

Water Privatization and the Poor – Experiences from Bolivia and Argentina¹

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I. Introduction

We are living in the 21st century, in a world where high-profile technical achievements and the worldwide exchange of goods are on the daily agenda. However, 768 million people of the world's population still do not have any access to safe drinking water and 2.5 billion people worldwide still lack access to basic sanitation (WHO and UNICEF, 2013): basic needs that are indispensable for a decent and healthy life.

Finally, during the last decade, access to clean water became of increasing importance and the focus of attention on the international development stage: in 2000, with the declaration of the MDGs the issue was acknowledged under goal 7, defining target number 10 as halving the proportion of people without sustainable access to drinking water and basic sanitation by 2015 (UN, 2013a). In addition, in July 2010, the UN declared access to clean water and sanitation a Human Right (UN, 2013b).

In course of this paper it shall be examined whether the privatization of water utilities in Latin America during the 1990s were an appropriate measure to tackle the problem of insufficient access to clean water and poor water quality and thus whether it could be of interest for future efforts in increasing water availability. The focus of this paper lies especially on the implications experienced by poor households in the privatized areas.

The selection of the case studies, namely water privatization in Bolivia and Argentina, is mainly based on the availability of data. Even though the concessions were revoked in the end they provide useful insights on the impacts of privatization such as

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the development of coverage rates, tariffs, health, and poverty issues. Also, they give interesting information on contract features that should be rather avoided for future projects.

After answering the question why privatization as a policy tool should be considered in the first place (II) three case studies will be investigated in more detail, namely the two Bolivian concessions in La Paz-El Alto (III.2.1-III.2.3) and Cochabamba (III.2.4 – III.2.5), as well as the concession in Buenos Aires, Argentina (IV). Here, the respective features of the concessions will be investigated, followed by a thorough analysis of their impacts and a consideration of the circumstances leading to their revocation. Finally, lessons will be drawn from the failed concessions including policy recommendations for future privatization efforts in this sector.

It will be seen that privatization per se has generally positive impacts on the affected population when carried out properly and according to the terms and obligations of the concession contract. However, several loopholes in the contracts or a lack in regulatory stability often result in renegotiations, tariff increases, and a deteriorating performance. Thus, after a first improvement in water services, privatization ultimately harmed especially the poor in our analyzed case studies, indicating that a more careful privatization process and stable and coherent regulatory framework is required.

Also, as will be seen in course of the literature review when examining the privatization impacts, further investigation and research in this area is urgently needed.

II. Why Privatization in the First Place?

During the 1990s almost all Latin American countries introduced a broad range of privatization policies and reforms in their infrastructural sectors being integral to major WB and IMF stabilization programs. Among them were also broad reforms of their water supply industries. Before investigating Bolivia's, as well as Argentina's privatization process in particular, it will firstly very briefly be answered the question: Why was privatization of the water sector strived for in the first place?

According to Foster (2005), the extensive willingness to accept privatization reform was highly motivated by dissatisfaction with the traditional "clientelist" model of water provision, with state-owned water enterprises being rather treated as part of the political apparatus than permitted to function as efficient service providers. While politicians stretched out their control over the sector by recruiting and dismissing water company directors and by supplying public subsidies for unprofitable firms on the one hand, water companies often had to satisfy political favors in the form of overemployment, artificially low tariffs, and the distribution of contracts founded on political rather than economic criteria on the other hand (*ibid.*). Thus, spiraling costs, low quality of service, an undersupply of the population, and precarious finances were the results (*ibid.*).

Subsequently, the reforms were aimed at breaking this pattern by tackling the problems at its roots, thus addressing the underlying institutional causes. According to this approach, the separation of the functions of policymaker, regulator, and service

provider was of major importance (ibid.). Ultimately, the reformed model of water provision is characterized by the introduction of a regulatory agency for monitoring the achievement of quality and coverage rates and for setting cost-recovery tariffs, efficient employment rates, contract awarding by competitive tendering, and a good quality of service (ibid.).

Finally, spurred economic growth, efficiency and an increase in investments, coupled with social equity expressed in an effort to avoid further wealth concentration was expected to occur as a result of privatization (Barja et al., 2005).

III. Bolivia

III.1. Economic Background

According to Morales et al. (2006) Bolivia's economic performance of the last decades can be described by identifying five sub-periods:

1. 1982-1985: Hyperinflation;
2. 1986-1989: Stabilization period where macroeconomic policies successfully stopped hyperinflation;
3. 1990-1997: SAPs were launched and a relative fast GDP growth was achieved;
4. 1998-2003: External as well as internal shocks severely hit the economy leading to a substantial reduction in GDP growth;
5. 2003-present: Moderate economic growth, especially due to the increase of export prices (Morales et al., 2006).

In the 1980s, prior to structural adjustment and privatization programs, Bolivia suffered from major external shocks, including the rise in world interest rates at the start of the decade, the cutoff in lending from the international capital markets, and the drop in world prices of Bolivia's commodity exports (Sachs & Morales, 1989). GDP growth rates averaged at about - 4 percent (World Bank, 2013a), the seignorage rate jumped up to 12 percent in mid-1982 and remained at that high plateau until 1985 —further fueling hyperinflation—, employment rates were extremely low, and tax revenues declined (Sachs & Morales, 1989).

As a result, starting in the mid-1980s and 1990s, Bolivia implemented an ambitious program of SAP implementation. In course of that, economic growth increased, and social indicators improved significantly. However, economic growth never exceeded 4 percent. With average per capita income growth being less than 1.5 percent per year this left income-based poverty measures basically unchanged (Morales et al., 2006).

Between 1990 and 1997, Bolivia annually grew at around 4.3 percent in real terms, allowing for increased fiscal revenues and reducing the annual average fiscal deficit to 3.6 percent of GDP compared to almost 5.6 percent registered in the late 1980s (ibid.). However, on the other hand, the fiscal costs caused by structural reforms began to increase. For instance, by 1997, the cost of pension reform amounted up to 3% of GDP, further rising up to 5 percent of GDP in 2000 (ibid.).

Hence, economic reforms did not make for an increase of fiscal revenues as it was initially assumed. Instead, reforms actually added to the fiscal deficit itself (*ibid.*).

A weak fiscal and financial sector and modest growth on exports left the economy vulnerable to external shocks. In the late 1990s this vulnerability became clear when several external and internal shocks hit Bolivia's economy, such as the Russian crisis in 1998, leading to scarce private external financing for several Latin American countries, or the high burden of fiscal deficit caused by the pension reform (*ibid.*).

In course of the fourth period, GDP grew at an annual average rate of 1.9 percent, inflation remained at a low level but the annual average fiscal deficit increased to 6 percent of GDP. By the end of 2003, Bolivia was close to a major financial and political crisis while the economy actually recovered due to an increase in export prices (*ibid.*).

Finally, it can be noted that SAPs including water privatization were accompanied by a surrounding of high poverty and inequality. In fact, poverty is omnipresent in Bolivia – in La Paz as well as in the constantly growing city of El Alto. According to Morales et al. (2006) about 28 percent of the population in the city of La Paz is poor, while poverty even reaches 62.7 percentage of the population in the city of El Alto. In addition, 26 percent of people living in El Alto could be even considered as being extremely poor.

III.2. Privatization Process in Bolivia

Bolivia's water privatization was part of a far-reaching and extensive privatization process directed by the Bretton Woods institutions World Bank and International Monetary Fund.

Bolivia was the second country —and first democracy— in Latin America to implement the 'economic shock therapy' under an IMF structural adjustment program (Estache & Trujillo, 2007). Facing the possibility of a complete economic collapse, privatization started in 1992 (*ibid.*) - covering all major key enterprises in the utility sector to attract investment and increase efficiency (Barja & Urquiola, 2001).

Privatization efforts in the water sector started in 1996. According to Morales et al. (2006) the specific need to transfer the state's enterprise's (SAMAPA) services was corroborated by three main arguments:

1. High deficits and therefore inability to access internal or external credits;
2. Lack of capacity to execute investment programs offered by international donors including IADB and WB among others, and
3. Complicated and inefficient price system (Morales et al., 2006).

Until 1996, SAMAPA operated with a highly complex tariff structure, containing more than 150 categories, 15 for metered customers and 135 for the rest (*ibid.*). According to this arrangement, consumers were not charged for the first 10m³, and the mean tariff was approximately USD 0.32/m³ (*ibid.*). In 1996, the National Council of Tariffs decided to change that and instead adopt a more simplified tariff structure, resulting in an average increase in tariffs by about 19 percent, which was supposed to be implemented

that year. However, it was only introduced by Aguas de Illimani, in 1997 – thus, after privatization was carried out (*ibid.*). Therefore, it is not surprising that the rise in tariff structure was immediately associated with privatization and it thus, as we will see in the following, became a highly lamented issue raised by social protests (*ibid.*).

In general, the Bolivian privatization process primarily relied on a new approach called “capitalization” —allowing strategic investors, selected through a public competitive bidding process, to obtain a 50% controlling stake in the enterprise— (Estache & Trujillo, 2007). The investor with the winning bid then takes over the management of the firm and is obligated to invest the amount offered in the bidding process in the development of the firm within a certain time period (Barja & Urquiola, 2001). Furthermore, the investor commits to fulfil expansion obligations and quality goals, and to operate under tariff regulation (*ibid.*).

Attempts to privatize water faced several difficulties, resulting in the proliferation of concessions as the main method for administrating state assets (McKenzie & Mookherjee, 2003). However, in practice, only one municipal firm, SAMAPA, was transferred to the private sector in 1997 for administration by Aguas de Illimani S. A. in La Paz - El Alto (Barja & Urquiola, 2001). A second transfer of a municipal firm in Cochabamba failed shortly after awarding the concession (further discussed below).

The failure to create a second concession, as well as the long delay in formulating the Potable Water and Sewerage Law —which finally got approved in 2000, and thus after the issuing of concession contracts— decelerated further reforms (Barja & Urquiola, 2001). Nevertheless, in the late 1990s further concessions were signed with several existing municipal firms in some smaller cities (*ibid.*). The contracts include —compliant with the Potable Water and Sewerage Law— several conditions for expansion, internal efficiency, and quality goals (McKenzie & Mookherjee, 2003). Tariff regulation was introduced under a rate-of-return mechanism with a five-year regulatory lag (*ibid.*) —prices thus calculated are aimed to support firms achieving their contractual obligations and expansion goals (Barja & Urquiola, 2001).

Due to political pressure, the Bolivian Water Law now gives municipalities a say in the process of tariff setting, seriously undermining the basic principle of institutional separation between regulator and service provider (Foster, 2005).

The main regulatory tool in Bolivia is represented by the cross-sectoral regulatory law SIRESE, created in 1994 (*ibid.*), which defines the regulatory institutional structure of the entire infrastructure sector including the role of the five regulatory agencies (or superintendencies) and one general superintendence (Barja & Urquiola, 2001). Thus, it was designed to be a hybrid between single-sector and multi-sector regulation (Foster, 2005). The system is financially, as well as administratively independent and superintendents are appointed by congress for a five-year period (Barja et al., 2005). In general, superintendents are responsible for granting rights, regulating tariffs, promoting competition, imposing sanctions, and receiving consumer claims (*ibid.*).

In case of the water sector, the rather general and brief law SIRESE was complemented by the Potable Water and Sewerage Law in 2000, indicating that the cross-

sectoral law was not always an adequate basis for establishing regulatory authority in any particular sector (Foster, 2005).

While this system comes with several advances it still lacks effectiveness, including, for instance, a lack of continuity of superintendents due to political pressures or lobbying operators being able to bypass regulations (Barja et al., 2005).

III.2.1 Concession in La Paz-El Alto

As already mentioned above, in 1997, the Bolivian government awarded the first major water and sanitation concession contract in La Paz-El Alto to the private consortium Aguas de Illimani S. A., led by Suez Lyonnaise des Eaux (Clarke et al., 2004). After several weeks of advertising and promotion with personal visits to foreign enterprises, only a modest number of three enterprises made their offers, with AISA presenting the highest offer for increasing water and sewerage coverage (Morales et al., 2006). Its objectives for the 1997-2001 period included a 100 percent access to potable water in the areas of Achachicala and Pampahasi, which cover the city of La Paz, and the installment of 71,752 new water connections and thus a 82 percent increase in access to potable water in the city of El Alto, of which 50 percent were supposed to be expansion connections and 41 percent access to sewerage (Barja & Urquiola, 2001; Clarke et al., 2004). Furthermore, the winning bidder committed to increasing sewerage coverage to 90 and 95 percent in El Alto and La Paz respectively with the new connections having to be in-house connections (Clarke et al., 2004). Hence, the bidding was much more conducted over coverage targets, especially increasing the coverage of low-income areas (Morales et al., 2006).

Tariffs were raised by 38.5 percent before the concession contract was signed, and thus a reduction on tariffs was not the objective (Clarke et al., 2004). Nevertheless, according to Clarke et al. (2004) tariffs still remained below cost for low-income households.

One very important feature of the La Paz-El Alto concession contract is that it distinguishes between “area servida” to which the described expansion goals of the contract apply and the “area no servida” (Morales et al., 2006). With regard to the latter one AISA can choose whether to provide its services or not, but has no obligation to do so (*ibid.*). Such a division has very obvious implications for low income neighborhoods, particularly if the service provider does not have a clear financial incentive to cover households outside the agreed service areas (*ibid.*). According to Morales et al. (2006), in the case of La Paz and El Alto, the “area no servida” was mainly composed of newly or recently formed neighborhoods that are likely the homes of new rural-urban migrants, most of whom are poor. As a result, the territorial separation for AISA to carry out their responsibilities did not include the poorest share of the population (*ibid.*).

III.2.2 Impacts of the Water Privatization

While getting an overview of the existing literature regarding the impacts of water privatization, especially with regard to the poor, one can note that, up to now, results substantially lack sufficient data and information, due to small observation samples and short time periods. However, a several insights have been gained in the past years, which will be presented in the following.

Barja et al. (2005) only considered households that had a pipe connection to the dwelling unit's building, using data of the 1990s. According to their study, access to water was initially high among the richer deciles. Nevertheless, in the period from 1994-99, the bottom seven deciles were able to increase their access of more than 10 percent, with the poorest decile increasing its access to water by even 24.6 percent. However, it needs to be paid attention on the fact that coverage rates already increased before privatization took place. So, in order to estimate whether privatization itself was responsible for an increased access the authors consider the difference between the annual growth rate in access before and after privatization. The results here shed a different light on privatization: while rates increased for the middle deciles, the overall trend indicates a decrease in annual coverage growth rates between 1994 and 1997. So, while access in general increased, the rate of water coverage decreased after privatization.

Another approach conducted by the authors in order to determine whether privatization increased access is to compare changes in access to water in the two cities with sustained concession, La Paz and El Alto, to changes in other major Bolivian cities. This approach is especially important considering the fact that increased coverage was the goal of the bidding process. The results here are indicating that access to water during 1992-94 increased faster in the other cities than in La Paz-El Alto for the top four quintiles. In the period during 1994-99, thus, after privatization, however, access increased more in La Paz-El Alto for all quintiles.

In general, the results indicate that there was not a strong privatization effect for the privatized areas since increased capital from privatization did not result in higher access levels in privatized areas when compared to public systems.

With regard to water prices, Barja et al. (2005) note that water prices were already increasing in La Paz-El Alto before the concession was carried out and continued to rise until 1998. However, in Santa Cruz —where privatization did not occur— prices rose substantially faster, indicating that privatization actually decelerated the increase in water prices. According to the authors privatization lowered the increase in water prices in La Paz-El Alto of about 10.5 percent when compared with other cities.

Concerning welfare changes Barja et al. (2005) estimate that the gaining of access to water due to the La Paz-El Alto concession resulted in substantial positive welfare changes, ranging from 11 to 25 percent for the poorest five deciles, and thus particularly benefiting the poor.

Ultimately, the water concession in La Paz-El Alto is also viewed as having reduced inequality and poverty, since the increased access to water benefited primarily the poor and water prices slightly decreased when compared to other cities.

To compare the effects of privatization on water and sewerage access — particularly for the poor— Clarke et al. (2004) also compared access before and after privatization in La Paz-El Alto relative to access in cities without private participation. The surveys they evaluated were carried out in 1995, 1999 and 2001.

Their results are quite compliant with the findings of Barja et al. (2005). According to the authors a general improvement in the late 1990s in all observed cities was identifiable, followed by a modest decline between 1999 and 2001 (Clarke et al, 2004). This result is reasonable when assuming that it is much harder to further increase access at an already high coverage level. Also, there is no evidence that the cities of La Paz-El Alto performed particularly better or worse with respect to water prices than the other cities.

While investigating access to sewerage the authors find that La Paz-El Alto was generally in a better shape prior to privatization, noting a constant decline in coverage rates throughout the time. While poor households could actually record increased access in 1999 it fell again in 2001.

Morales et al. (2006) are estimating a water-poverty index by looking at the level of actual water consumption in order to assess the impact of water privatization in La Paz-El Alto. According to them, 50 liters per day are the minimum amount of water required to satisfy basic needs, representing the water poverty line. Households that fall below that line are considered to be poor, levels that fall below half the minimum of consumption required are considered to be extremely poor. The results are rather disappointing as privatization seems to not having achieved the raise of water consumption above a minimum level. According to the authors, about 26.7 percent of the population in La Paz consumed less than 50 liters per day in 2002 and thus falls below the water poverty line, with 15.2 percent even suffering under extreme poverty. The situation in El Alto seems to be even more worrisome with about 37.3 and 13.6 percent of the population consuming less than 50 and 25 liters per day, respectively. Furthermore, inequality in water consumption ranges at high levels of the Gini index between 0.4 and 0.5. However, it needs to be noted that, in that context, the authors do not mention comparison values. The results would be much more meaningful in relation to preceding values prior privatization.

Morales et al. (2006) further find out that water privatization did not help the poor to access water services in La Paz comparing with the non-privatized city of Santa Cruz. However, when comparing the city of El Alto with Cochabamba and Santa Cruz, the results show that privatization did have a positive impact on water coverage. In their study the authors designed a new data base using 1992 and 2001 Population Census data, and the national Budget family surveys of the same period.

In their study McKenzie and Mookherjee (2003) compare before and after changes while also comparing the effects in the privatized sector with other non-privatized sectors to control for macroeconomic changes in the economy.

In course of their investigation the authors find that access to water utilities increased for all deciles after privatization, taking into account the period from 1994 to 1999. However, as they point out, the analyzed surveys do not provide any information on illegal connections, possibly leading to an overestimation of increases in access due to the introduction of metering. However, they emphasize that the expansion of network mainly benefits the poor since coverage levels of the richer deciles are already very high.

As well as Barja et al. (2005) the authors observe that the water concession in La Paz-El Alto resulted in water prices increasing less than elsewhere in Bolivia based on data provided by the Bolivian institute of statistics.

Furthermore, McKenzie and Mookherjee (2003) indicate that the privatization of water services in La Paz-El Alto slightly reduced inequality and poverty of about 1.0-1.5 percent.

As seen above and pointed out by Clarke et al. (2004) existing statistical and econometric studies provide no consistent and robust evidence of strong improvements in sector performance following privatization but are rather inconclusive. Thus, the analysis provides little evidence that privatization itself generated the improvements in access; however, there is also no evidence that poor people particularly suffered under privatization.

Unfortunately, this problem will continue to accompany us throughout the following investigation of the Buenos Aires concession.

III.2.3. Problems with the AISA Contract and Failure

With regard to the above presented results it seems rather unclear why the La Paz-El Alto concession ultimately failed in 2005.

As Mulreany et al. (2006) emphasize once again: the private water system did not bypass the poor in La Paz-El Alto. Nevertheless, in the long term, AISA failed to keep pace with the increasing urban population in El Alto caused by rural-urban migration (ibid.). According to them, increasing connection fees and the failed agreement with the government on service expansions ultimately resulted in 200 000 people without access to the system (ibid.).

Spronk and Crespo (2008) also attribute the failure of the concession to problems in the contract —represented by the (already mentioned) distinction between “area servida” and “area no servida”— as this distinction allowed AISA to claim the achievement of full service coverage even though approximately one-third of the population (200,000 people) of El Alto lacked basic water service.

Furthermore, they also identify the issue of rising connection fees. According to them, AISA “outsmarted” other companies in the region by raising fees for new connections rather than tariffs for existing customers (ibid.). In order to receive a water and sewerage connection in La Paz or El Alto, costs were amounting up to USD 445 in 2004, the equivalent of almost nine monthly salaries at minimum wage (ibid.). This approach is of special concern as it particularly penalizes the poorest of the poor, due

to the fact that it is generally the poorest households that did not have connections to the public water system in the first place (ibid.).

As a result, the once acclaimed as a “pro poor” concession contract in La Paz-El Alto ultimately failed in 2005 and the company returned to public control.

III.2.4. Cochabamba Concession

Up to 1997 Cochabamba’s municipal water utility merely covered 57 percent of the population—leaving particularly poor households unconnected—, and had to register about 50 percent losses in unaccounted for water on average, leading to increasing debts (Clarke et al. 2004). As population increasingly demanded a solution to this precarious water problems, Cochabamba was the second city in Bolivia to enter concession negotiations, following the model provided by La Paz-El Alto (ibid.). Finally, in 1999, the government signed a 40-year concession contract with Aguas del Tunari, a subsidiary of Bechtel enterprises, including a guarantee to the operator of profitability (ibid.). In the concession contract AdT agreed to invest USD 200 million in the Mis-cuni water provision project—with 30 percent coming from equity and the rest from debt— (Barja et al. 2005). Also included in the concession contract was the cancellation of state subsidies, as well as an expansion of the water network. In course of the auction for the water concession, AdT was the only bidder (ibid.).

However, after five months the contract was cancelled due to the rising of pervasive civil disorder, better known as the “water war” (ibid.). In general, social discontent was based on three things: average tariff increases, confusion among small scale farmers that they would be charged for their irrigation water, and the exclusivity rights granted to AdT (ibid.). Also, the process of privatization substantially lacked consumer participation (Clarke et al. 2004).

III.2.5. Subsequent Changes and Failure of the Cochabamba Concession

Right after the concession contract was signed, the government regulator allowed AdT to raise tariffs of 35 percent on average - raising the cost of water to around a quarter of the average monthly salary (Spronk & Crespo, 2008).

At the beginning of 2000, consumer prices increased of about 51 percent on average (Barja et al., 2005). This fact is especially alarming, paying attention to the fact that about 70 percent of Cochabamba’s population lived below the poverty line at that time (Estache & Trujillo, 2007). Owed to the fact that water prices were falling during 1997-99 this rise was an even greater shock to consumers (Barja et al. 2005). According to Barja et al. (2005), prices increased of about 43 percent on average for poor households, and of about 57 percent for the middle class. Some users, however, even reported an increase of about 200 percent (Spronk & Crespo, 2008).

According to Estache and Trujillo (2007), the price increases were, on the one hand, owed to an enhanced cost recovery through reductions in subsidies. On the other hand, they were also necessary in order to pay for the construction of several

infrastructure utilities that would boost water supplies to the Cochabamba area (Estache & Trujillo, 2007). However, as the tariff increases arose shortly before AdT met its equity commitment regarding the Miscuni project and the start of debt financing, public perception was that AdT tried to finance its equity share with the extra revenues generated by tariff increases (Barja et al. 2005: 150).

Another important issue was posed by the monopoly provision of AdT and its granted exclusivity rights, comprising that AdT became the owner of every drop of water within the Cochabamba area for the duration of the contract, which caused a severe problem for urban residents that just had dug their own wells as well as for small scale farmers who were highly dependent on water for personal use and crop irrigation (Spronk & Crespo, 2008). Owing to the poor conditions of the previous municipal utility SEMAPA, 43 percent of urban residents were not provided with water services. As a result, a large share of these unconnected residents built independent water systems that relied on “free” water resources (ibid.). The new concession contract and the new Potable Water and Sewerage Law threatened to expropriate these communities without compensation. As the content of the law, as well as its implications was still unknown at the initial phase of the concession, people were frightened that AdT could also exploit water resources outside of its service area, which threatened the water supplies used by small communities and farmers in the surrounding region (ibid.). Due to this uncertainty as well as an already noticeable deterioration of the situation due to price increases people were willing to “go to the water war”.

Due to increases in prices, the reduction of state subsidies, and the short-lived nature of the privatization, etc. welfare losses were also notable. According to Barja et al. (2005) the maximum welfare loss caused by a 43 percent price increase is 3.8 percent of per capita monthly expenditure. In addition, an additional 2 percent of the population fell below the poverty line on the basis of privatization (McKenzie & Mookherjee, 2003).

As a result, the control over the water network was ultimately retransferred to the municipal utility SEMAPA five months later.

IV. Argentina – Buenos Aires

IV.1 Economic Background

Similar to Bolivia, Argentina’s privatization of the water sector was part of a broad program of structural adjustment, introduced in 1989 as a response to Argentina’s turbulent economic history and decades of economic decline.

Argentina, as well as many other Latin American countries, suffered through an extended period of economic instability including the Latin American debt crisis (Hornbeck, 2002). Throughout the decade, GDP growth rates were strongly fluctuating, starting with a positive 4.2 percent in 1980, but then falling to -5.7 percent in 1981, reaching 3.9 percent again two years later in 1983 (World Bank, 2013b), dropping down to -7.6 percent in 1985 just to soar back up to an impressive 7.9 percent

in the following year (World Bank, 2013c). At the end of the decade, in 1989, GDP growth again dropped to -7.5 percent (World Bank, 2013d). In the late 1980s the country was facing increasing inflation mainly driven by money printing in order to finance huge fiscal deficits—averaging around 9 percent of GDP during the decade— (Galiani et al., 2005). This deficit was, to a large extent, owed to governmental overspending, spending more than they could collect by taxes and borrowing from financial markets. A substantial part was also due to huge SOE losses (*ibid.*).

In the final stages of the decade the Radical government could not balance the budget anymore. Additional deficit spending could not be financed by further printing money or issuing new debt (*ibid.*). Ultimately, in 1989, Argentina was struggling with hyperinflation increasing to more than 3,000 percent (Alcázar et al., 2000), resulting in the premature resignation of the government (Galiani et al., 2005).

Subsequently, the Peronist party under President Carlos Menem took over the affairs of state, introducing ambitious SAPs including trade liberalization, tax reform, privatization, and the introduction of a currency board in order to reduce the budget deficit, control inflation, and promote economic growth (*ibid.*). The center piece of reforms was represented by the implementation of the Convertibility Law, which legally implemented the currency board in 1991, ending the hyperinflation by establishing a pegged exchange rate with the US dollar and backing the currency substantially with dollars (Saxton, 2003).

From 1991-94 Argentina was rewarded for its efforts, enjoying strong economic growth averaging at approximately 10 percent (World Bank, 2013d). However, following Mexico's Tequila crisis in 1995, capital flowed out of emerging markets, Argentina's GDP again declined by about 2.8 percent leading to a severe banking crisis (Hornbeck, 2002).

After a short recovery in 1996 and 1997 with growth rates of 5.5 and 8.1 percent, respectively, Argentina again experienced a throwback in 1998 due to the East Asian financial crisis, entering a prolonged recession and facing rising unemployment (*ibid.*).

The following years were marked by austerity, discontinuity and public panic. After a change of government in 1999, the new ruling party under Fernando de la Rúa sought assistance from IMF, leading to countless financial stand-by agreements and multilateral assistance packages in return for Argentinian debt restructuring, fiscal adjustments, and a strict austerity plan (Hornbeck, 2002). However, markets reacted negatively and Argentina's economic performance remained disappointing. Nationwide strikes and protests against the government's austerity plans occurred, supermarket looting took place, and the unemployment rate reached 18 percent (*ibid.*). Furthermore, interest rates in pesos averaged 689 percent on fears of devaluation and deposit freeze, resulting into a bank run in 2001. As a reaction, the Minister of Economic Affairs announced an actual bank deposit freeze in December 2001 (*ibid.*). Additionally, the IMF cut off lending in 2001 (Saxton, 2003).

After a change of government at the beginning of 2002, with the Peronist party taking over again, and the severely depressed economy reaching bottom in September 2002—defaulting on debt to the WB and noting GDP growth rates of -10.9 percent

(World Bank, 2013e)— Argentina was finally able to gradually recover in 2003 (Saxton, 2003).

IV.2. Privatization Process in Argentina

In general, Argentinian privatization of SOEs was accelerated by the dramatic economic circumstances as described above, since it was supposed to reduce the huge budget deficit accumulated over decades using the substantial sums paid by acquiring enterprises in the form of cash and Argentine debt bonds (Galiani et al., 2005). Furthermore, privatization was supposed to fix up the poor state of Argentina's physical infrastructure, which was mainly neglected for a long time under public ownership and lacked sufficient provision of the population (*ibid.*). In short, macroeconomic stabilization and improved efficiency were the important objectives of the process (McKenzie & Mookherjee, 2003).

For instance, in the case of the Buenos Aires concession, water services in the area were provided by the federal company OSN and several cooperatives until 1993 (Galiani et al., 2005). OSN in particular faced substantial problems in providing economic access to water and sewerage connection of good quality. During that time merely 70 percent had a water connection, and only 58 percent a sewerage connection (Alcázar et al., 2000). The lack in coverage was especially pronounced in the poorer areas, which had been growing by 5 to 6 percent a year before the concession was implemented, summing up to 5.6 million people—with only 55 percent of them having access to water and only 36 percent to sewerage— (Alcázar et al., 2000). OSN was not investing enough to keep up with the pace of growth in these outlying areas of the city, and the majority of new connections had been financed by neighborhood associations (*ibid.*). According to Alcázar et al. (2000) OSN investments were in fact not even sufficient enough to maintain existing networks that were more than 60 years old and urgently needed reparation or replacement. As a result, water shortages, interruptions and breaks were on the daily agenda in Buenos Aires (*ibid.*). The main reason for OSN's insufficient investment rates was its lack of funds due to its inefficient operation, accompanied by extremely low water tariffs, since they had been declining in real terms during much of the preceding thirty years, falling by almost 70 percent from 1960 to 1976 (*ibid.*). However, prior to the Gran Buenos Aires privatization, the government firstly raised water tariffs by 62 percent, additionally increasing them by 18 percent through the introduction of a new tax, and further eliminated cross-subsidies in order to establish cost reflective prices, assuring private operators a reasonable rate of return (Delfino & Casarin, 2001; Olleta, 2007).

The reform of the utility sector in general started in 1989. The legal framework was established through national legislation of the State Reform Law No. 23,696, authorizing the complete or partial privatization of SOEs, and the Economic Emergency Law No. 23,697 (Loftus & McDonald, 2001). These laws were then complemented by several decrees and ministry resolutions (Delfino & Casarin, 2001). Through Law No. 23,969, the government was able to quickly privatize the state-run Buenos Aires water

and sewerage network OSN without prior public consultation. Further presidential decrees (2074/90, 1443/91 and 2408/91) stated that the privatization would take the form of a concession (Loftus & McDonald, 2001).

As soon as the Argentinian government announced its laws of administrative reform, the WB funded and appointed a team of private sector technical and financial consultants to give advice on the future of Buenos Aires' water sector.

The method of privatization included inviting bids from a set of prequalified international bidders previously examined by the WB (McKenzie & Mookherjee, 2003). Furthermore, a privatization committee was convened, consisting of representatives of the Ministry for the Economy and Public Works, the Privatization Board, the water sector union, and OSN (Loftus & McDonald, 2001).

IV.3. The Aguas Argentinas Concession in Buenos Aires

In 1993 the bidding process on the Buenos Aires water and sewerage utilities started. In course of the process, five companies emerged, soon being reduced to three as the two main French companies decided to submit a joint proposal and the Spanish consortium's technical proposal failed (Loftus & McDonald, 2001). Finally, the local authorities of Buenos Aires quickly awarded a 30-year concession of water and sanitation services to the private enterprise Aguas Argentinas —formed by French, British and Spanish capital, together with local partners— offering a tariff reduction of 26.9 percent (Clarke et al., 2004). Thus, the concession contract was bid based upon the price reduction that the winning firm would implement instead of coverage or quality targets.

The contract then included several targets, including a gradual increase of water and sewerage coverage amounting up to 100 and 90 percent, respectively, by the end of the concession (Alcázar et al., 2000). Furthermore, approximately one million people had to be connected every five years for the first 15 years for a total investment cost of about US\$ 4 billion (*ibid.*). To guarantee its performance the contractor had to agree to an inflation indexed performance bond of USD 150 million that was supposed to forfeit to the government if the contract was terminated due to the non-fulfillment of AA (*ibid.*).

An important feature of the implementation of the concession was the introduction of an independent regulatory agency, namely ETOSS, in order to monitor the quality of service, represent consumers, and to assure the achievement of the concession agreements (Loftus & McDonald, 2001). However, soon after implementation ETOSS came under public fire. It was partly financed through a percentage of AAs' billing, leading to increasing doubts whether the regulatory agency was actually acting independently and objectively in terms of tariff-related issues (Olleta, 2007). In addition, ETOSS was characterized by its inexperienced staff owed to the fact that the agency was created quickly as part of the rush to privatize (Alcázar et al., 2000).

According to Clarke et al. (2004), the contract furthermore included a complicated and non-transparent pricing scheme depending on several household criteria. The

water and sewerage services were charged in accordance with a flat-rate tariff which concerned about 90 percent of consumers —being similar to a property tax as it was based on a ‘general tariff’ plus certain property criteria such as the zone where the property is located, the quality of the residence, and the size of the property— (Delfino & Casarin, 2001). The remaining consumers were simply charged according to their metered consumption (*ibid.*). This arrangement implies two main features: a fixed charge and a unit charge, which came into effect as soon as the customer exceeded the free consumption threshold (Delfino & Casarin, 2001).

Furthermore, the concession contained an exclusivity clause demanding that new users close off all previous alternative sources of supply and instead install an AA network connection (Foster, 2005). This newly connected households then had to pay an infrastructure charge and another amount for the connection itself —particularly putting a financial burden on poor households and hindering expansion into poor neighborhoods— (Delfino & Casarin, 2001). Furthermore, in course of renegotiations, the connection fee has been substantially increased in 1994, reaching almost a month’s earning for a household at poverty line (Galiani et al., 2005). Owing to that, the contract was adjusted in 1997, replacing the infrastructure charge with a charge for universal services which concerned all consumers, and transforming the connection charge into a charge for joining the service payable in instalments (*ibid.*).

Shortly after the awarding of the contract to AA renegotiations occurred, leaving the question whether AA was intentionally bidding a price that was too low to ensure sustainability, relying on the possibility to renegotiate the contract conditions in the aftermath (Clarke et al., 2004). While tariffs were initially lowered by 26.9 percent, renegotiations resulted in adjustments of the tariff level, with a 13.5 percent increase in 1994 and a 5.31 percent increase in 1998 (Delfino & Casarin, 2001).

IV.4. Impacts of the Water Privatization

Alcázar et al. (2000) describe the effect of privatization as particularly positive, leading to consumer welfare gains and an improvement in performance, considering the initial phase after privatization. According to them, due to a significant increase in investment, new connections increased by about 11 percent over the first five years so that coverage increased from 70 percent of customers in the service area in 1992 to 83 percent by 1999.

According to the authors, the development of water tariffs is hard to calculate. They state that, regarding the trend in real operator revenues, one could conclude that unit prices have risen after a major initial drop of 26.9 percent. Nevertheless, they are not yet back to 1992 levels. Furthermore, considering all adjustments since 1992 an already connected customer was, at first sight, paying about 23.4 percent more for water services in 1998 than in 1992. However, during that same period the consumer price index increased by 21.2 percent.

Service quality is stated to have increased after the privatization in Buenos Aires. The response to water complaints decreased from 144 days in 1992 to 48 days in 1995,

and the delay in sewerage complaints significantly fell as well from 240 days in 1992 to 30 days in 1995.

Finally, Alcázar et al. (2000) estimated that that the overall welfare would gain a total of USD 1.16 billion from the concession over continued public operation, with consumers receiving the greatest share of 80 percent. Nevertheless, welfare gains were expected to disproportionately benefit the high- and middle-income groups with a large part resulting from the drop in tariffs following the concession tender, whereas poor households were confronted with a high connection fee. According to the authors, approximately two thirds of the expected beneficiaries from new connections were lower middle to upper income. Additionally, from 1993 to 1995, AA was not particularly trying to reach low-income households. As a result, only about 36 percent of new connections were going to poor households at the initial phase after privatization.

Delfino and Casarin (2001) discover that bimonthly expenditure for a typical, consumer for non-metered water and sewerage services rose from USD 25 in 1997 to USD 29.84 in 1999 due to the implementation of the charge for universal services and the charge for joining the service. Another gain factor is an increase in nominal prices for water and sewerage services of 19 percent from 1993 until the end of 1999, including the evolution of the consumer price index. So, Delfino and Casarin (2001) are coming up with concrete results regarding the development of tariffs when compared to Alcázar et al. (2000).

Comparing pre- and post-privatization data, the authors note that the users of water and sewerage services were experiencing an average welfare loss of approximately USD 49 during the private ownership of AA, a loss equivalent to 0.1 percent of their total annual income. Yet, the losses have been relatively equal across groups, fluctuating between USD 46 for the poorest and USD 51 for the richest quintile. As a result, tariff adjustments and the implementation of further charges represented a relatively heavier burden on poorer households, for whom these tariff changes constituted 1.85 percent of their income, but only 0.22 percent for the rich.

According to Delfino and Casarin (2001), benefits from water and sewerage privatization were mixed. The fast expansion of the water network provided a welfare gain for about 0.5 million households of about USD 33 million per annum, but substantial costs for accessing the sewerage network caused important losses to new users (with about USD 86 welfare loss for newcomers).

The probably most important and most cited insights come from Galiani, Gertler, and Schargrotsky in 2005. They put particular focus on the impact of privatization of water services on child mortality, comparing privatized and non-privatized municipalities. They only consider children under age five since they are particularly vulnerable to water-related diseases. It needs to be noted here that their results are not restricted to the Gran Buenos Aires area but deal with Argentinean privatization of the water sector in general. However, their results can be applied to Gran Buenos Aires as well and will be thus further investigated in more detail.

The authors find that the privatization of water services results in an approximately 8 percent decrease in the child mortality rate, due to improved access to water and

sanitation utilities and potential changes in the service quality. To rule out a bias in the results, potentially occurring due to an improved health care system, the authors examine the impact of privatization on mortality by cause of death, finding that it almost exclusively reduced deaths from infectious and parasitic diseases which are mainly caused by poor quality water.

Furthermore, Galiani et al. (2005) make the observation that the privatization of water mainly benefited poor municipalities. According to them the positive effect on child mortality is increasing with the level of poverty—amounting up to 26.5 percent reduction in the poorest areas—. Thus, health inequalities are reduced.

With special regard to Buenos Aires, Galiani et al. (2005) find that efficiency and profitability, as well as infrastructure investments substantially increased after the privatization of OSN, with investments rising from USD 25 million to USD 200 million per year. Also, water shortages during the summer, as well as frequent breaks and interruptions, low pressure, poor water quality, and sewer flooding were confined. They also state that the number of connections to water and sewerage services increased of 30 and 20 percent, respectively, in the aftermath of privatization, being especially concentrated in the poorer areas and accounting for 84.6 percent of the newly installed connections.

The study of Galiani, Gonzalez-Rozada, and Schargrotsky, conducted in 2008, pretty much complements the findings of Galiani et al. from 2005. They state that thanks to privatization and the “Modelo Participativo de Gestion”—a program conducted by AA and focusing on the participation and connection of poor neighborhoods in Buenos Aires— a substantial reduction in the presence, duration and severity of diarrhea episodes was achieved. The authors find that diarrhea episodes decreased by 74 percent in the poorer areas, brought about by improvements in water quality and access to safe drinking water.

Furthermore, based on their results, the program also reduced the money allocated to water-related expenditures by these households by about 82 to 95 percent, when compared to families in non-privatized areas. This represents approximately 4.5 percent of the average total income.

According to McKenzie and Mookherjee (2003), the privatization of water utilities in Buenos Aires resulted in a general increase in coverage when comparing the access rates from 1985-86 with access rates from 1996-97, rising from 90.3 percent to 93.7 percent. However, a remarkable observation is that the increase preferably benefited the poorer deciles (especially the lowest three deciles), whereas the share of household connected to the utilities slightly decreased in the top four deciles during that period.

With regard to prices, the authors find that the concession lowered prices by 16 percent, since the addition of a universal service fixed fee to all users allowed AA to lower access fees to one-tenth of the previous level.

In addition, McKenzie and Mookherjee (2003) find that quality in the Buenos Aires water sector significantly improved. Here they pay particular attention to two quality indicators: spilled water and average delay in attending claims—comparing

their change in two time periods, 1992-93 and 1994-99—. They find that spilled water rates fell from 1.49 million of m³ per day to 1.27 million of m³ per day. The average delay in attending claims fell from 180 days to 32 days.

As can be derived from the previous investigation, results are highly ambiguous and partially inconclusive, not allowing for a clear assessment or pointing to a clear direction. Galiani et al. (2005 and 2008) especially emphasize the improvement in health outcomes, particularly the reduction in under-5 child mortality which highly benefits the poor. Alcázar et al. (2000) and McKenzie and Mookherjee (2003) report an improvement in water quality, increased access, and welfare gains, whereas Delfino and Casarin (2001) as well as Alcázar (2000) reveal welfare losses for the poorest deciles—mostly due to high connection fees—. Also, McKenzie and Mookherjee (2003) investigate a general reduction in tariffs while Delfino and Casarin (2001) confirm a tariff increase of 19 percent.

IV.5. Problems and Cancellation of the Buenos Aires Concession

Besides an overall discontent in Latin America with privatization, the macroeconomic crisis of 2001-2002 (as described under IV.1) further increased political and public tensions (Galiani et al., 2008). As a result, the Argentinean government did not allow any tariff increases during that time, which made AA interrupting its investment and ultimately lead to the cancellation of the concession in 2006 (*ibid.*).

With the introduction of a new passage of the Law of Economic Emergency and Exchange Regime in early 2002 the cancellation of the Buenos Aires concession was accelerated (Azpiazu & Castro, 2012). The law terminated fixed parity between the Argentine peso and the US dollar and implemented a new operational context for SOEs merging into private ownership during the 1990s (*ibid.*). Especially with regard to AA, it resigned an indexing mechanism implemented shortly before to raise tariffs and reverted to local currency public service tariffs (*ibid.*). The law furthermore announced that all contracts with privatized companies would be subject to renegotiation. In the meantime private operators were not allowed to change or neglect the terms of compliance with their contractual obligations (*ibid.*).

Since AA did not want to lose its privileges, the private company reacted immediately by putting pressure on Argentina's government, directly and through its foreign shareholders, trying to force Argentina to solve the problem in favor for the company. These developments imposed severe restrictions and worsened the conditions for the long-delayed and already conflictive process of contract renegotiation. Furthermore, AA prepared an emergency plan containing a number of requests to the government including the provision of retroactive insurance to cover AA's external debt of around USD 700 million, to grant a peso-dollar parity for its imports, and to suspend all investments unilaterally and indiscriminately (*ibid.*).

With Argentina defaulting on its public debt in 2002, a clear priority for the government was to find a solution that would prevent taking charge of AA's huge debt and that would ward off international pressures. Thus, in 2004 the government signed

an agreement that maintained tariff levels, and was binding AA to present a plan to restructure its external debt (ibid.).

However, a few months later the renegotiation took a new turn when AA submitted a new proposal including a revenue increase of 60 percent from January 2005, state intervention to obtain a loan for USD 250 million to be repaid in 18 years with an interest rate of 3 percent, government commitment to take charge of 48 percent of future infrastructure investments and an exemption from income tax (ibid.).

Argentine authorities considered the proposal unacceptable, finally resulting in the government passing the decrees 303/2006 and 304/2006 in 2006 to cancel AA's concession (ibid.). Thenceforth, the water provision was retransferred to the newly created public company "Agua y Saneamientos Argentinos" (Galiani et al., 2008).

V. What can we learn from Argentina and Bolivia?

According to the results presented above the privatization of water and sewerage services seems to partially have improved performance and efficiency of the formerly SOEs. Also, with regard to the poor, several improvements have been noted, like the reduction in child mortality rates in Argentina, increased access, and higher water quality, indicating that water privatization is not neglecting the poor per se and actually having beneficial features when carried out properly.

However, those results were mostly based on a poor database and were part of studies that were only investigating subsequent changes after privatization. Ultimately however, all three concessions failed due to a deteriorating performance, increasing tariffs, and public discontent that can be traced back to fundamental loopholes in the contract or a lack in regulatory stability.

In the following, it shall be examined in more detail what insights one can derive from the case studies and what kind of policy recommendations they are implying for the future.

As already described above the distinction between 'area servida' and 'area no servida' was a crucial flaw in the La Paz-El Alto concession, giving AISA the choice whether to serve newly emerging areas or not. The neglect of the areas was ultimately partially responsible for the failure of the AISA concession contract, leading to public discontent and leaving about 200,000 people unconnected to water and sewerage services.

Thus, stipulating coverage targets for newly emerging neighborhoods seems of particular importance, especially for areas or cities with high rural-urban migration rates such as La Paz-El Alto in countries like Bolivia that are still in the process of developing from an agricultural economy to a manufacture-based industry. Especially with regard to the poor, the inclusion of coverage targets for newly emerging areas is of crucial importance considering the fact that the population living below the poverty line is mainly concentrated in those districts.

Also, with regard to the bidding process it seems recommendable to award the concession based on price reduction that the winning firm would implement, as well

as coverage targets—including provision of services for newly emerging districts—to assure universal coverage, instead of merely focusing on only one side. As we have seen, the focus needs to especially be on prices as they ultimately increased in all three concessions investigated above, putting a particularly high burden on the poor and finally leading to the cancellation of all three transfers. Here, as the Buenos Aires concession has shown, it is of extremely high importance to avoid renegotiations in the aftermath of the awarding, since they can undermine the value of bidding for the market (Clarke et al., 2004). If the winning bidders can anticipate that they would be able to renegotiate the terms and obligations of the concession contract they will have a strong incentive to bid strategically, planning on renegotiating unfavorable contract provisions after they have won (*ibid.*). As a result, in the case of the Buenos Aires concession, renegotiations particularly harmed the poor due to the subsequent tariff increases and connection charges.

In this context, the existence of a strong and well-grounded regulatory framework is of high importance, making it less likely for renegotiations to happen. According to Clarke et al. (2004) this emphasizes the importance of having a stable and coherent set of rules.

As already broached briefly, the Argentinean regulatory agency substantially lacked authority as well as experienced staff. Only one year into operation, AA actually pressured ETOSS to allow for a tariff increase even though the company had agreed not to raise prices for ten years (Olleta, 2007). Furthermore, the agency was victim of constant politicization. Its composition made it difficult to find agreement among the representatives of the three jurisdictions involved—hindering quick and effective actions—. Also, as stated by Olleta (2007), its work and function was gradually being neglected by highest governmental instances, to the point of being actually deprived of authority.

Also, in the case of Bolivia, various factors of the main regulatory tool SIRESE have hampered its effectiveness, including the lack of continuity of Superintendents due to political pressures and the delay in approval for a sectoral water law and further detailed regulations (Barja et al., 2005). Thus, private companies were able to lobby the executive and legislative branches in order to bypass regulations (*ibid.*). Also, due to political pressure, the Bolivian Water Law gives municipalities a say in the process of tariff setting, seriously undermining the basic principle of institutional separation between regulator and service provider (as mentioned under II).

Another problem is represented by the fact that there are often very few bidders for concession contracts, as we have especially seen in the La Paz-El Alto case in Bolivia. This partly reflects the fact that several big firms are dominating private sector participation in water and sewerage (Clarke et al., 2004). An insignificant number of bidding firms is naturally accompanied by low or no competition at all, making it likely for acquiring firms to dominate the whole privatization process by dictating terms and conditions of the contract or simply making a modest offer in terms of tariff reductions or coverage targets. As mentioned in the Argentinean case, the quick—almost hasty—privatization of SOEs actually favored the low number of bidders. In the case of

Bolivia, several observers even noted that the government itself created the conditions for a ‘fire sale’ by publicizing the poor state of its SOEs and thus only encouraging a low number of bidders (Barja et al., 2005).

So, instead of transferring enterprises hastily, or even firing them out, governments should rather slow down the privatization process in order to ensure competition and thus proposals of high quality leading to the best possible outcomes for consumers.

Furthermore, governments should try to avoid regulatory uncertainty for enterprises in order to boost competition. As Foster (2005) and McKenzie and Mookherjee (2003) state, relevant laws and decrees should be in place before the awarding of concessions are carried out. In Bolivia, this was not the case. Here, the concession contract for water services in the metropolitan area was issued prior to the approval of the sectoral Potable Water and Sewerage Law and further regulations in 2000, possibly explaining the low number of bidders.

Also, asymmetric information seemed to be of particular importance in the Cochabamba concession. Since a large share of residents obtained their water from independent water systems that relied on free water systems, fearing that the new concession contract and the new Potable Water and Sewerage Law would expropriate them without compensation—due to the fact that the content of the law, as well as its implications were still unknown at the initial phase of the concession—. Partly due to this uncertainty people were willing to “go to the water war”. Thus, an improved exchange of information between all shareholders is also of great importance.

In general, concession contracts should be more responsive to the needs of poorer households, so that things like the connection charges in Buenos Aires, an increase in connection fees like in La Paz-El Alto or a tremendous increase in water tariffs as in Cochabamba are avoided.

VI. Conclusion

As seen throughout the preceding analysis, the privatization of water and sanitation services initially improved the situation in La Paz-El Alto and Buenos Aires by increases in coverage and access rates and reduced tariffs. Also, a reduction in child mortality rates, increased efficiency and a rise in investments have been noted in the majority of studies. The literature leaves the impression of water privatization being particularly beneficial for the society as a whole, but especially improving circumstances for the poor.

However, in the long term, the desired results could not be achieved and all three concessions were finally revoked. The poor share of the population was ultimately the one that suffered most under tremendous tariff increases, connection fees and charges, and denied access into the network, facing an increasing financial burden. As discussed in the last section, this unfortunate development can ultimately be traced back to a lack of regulatory control and contractual coherency.

As elaborated above, the performance of privatized utility companies could thus be improved by establishing a strong regulatory agency and ensure its independent operations, conducting a slower and more competitive bidding process, increasing information flows between the involved parties, and generally put more focus on the urgent necessities of the poor districts and households.

Overall, it cannot be taken a clear stand in the public discussion on water privatization in Latin America based on the results presented by the public literature. Nevertheless, it seems to have a positive welfare gain when carried out properly, not bypassing the poor. But still much remains to be done—including further conclusive research based on a broad database in this area.

List of Abbreviations

AA	Aguas Argentinas
AdT	Aguas del Tunari
AISA	Aguas de Illimani S. A.
ETOSS	Ente Tripartito de Obras y Servicios Sanitarios
GDP	Gross Domestic Product
IADB	Inter-American Development Bank
IMF	International Monetary Fund
MDG	Millennium Development Goal
OSN	Obras Sanitarias de la Nación
PSP	Private Sector Participation
SAP	Structural Adjustment Program
SIRESE	Sistema de Regulación Sectorial (Bolivia's regulatory system)
SOE	State-Owned Enterprise
UN	United Nations
UNICEF	United Nations Children's Fund
USD	United States Dollar
WB	World Bank
WHO	World Health Organization
WSP	Water and Sewerage Provider

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