a concession agreement with International Water Services consortium led by Bechtel Corporation. The resulting company, Interagua signed a 30 year concession agreement. Although, the initially intended contract was to include necessary capital investment by the

company, the resulting contract neither obligated the company to meet specific targets, nor to specifically adhere to laws ensuring that services are provided to all citizens within the concession area (Joiner, 2007).

In 2005, Observatorio Ciudadano de Servicios Publicos (OCSP), a local NGO, was started to monitor the conduct and compliance of Interagua and ECAPAG. A Guayaquil poll of 40,000 inhabitants conducted in the same year showed that people felt the need for guaranteeing the rights of all citizens and increased public participation, although it is noted that the sample was not representative of the whole population (Carrillo et al., 2006). Complaints relating to service quality came from poorer areas, such as Guasmo Sur and Suburbio Oeste.

In 2008, Bechtel sold the majority of its shares in Interagua to Proactive Medio Ambiente (Company with Ecuadorian and Colombian parent shareholders).

CHAPTER FOUR: COMPARATIVE QUALITATIVE ANALYSIS

4.1 Qualitative Approach

In this chapter, a qualitative analysis is conducted across the six water privatization cases. Key elements like the nature of the contracts, governance and regulatory frameworks, contextual political and economic factors, and privatization outcomes are examined. Qualitative information sources include literature sources referenced in Chapter Two as well as additional public information. These sources include academic articles, government agencies (water utility, regulatory and statistical departments), NGO and civil society, and IFI and regional development bank sources and reports. Sources not identified as reports specifically primarily consist of website resources. Online World Bank and International Monetary Fund (IMF) resources have been accessed as well in reference to sections pertaining to these institutions.

In assessing the water privatization cases, two key points must be noted. First, the six urban water privatization cases have been chosen as prominent examples of such cases implemented in the Global South. Second, water privatization has been promoted and established based on expected improvements over public provision, such as expanding water access and increasing capital investment. Consequently, water privatization's performance is assessed relative to prior public provision models and the contractual targets established under privatization.

The nature of the privatization contract is critically examined individually and then comparatively across cases to identify patterns. The state's ability to implement and enforce agreements with the private sector is contingent on an effective

governance and regulatory framework. Contracts, governance and outcomes can all be affected by political instability, economic conditions and related external agents. Accordingly, the chapter is organized around these key qualitative elements for the six cases.

It must be emphasized that the qualitative information available for analysis is limited by a lack of available direct source information on the contract terms, implementation, governance and regulation, contextual factors, contract performance and related events. Specific data on Casablanca, as well as La Paz-El Alto and Guayaquil cases have been more difficult to identify and access. There is also a general lack of transparency pertaining to the comprehensive conditions of IFI loans. Also, access to certain online resources, such as the Indonesian advocacy groups People's Coalition on the Right to Water (KRuHA) and AMRTA Institute for water literacy, is sporadic in nature. Consequently, information gaps exist for all of the cases to varying degrees.

Table 4.1 provides a comparative high level summary for the six cases. It can be seen that all of the cities, except La Paz-El Alto (and the country of Bolivia), are port cities. Similarly, each of the port cities suffer some level of flooding due to low lying areas and/or a lack of appropriate city and sewer drainage systems. Of the port cities, only Jakarta's concession agreement excludes sewerage from the privatization scope.

Table 4.1 Case Comparison: First Ten to Fifteen Years of Privatization

Category	Buenos Aires	Jakarta	Manila	Casa.	La Paz-El Alto	Guay.
Port city	Yes	Yes	Yes	Yes	No	Yes
Lacking drainage infrastructure	Yes	Yes	Yes	Yes	No	Yes
Privatization continues today	No	Yes	Yes	Yes	No	Yes
Water tariffs increase before privatization	Yes Olleta, 2007	Yes (Not confirmed)	Yes Kumar, 2009	n/a	Yes Laurie & Crespo, 2007	Yes Carrillo et al., 2006
Sector preparation: decentralized >= 5 years before privatization	No Laborde, 2005 Olleta, 2007	Yes (City gov.) Argo & Laquian, 2007	Yes Kumar, 2009	No World Bank, 2009	n/a	Yes Tiepolo, 2007
Competitive bid process (final stages)	Yes Olleta, 2007	No Bakker et al., 2006	Yes Negishi, 2010	No ACME, 2008	No Laurie & Crespo, 2007	No Joiner, 2007
Population covered by concession	Partial Metro Dardenne, 2006	City / Prov. Bakker et al., 2006	Metro MWSS RO, 2003	Main city Hatem, 2007	Partial Metro Laurie & Crespo, 2007 Dardenne, 2006	City/ Suburbs Joiner, 2007
Original network expansion targets	Yes Olleta, 2007	Yes JWSRB, 2009	Yes Kumar, 2009	Yes ACME, 2007-2011	Yes Lobina & Hall, 2007	Yes (soft terms) Joiner, 2007
Informal water supplier arrangements permitted	n/a	Yes Argo & Laquian, 2007	Yes ADB, 2008	Yes Company ref. to subcontractors (unconfirmed)	n/a	Yes Swyngedouw, 2004
Investment targets	Yes Olleta, 2007	Yes JWSRB, 2009	Yes Kumar, 2009	Yes Saadi, 2012	No Laurie & Crespo, 2007	Yes Carrillo et al., 2006
Intended water price increases	Yes Olleta, 2007	Yes JWSRB, 2009	Yes ADB, 2008	Yes Olivier, 2009	n/a	n/a

Table 4.1
(Continued)

Category	Buenos Aires	Jakarta	Manila	Casablanca	La Paz-El Alto	Guayaquil
Standardized subsidy programs	Yes Dardenne, 2006	No* Ardhiani e & Zamzami, 2010	No*	Yes Olivier, 2009 Hatem, 2007	No	Yes Carrillo et al., 2006
Compensation mode	Revenue Alcazar et al., 2000	Volume Argo & Laquian, 2007	Revenue FDC, 2009	Revenue Saadi, 2012	Revenue Morales et al., 2006	Revenue (Unconfirmed)
Compensation tied to US$ or Euro	Yes FWW, 2009a	Yes JWSRB, 2009	Yes FDC, 2009	Yes Hatem, 2007	Yes Foster & Irusta, 2003	Yes (Dollarized) Tiepolo, 2007
Contract compliance terms noted	Yes Solanes, 2006	n/a Kurniasih, 2008	n/a	n/a	Yes Laurie & Crespo, 2007	Yes Carrillo et al., 2006
Water governance - arm's length?	No Alcazar et al., 2000 Solanes, 2006	No Argo & Laquian, 2007	No Kumar, 2009 Cuaresma, 2006	No Saadi, 2012 ACME 2007-2011	No Laurie & Crespo, 2007	No Joiner, 2007
Water governance - decentralized?	Part Laborde, 2005 Olleta, 2007	Part/Increasing? Nugroho, 2011	No Kumar, 2009	Part Saadi, 2012	No Morales et al., 2006 Nickson & Vargas, 2002	Part Joiner, 2007
Negotiating level	National Olleta, 2007	National JWSRB, 2009	National Kumar, 2009	National ACME, 2008	National Laurie & Crespo, 2007	National Joiner, 2007
Water governance levels	Multiple Olleta, 2007	Multiple Nugroho, 2011 JWSRB, 2009	Multiple FDC, 2005	Multiple Saadi, 2012 Lahlou, 2008	National Laurie & Crespo, 2007	Multiple Joiner, 2007
Contract / service regulator	Dedicated Olleta, 2007	Not specified initially JWSRB, 2009	Dedicated FDC, 2005	Committee ACME, 2007	Water dep't regulates Laurie & Crespo, 2007	Dedicated Carrillo et al., 2006
Water governance - legislated regulator?	Yes Solanes, 2006	No Bakker et al., 2008	No Kumar, 2009	n/a	Yes (Implied) Morales et al., 2006	Yes Joiner, 2007

* Supplemental subsidy programs have not been noted as vital to the concession agreement.
Note. n/a denotes not available or applicable.

The sections that follow provide a detailed qualitative examination of the key elements or parameters of the cases.

4.2 Nature of Contracts

This section compares the water concession contracts across the six cases, identifying and describing trends and noting specific terms. The cases are compared over a period of observation of approximately eight to 13 years depending on the case. Most of the analysis in this section pertains to the immediate lead up to and terms of the contracts upon privatization except where explicitly noted.

Pre-Contract Situation

As alluded to and mentioned in the earlier chapters, the World Bank has played a leading advocacy, promotional and technical support role in facilitating at least five of the water privatizations.[27] These roles generally reflect loan conditionalities which are generally determined in the World Bank's practices, rather than being explicitly stated in project loan agreements. The World Bank's involvement in these cases has included: loan financing for water and sewerage system infrastructure leading up to the water privatizations; technical and advisory support for liberalization, decentralization and privatization policy reforms; technical studies (i.e. pertaining to operating and infrastructure deficiencies); and institutional restructuring preparation and implementation necessary for privatization.

[27] The World Bank's water concession bid process role was not confirmed in Casablanca's case.

Water tariffs increased within two years prior to water privatization in five of the cases.[28] Such price alleviation appears to have been instrumental for promoting and facilitating public acceptance of privatization.

Privatization Support Financing

Numerous types and levels (i.e. national to local) of financing facilitated policy and water-specific reforms and improvements leading up to privatization. Funding continued during the privatizations, to serve additional reform supports, water resource management, infrastructure, and social programs (e.g. subsidizing water connection charges). Both before and during the privatizations financing has come from the World Bank, IMF, regional development banks, additional foreign and domestic commercial lending institutions, and in at least one case - state funding (tax subsidy provided to support capital works in Guayaquil). Casablanca is the only water case to not involve World Bank financing support during the immediate lead up to and initial years of the privatization.

Concession Process

Buenos Aires and Manila solicited multiple contract bidders in the final stages of their concession bid processes. The other four cases either lacked competitive concession processes or resulted in single bids. Jakarta and Casablanca concession contracts were directly awarded. La Paz-El Alto and Guayaquil water privatization offers encountered difficulties in eliciting bids, eventually resulting in single qualifying bids that led to the concession agreements. These two concessions were designed to solicit bids based on the number of new water connections to be installed and the resulting network coverage. For Buenos Aires, Manila, as well as Jakarta, the primary

[28] No reference to pre-privatization rates was found for Casablanca.

contract bid criterion was lowest water price (although Jakarta directly negotiated its terms with pre-selected companies).

It is apparent in these cases that concession bid processes being based on lowest water price has contributed to competition for the contracts. Conversely, bid criteria with a greater focus on explicit or implied capital investment requirements appear to have detracted from contract competition in the other three applicable cases.

Contract Terms, Geography and Scope

International consortiums, comprised of multinational corporations, contracted for the water concessions in all cases. Due to legislative limitations, Jakarta and Manila concessions were initially arranged to include domestic company majority ownership, although the foreign consortiums have managed operations over the duration of privatization. Five of the six cases initially involved Suez S.A.[29] as a lead partner. All six cases (eight contracts, as Jakarta and Manila both comprised two concession areas each) were developed and implemented as water monopolies with 25 to 30 year terms. All of the concessions, by definition, are comprehensive water distribution system leases[30], negotiated to include operations, maintenance, administration and capital planning and investment responsibilities.

---

[29] As indicated previously, this multinational corporation's involvement was as Lyonnaise des Eaux in a few cases, later merging to create Suez S.A., and more recently splitting into GDF Suez and Suez Environnement.

[30] In five of the cases, concessions have included varying levels of sewerage system responsibilities such as network and/or septic tank household sewer connections and wastewater treatment plant construction and operations. All of the cities have drainage systems which include some level of raw untreated sewage running through drainage systems and open canals.

In all cases, the long term leases have been owned by private sector consortiums.[31] The concession area water networks, to have been expanded, cover the respective urban areas to varying insufficient degrees. Each of the cities has experienced significant deficiencies in network coverage where many of the peripheral urban areas are generally represented by slums. The negotiated concession area boundaries have been noted as missing significant peripheral populations in some of the cases. For example, as highlighted in Chapter Two, Buenos Aires and La Paz-El Alto concession boundaries have missed significant populations (15% or more) from network expansion plans (Dardenne, 2006). This issue has also been noted in Casablanca's case, particularly in reference to a lack of property rights inhibiting inclusion in the water concession. In Jakarta and Manila's cases, peripheral areas fall into other municipalities' authority. The case cities have all had urban slums comprising between approximately one- and two-thirds of urban populations at the privatizations' inceptions.[32] Overall, the initial observation with respect to geographic scope is that such significant particularly peri-urban populations were very likely not adequately addressed when originally establishing the contract parties' obligations.

Performance Targets[33]

All of the agreements include targets for increased water service expansion over the full term of the concession. The concessions agreements also generally

---

[31] Of course, this does not preclude public institutional investors from being shareholders in the individual companies or transferred water utility companies (as applicable).

[32] Refer to Table 5.1. This data is used as a general reference only, as some figures do not appear representative of the case cities and/or rapidly declining trends appear contrary to other qualitative source reports.

[33] Note that sewerage, wastewater treatment related targets are not directly assessed within the comparative analysis except where exceptional notice is made.

have or require specific shorter term (i.e. five and/or ten year) performance targets. The criteria for service expansion have included geographic and population coverage of the respective water and sewerage networks. In most cases, water and sewerage connection objectives are separately articulated. The degree to which contract terms have clearly specified network expansion terms is unknown. As indicated in earlier chapters, contract renegotiations reduced or removed specific expansion targets in the cases of Buenos Aires, Jakarta and Manila. In the other three cases, network expansion is based on either a calculated proportion of geographic network coverage, numbers of household connections, or specific populations requiring water service access.

In at least three cases, Jakarta, Manila, and La Paz-El Alto, performance targets are explicitly identified as intending to achieve universal (100%) water coverage: Manila – after 10 years, Jakarta – after 25 years, and La Paz-El Alto – after five years, as per original contractual terms. Jakarta and Manila contracts do not clearly mandate household connections as the primary mode of domestic water access (i.e. permitting public taps to meet coverage targets). Moreover, in these two case agreements as well as those of Casablanca and Guayaquil, informal third party water providers are either allowed or not explicitly banned within the concession service areas.[34] These contractual terms, or lack thereof, have significant bearing on the nature and geography of water access. Moreover, these circumstances also have implications for whether water concession terms are being adequately fulfilled as intended. Only La Paz-El Alto appears to have explicit household network connection

[34] No information found on Buenos Aires or La Paz / El Alto.

targets mandated by the contract, which were intended to specifically target increased services for un-served poor households in El Alto.

In at least half of the cases, Manila, Jakarta, and Casablanca, concessions have included provisions to reduce water losses (also referred to as non-revenue or unaccounted-for water). In two of these cases, Manila and Jakarta, as well as Guayaquil, terms were also included to address water pressure where it has been identified as an issue for water service continuity and quality. Water quality is noted as a key target in two of these cases: Manila and Guayaquil. Sewerage connection targets are separately defined to varying degrees for the five applicable cases (excludes Jakarta).

Investment Targets

Five of the six concession agreements have clear investment targets for the companies. However, La Paz-El Alto's contract specified water connection targets without corresponding investment levels. Manila's contracts have included terms requiring concessionaires to repay prior debts held by the public water company. Contract renegotiations for Buenos Aires, Jakarta and Manila have resulted in reduced investment commitments.

Casablanca's case is the only example of domestic currency also being used for capital works financing initially, without any noted indexing to a foreign currency. Jakarta and Manila are also noted as raising funds in local investment markets within the first ten years.

Water Pricing Terms

Manila is the only concession noted as including an original target for ongoing water price reductions. Such changes are managed by the "rebasing" exercise

discussed by Kumar (2009) in Chapter Two. This is also one of the three cities which included price as the primary bid criterion. It appears that all cases have a form of increasing block water tariff (i.e. escalating price per volume), with different categories of residential and commercial customers paying differing water rates. Five of the six cases have involved charges to customers for new water connections regardless of residential customer class. Only Guayaquil has categorically waived charges for new connections (tied to a state subsidy). In two other cases, Casablanca and Buenos Aires, social water tariff programs have been implemented to subsidize the first block of water consumption for eligible households. On this point though, program eligibility may not have been adequately addressed within the contracts. This point was alluded to earlier in Chapter Three by Saadi (2012) and Dardenne, 2006, with respect to these respective cases. At least four of the cases, Buenos Aires, Jakarta, Manila, and Casablanca, have included contract terms for periodic water rate increases or reviews. Water pricing is a term regulated by the contract and government agencies authorized to review and approve water price decisions. Each concession varies with respect to the level of reference to and resulting implementation of procedures and regulatory processes for water tariffs.

In three of the renegotiated cases (excluding Casablanca), the new terms have allowed for new and ongoing water price increases (particularly for Jakarta and Buenos Aires). Price increases have been facilitated by negotiating higher guaranteed rates of return.

Contract terms do not appear to include obligations that address or regulate pricing for third party (i.e. re-sellers) water markets. In at least three cases, Jakarta, Manila and Guayaquil, vendor water accessed through reselling and other sources

was a significant residential water provision mechanism at the outset of privatization. These secondary markets charge higher rates per volume but do not require any network connection infrastructure. Also, in Casablanca's case, subcontractors have been mentioned as providing services although little is known about pre-privatization water vendor markets.

Compensation Terms

In five of the six cases (excludes Guayaquil), service compensation has been fixed to specific foreign exchange rates, and foreign capital controls have been relaxed effectively transferring financial risk to government authorities and consumers (subject to pricing regulation). Four of these cases have involved contract renegotiations to further affect these terms (excluding La Paz-El Alto). Ecuador moved to using the US dollar as its domestic currency prior to Guayaquil's concession agreement implementation.

Jakarta's concession agreement is the only example of company revenues being based on water volume sold rather than sales revenues. This contract term was emphasized by Argo and Laquian (2007) in Chapter Two. In this case, there has not been an apparent control mechanism to ensure that appropriate levels of capital investment and corresponding network expansion at least partly define the method of sale. Consequently, this puts an inordinate amount of pressure on the water authority to increase prices to transfer risks to customers.

All of the concession agreements include provisions for guaranteed or expected levels of company return.

Compliance Terms

Buenos Aires, La Paz-El Alto, and Guayaquil are identified as having (or having had) defined sanctions for contractual non-compliance. La Paz-El Alto's penalty terms were clearly defined while the other two cases have been noted but not confirmed. No such terms are initially apparent in the other three cases. The contract renegotiations that took place have essentially acted to relax or remove compliance terms.[35] Collectively, the renegotiations were made in several iterations over a number of years. Overall, only one of six cases, La Paz-El Alto, is known to have explicitly articulated contract sanctions which are directly linked to underperformance of water and sewerage connection installation targets.

Contract Terminations, Disputes & Ownership Transfers

Buenos Aires and La Paz-El Alto contracts were eventually terminated. In both cases, terminations appear to have been instigated by the state. Although in Buenos Aires' case, the dispute over the government freezing water prices and reversal of exchange rate protections left the company in a situation that could not be mutually resolved. Both cases have involved some level of legal threat and continuation to the World Bank's International Centre for the Settlement of Investment Disputes (ICSID). Jakarta and Manila have both had various court and arbitration panel disputes leading to and subsequent to renegotiations.

Concession ownership changes have been permitted in all six cases during the first ten years of privatization. In three cases (all five companies), Manila, Jakarta and Guayaquil, majority company shareholders have changed. In the cases of Buenos Aires, La Paz-El Alto and Manila (East), the World Bank became part

---

[35] It is not known whether these changes were formalized or simply *allowed* by regulating authorities.

concession owner. In East Manila, Manila Water's major shareholder Ayala Group is a multinational investment group with local colonial history. Manila Water has now recently become the major shareholder in West Jakarta's water concession company. All other majority concession shareholders are also multinational corporations. Jakarta's only domestic tie, Astra International, is a company originating in Indonesia but now subsidiary to foreign holdings company Jardine Matheson (Hall and Lobina, 2009). Overall, it appears that there are few, if any, capital control barriers to transferring majority ownership / operator. Also, as relating to investments mentioned above, there is no consistent method of capital financing with private and publicly-traded companies obtaining capital financing from and distributing dividends to various sources. Government oversight of such transfers has been noted in two cases (Guayaquil and West Manila).

4.3 Governance and Regulation

This section focuses on governance and regulation, comparing reformed water governance institutional roles and levels of responsibility to identify trends and differences as relevant to the privatization outcomes across the cases. The objective is to capture any trends in legislation, procedures, governance structures and respective roles in governing the contracts and regulating the related services. Regulation is primarily examined through the established regulatory bodies responsible for water service regulation in the respective cities. Therefore, environmental and public health regulations are only examined in so far as these mechanisms are known to be integrated with reformed urban water service regulation.

Pre-Concession Reforms

In the years leading up to and continuing during the concessions, all cases have involved policy reforms and government restructuring to facilitate water privatization. Policy reforms have included liberalization[36], decentralization, and privatization reforms to accommodate water privatization. In three of the cases, Indonesia, Philippines and Ecuador, water and sanitation sector decentralization (to regionalize water management) began at least five years prior to the water privatizations. In Argentina and Bolivia, reforms were part of broad privatization initiatives across several sectors that were implemented in only three to four years. Bolivia is the only country which has been noted to include fiscal decentralization, although water sector decentralization for the La Paz-El Alto privatization is not apparent. Water decentralization began in Morocco just two years prior to Casablanca's privatization.

As mentioned earlier, in five of the six cases, the World Bank provided funding predicated on national and regional level policy reforms to facilitate decentralization, liberalization and privatization.[37] The Bank provided direct assistance or supervision in the designs and implementations of policy reforms and the subsequent and concurrent water concession processes.

In the case of Jakarta, a water law required by the World Bank took six years to implement. Legislative changes accommodating water privatization have prioritized recognition of water's multiple purposes and types of users. This may potentially contradict pre-existing constitutional definitions of water access.

---

[36] Liberalization, in this context refers to policy changes that permit foreign investment and operation of a utility, and relax restrictions on their activities.

[37] For Morocco, the World Bank's first loan following the immediate lead up to Casablanca's water privatization occurred ten years after the privatization.

Governance Model, Contract Regulation and the Regulator

As noted in Table 4.1, all of the concessions were negotiated by national-level authorities. Five of the six governance models were developed with multiple levels of government involvement – national level ministries holding specific contract and environmental mandates; multi-level board representation for regulating authorities; and/or high-level officials appointing respective directors. La Paz-El Alto's water privatization was highly centralized, stemming from reforms, restructuring and implementation at the national level, with no resulting authority at the local level. Ecuador's model is also highly centralized as the concession agreement for Guayaquil was arranged by the President's office and signed at the Inter-American Development Bank's (IADB's) Washington (DC) offices. Guayaquil's mayor is the only local representative on the water regulator's board. However, irregularities have been noted, such as the National Comptroller's Office not being used for financial oversight of the water concession. Manila's water governance is also centralized as the president appoints the water authority board members. Buenos Aires' governance model included the national government overseeing the concession with all three levels of government represented on the regulator's board. Casablanca's governance model includes national oversight with municipal representation. Finally, Jakarta's water governance model has the city's water authority reporting to the local government (governor and local assembly).[38]

Three water governance models, Buenos Aires, Manila, and Guayaquil began with a city-specific water regulatory body. As alluded to in Chapter Two, Casablanca's regulator is noted as being structured as a committee rather than a dedicated

[38] The water concession agreement is for DKI Jakarta, which is formally a province.

department. Jakarta's governance model initially included only the water authority (without dedicated regulatory duties), creating a regulatory office for monitoring purposes only after renegotiating contracts three years later. Lastly, Bolivia's national water authority also acted as regulator for the La Paz-El Alto water concession.

In all cases, the regulatory body does not appear, by design, at arm's length from the government, which has promoted varying levels of political influence or interference. Only Jakarta appears to have this influence isolated to the local authority (Only after presidency changed shortly after privatization) while all other cases have national level departments or presidential office representation that have been in a position to supersede local authority to regulate the water contracts and services. All cases call into question the regulator's mandate and authority to regulate network expansion, quality and/or water pricing. In some cases, these duties are split between more than one department[39], or roles are conflicting, or can be superseded by national offices.

In half of the cases, Buenos Aires, Jakarta and La Paz-El Alto, government bodies have been identified as having authority to exercise contract sanction measures. La Paz-El Alto's water concession is the only case with clearly defined and communicated fines for non-compliance, although it is also the only case with no local level regulatory authority. None of the cases have been identified as including regulation over subcontracted or vendor water supply and services.

---

[39] Generally, governments are noted as having separate ministries responsible for the contracts, environmental and public health.

4.4 Contextual Factors

This section comprises external factors closely relating to and affecting the water contracts and respective governance models. Contextual comparative analysis includes an assessment of external entities, political and economic factors impacting or supplementing water privatization contracts, services and governance models.

Pre-Privatization Facilitation

The IMF and World Bank have had a history of extending loans beginning before the 1990s in all six cases. The two institutions generally work together with the World Bank providing sectoral reforms and project loans, while the IMF focuses on fiscal stabilization and monetary policy efforts. This appears indicative of the lead up to these cases, as previously described, with a significant role for the World Bank in five of the six cases[40] in national liberalization and specific privatization reforms, particularly of public utilities and in water resource management. Such reforms and related loans are generally justified by the increasing urban pressure on water resources, public utilities and their scope and quality of services in all six cases. The five of six cases involving significant World Bank involvement also have been viewed as fiscal crises at national and/or local levels preceding the water privatization reforms. Water privatization is a loan assistance condition in at least four of the cases.[41]

Regional development banks have also provided varying levels of assistance to the water concession processes, although there is no specific identifiable trend across cases. The World Bank has provided significant direct facilitation in five

---

[40] In Casablanca's case, no direct involvement by the World Bank has been confirmed relating to the concession process specifically.
[41] Unconfirmed for Indonesia and Morocco.

cases' concession bid and contracting processes. This role has encompassed designing and facilitating the concession bid process (which have included bid criteria and a *pre-qualification* process), the contract model, concession promotion, and implementation until the signing of the agreements. Technical studies are also confirmed to have preceded some concession processes with the World Bank funding and/or subcontracting consultants to undertake these studies.

The Role of Economic Crises

The IMF financed national loan packages for Argentina, Indonesia, the Philippines, Bolivia, and Ecuador either just prior to and/or during the water privatizations. Loans were also provided to Morocco although this was more than a decade prior to the water privatization in Casablanca. The primary five bailouts all included significant currency devaluations which sparked debt repayment issues. In Argentina's case, the IMF was directly involved in calling for relaxation of currency controls preceding a devaluation that prompted rescue loans. Only Morocco has maintained currency exchange rate controls during the water privatization.[42]

Political Instability & Influence

All of the case countries can be viewed as politically unstable to varying degrees. Indonesia was considered highly corrupt in the 1990s due to the centralized military-led government. Immediate economic circumstances contributed to President Suharto's exit, supplemented with a bailout by the IMF. Perceptions of corruption have only marginally changed though.[43] Bolivia experienced frequent turnover of its presidency leading up to water privatization. Ecuador is viewed as

---

[42] Various supplemental documents have been accessed for this section at www.imf.org
[43] In fact, perceptions of corruption have worsened (i.e. 1999 to 2007, according to Transparency International, 2012).

increasingly corrupt. These factors have contributed to a lack of competition for each of the water concessions during the bidding processes. Moreover, in reference to the renegotiations which were experienced in the other three cases (as well as for Jakarta), no formal governance mechanism was apparent in allowing for the contracts to be reopened. Buenos Aires' regulator was moved to the environmental ministry to remove it from contract renegotiations. As mentioned in Chapter Two (FDC, 2005), Manila's regulator has an informal relationship with and physical proximity to the water concessionaire. Guayaquil's contract cannot be effectively regulated due to performance targets not being requirements of the contract.

4.5 Privatization Outcomes

Contract Performance

Based on the original contracts, all companies have failed to achieve their respective water network expansion targets in the first ten years of privatized operations. In five of these cases, based on original terms, the lack of expansion targets has essentially constituted a breach of contract. In the sixth case, Guayaquil's targets are not stipulated as required by the contract.

As previously indicated, five of the six cases' concession agreements[44] include corresponding investment targets, while La Paz only specified connection installation targets without corresponding investment level required. Guayaquil's concession only included a soft target for investment levels for the first ten year plan which has not formally carried into subsequent plans. In the other four concession models, the companies have under-invested relative to original contract terms. However, contract

[44] Referring to Jakarta and Manila as one case each given that the contract model is the same for both concession areas in each respective city.

renegotiations for Buenos Aires, Jakarta and Manila reduced respective contractual water coverage targets.[45] These renegotiations resulted in a lack of clarity in revised targets and related terms, which have made it difficult to assess whether subsequent terms and performance have been adequate.

Both Manila and Jakarta have not reached original non-revenue water targets established to reduce water leakages. It has been suggested that such losses represent increased theft of water. Manila and Jakarta have used bulk water sales at the water network's periphery towards achieving water coverage targets. As indicated earlier, it is not clear whether contract terms formally allow such informal network extension. Moreover, increased water prices from informal water sales amongst predominantly poor populations will likely lead to increased theft of water, particularly given that alternative water sources are not formally permitted.[46] Overall, four of the six cases are noted as continuing subcontracting and/or informal vendor water arrangements to service areas within the concession area scope that are not serviced by network infrastructure.[47]

Contractual performance failures have consistently occurred from the outset for all contracts. Subsequent contract renegotiations have acted as a performance disincentive given that water coverage and necessary capital investment targets were reduced.

In four cases, Buenos Aires, Jakarta, La Paz-El Alto, and Guayaquil, elevated prevalence of water-borne diseases have been noted. Specific water and sewerage infrastructure issues have been noted as public health hazards in three of these

---

[45] Including sewerage targets for Buenos Aires and Manila.
[46] Casablanca has also been noted as permitting subcontracting of services although no data was found. Refer to Table 5.1 for slum population information.
[47] No information found on Buenos Aires or La Paz / El Alto.

cases, Buenos Aires, Jakarta, and Guayaquil; as well as Manila. There is no identifiable trend across cases to date to reasonably assess whether water privatization has improved water quality though.

Water Tariffs and Access for the Poor

As noted in Chapter Two by several authors, in five of the six cases (all except Casablanca), nominal water tariff increases have been at least implied as prohibitive for customers at particular times during the privatizations (See Table 4.2). The cases initially had varying levels of water price regulation. After renegotiations took place for some of the cases, further water price changes were permitted. In three cases, Buenos Aires, Jakarta, and Manila, water pricing has been found to be prohibitive to users in general. In cases where alternative sources are available (Jakarta, Manila, Guayaquil), vendor water has been accessed at much higher prices, or, when water cannot be afforded, water is accessed without an official connection or sources are contaminated.

La Paz-El Alto is the only case known to have effectively required water coverage to poor areas, despite un-served areas comprising significant proportions of poor neighbourhoods. The World Bank has been noted as funding water subsidy programs focused on the urban poor at different times during privatization in all of the cases. However, none of these programs have been identified as sufficient to substantially support the companies in meeting their contracted service coverage or corresponding investment targets. The Casablanca program appears to involve substantial numbers of poor households, although as previously noted, water connection installation figures presented by the company have been questioned in general.

It appears that the initial concession bid processes including low-price criteria put immediate subsequent upward pressure on prices in the cases of Buenos Aires, Jakarta and Manila which also contributed to the renegotiation of contracts. In two of these cases, Jakarta and Manila, as well as Guayaquil, water vendors have continued to serve poor areas with bulk water access informally extending networks, charging prohibitive pricing. No known regulatory mechanisms have been identified for vendor water in these cases. At the same time, the concession companies have reported water coverage increases that imply network expansions through bulk water sales.

4.6 Qualitative Summary

The qualitative analysis of the six cases in this chapter has revealed the general failure of water privatization. The failures pertain to various overlapping aspects of water privatization including: (1) inadequate contracts with ambiguous terms, (2) lack of effective governance and regulatory oversight, (3) political interference, corruption and lack of accountability, (4) preference of international interests over domestic public interest[48], and (5) unfavourable economic situations and political instability - that have exacerbated the problems with such concessions. Table 4.2 shows a summary of these and various additional findings.

A key comment regarding these findings is that privatization has been more highly analyzed and publicized than the previous public water model. As a result, the concession agreement obligations and promises to improve upon previous service metrics have acted as a proxy for privatization's success.

[48] Although use of domestic financing sources to some degree in three known cases, Jakarta, Manila and Casablanca, may be viewed as serving a domestic interest.

From this critical context, the qualitative analysis generally shows privatization to be a failure thus far. However, Casablanca's recent renegotiation of the water concession shows signs of potentially remedying performance deficiencies apparent during the first ten years of this concession by limiting the company's rate of return and restoring investment shortcomings. Furthermore, it has been reported very recently that fines have been levied for under-performance, although the company has publicly disputed these findings. This case is the only partial exception to the generalized findings.

Table 4.2 Summary of Privatization Concessions Structure and Performance

Category	Buenos Aires	Jakarta	Manila	Casa.	La Paz / El Alto	Guay.
World / Regional Development Bank Facilitation	Yes Olleta, 2007 FWW, 2009a	Yes Argo & Laquian, 2007	Yes Argo & Laquian, 2007	n/a	Yes Morales et al, 2006	Yes Swyngedouw, 2004
Majority Ownership Change?	n/a	Yes Hall & Lobina, 2009	Yes FDC, 2009	No	n/a	Yes IFA / MIGA, 2008
Original contract expansion targets met?	No Castro & Azpiazu, 2012	No Ardhiani e & Zamzami, 2010 JWSRB, 2009	No Public Citizen, 2003	No Saadi, 2012 ACME 2007-2011	No Laurie & Crespo, 2007	n/a Joiner, 2007 Cardenas, 2008
Original contract investment targets met?	No Castro & Azpiazu, 2012 Lobina & Hall, 2007 Olleta, 2007	No (Implied) JWSRB, 2009	No FDC, 2009	No ACME, 2007-2011 Saadi, 2012	n/a Lobina & Hall, 2007 FWW, 2006	n/a
Contract renegotiated?	Yes Alcazar et al., 2000 Olleta, 2007	Yes Hall et al., 2010	Yes FDC, 2005, 2009	Yes Saadi, 2012	No	No
Excessive foreign currency expenditures?	Yes Laborde, 2005	Yes Argo & Laquian, 2007	Yes / n/a Argo & Laquian, 2007	Yes Lahlou, 2008 ACME, 2007-2011	n/a	n/a
Excessive company debt?	Yes Laborde, 2005 Solanes, 2006	n/a	Yes / n/a Chia et al., 2007	n/a	n/a	n/a

Table 4.2 (Continued)

Category	Buenos Aires	Jakarta	Manila	Casa.	La Paz / El Alto	Guay.
Vendor / subcontractor water continues?	n/a	Yes Argo & Laquian, 2007	Yes ADB, 2008	Yes Hatem, 2007 ('Subcontractors', unconfirmed)	n/a	Yes Joiner, 2007
Significant water price increases?	Yes Olleta, 2007 Castro & Azpiazu, 2012	Yes Argo & Laquian, 2007	Yes Argo & Laquian, 2007 FDC, 2005	Yes Saadi, 2012	Yes Laurie & Crespo, 2007	n/a Cardenas, 2008
Disputes and public protest?	Yes ICSID, 2010	Yes Argo & Laquian, 2007 Bakker et al.,	Yes Argo & Laquian, 2007 MWSS RO, 2003	Yes Olivier, 2009 ACME, 2012	Yes Dardenne, 2006 Morales et al., 2006	Yes IFC/MIGA, 2008
Economic or financial crisis followed by additional IFI loans?	Yes Solanes, 2006	Yes Argo & Laquian, 2007	Yes, Argo & Laquian, 2007	No	Yes / n/a Morales et al., 2006	Yes / n/a Tiepolo, 2007
Effective concession process and contract design?	No Solanes, 2006	No Argo & Laquian, 2007	No FDC, 2009	n/a	No Laurie & Crespo, 2007	No Joiner, 2007
Evidence of regulatory enforcement?	No Porporato & Robbins, 2010	No Argo & Laquian, 2007	No ADB, 2008	Yes* Saadi, 2012	No (after term'n) Lobina & Hall, 2007	Yes** FWW. 2007
Water quality or sewerage health hazards?	Yes Alcazar et al., 2000 Engel et al., 2011	Yes Kurniasih, 2008	Yes Argo & Laquian, 2007 MWSS RO, 2003	n/a	Yes FWW, 2006	Yes Tiepolo, 2007

Note. n/a denotes not available or applicable. Split answer indicates differing observations for each concession area or differing answers for each part of the respective category.

* 15 years into privatization, relating to first ten year performance.

** Performance fine has been noted as of 2006. Details unknown.

Active Concessions

Although the four active privatization cases, Jakarta, Manila, Casablanca, and Guayaquil still have many years remaining in their contracts, it appears that the revised contracts and existing governance frameworks constrain potential future successes for Jakarta, Manila and Guayaquil. This point is demonstrated by various summary points presented in Table 4.2. For example, these three active concessions have all changed majority shareholder operators within ten years of privatization. These concessions all permit vendor supply arrangements which are not regulated under the concessions, yet are used to account for company water coverage target successes (which are supposed to be regulated?). Additionally, the World Bank concession process and agreement design, and contract renegotiation of price controls and alleviation of performance targets; appear to have solely favoured the companies. These findings point to a critical lack of service criteria and accountability in the concession models. It appears that the renegotiations for Jakarta and Manila were approved to appease the companies. As alluded to earlier, Jakarta's government's weak contract position led to further alleviation of company responsibilities in the 2001 renegotiations. Manila's renegotiation effectively weakened contractual requirements. The concession terms for Guayaquil alleviated much of the accountability for the company by not mandating coverage targets. Such evidence suggests that any future changes to remedy contractual shortcomings in any of these cases to favour of the states and/or general public would be difficult to renegotiate without violating the terms of the existing contracts.

These factors have constrained state autonomy and capacity to favourably resolve water service needs to benefit the general public and slow or stop related

capital outflows. As noted, of the four remaining cases, only Casablanca has shown potential signs of regulating the company to provide effective service within a limited rate of return in the future, although the company has not yet acknowledged its shortcomings to the degree of complying with contract sanctions.

CHAPTER FIVE: QUANTITATIVE ANALYSIS

This chapter examines quantitative data on water connections and coverage, consumption and pricing across the cases before and after privatization to the extent possible given the available data. Given severe data limitations and reliability, the examination falls short of a proper quantitative analysis. As a result, this partial analysis is only meant to supplement the qualitative analysis in the previous chapter.

5.1 Data Sources and Definitions

In addition to various case reports, a few major sources for quantitative data across the cases are used in this chapter. The latter include Marin (2009), the International Benchmarking Network for Water and Sanitation Utilities database (IBNET, 2005-2011), and UN-HABITAT (2008) and United Nations (UN) Statistics Division (2012) information. UN-HABITAT's *State of the World's Cities 2010/2011* (2008) is used for comparative city populations and slum populations. UN Statistics Division (2012) is used for some population information. As concession area population estimates differ by source, and in some cases do not align with the city or metropolitan area boundaries, water supply coverage and populations served data are also used to cross reference and establish reasonable estimations for population figures during the relevant years of analysis.

Population figures are estimates of the populations of the water concession areas. Where noted, population figures may be re-estimated to capture populations thought to be missed by registered population figures.

Number of Water Network Connections figures represent the number of water connections known for individual years for the respective water case cities. The

number of water connections from one year to the next provides an annualized measure of performance without taking population into account. Disaggregated residential connections are provided and analyzed only where noted.

Population Served figures are estimated figures for populations served by the existing water connections for each case city by year. Population served acts as a flow through figure for calculating water supply coverage.

Water Coverage figures represent the percentage of total population estimated to be served by the existing water connections (Population served divided by total population in the respective concession area) for each year.

Water Consumption is the volume of water sold, expressed in millions of cubic metres per year. The figures are converted into water consumption per capita as a proxy for household consumption, which is generally a larger proportion of total water consumption compared to commercial and industrial users of potable water resources.

Average Water Price is generally expressed as the average price paid for access to each cubic metre, or other specified measure, of potable water.

5.2 Data Limitations and Qualifications

Several constraints emerged while attempting to obtain water coverage (and/or network connections, population and household size data as applicable), consumption and pricing data over time and across cases: (1) Full data sets for comparison are not available, (2) Methods of determining these variables differ by location and source, (3) Many officially-recognized figures appear void of scrutiny and simply align with contractual targets, (4) Most figures do not distinguish between

residential, commercial and institutional data figures[49], and (5) Very few figures were identified for years before water privatization. This limitation is especially apparent with respect to water consumption (Section 5.5). As a result, as indicated above, the method has involved close scrutiny of source data to attempt to use the most reasonable data in each case.

Official population estimates from national censuses and the UN tend to underestimate metropolitan figures quoted by various literature sources. Such higher estimates are based on geographic and social realities in these cities. Urban peripheries mostly comprise poor populations in each of these cities. They are significant in proportions, lack property rights and the ability and rights to be counted officially. As a consequence, they also get left out of the services and figures quoted to determine the water concession city and population-served contract parameters. Across all cases, urbanization trends are simply contradicted by outdated census information. There is a need to acknowledge and recognize the real populations that make up the significant informal settlements and areas generally described as slums. See Table 5.1 for the estimated proportion of urban slums in case countries.

A significant limitation in acquiring meaningful data relates to the complexities of the respective water rate (tariff) structures. Average water pricing and consumption is not consistently disaggregated to residential levels. Water block tariff structures generally charge different rates to specific categories of residential, commercial and institutional customers, as well as varying levels within residential categories. Consequently, in some cases, the data is not available or only available

[49] Companies approached directly indicated that such disaggregation was not available.

from limited sources for very few years of observation. Moreover, the consistency of the average all inclusive water tariff calculation methods cannot be verified.

Table 5.1 Proportion of Urban Population Living in Slums

Year	Argentina	Indonesia	Philippines	Morocco	Bolivia	Ecuador
1990	30.5	50.8	54.3	37.4	62.2	-
1995	31.7	42.6	50.8	35.2	58.2	-
2000	32.9	34.4	47.2	24.2	54.3	-
2005	26.2	26.3	43.7	13.1	50.4	21.5
2007	23.5	23.0	42.3	13.1	48.8	-

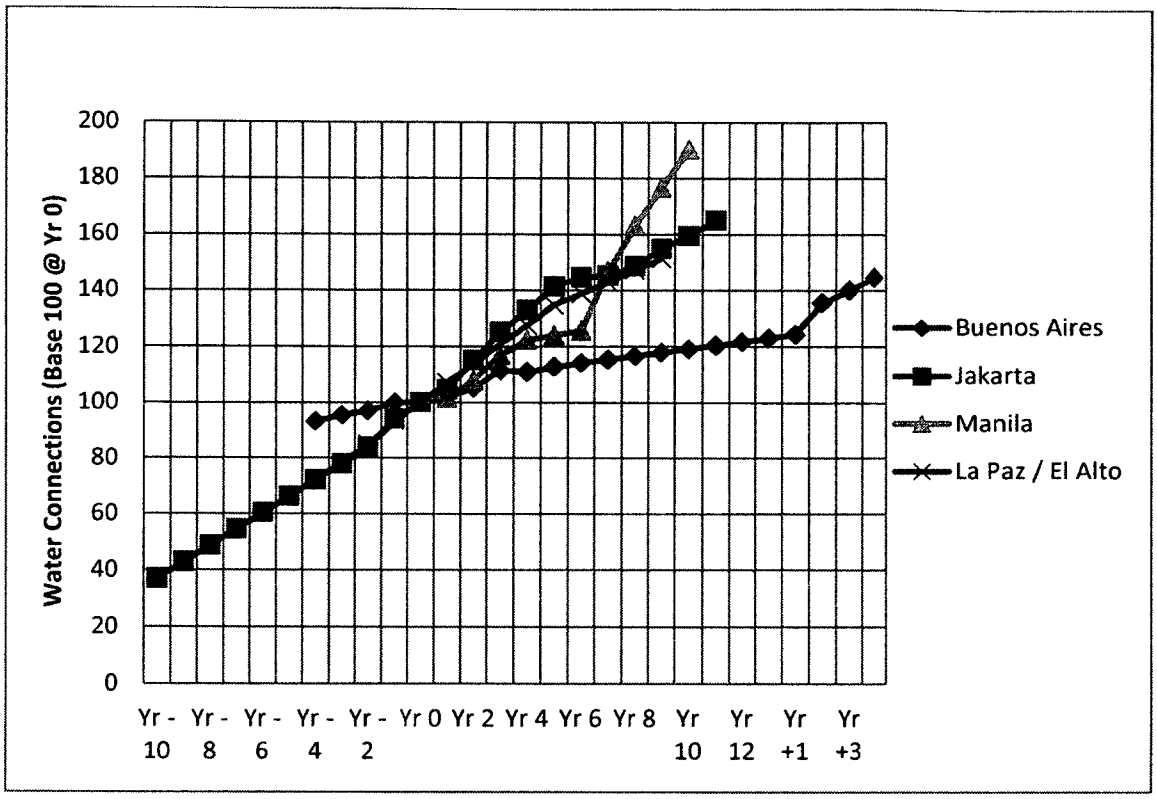
Source: UN Habitat (2008)
Note. Ecuador data only available for 2005.

5.3 Water Connections

Although attempts were made to acquire disaggregated residential household connections and consumption data, very few figures could be found. In the few cases where residential figures have been identified, it has simply been for specific years and does not necessarily permit comparative analysis. Consequently figures used in this partial analysis comprise domestic, commercial and institutional connections and consumption. Nonetheless, household and group tap connections typically make up a large proportion (i.e. over 70%) of all water connections.

Water connection figures for each city are adjusted to a baseline of 100 at year zero. From the adjusted connection figures, average annualized rates of change are calculated for the specific reform periods. This data and respective calculations are represented in Figures 5.1 and 5.2, respectively.

Figure 5.1 Water Connection Trends



Source: Constructed from data provided by Alcazar et al. (2000), AySA (2005-2010) (Buenos Aires); JWSRB (2009, 2011), Bakker et al. (2006), Tutuko et al. (2001), Shofiani (2003) (Jakarta); MWSS Regulatory Office (2003), Altmann (2007) (Manila); Foster and Irusta (2003), Food and Water Watch (2006), Chia et al. (2007)(La Paz-El Alto)

The connections figures are generally referred to as registered or official connections. They are implied as a proxy for household water access although it is not verified whether any of the presented figures comprise *only* household connections. Furthermore, geographic expansion of the respective water services is implied but disputed in specific cases. The disputes relate to documented evidence that in Buenos Aires, Jakarta and La Paz-El Alto cases, by example, installed water connections within existing network areas are used to achieve increased water coverage targets.

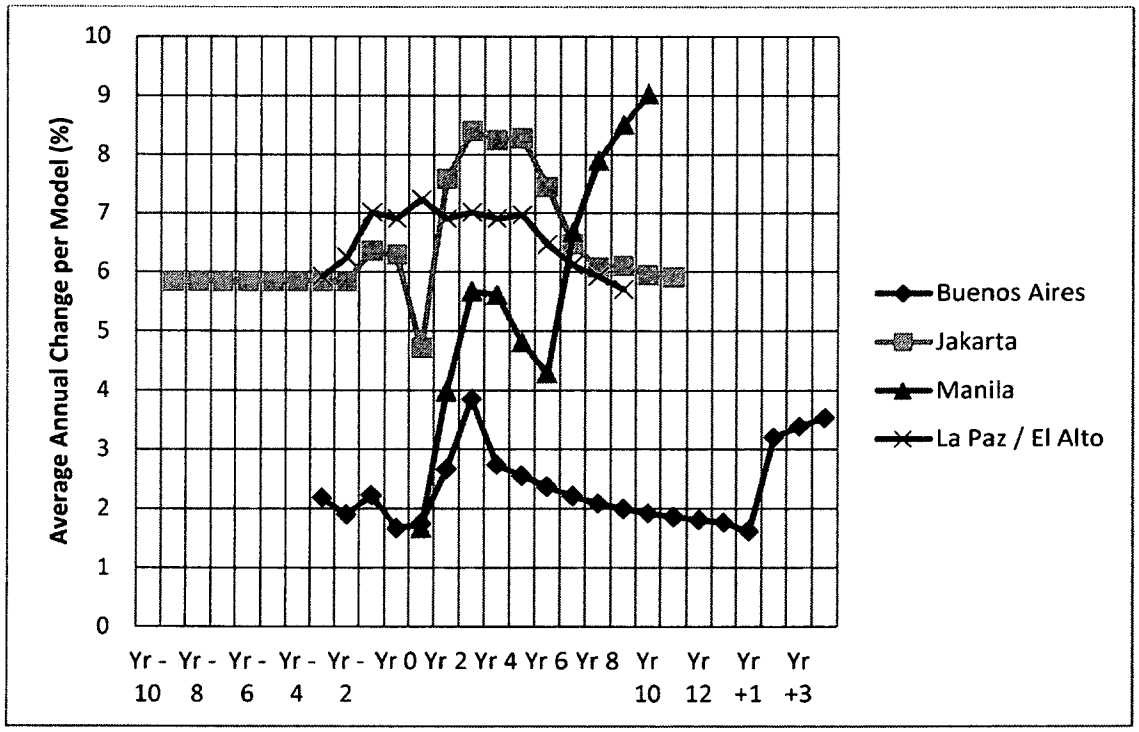
Figures 5.1 and 5.2 simply account for the numbers and changes in reported water connections installed each year as a measure of raw performance without accounting for population changes. Viewing Figure 5.1, the confluence of data points at Year 0 (X Axis) and Connections 100 (Y Axis) represents the beginning of privatization for each of the four cases shown. It can be seen that all four cities are experiencing growth in the number of water network connections both before and after privatization. Buenos Aires shows a steady climb during the four years of public water provision preceding the 13 year period of water privatization, during which a slight additional increase in the trend is temporarily apparent (approximately years 2 – 4 of privatization). The trend then shows a marked increase during the second phase of public water (years 1-4 shown in the right hand columns of the figure). Jakarta's line prior to privatization is based on an average (specifically for years -10 to -1). This increase accelerates during privatization (particularly years 3 – 5) then steadies again similar to the pre-privatization trend. Manila shows significant increase in the trend, particularly after year 6 of privatization although no data is available for the preceding public period. Finally, La Paz-El Alto's increasing trend steadily increases both before and after privatization, lowering slightly after year 5 of privatization.

Figure 5.2 shows the average annual rates of change of water connections for water network connections, calculated based on the same data presented in Figure 5.1.[50] The trends accentuate the previous observations noted above. Buenos Aires clearly experienced growth in connections early during privatization. This rate of

[50] The figures at each respective year represent the average rate of change for the specific water provision model type to that date.

increase then steadily declined. Buenos Aires' second period of public water provision then brings a renewed increase for the few observed years. Jakarta experiences an initial increase in the rate of installation during privatization which then declines to a level similar to pre-privatization. La Paz-El Alto shows a tapering of increases after privatization, which fall below pre-privatization levels. Manila clearly shows an initial increase followed by further surges, but without comparison to the pre-privatization period.

Figure 5.2 Average Annual Connections Change per Water Model



Source: Average annual connections changes are calculated based on data presented in Figure 5.1.

For the three cases showing years of public provision represented visually in Figures 5.1 and 5.2, the average rate of annual change, adjusted to the year of

privatization, is higher for the public model.[51] Note that all four cities have reported disputable figures, relating to some of the water connections alleged as being installed within the existing networks rather than in expansion zones. Despite such issues, the results of annual increases in numbers of water connections slightly favour the pre-privatization era.

The importance of this finding is constrained as no comparable financial information on water supply cost per unit has been accessed as a metric for 'efficiency'. In light of such limitations, water connections installations before and after privatization are compared from the perspective that the private model's contractual expectations are that it outperform the previous public model (as discussed in Chapter Four).[52] These issues are discussed further in later sections of this chapter.

5.4 Water Coverage

The water coverage trends for five cases[53] prior to and after privatization are shown in Figure 5.3. A variety of sources are used, as indicated, either providing figures directly and/or from which coverage rates are calculated to establish trends. In Buenos Aires, water coverage trends follow a very similar line to the previously noted connections trend. The results between water model periods are very similar, and then climb significantly during the second period of public provision. Jakarta appears to be increasing coverage at a higher rate until about Year -5 before

---

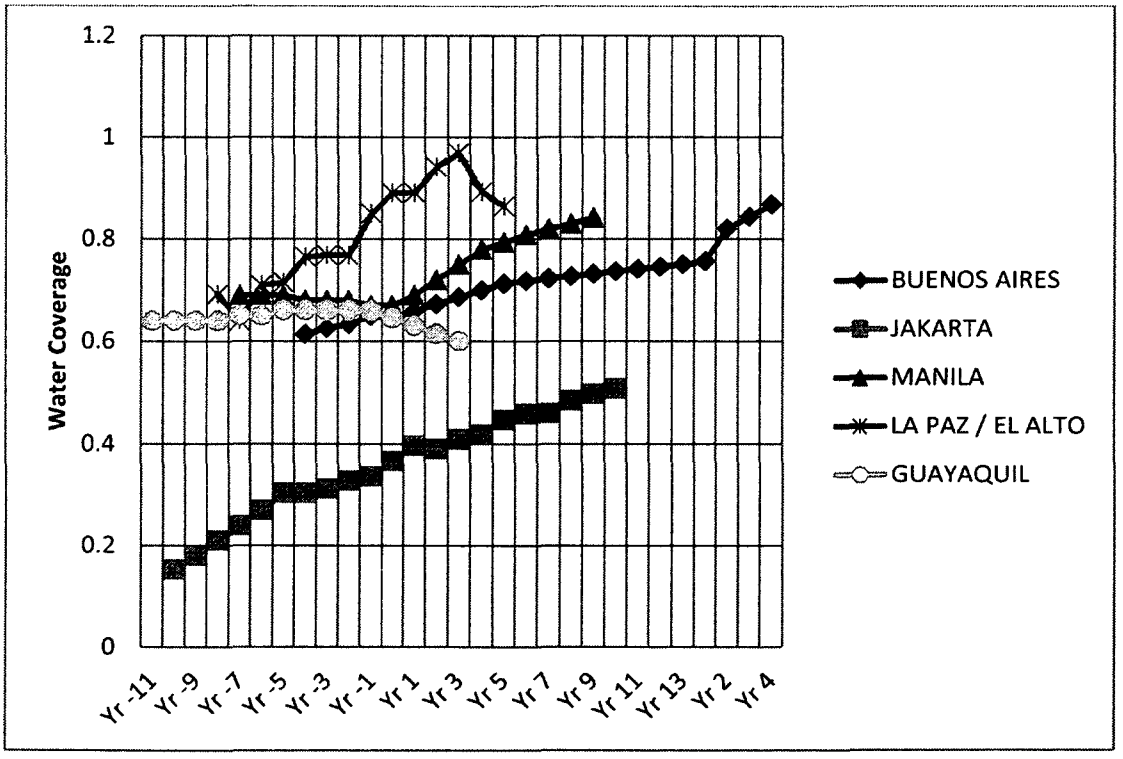
[51] Buenos Aires 3.53% (1.67 using prior public period only) vs. 1.77, Jakarta 6.29 vs. 5.91, La Paz / El Alto 6.91 vs. 5.70.

[52] Outside of the context of contractual expectations, it is difficult to generalize the reasonable level of expected annual rates of connections installations (e.g. In terms of the capacity to expand the water network during privatization).

[53] Casablanca is excluded due to significant data discrepancies preventing the estimation of any reasonable trend.

privatization and then steadily increases at a lower rate of change for the remaining years, with the exception of a slight increase just before and after privatization. Manila's trend shows slightly declining water coverage before privatization which then steadily climbs thereafter. La Paz-El Alto's trend reflects alternating levels of coverage increases each year until a few years into privatization after which coverage declines. Guayaquil's water coverage makes little change before privatization and then experiences decline. These declines (and declines in coverage in general) primarily relate to population rate increases exceeding water connection installation rates.

Figure 5.3 Water Coverage Comparison



Source: Constructed from data provided by Marin (2009), AySa (2005-2010), Dardenne (2006) (Buenos Aires); JWSRB (2009), Schouten and Halim (2010), Bakker et al. (2006) (Jakarta); MWSS RO (2003, 2011), Negishi (2010), David (2000), Altmann (2007) (Manila); Morales et al (2006) (La Paz-El Alto); Tiepolo (2007), Swyngedouw (1997) (Guayaquil)

Figure 5.3 reflects that Manila's water privatization has been more successful in increasing coverage than during the years leading up to privatization, while public provision coverage rates have increased to a greater degree than during privatization for Buenos Aires, Jakarta, La Paz-El Alto and Guayaquil.

Water Supply Cost

In absence of verifiable cost data from the companies on per unit cost of water supply, the few observations of coverage rates above provide only a partial view of how privatization has compared to the pubic model. It is important to acknowledge that network expansion is likely increasingly expensive in the peripheral network areas to be served in these cities. The potential of increased direct capital costs and related challenges are apparent and relevant. The direct elements of these challenges have theoretically been accounted for within the original contractual obligations though. Either way, through privatization, the companies have clearly inherited significant challenges in meeting their contracted deliverables.

Experimental Changes in Coverage Assumptions

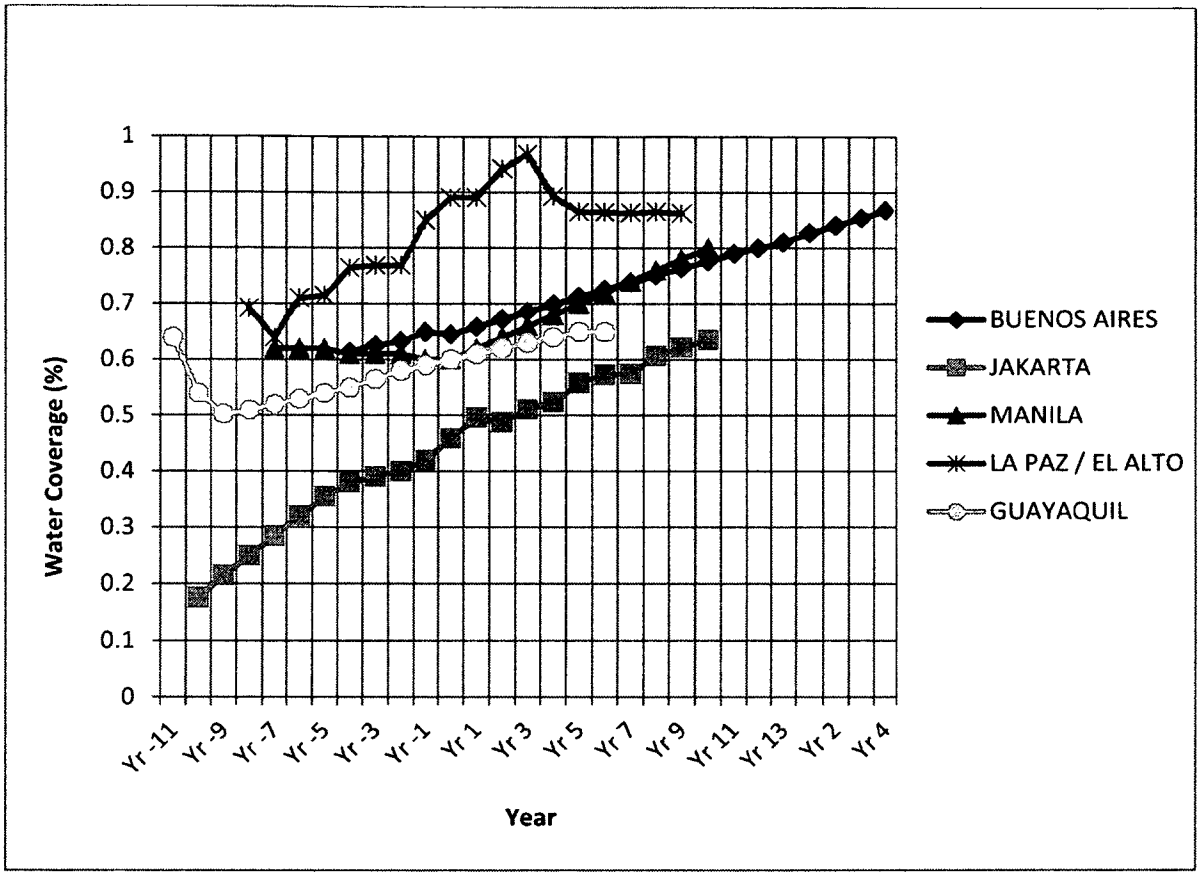
Figures 5.4 and 5.5 provide a variation of the five cases' figures presented above. The purpose is to reflect on whether changes in assumptions substantially alter the results. For Figure 5.4, Buenos Aires coverage rates are adjusted to accept Marin's (2009) population served figures at the end of the privatization rather than the AySA (2005 - 2010) cited figures.[54] This change in assumptions flattens the post-privatization section of the trend. Jakarta's trend is adjusted to reflect higher Jakarta Water Supply Regulatory Body (JWSRB, 2009) figures based on smaller

[54] This change in assumptions provides for comparison but is not necessarily realistic given that a steady stream of capital investment was not occurring at the end of the privatization given the state of dispute for this concession during its last four years.

household size estimates. Although JWSRB reports these figures as the data provided by the concessionaires, they question their validity given that household size information has not been updated to appropriately calculate resulting coverage rates.[55] Additional figures are used prior to privatization, provided by Schouten and Halim (2010), to reasonably adjust this sample alternative trend. This could generally be described as an 'unaudited' version of coverage rates. Despite the issues with this version, it simply suggests an 'alternative version' of coverage rates to date for Jakarta that are climbing at a slightly higher rate than the initially established version. Manila's trend in Figure 5.4 is adjusted to align with Marin's (2009) suggestion that coverage started at 60% and increased to 80%. This version, particularly as representing the starting coverage for the privatization, contradicts official data estimates. Pre-privatization coverage is also adjusted to align with the implied difference in coverage relative the known numbers of connections and respective population prior to the concession. Manila's trend consequently still looks very similar to Figure 5.3 in that coverage increased following privatization. La Paz-El Alto's coverage rate depiction in Figure 5.4 simply suggests what the trend looks like if it could be assumed that the coverage rate stabilized after year 5 of privatization. Guayaquil's revised trend relaxes the notion that population has been increasing at the rate implied by Tiepolo's (2007) data. This results in a slowly increasing trend rather than declining as is shown in Figure 5.3.

[55] The calculation for the original version of the coverage rate trend as included in Figure 5.3 could be viewed as representing a household size of approximately 7 or at about 80% of the potential range implied by JWSRB (2009).

Figure 5.4 Water Coverage - Alternate (2)



Source: Constructed from data provided by Marin (2009), AySA (2005-2010), Dardenne (2006) (Buenos Aires. Based on average annual changes from year 1.); JWSRB (2009), Schouten and Halim (2010), Bakker et al. (2006) (Jakarta); Marin (2009), MWSS RO (2003, 2011), Negishi (2010), David (2000), Altmann (2007) (Manila); Morales et al (2006), Food and Water Watch (2006), U.S. Department of State (2009) (La Paz-El Alto. Supplemented by assumption that coverage rates stabilize after year 5 of privatization); Tiepolo (2007), Swyngedouw (1997) (Guayaquil. Supplemented with assumption of lower population trends.)

Considering Figure 5.4's alternate assumptions and source information, Jakarta and La Paz-El Alto still reflect that public provision has higher increases in coverage rates than during privatization, while Buenos Aires and Guayaquil now show mixed results between models. Manila's trend remains similar to the original version.

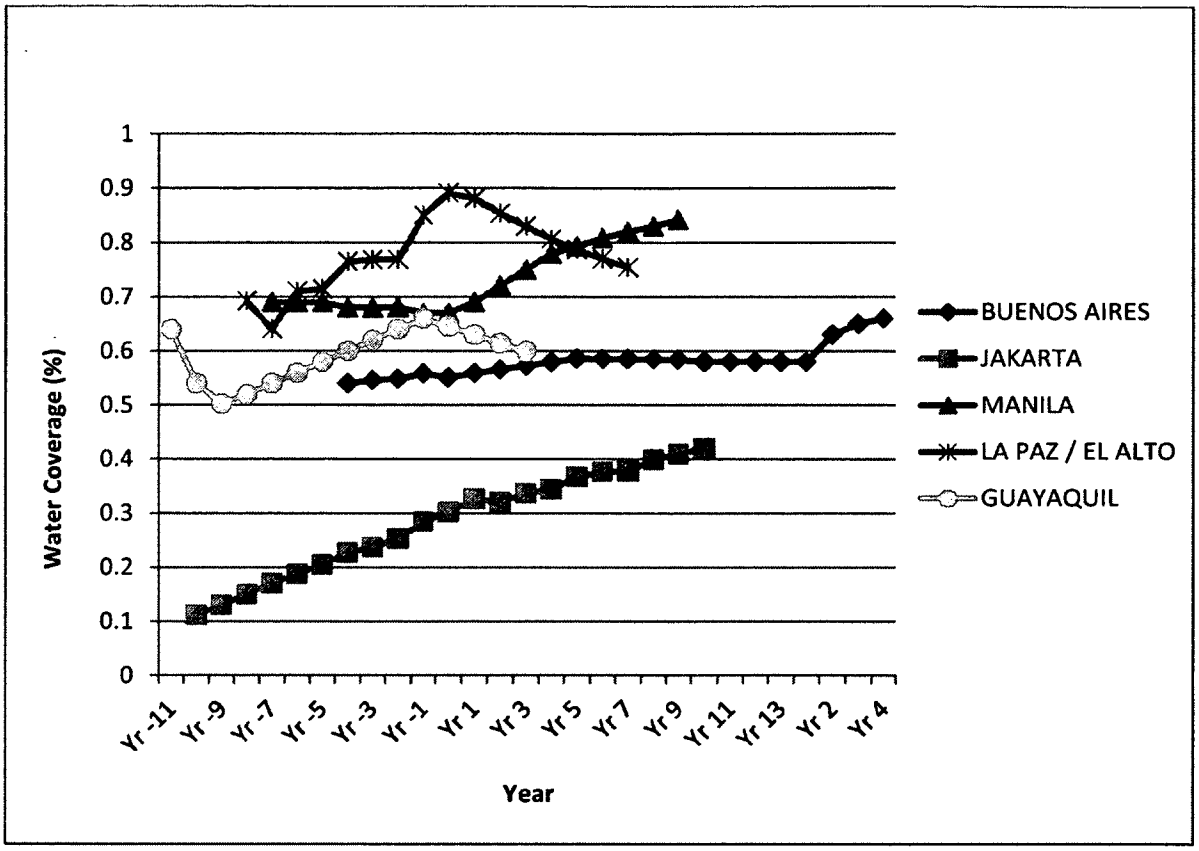
An additional alternate version (3) is represented by Figure 5.5. This version represents lower coverage rate estimates. Buenos Aires is adjusted based on the coverage rate being calculated from the metropolitan area population. Jakarta is

adjusted by using a lower estimation of average household size as suggested by JWSRB. La Paz-El Alto coverage rates are adjusted during privatization to account for coverage rate findings from Laurie and Crespo (2007).[56] Guayaquil's pre-privatization trend is significantly affected by alternative lower figures identified via Swyngedouw (1997).

Manila's trend is based on the same figures presented in Figure 5.3, therefore still reflects privatization increasing coverage rates. Buenos Aires, La Paz-El Alto and Guayaquil reflect higher public provision coverage trends. The additional alternate adjustments reflected in Figure 5.5 make Jakarta's results rather ambiguous having flattened the trend for all years.

[56] Laurie and Crespo (2007) found that only just over 20% of water connections were for expansion while the rest were installed within the existing network (referred to as 'densification'), hence not sufficiently expanding the network as was originally understood to be intended by the parties.

Figure 5.5 Water Coverage Comparison - Alternate (3)



Sources: Constructed from data provided by Marin (2009), AySa (2005-2010), UN (2012) (Buenos Aires); Schouten and Halim (2010), Bakker et al. (2006), JWSRB (2009) (Jakarta); MWSS RO (2003), Negishi (2010), David (2000) (Manila); Morales et al (2006), Food and Water Watch (2006), U.S Department of State (2009); Chia et al. (2007), Laurie and Crespo (2007) (La Paz-El Alto); Tiepolo (2007), Swyngedouw (1997) (Guayaquil)

Coverage Summary

Table 5.2 summarizes figures from the preceding three Figures (5.3 - 5.5). The original version (5.3) weighted averages show that the public model has outperformed privatization at a ratio of about 4:3 (1.2% vs. 0.9% average annual coverage changes). The first alternate version (2) results suggest very close results between the public and private model, 1.1% vs. 1.2% weighted average annual

coverage increases, respectively.[57] The additional alternate version (3) figures suggest that the public model coverage increases are more than 3:1 over the private model (1.1% vs. 0.3% annually on average). The original version data from Figure 5.3 comprises the most conservative estimates based on either official coverage data and/or have passed some level of audit or research scrutiny. In four of the five cases' (all except Manila) public models have outperformed privatization based on water coverage.

Table 5.2 Water Coverage Versions – Average Annual Changes Per Model

WATER COVERAGE VERSIONS *Average Annual Changes Per Model* (%)								
	PUBLIC			Yrs	PRIVATE			Yrs
City	Original	Alt (2)	Alt (3)	Observed	Original	Alt (2)	Alt (3)	Observed
Buenos Aires	1.9%			8	0.8%			13
		1.1%		8		1.3%		13
			1.1%	8			0.2%	13
Jakarta	2.1%			10	1.4%			10
		2.8%		10		1.8%		10
			1.9%	10			1.2%	10
Manila	-0.3%			7	1.9%			9
		-0.3%		7		2.0%		10
			-0.3%	7			1.9%	9
La Paz / El Alto	2.5%			8	-0.5%			5
		2.5%		8		-0.3%		9
			2.5%	8			-1.9%	7
Guayaquil	0.0%			11	-1.5%			3
		-0.4%		11		1.7%		6
			0.0%	11			-1.5%	3
Weighted Avg Chg*	**1.2%**	**1.2%**	**1.1%**		**0.9%**	**1.3%**	**0.3%**	
* Weighted average based on the number of years of observation per case.								

As many of the cases have contradictory figures available, it is relevant to have examined the degrees to which changes to the observed data points impact the above results. Alternate version (2) includes some questionable assumptions, although the alternate version (3) as shown in Figure 5.5 and also reported in Table 5.2 includes assumptions which either adjust population to higher estimates, adjust for household size discrepancies, and/or adjust for reported connections

[57] Noting the previous issues raised as to the validity of this particular version of figures.

installations not all being an 'expansion' of the existing network[58]. This latter version of figures illustrates an even greater differential between the public model and privatization coverage changes on average (as per Table 5.2), although the overall results still show that the same four of five cases' public models outperformed privatization based specifically on water coverage changes.

Connections and Coverage Data Limitations

Casablanca has been entirely left out of this analysis due to discrepancies between reported figures and the anecdotal evidence that an audit has occurred refuting connection installation and coverage figures cited by the company. La Paz-El Alto's concession figures have included results of audit figures to better capture the actual results of water privatization during the concession term. The large discrepancies between company claims and audited figures beg the same questions of the performance data for the other cities. In the case of Buenos Aires, the remunicipalization of the water services highlighted a discrepancy relating to the final figures at the end of privatization – beginning of new public services. Despite there being active civil society groups in the other cities, no known third party audits or estimations have been made for Jakarta, Manila or Guayaquil.

5.5 Water Consumption

Water consumption figures are identified for all of the case cities to varying degrees, whereby IBNET (2005-2011) filled in gaps where other available sources were not identified. However, in all cases, the years of observation are limited, and specifically to years after privatization started. Different methods are used in the arriving at the scope and estimation methods across cases. Nonetheless, this brief

[58] As adjusted for La Paz / El Alto for Alt.Version (3).

analysis is conducted to help identify any particular trends or insights into privatization effects on consumer welfare as feasible. Residential consumption figures are not commonly identified. In many of the cases, household meters are still not consistently installed to ensure the availability of disaggregated residential figures. Total consumption is generally used as a proxy for residential consumption with the provision that any differences in results are examined closely.

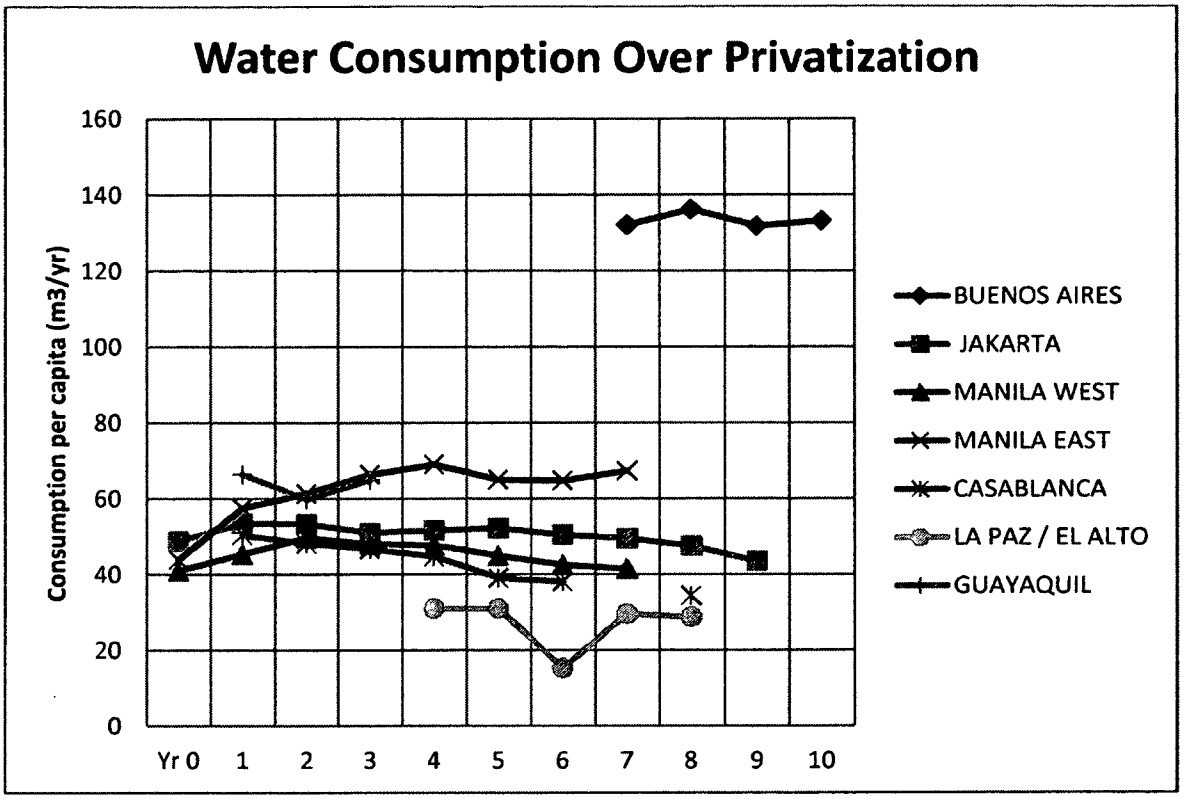
Water consumption per capita trends are plotted over the privatization years for each of the cases in Figure 5.6 (Year of Privatization = 0). Buenos Aires' water consumption per capita shows as relatively constant over the few available years (years 7 - 10). It can be seen that Buenos Aires' water volume consumed per capita is more than double that of the next nearest concession (Manila East). Jakarta's consumption level begins to climb initially and then slowly decline after the first two years of privatization. From the beginning of the concession, the drop represents about a 11% decline (or about 19% from its peak). Manila West's consumption also initially increases (by over 20%) then slowly declines after year 2 back to its original level. Casablanca's water consumption level can be seen as dropping over 30% during privatization.[59] La Paz-El Alto's consumption trend reflects a slight decline over four of five of the observed years. The year 6 figure (Approx. 15.33 cubic metres), however, may be a data error, particularly given that the level of daily consumption implied is just over 40 litres per day per capita.[60] Guayaquil's brief three year trend shows a 10% decline initially and then a return near to its previous

[59] Note that as no figure was specifically identified for Year 7 of privatization, this missing data point is reflected by a break in the trend line.

[60] As the data represents aggregate consumption, the figures imply an even lower residential level of consumption. This would be particularly alarming given that the absolute minimum requirement for basic needs is considered to be 50 litres per day.

level as of year 4 of privatization. Finally, Manila East shows an increase of over 50% consumption during the years of observation.

Figure 5.6 Water Consumption[61]



Sources: Constructed from data provided by IBNET (2005 - 2011) (Buenos Aires); JWSRB (2009) (Jakarta); MWSS RO (2003, 2011) (Manila); LYDEC, 2006 (Casablanca); IBNET (2005-2011) (La Paz-El Alto); IBNET (2005-2011) (Guayaquil)

Four concessions can clearly be seen as experiencing declining levels of consumption during privatization. One of these cases, Manila, also includes an increase - in the East Manila concession. Buenos Aires shows rather constant consumption over its few years of observation, and Guayaquil shows a slight decline over three years of observation.

[61] Volumes converted to cubic metres per year where necessary. Note that 36.5 cubic metres per year is approximately equivalent to 100 litres capita per day. Also, note that commercial and institutional consumption is included in the figures.

Additional Consumption Insights

The Manila West, La Paz-El Alto, Casablanca and Jakarta (by year 9 of privatization) consumption levels, are extremely low in terms of per capita volume, as implied for domestic basic needs. In the case of Casablanca, water production and related constraints have been previously noted by the company (e.g. LYDEC, 2006) which may contribute to the declining low levels of consumption reached by year 8 of privatization. Alternative private well and indirect network vendor source supply also act to complicate understanding the degree to which the formal water network water consumption figures, for most of the cases, accurately represent domestic water consumption behaviour.

Consumption Caveat

Consumption per capita as represented by the figures in this brief analysis can only be estimated in most cases. The reasons are that the only information that can potentially be established as *known* from the start of privatization for most cases is the number of water connections. This is due to a lack of household metering in many cases. Even then, the varying inherited network conditions, circumstances and chosen strategies associated with water delivery method (i.e. individual household, shared household, public water connections, and transfer of responsibility at network connection points to third parties.) complicate understanding established figures and estimation methods as an accurate reflection of per capita consumption. Moreover, the data in Figure 5.6 represents domestic, industrial, commercial and institutional consumption. Although, it has been generally noted that residential consumption represents a major portion of aggregate consumption, changes in the other modes of consumption may contribute to changes in the observed trends.

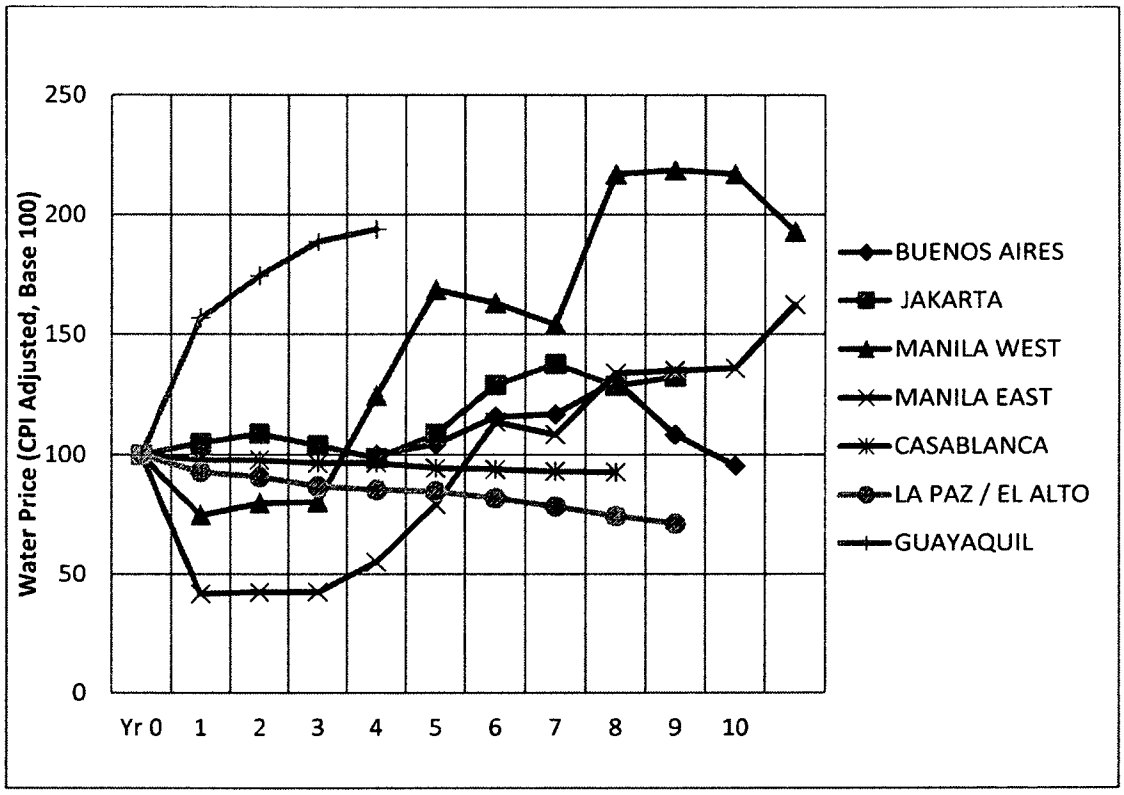
5.6 Water Pricing

As water pricing for Manila has differed between the two concession areas and the concessions have been identified as having different situations and levels of success, these prices are shown separately. Water prices (tariffs) are adjusted for comparison using the general Consumer Price Indices (CPI's) for each country (from United Nations, 2006 and 2010). All nominal prices are divided by the respective year's general CPI for each country. Water price data is then converted to a base of 100 for the first observation, generally one year prior to the first data observation, beginning at year 0 of privatization or later as applicable. All of the nominal price data is based on quoted or average residential water pricing.

Water prices during privatization as available are shown in Figure 5.7. All cases begin at adjusted real prices of 100 in year 0, except for Buenos Aires which begins in year 4 of privatization. Buenos Aires' trend shows real water prices increasing by more than 30% then dropping again to near original levels (due to hyperinflation). Jakarta's trend shows relatively stable prices then an increase of more than 30% by year 7. Manila West's real water prices initially drop, increase significantly, then double as of year 8 onwards. Manila East prices initially decline by almost 60%, then slowly rise surpassing initial levels by year 6 and increasing to more than 50% original levels by year 11. Casablanca's real price rates are relatively stable, declining slightly over the observed period (due to inflation rates slightly exceeding the reported nominal water price increases). La Paz-El Alto real prices slowly drop by almost 30% over nine years. Finally, Guayaquil's prices increase dramatically and taper off at an almost 100% increase over the brief five years of observation. As observed, three cases (four companies) have resulted in significant

real water price increases (Jakarta, Manila West and East, and Guayaquil). Buenos Aires fluctuates significantly but returns to similar levels as year 4. It is unknown how this relates to levels at the beginning of the concession, although it is suspected that earlier levels would have been lower given initial nominal price increases and lower preceding inflation levels. Casablanca is the most stable in terms of real prices, and La Paz-El Alto is the only case experiencing significant real price decline.

Figure 5.7 Water Pricing Comparison



Source: Constructed from data provided by Post (2009), Simpson (2006) (Buenos Aires); Bakker et al. (2006), Santono (2005), JWSRB (2011) (Jakarta); MWSS Regulatory Office (2011) (Manila); Olivier (2009) (Casablanca); Morales et al. (2006) (La Paz-El Alto); Carrillo et al. (2006) (Guayaquil)
Note. All figures adjusted using CPI (UN 2006, 2010) and to base of 100.

5.7 Water Consumption and Pricing

Examining the combined results of the previous tables, it can be seen that consumption during privatization has remained steady or declined as real prices have risen in Buenos Aires, Jakarta, Manila West, and Guayaquil. In Casablanca and La

Paz-El Alto though, consumption has declined while real prices have also dropped. Manila East experienced a large initial reduction in real prices which may contribute to consumption increases discussed earlier. Generally speaking though, it can be seen that Manila East is the only example of consumption per capita rising during privatization. It cannot be said whether real price is influencing consumption or vice versa. This partly relates to a lack of supply cost information as mentioned earlier.

Elasticity of Demand Comments

A few specific considerations should be mentioned in attempting to understand the effects that price increases may have had on consumption in these cases. The quantitative data analyzed above has various limitations. First of all, consumption has not been isolated to domestic consumption. As a result, it cannot be known the exact proportion comprising domestic consumption for each case. As noted in Chapter One, basic needs consumption has been articulated as equivalent to 50 litres of water per capita per day. It is possible in several of these cases that the domestic proportion of consumption has remained or is nearing levels where demand is highly inelastic for a proportion of the population. A further point here though is that average price and consumption figures were used in the analyses in this chapter. As many categories of customers are being aggregated in these average figures, it is difficult to truly understand the price elasticity of demand[62]. Secondly, as alluded to earlier, little can be said about water demand specifically given the lack of comparable information on water supply costs. Finally, as mentioned in the Consumption Caveat section earlier, comparable data which sheds

[62] Price elasticity of demand can be generally described as the responsiveness of quantity demanded to changes in price.

light on consumption behaviour relating to alternative sources is not understood and outside the scope of direct analysis here.

Water Conservation and Efficiency Comments

It can be theoretically argued that higher prices promote water conservation. Although no direct information has been found to support this objective in these cases, it can be seen that nominal prices (as discussed in earlier chapters) as well as real prices (as analyzed in this chapter) have generally risen during privatization. At least, we can say that prices rose unanimously for Buenos Aires, Jakarta, Manila and Guayaquil. As was found by Argo and Laquian (2007), as discussed in Chapter Three, middle and upper classes were most affected by resulting price increases in Manila. This could easily be implied as a conservation incentive.

Theoretically any efficiency improvements achieved by privatization would be reflected in either water connections or coverage performance outcomes or lower prices. Water connection and coverage outcomes have been discussed. However, in the case of pricing, higher prices may be desirable to give incentive for conservation. In light of the foregoing considerations that complicate understanding demand elasticity, a further point in the context of efficiency and this quantitative analysis specifically is that the reasons for the resulting nominal prices changes are not well understood.

5.8 Partial Quantitative Analysis - Summary

This section has included a partial quantitative analysis to shed light on water privatization's success relative the preceding public model, and to examine any potential consumer impacts as potentially identified. Review of water connections data for four available cases, Buenos Aires, Jakarta, Manila, and La Paz-El Alto,

before and after privatization, suggests that privatization has not generally outperformed the public model. Water coverage analysis for five available cases, all except Casablanca, reflects that public water distribution primarily preceding water privatization has marginally outperformed the private model overall.

Manila's water privatization is the exception, showing improvements over the public model which was showing as remaining constant in years preceding privatization. However, as it was identified in previous chapters that Manila Water (East Manila) has used informal water access to reflect improvements in its coverage; and as it is implied that the previous public coverage figures only represented formal network coverage, these qualitative findings contradict and raise questions as to the validity of Manila's quantitative coverage results.

In five of six cases (Manila having been analyzed as two parts of one case) water consumption per capita has declined or remained constant over privatization. Only Manila's East concession has shown consumption increases during privatization. Price analysis has shown that four of the six cases have experienced real price increases during observed periods. These prices may relate to corresponding consumption changes although various considerations limit understanding the direct relationship between water pricing and consumption for these cases. Further analysis of how prices have impacted consumer behaviour for the population served by water networks during privatization would require additional review of the underlying nominal prices and how inflation impacts respective consumer goods and services baskets. Furthermore, the brief review of prices is limited in that water prices have been directly tied to foreign currencies (US$ or Euro)

in some cases potentially acting to further increase or contradict real prices as quoted.[63]

Generally speaking, the connections and coverage analyses have provided more information on privatization's outcomes relative the public model given that they shed some light on both the served and un-served populations. Consequently, Buenos Aires, Jakarta, La Paz-El Alto and Guayaquil water privatizations have not been found to outperform public models. Although Manila's trend reflects an outperforming private model, the validity of these findings is questionable. Finally, no data was available to provide insight into Casablanca's water coverage trend.

[63] For example, Laurie and Crespo (2007) suggest a 35% real price increase for La Paz / El Alto contrary to figures analyzed in this chapter provided via Morales et al (2006).

CHAPTER SIX: CONCLUSION AND DISCUSSION

6.1 Summary of Results

This thesis' primary objective has been to answer the question of whether urban water privatization has worked in the Global South. Six key prominent cases of water privatization have been identified and examined using a mixed methodology, primarily focused on qualitative analysis, supplemented by a partial quantitative analysis. The results show that water privatization has generally failed to exceed the levels of water access that were achieved by the public models before it. As the prior public model is less analyzed and publicized than the private model though, water concession agreement performance has acted as a proxy for privatization's success. In this respect, the privatization is generally considered to have not worked to date. The partial exception to this finding is that Casablanca's case shows some promise based on a ten year review and subsequent renegotiation.

The supplemental quantitative findings reflect similar results between water coverage and connection installations before and during privatization. However, they also suggest that the initial pace of improvements begun to decline after the early years of privatization. Manila's available coverage information acts as an exception suggesting that reported water coverage has far surpassed stagnant results reflected in connections and coverage data figures prior to privatization. These results are refutable though given West Manila's recorded failure (during which water services were temporarily transitions to public control again) and East Manila taking credit for coverage increases resulting from bulk water sales[64]. Given that informal vendor water resellers are not regulated by the water concessions, it seems counterintuitive

[64] From Chapter Two, as highlighted by Kumar, 2009, citing interviews with the Asian Development Bank. Also, Bakker et al., 2008, made suggestions that informal water supply should be regulated.

that such results can be considered appropriate contractual performance inclusions. Also, Manila, as with Jakarta and Buenos Aires, appear to have signed water concession contracts that were not sustainable or that they intended to renege on. Overall, it appears that water privatization contracts have failed based on companies not being held accountable for performance and corresponding investment targets due to either ill-defined or ambiguous terms, or that terms were later altered. These failures relate to ineffective governance frameworks, with either poorly administered or non-existent legislative policy, which either did not or could not avoid corruption or collusion. Companies had the opportunity to verify the accuracy of information and various conditions relating to the case cities upon expressing interest in the privatization bids or the direct contracts. In either event, four of the case cities have involved significant contract renegotiations. Buenos Aires and Jakarta renegotiations appear to have only benefited the companies. Manila's revisions allowed for limits in rate of return at the expense of previously mandated performance targets. Casablanca's renegotiation is the only one of four which included elements to improve the company's accountability. In another case, Guayaquil's privatization was implemented without mandating clear performance targets in the concession agreement. Nonetheless, the company's selling of ownership in the concession following a fine in 2006 should be viewed as an accountability failure. It is not known whether the current company owners have improved water access significantly or taken on past liabilities for the original company's shortcomings.

Water privatization has failed in all cases to varying degrees, reflected in disputable water access improvements which have not clearly been intended to expand geographic access to water. These situations have included contradictory

interpretations of water access calculations and the use of various cost-saving methods which have included informal water distribution channels in four of the cases (Jakarta, Manila, Casablanca[65], and Guayaquil). La Paz-El Alto's contract was terminated partly due to the company's underperformance, effectively misinterpreting network expansion terms. Buenos Aires' concession was eventually terminated due to the stand-off between network expansion and the need for higher prices to make the company profitable in the face of hyperinflation. Capital investments have underperformed and been spent in predominantly foreign currencies in four of the cases (all except La Paz-El Alto and Guayaquil for which such terms are unknown), leading to inordinate levels of foreign technical consultancy fees. In each of these cases, there is question as to whether the reported foreign expenditures validly added to the respective capital infrastructure stocks.

Consequently, the water privatizations have generally failed to meet originally negotiated contractual performance and investment targets, as based on the available evidence to date. There is secrecy in many cases surrounding the water privatization models, their implementations, and operations. The governments, legislation, political cultures, IFI, regional development banks, and bilateral parties, companies and negotiated contracts are all influential parties and factors to varying degrees at particular stages in such secrecy. All cases reflect a general lack of open communications and diplomacy that includes the lack of an open dialogue with the general public - to have ensured that privatization results not only appear to meet originally intended objectives, but are achieving them.

---

[65] As previously noted, there has been reference to subcontracting in Casablanca although the details of these arrangements are unknown.

The four active privatized water models still involve public protests and a pressured progression towards accountability reflected in recent fines. Jakarta, Manila and Guayaquil still appear to formally lack accountability to maintain a trajectory of network improvements and expansion though. This is reflected in the allowance of unregulated informal vendor water provisions, which appear to be included in reported coverage rates for Manila, as discussed above, as well as Jakarta. Guayaquil has little or no accountability for network expansion. Casablanca appears as the only potential exception given recent renegotiations with positive elements for network provision. The future will tell as to whether these parties will continue to mask, repair or terminate their respective urban water models.

6.2 Water Governance Lessons

Various lessons from the implementation of water privatization in the six studied cases have become apparent. This section summarizes some of the critical issues observed and provides recommendations for alleviating such issues.

Clear and Measurable Performance Targets

First and foremost, contractual agreements between governments and private sector parties require close inspection and an attention to detail that will not allow for varying interpretations and complex disputes down the road. As various levels of government and the general public are all stakeholders in water services, it is essential that these parties all have representation that facilitates the opportunity to review and provide input to the contract *before* negotiation with the service contract party.

The resulting contract must have clear, measurable and intentional performance targets with very clear, enforceable, sufficient and monitored sanctions for non-compliance. The contract must specify the requirement of access to documents by all respective levels of government, regulator and independent auditor.

Controlling Investment Terms

Foreign equity and debt issues, investment expenditures and distributions appear to mitigate performance when not regulated from the outset in the contract. It is necessary to openly define cost of capital, capital infrastructure sourcing, currency of trade, technical consultant fee percentages, as well as dividend distribution timing and percentages. These contractual terms need to be explicitly set during negotiations with clearly aligned penalties for non-compliance.

Countries in the Global South in particular should be focused on raising capital in local markets where feasible. Although examples of this have now become apparent in some of the case cities (Jakarta, Manila and Casablanca), it is still important to consider such capital raising issues in the context of cost of capital to prioritize necessary capital works accordingly. There is an increasing admission that the private sector is not necessarily capable of financing sufficient capital for such arrangements. Any notion of a best practice contract would have determined this fact up front and potentially avoided such a costly reform to water governance.

Exchange rate risks must be mitigated by the state. Consequently, such risks should not be borne solely by the state and public. Clearly, this is a negotiating item, however it would appear in several of the six cases that the government was to bear the risks of exchange rate fluctuations. Such a circumstance cannot possibly be

favourable to a publicly-provided water model financially dependent on domestic currency.

Water Pricing Regulation

It is critical that terms of price regulation are specified clearly in the water contract to inform and gain public acceptance and avoid future conflicts. Moreover, an appropriate water pricing regime with a progressive increase per water volume is necessary, as a matter of recognizing the incremental costs of water and encouraging conservation. Such a pricing model should not penalize the poor, charging average rates per volume greater than the same rates for high volume users. Any resulting model implies that higher volume consumption subsidizes lower volume users. It cannot be denied that without such provisions, additional societal costs would be and are necessary for public safety, public health and existing apparent urban infrastructure planning.

Water Monopoly Model

A water monopoly may be the most practical way of transferring services to the private sector, but the evidence shows that it has not worked better than the public model, acknowledging Casablanca's potential future success stemming from its renegotiation and East Manila's debatable coverage methods. The inordinate level of power of the multinational companies demonstrated in (three of the four) renegotiations, disputes, and a general lack of accountability by all parties, suggests that a better model must exist. Such a model may be the public model. It is clear though that an incentive for effective and sufficient investments is critical. This point is the source of water privatization's failures and has also contributed to the terminations.

It is not clearly evident that the private sector has demonstrated superior technical capacity as reflected in the six cases to date. Moreover, local factors such as historically inherited city infrastructure, deficiencies, water supply and quality issues, and other elements of the urban environment, flooding and other climate related issues all should have been incorporated into the *appropriate* water model to suit the local conditions. This does not appear to be the case. Instead a one-size-fits-all model was essentially implemented in all of the cities.[66] Water privatization, as implemented in the studied cases has various implications for effective governance.

Corporate Due Diligence

The companies had the obligation of directly researching (1) Infrastructure conditions, (2) Physical parameters within and outside of the planning area, and (3) Relevant urban planning data in the service expansion zones, as applicable. If imposed timelines were too rigid, the bidders would have scoffed. It is not apparent that such issues arose publicly. Instead, private negotiations, involvement from bidder host countries, and a general lack of competition for the contracts was the case. Such a lack of due diligence implies collusion or a backroom trust in the World Bank-led process, perhaps expecting future renegotiations once needed.

Water Governance

Weak governance models and a lack of appropriate corresponding exercisable policy have left governments in increasingly compromised positions during water privatization. This has engendered backroom deals and nasty legal disputes.

---

[66] Little is known about Casablanca's water contract. It is similar to the others although the World Bank did not necessarily play a key facilitating role.

Notwithstanding other elements of best practice recommended in this chapter, addressing such issues of governance and policy up front can reduce subsequent disputes and make the water model more effective. It is not clear though that the negotiating national government actors did not intend to essentially transfer accountability for water provision to the new private actors. Transferring water responsibilities has allowed the fiscal reasons for water price increases to bypass public debate making the multinational companies the centre of attention.

In several of the water cases, there have been corresponding accusations and legal cases of corruption. Implementing measures of public consultation in the water concession contracts acts to establish or restore public confidence, and also makes the company more responsive to customer needs. The governance framework should include an auditor and regulatory model which are transparent and responsive to public concerns. These elements need to be addressed in legislation, operating policy, and specified clearly in water contracts and revisions of contracts. Communication requirements should also be addressed in policy accordingly. The governance structure, its components and exercisable policy are necessary to reduce corruption and increase transparency and accountability.

Public Consultation

Clearly, public consultation and participation are often seen as arduous and slow down processes, as reflected in these cases. However, meaningful input from the general public, including significant interest groups such as the vast urban poor, must provide solutions that are more sustainable than those made with little or no public input. Avoiding protest requires involving the people, however divided they may be. The water models, as discussed, did not account for any input from the

general public. They were preconceived and implemented without any significant structural changes. These scenarios essentially guarantee one of two future directions: (1) the public protests until a new model is implemented, or (2) the public is ignored and controlled to a degree that does not fully handicap the current water models. Of course, improvements are possible under the current models, however, with no clear framework for accountability ensures that parties will continue to act for their own self interests.

The Water Privatization Myth

Private sector participation in the water sector cannot resolve all water supply issues for urban cities in the Global South. The efficiency argument is misplaced as water provision is a complex service delivering an essential resource within the context of various urban services in rapidly changing urban settings. Furthermore, 'privatization' as a definition may be misleading given the extent to which states involve themselves in advocating for, investing in and ensuring the success of companies. For example, French water companies have been noted as depending on the French government as a major shareholder, implying a blurring of lines between privatized and public water provision (See, for example, Hall and Lobina, 2009). This is particularly relevant given the immense presence of Suez S.A. (in five of the six privatization cases).

International Influence and the Lack of Autonomy

The circumstances in at least five of the six study cases have involved international pressures to decentralize the urban water sector (implying a decrease in transfers to support services) and provide options for financing operations and necessary water network expansions. Being policy handcuffed by the World Bank

and IMF ensured that the model would be self-financed (or continuously push in that direction) which assured that network expansion would underperform initial promises, particularly given the extent of the urban poor in these cities.

A history of loans and related conditions have ensured that water privatization would be carried out based on a homogenous model which limits state autonomy to positively influence policy or the services without fully deregulating prices. Even then, there is little evidence that water access would look much different than today's results. Allowing companies to increase prices without any regulation would simply allow existing consumers to be charged excessively. This may result in reduced consumption in the case cities, implying elastic consumption, although realistically those that cannot afford increased prices will likely seek alternative modes of water access. As indicated earlier though, little can be said of the elasticity of demand on average based on the partial quantitative analysis.

The World Bank and IMF are part of an international umbrella which is presumably accountable to nation states albeit inequitably. The collective nation states under the UN umbrella would need to agree on changes to the World Bank's role (and WTO and IMF). Is this possible? Who would police them? International governance requires the collective nations to ensure accountability. As structured today, the ICSID, MIGA, and the direct investment which the World Bank has engaged in in these cases, all amount to various conflicts of interest without any accountable recourse. There is no mechanism for state protection against the companies.
It appears that the nations involved in each of the six cases are not in a position to negotiate or dictate any terms with the World Bank. If this was the case, appointing an independent mutually agreed arbitrator with international transparency would be

a potential starting point. A large step further would relate to re-evaluating the concept of a water monopoly for one city.

Along with regional development banks and various bilateral actors, the World Bank and IMF have pushed for international private sector firms to engage in water privatization activities in the six cases. Regulatory reforms have been directed towards decentralization and to minimize oversight as to not inhibit the private sector's ability to function profitably. Direct consequences of related actions have involved capital flight, underinvestment, and the general lack of accountability already mentioned. Companies have not generally been held accountable as contracts were renegotiated in three of the cases. In turn, governments have not been accountable to their populations by agreeing to the overarching concession models. The IFI's are not accountable agents in any substantive way. This is reflected in the ICSID set up, and more so in the contradiction between a said commitment to alleviate poverty while engaging in facilitation of agreements that do not appear to be beneficial to the affected populations.

Only two methods of regaining autonomy are apparent for affected states: (1) Reduce debts to effectively terminate structural adjustment agreements, or (2) Examine and potentially challenge the legality of respective loans.

Water for the Poor

The prevalence of the poor in the six study cases suggests that a model such as water privatization based on water monopolies is an overly simplistic approach to a very complex set of issues relating to urban water access. The goal of extending water to the general public let alone poor households is a monumental task in each instance. Innovative solutions are needed that allow for the poor to access

alternative sources of water and enable subsidization that is not driven by a water monopoly provider. The best solutions for provision of water for the poor will need to circumvent the standard policy and be driven by the local community and specifically involved interest groups.

Urban Development

Clearly, these cases demonstrate the complex economic, political, social and technical challenges of providing potable water to an increasingly sprawling urban landscape. Urban planning and development must theoretically be integrated with the water model to ensure that efficiencies are gained in the trajectory of developing the urbanized region. This also helps with social accountability. The six cases all reflect undeveloped areas of the city whether central or peripheral; and often people settle in precarious settings as noted of Guayaquil's hillside or under bridges in Jakarta. The continued forces of urbanization require that water networks are developed as part of larger urban plans.

Generally speaking, the removal of cross-subsidies acts to compartmentalize services. If privatization can work, it would require very explicit contractual terms and operational processes necessary for the collaboration between the company and various public departments to ensure, for example, that urban planning and development functions are positively affected. The majority of evidenced historical examples of successful economic and social (i.e. community or urban) development involve significant government leadership. The direction of the examined water models though is represented by government control without the necessary leadership. The water privatizations in all six cases have involved national government oversight with varying levels of regional and local level implementation.

These levels of government involve varying elected and appointed offices with competing objectives which further complicate water privatization's role in urban planning.

Democratic Rule

No one would openly dispute that democracy is a necessary element of an open economy and a healthy private sector. Consequently, more power needs to be observed in the voices of the masses. This is not apparent in any of the six water privatization cases to any substantive degree. Public protests contributed to the termination of two of the concession agreements. As noted above, a public participation component is needed to sustain an effective model, whether or not water governance is privatized. Interestingly, a lack of transparency in urban water reforms and privatization complicate national and urban accountability as reflected in democratic processes.

6.3 Limitations of the Study

This study has encountered various limitations stemming from information not being readily available within the public domain or through requests. Although the existing academic literature researching the individually covered cases is growing, it is still difficult to access critical documents such as the privatization contracts. Moreover, temporal datasets could not be directly accessed for water connections, coverage, consumption, and pricing data before and after water privatization for each of the cases. Consequently, information was accessed through existing academic literature, regulatory reports and the companies to conduct the partial quantitative analysis. However, many contradictions exist between sources of information, requiring extended scrutiny. For example, official data in several cases has been

unaudited data which cannot be trusted. Furthermore, a lack of information on water supply costs prevents extending analysis and commenting further on the elasticity of demand, for example.

An additional issue relates to the information available on urban populations, particularly slums and growing peri-urban populations. Some of the cases, such as La Paz-El Alto and Buenos Aires, have noted issues of the formal concession areas not comprising the full urban metropolitan area. These cases, as well as Guayaquil, are noted as having a peri-urban sprawl which is difficult to understand in the context of understanding, defining and calculating water coverage. A lack of contractual clarity and audited data also made it difficult to identify where water connections were being installed in existing rather than new concession areas.

6.4 Further Research

Further research on water privatization can take a few related directions. The circumstances giving rise to and controlling the water privatization model implemented in at least five of the six studied cases include dominant international influence and controls. It is not only important to understand these controls, but also the pathways associated with transitioning the current models to either: (1) make privatization work or (2) re-municipalize the water model. This is relevant in understanding factors associated with state autonomy over water.

Another related area of study includes a focus on the financial constraints that brought about the implemented water privatization models. A better understanding of these forces is critical, but also studies focused on pathways to fiscal austerity while maintaining ambitious urban water provision goals. Understanding international accountability as housed in agreements, circumstances

and expectations between nation states, the World Bank, and other international actors specifically relating to urban water privatization is essential in knowing whether there are alternative pathways to resolve failures stemming from water privatization.

Many or perhaps all of the studied cases involve governments that are affected by their historically implemented structures and events. Studying methods of reducing corruption as a lead up step to implementing water resource reforms affecting urban cities would be a valuable area of study.

Yet another potential area of study involves effective water governance as relating to urban planning and development in the context of water privatization. Water privatization, as implemented, is not effectively integrated with urban planning and development functions. The question is how to de-compartmentalize or rather ensure collaboration between historically public functions and the private sector to provide an effective and efficient suite of essential services.

An additional element of quantitative analysis, extending from this thesis would be to identify and analyze the cost of potable water supply and distinctions between potable and lower quality sources of wáter, in assessing and identifying best practice solutions to urban water provision in the Global South.

REFERENCES

ACME-Morocco. (2007). Press Review. LYDEC: The damning report of the town of Casablanca (Google, trans.). Retrieved from http://www.acme-eau.org/ACMEMaroc/archives/2007/12/

ACME-Morocco. (2008). Location in Morocco: Management delegate in question (Google, trans.). Retrieved from http://www.acme-eau.org/ACMEMaroc/archives/2008/4/

ACME-Morocco. (2011). Press Review. Morocco: Water, Power Utilities, French operators in the spotlight (Google, trans.). Retrieved from http://www.acme-eau.org/ACMEMaroc/

ACME-Morocco. (2012). Mediterranean: Threats to water? (Google, trans.). Retrieved from http://www.acme-eau.org/ACMEMaroc/

Agua y Saneamientos Argentinos S.A. (2005 – 2010). Water connections and coverage [Data figures]. Retrieved from http://www.aysa.com.ar/index.php?id_seccion=7

Alcazar, L., Abdala, M., Shirley, M. (2000). *The Buenos Aires Water Concession*. Policy Research Working Paper. World Bank. Retrieved from http://elibrary.worldbank.org/content/workingpaper/10.1596/1813-9450-2311

Altmann, D. (2007). *Marginal Cost Water Pricing: Welfare Effects and Policy Implications using Minimum Cost and Benchmarking Models, with Case Studies from Australia and Asia* (Doctoral Thesis). Retrieved from http://digital.library.adelaide.edu.au/dspace/bitstream/2440/39464/2/01front.pdf

Ardhianie, N., Zamzami, I. (2010). *No Pro-poor Agenda in Jakarta Water Concession*. AMRTA Institute, KRuHA. Retrieved from http://www.waterjustice.org/?mi=1&res_id=285

Argo, T., Laquian, A.A. (2007). The Privatization of Water Services: Effects on the Urban Poor in Jakarta and Metro Manila. In A. Laquian, V. Tewar, L. Hanley (Eds.), *Inclusive City: Infrastructure and Public Services for the Urban Poor in Asia* (pp. 224-248). Washington, DC: John Hopkins University Press.

Asian Development Bank. (2008). *ADB Assistance to Water Supply Services in Metro Manila*. ADB Evaluation Study. Retrieved from http://www.adb.org/sites/default/files/SST-PHI-2008-31.pdf

Bakker, K., Kooy, M., Shofiani, N.E., Martijn, E. (2006). *Human Development Report 2006. Human Development Report Office Occasional Paper. Disconnected:*

Poverty, Water supply and Development in Jakarta, Indonesia. United Nations Development Programme (UNDP). Retrieved from http://hdr.undp.org/en/reports/global/hdr2006/papers/Bakker_et_al1.pdf

Bakker, K., Kooy, M., Shofiani, N.E., Martijn, E. (2008). Governance Failure: Rethinking the Institutional Dimensions of Urban Water Supply to Poor Households. *World Development*, 36(10), 1891-1915.

Cardenas, C. (2008). Ecuador – Impacts of Water Privatization in Guayaquil, Ecuador. Retrieved from http://www.wiser.org/resource/view/36ccded4333a2a9680213477d8c3f8e8

Carrillo, P., Bellettini, O., Coombs, E. (2006). Stay Public or Go Private?: A comparative analysis of water services between Quito and Guayaquil. Inter-American Development Bank. Retrieved from http://www.iadb.org/res/laresnetwork/files/pr264finaldraft.pdf

Castro, J.E. (2008). Neoliberal Water and Sanitation Policies as a Failed Development Strategy: Lessons from Developing Countries. *Progress in Development Studies*, 8(1), 63-83.

Castro, J.E. and Azpiazu, D. (2012) Chapter Four. Aguas Publicas: Buenos Aires in Muddled Waters. In *Remunicipalisation: Putting Water Back in Public Hands.* (pp.58 – 73). Transnational Institute. Retrieved from http://www.municipalservicesproject.org/publication/remunicipalisation-putting-water-back-public-hands

Chia, P., Chua Chiaco, K., Kim Fat, C., Teo, S., Toh, K. (2007). Water Privatization in Manila, Philippines. Should Water be Privatized? Retrieved from http://faculty.insead.edu/dutt/emdc/projects/EMDC%20Projects(MarApr07)/EMDC_WaterPrivatization%20in%20Manila.pdf

Cuaresma, J. C. (2006). Pro-poor water services in Metro Manila: in search of greater equity. In M. Minogue & L. Carino (Eds.), *Regulatory Governance in Developing Countries* (pp. 258-280). Northampton, MA: Edward Elgar.

Dardenne, B. (2006). The Role of the Private Sector in Peri-Urban or Rural Water Services in Emerging Countries. Paper prepared for the OECD Global Forum on Sustainable Development (Paris, Nov. 2006). Retrieved from http://aspa-utilities.com/Dardenne_OECD.pdf

David, C. (2000). MWSS Privatization: Implications on the Price of water, the Poor. and the Environment. Discussion Paper Series No.2000-14. Philippine Institute for Development Studies. Retrieved from http://www3.pids.gov.ph/ris/dps/pidsdps0014.pdf

Dumol, Mark (2000). *The Manila Water Concession.* Washington, DC: The World Bank. Retrieved from http://rru.worldbank.org/Documents/PapersLinks/502.pdf

Engel, K., Jokiel, D., Kraljevic, A., Geiger, M., Smith, K. (2011). *Big Cities. Big Water. Big Challenges. Water in an Urbanizing World.* WWF. Retrieved from http://www.wwf.se/source.php/1390895/Big%20Cities_Big%20Water_Big%20Challenges_2011.pdf

Food and Water Watch (FWW, 2006). *Analysis of the Audit of AISA. Violations of the Concession Contract.* Retrieved from http://documents.foodandwaterwatch.org/doc/AISA_audit_english.pdf

Food and Water Watch (FWW, 2007). Bechtel Profits from Dirty Water in Guayaquil, Ecuador. Retrieved from http://ciel.org/Publications/MurkyWaters_Background_15Apr08.pdf

Food and Water Watch (FWW, 2009a). Buenos Aires – Collapse of the Privatization Deal. Retrieved from http://www.foodandwaterwatch.org/global/latin-america/argentina/buenos-aires-collapse-of-the-privatization-deal/

Food and Water Watch (FWW, 2009b). Guayaquil, Bechtel Deceives the People Again. Retrieved from http://www.foodandwaterwatch.org/global/latin-america/ecuador/guayaquil-%E2%80%93-bechtel-deceives-the-people-again/

Foster, V. and Irusta, O. (2003). *Does Infrastructure Reform Work for the Poor? A Case Study on the Cities of La Paz and El Alto in Bolivia.* World Bank Policy Research Working Paper 3177. Source EBSCO: Econlit.

Freedom from Debt Coalition (FDC). (2005). *ADB and the Privatization of Metro Manila's Water Distribution System: Corporate Greed takes over Public Welfare.* Prepared for the Regional Conference on the ADB Water Policy, 13-15 November 2005, Quezon City, Philippines. Retrieved from http://www.docstoc.com/docs/98331097/ADB-and-the-Privatization-of-Metro-Manila-Water-Distribution

Freedom from Debt Coalition (FDC). (2009). *Recalibrating the Meter: A Ten Year Overview of the MWSS Privatization Deal.* Retrieved from http://www.fdc.ph

Galiani, S., Gertler, P., and Schargrodsky, E. (2005). Water for Life: The Impact of the Privatization of Water Services on Child Mortality. *Journal of Political Economy,* 113(1), 83-120.

Gleick, P.H. (1996). Basic water requirements for human activities: Meeting basic needs. *Water International,* 21, 83-92.

Graham, C. (1998). *Private Markets for Public Goods.* Washington DC: Brookings Institution Press.

Hailu, D., Osorio, R., and Tsukada, R. (2009). Water Privatisation and Renationalisation in Bolivia. Are the Poor Better Off? *International Policy Centre for Inclusive Growth*, No.100 (Oct. 2009). Retrieved from http://www.ipc-undp.org/pub/IPCOnePager100.pdf

Hall, D. and Lobina, E. (2009). The Private Sector in Water in 2009. Retrieved from http://www.psiru.org

Hall, D., Lobina, E., Corral, V. (2010). Replacing Failed Private Water Contracts. Public Services International (PSI). Retrieved from http://www.psiru.org

Hatem, Tarek (2007). LYDEC: Providing Electricity, Water & Sanitation to Casablanca's shanty Towns. *Growing Inclusive Markets* series. New York: United Nations Development Programme (UNDP).

The Heritage Foundation (2012). Country economic data. Retrieved from http://www.heritage.org

International Benchmarking Network for Water and Sanitation Utilities (IBNET) (2005-2011). Retrieved from: http://www.ib-net.org/en/texts.php?folder_id=78

International Centre for Settlement of Investment Disputes (2010). Decision on Liability (in the proceedings between Suez, Sociedad General de Aguas de Barcelona S.A., and Vivendi Universal S.A. (Claimants) and The Argentine Republic (Respondent)). Retrieved from http://italaw.com/documents/SuezVivendiAWGDecisiononLiability.pdf

International Finance Corporation / Multilateral Investment Guarantee Agency (IFC/MIGA, 2008). *Ombudsman Assessment Report. Complaint Regarding MIGA's Involvement in International Water Services Project – Interagua.* Retrieved from http://www.cao-ombudsman.org/cases/document-links/documents/InteraguaFinalAssessmentReport.pdf

Jakarta Water Supply Regulatory Body (JWSRB) (2009). *The First Ten Years of Implementation of the Jakarta Water Supply 25-Year Concession Agreement (1998-2008)* (A Draft Translation). Retrieved from http://www.jakartawater.org/images/stories/unduh/10tahunbrEng.pdf

Jakarta Water Supply Regulatory Body (JWSRB) (2011). Website resources [Water data figures]. Retrieved from http://www.jakartawater.org

Jamati, Claude (2003). Casablanca (Morocco): An Example of Public-Private Partnership. *International Journal of Water Resources Development*, 19 (2), 153-158.

Joiner, E. (2007). *Murky Waters: a Critical and Purposeful Look at Water and Sanitation Services in Guayaquil, Ecuador.* Guayaquil, Ecuador: Movimiento Mi Cometa and Observatorio Ciudadano de Servicios Publicos. Retrieved from http://www.uusc.org/files/MurkyWaters.pdf

Jordan, R., Rehner, J., Samaniego, J. (2010). REGIONAL PANORAMA Latin America Megacities and Sustainability. Santiago, Chile: United Nations.

Kumar, M. (2009). *Institutional and Regulatory Economics of Public Private Partnerships in Infrastructure: Evidences from Stochastic Cost Frontier Analysis and Three Case Studies of Urban Water Utilities* (Doctoral Dissertation). Retrieved from http://gradworks.umi.com/3359247.pdf

Kurniasih, H. (2008). *Water Not for All: The Consequences of Water Privatisation in Jakarta, Indonesia*. Paper presented at the 17th Biennial Conference of the Asian Studies Association of Australia in Melbourne, July 1-3, 2008. Retrieved from http://arts.monash.edu.au/mai/asaa/henikurniasih.pdf

Laborde, Lilian del Castillo (2005). Institutional Framework for Water Tariffs in the Buenos Aires Concession, Argentina. *International Journal of Water Resources Development*, 21 (1), 149-164.

Lahlou, Mehdi (2008). Water Privatisation in Morocco: First Lessons Drawn from the Case of Lyonnaise des Eaux in Casablanca. Retrieved from http://tni.org/archives/act/18357

Laurie, N., Crespo, C. (2007). Deconstructing the best case scenario: Lessons from water politics in La Paz-El Alto, Bolivia. *Geoforum*, 38 (2007), 841-854.

Lobina, E. and Hall, D. (2007). Water Privatisation and Restructuring in Latin America. Retrieved from http://www.psiru.org

LYDEC (2006). *Improving Water Management. The Lydec Concession Casablanca – Morocco* [Data figures]. Presentation by Fouad Djerrari, COO LYDEC for the 4th World Water Forum, Mexico 2006. Retrieved from http://www.bvsde.paho.org/bvsacg/e/foro4/18marzo/public/Improving.pdf

Marin, Philippe (2009). *Public-Private Partnerships for Urban Water Utilities: A Review of Experiences in Developing Countries* (Trends and Policy Options, no. 8). Washington, DC: World Bank.

MEED: Middle East Economic Digest (2005). Water Firm Floats on Bourse. *Middle East Economic Digest*, 49(27), p.29-29. Emap Business International Ltd.

Metropolitan Water and Sewerage System Regulatory Office (MWSS RO) (2007). Regulatory Office presentation [Data figures]. Retrieved from http://www.mwssro.org.ph

Miranda, L., Hordijk, M., Torres Molina, R.K. (2011). *Water Governance Key Approaches: An Analytical Framework. Literature Review.* No. 4 (July 2011). Chance2Sustain consortium project. Retrieved from http://www.chance2sustain.eu/fileadmin/Website/Dokumente/Dokumente/Publications/Chance2Sustain_-_Literature_Review_No.4_-_Water_Governance_Key_Approaches_An_Analytical_Framework.pdf

Morales, R., Jiminez, E., Ajata, P., Villegas, H., & Champey, A. (2006). *Does Society Win or Lose as a Result of Privatization? A case study on the impact of water privatization in Bolivia.* La Paz, Bolivia: CIESS Econometrica SRL. Retrieved from http://www.iadb.org/res/laresnetwork/files/pr262finaldraft.pdf

MWSS Regulatory Office (RO) (2003). *Annual Report.* Manila: MWSS Regulatory Office.

MWSS Regulatory Office (RO) (2011). Data figures. Retrieved on March 01, 2011 from www.mwssro.org.ph

Negishi, T. (2010). *Regulatory Framework for the Manila Water Concessions.* Retrieved from http://kamome.lib.ynu.ac.jp/dspace/bitstream/10131/7304/1/6Negishi.pdf

Nickson, A., Vargas, C. (2002). The Limitations of Water Regulation: The Failure of the Cochabamba Concession in Bolivia. *Bulletin of Latin American Research*, 21(1), 99-120.

Nugroho, R. (2011). *The Governance of Jakarta Water: The Role of the Regulatory Body.* Paper presented at The World Water Week, 23 August 2011 Stockholm Stockholm International Water Institute (SIWI). Retrieved from http://www.worldwaterweek.org/documents/WWW_PDF/Convernors/event_resources/Jakarta-Water-Governance.pdf

Olivier, Anne (2009). *Distributional Incidence of the Water Tariff Subsidies in Casablanca, Morocco.* Proceedings of the International Conference on Infrastructure Economics and Development, Toulouse, France, January 2010. Retrieved from http://siteresources.worldbank.org/DEC/Resources/84797-1257266550602/OlivierA.pdf

Olleta, Andres (2007). *The World Bank's Influence on Water Privatisation in Argentina. The Experience of the City of Buenos Aires.* Geneva, Switzerland: International Environmental Law Research Centre. Retrieved from http://www.ielrc.org/content/w0702.pdf

Porporato, M., Robbins, P. T. (2010). Privatisation and Corporate Governance in Emerging Economies: What Went Wrong With Aguas Argentinas S.A.? *International Journal of Economics and Business Research*, 2(3-4), 187-209.

Post, Allison E. (2009). Pathways for Redistribution: Privatisation, Regulation and Incentives for Pro-Poor Investment in the Argentine Water Sector. *International Journal of Public Policy*, 4(1-2), 51-75.

Public Citizen (2003). *Water Privatization Fiascos: Broken Promises and Social Turmoil.* Retrieved from http://www.foodandwaterwatch.org

Public Services International Research Unit (PSIRU). (2005). *Water Privatisation and Restructuring in Asia-Pacific.* Retrieved from www.psiru.org/reports/2004-12-W-Asia.doc

Saadi, Mohamed S. (2012). Water Privatization Dynamics in Morocco: A Critical Assessment of the Casablancan Case, *Mediterranean Politics*, 17(3), 376-393.

Santono, H. (2005). *Current Situation of Jakarta Water Privatization*. Retrieved from http://kruha.org/oneMODUL/oneDocument/1300268730.pdf

Schouten, M., and Halim, R., D. (2010). Resolving Paradoxes of Water Loss Reduction: A Synthesis in Jakarta. *Resources, Conservation and Recycling*, 2010, doi: 10.1016/j.resconrec.2010.05.006

Shirley, M. M., & Menard, C. (2002). Cities Awash: A Synthesis of the Country Cases. In M. Shirley (Ed.), *Thirsting for Efficiency.* (pp. 1-41). Oxford, UK: Elsevier Science Ltd.

Shofiani, N.E. (2003). *Reconstruction of Indonesia's Drinking Water Utilities* (Master Thesis). Stockholm: Royal Institute of Technology. Retrieved from http://www2.lwr.kth.se/Publikationer/PDF_Files/LWR_EX_03_30.PDF

Simpson, Robin (2006). Universal Access in the Water and Sanitation Sector. In *Liberalisation and Universal Access to Basic Services.* (pp. 97-134). Paris, France: OECD and IBRD / The World Bank.

Solanes, Miguel (2006). Efficiency, Equity and Liberalisation of Water Services in Buenos Aires, Argentina. In *Liberalisation and Universal Access to Basic Services.* (pp. 149-171). Paris, France: OECD and IBRD/The World Bank.

Swyngedouw Erik (1997). Power, nature, and the city. The conquest of water and the political ecology of urbanization in Guayaquil, Ecuador: 1880 – 1990. *Environment and Planning.* 29(2), 311–332.

Swyngedouw, Erik (2004). *Social Power and the Urbanization of Water.* New York: Oxford University Press.

Tiepolo, M. (2007). *The Barrio Marginado Regularization in Guayaquil, Ecuador.* Working Paper No.27 – 2007. Torino, Italy: Centro Città del Terzo Mondo. Politecnico di Torino. Retrieved from: http://areeweb.polito.it/ricerca/cctm/wp/WP27.pdf

Transparency International (2012). Corruption Perceptions Index data tables. Retrieved from www.transparency.org/

Tutuko, K., Kamil, I.M. & Giggacher, M. (2001). *Jakarta Water Supply: How to Implement a Sustainable Process.* Presented in a Sustainable Services Seminar, Nov.23, 2001 in Hong Kong. Retrieved from http://www.pecc.org/resources/doc_view/1227-jakarta-water-supply--how-to-implement-a-sustainable-process

United Nations Human Settlement Programme (UN-HABITAT) (2008). *State of the World's Cities 2010/2011.* London: Earthscan.

United Nations (UN) (2006). *Statistical Yearbook* (Fiftieth Issue). Retrieved from http://unstats.un.org/unsd/syb/

United Nations (UN) (2010). *Statistical Yearbook* (Fifty-fifth Issue). Retrieved from http://unstats.un.org/unsd/syb/

United Nations Statistics Division (UN) (2012). UN Data population statistics. Retrieved from: http://data.un.org/Data.aspx?d=POP&f=tableCode:240

U.S. Department of State (2009). *Background Note: Bolivia.* Retrieved from: http://www.state.gov/outofdate/bgn/bolivia/141890.htm

Wikipedia (2012). *Economy of Ecuador.* Retrieved June 01, 2012 from http://en.wikipedia.org/wiki/Economy_of_Ecuador

The World Bank (1993). *Water Resources Management.* Retrieved from: http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2000/02/23/000178830_98101911251888/Rendered/PDF/multi_page.pdf

World Bank (2009). *Project Performance Assessment Report: Morocco.* Retrieved from http://lnweb90.worldbank.org/oed/oeddoclib.nsf/DocUNIDViewForJavaSearch/EC4A7ED8BF368B1A8525761E004FB91F/$file/Morocco_ppar_wrmp.pdf

The World Bank Group (2012). *Morocco's' Potential Still Unrealized.* Independent Evaluation Group (IEG). Retrieved from: http://lnweb90.worldbank.org/oed/oeddoclib.nsf/DocUNIDViewForJavaSearch/33297C600E792CD0852567F5005D8FBE

World Health Organization (WHO) (2013). *Washington Consensus*. Retrieved from: http://www.who.int/trade/glossary/story094/en/index.html

Wu, X., & Malaluan, N. (2008). A Tale of Two Concessionaires: A Natural Experiment of Water Privatisation in Metro Manila. *Urban Studies*, 45(1), 207-229.

Wyatt, A. (2005). *Public, Private and Community Roles and Initiatives.* Presentation at South East Asia Geography Conference Panel: Water Governance in Context. Retrieved from: http://www.mekong.es.usyd.edu.au/projects/wg_working_paper_3.pdf.