JAKARTA, INDONESIA

Case Study (Water)

Project Summary:

The Republic of Indonesia, the largest archipelagic state in the world, is comprised of 17,508 islands and shares land borders with Papua New Guinea, East Timor, and Malaysia. Indonesia has an abundant supply of renewable water resources, but has had limited success in providing potable water for its citizens [1]. Experts estimate that only forty percent of all urban residents have access to piped water, with the majority of people relying on ground water. During the twentieth century, access to adequate water improved slightly, but funding priority has typically been given to improving and expanding irrigation systems instead of the drinking water supply.

Jakarta, located on Java Island, is the capital largest city of Indonesia, and provides an example of the water crisis that is seen throughout the country. In 1997, only forty-two percent of residents had access to piped water, and many these people still relied in part on ground water or bottled water. The remainder of the residents experienced not only inequality in access to piped water connections, but also in the quality of water. This was in part due to a tariff structure under the public water utility that created a disincentive to connect poor households. In wealthy and middle-class neighborhoods, residents normally had twenty-four hour-a-day access to piped water suitable for washing, cooking, and bathing. In the disadvantaged neighborhoods, the vast majority of residents got their water from community ground pumps, from which the flow was intermittent and the quality of water was poor. The groundwater often had high levels of waste contamination (because of the lack of an adequate sewerage system) and suffered from frequent pressure losses. As a result, lower-income residents were forced to purchase water from vendors at prices that were 10 to 15 times the normal residential water tariff.

In 1997, the government decided to turn to the private sector for help with the water system in Jakarta, in part because of pressure from international financial institutions to utilize private sector funding. To establish opportunities for two Indonesian companies, the public water utility was split into two companies – one east and the other west of the Ciliwung River. Two major, international water companies bid to provide piped water under this new arrangement. Each company was paired with a local Indonesian company because under then-president Suharto all foreign companies were required to partner with an Indonesian company, if they wanted to
operate a utility network. While it was not unusual for a government to require such a pairing, in Indonesia, the pairing was with companies personally linked to the president.

Two public-private partnerships (PPPs) were formed to provide water to both east and west Jakarta (hereafter collectively referred to as “Jakarta Water”). Ambitious targets were set and the contracts required significant investments by private sector partners. However, because of inadequate specifics in the contract, insufficient government participation in the partnerships, and poorly designed incentives, the PPPs cannot be deemed successful.

The Asian financial crisis struck a few months after the contracts were signed and led to political and economic turmoil in Indonesia and the resignation of the president. The rupiah faced a strong devaluation and PAM Jaya (the municipal water utility, which entered into the PPP agreements) did not want to raise water tariffs to offset the devaluation because people were already facing rising food and fuel costs. As a result, PAM Jaya accumulated additional debt and was unable to make the contractually agreed upon payments to the private companies that were intended to offset the difference between tariff revenues and the volume of water actually delivered.

After ten years of operation, very little has changed in Jakarta. While some new connections were made the additional connections were far short of the contractual targets, and while the cost of water has increased, the quality of service is little improved. Increases in the tariff rate of over thirty percent at a time were implemented on several occasions. Residents were not happy with the new prices, especially when the water quality did not improve; customers are paying more for the same inadequate service. The vast majority of residents still rely on ground water and high-priced vendors to meet their potable water needs. For most residents, piped water continues to remain unavailable.

**Project Objectives:**

The primary goal of the public-private partnership was to expand service, with an emphasis on service to poorer residents and neighborhoods. Only forty-two percent of the population in Jakarta had access to piped water. Typically, poor families did not have access to affordable water and a larger percentage of their income was spent on water. Expanding service into poor neighborhoods would give affordable access to people who did not have it before.

A second goal was to improve the quality of service in poor neighborhoods and the overall quality of the water. Service was intermittent, flowing mostly at night, and the water was of such poor quality that people could not drink it. Jakarta had virtually no sanitation system, so the
majority of ground and pump water was contaminated. Under PAM Jaya, leakage was so extensive that water loses in the system were at fifty-six percent. Jakarta Water intended to reduce this amount to less than thirty-five percent by 2003.

Achieving the first two goals would lead to reaching another objective. With inadequate and limited piped water, many people did not have access to affordable water. Bringing more people into the network and improving the quality would grant the majority of Jakarta’s residents’ access to affordable water that is safe for drinking. Access to affordable drinking water would also reduce the amount poor households spend on water, leading to further economic and social development in these neighborhoods.

Improving and expanding access to water in Jakarta will help Indonesia reach the United Nations Millennium Development goal of halving by 2015 the proportion of people without sustainable access to safe drinking water and basic sanitation. Achieving this goal will also lead to achievements in other areas because residents of Jakarta suffer from water borne illnesses and diseases associated with inadequate water supplies. The ultimate goal was to provide comprehensive access to sanitary drinking water for citizens at all income levels.

**Project Description:**

1. **Partners**

Two PPP contracts were created, with an international water company and an Indonesian company comprising each PPP. Different international and Indonesian partners were selected for the eastern and western contracts; collectively, these four companies constituted the private sector partners of Jakarta Water. The international European-based water companies were two of the largest in the world, each with substantial experience in operating and improving water delivery systems. One of the Indonesian companies was controlled by Suharto’s son and the other by a close friend of Suharto.

The public sector partner was the government, under the municipal water agency, PAM Jaya. Neither the foreign nor the domestic partners were selected through an open bidding process; instead the selections were based on personal contacts. The government then made a unilateral decision as to which international company would be paired with which Indonesian company; the government’s decision was then accepted by PAM Jaya and the private firms were notified of the government’s decisions. These decisions formed the basis for the original partnering agreements.
As noted above, the Indonesian firms in particular, had close association with the Suharto regime. After Suharto resigned from office, in the face of broad public protests, it was deemed a liability to continue a business relationship with companies connected to the ousted president. The Indonesian partners were then bought out by their international partners.

In 2006, the international company in charge of west Jakarta Water sold equity in the consortium. It maintained a fifty-one percent ownership and sold the rest to an Indonesian group and an international financial group, which assumed thirty percent and nineteen percent equity positions, respectively.

2. Implementation Environment - Legislative and Administrative

Under Suharto’s New Order Administration, it was common knowledge that foreign companies needed to work with an Indonesian company, if they wanted to invest in Indonesia. This meant doing business with companies run by Suharto’s family members or close political allies.

When the Jakarta Water PPPs were established in 1997, there was no law allowing foreign investment in water or foreign companies to operate water systems. This did not stop the PPPs because the President approved of the plans and allowed them to move forward, as the international companies were partnering with companies connected to him. In order to provide the legal framework, the Home Affairs Minister issued a ministerial instruction in July 1996 that removed water utilities from the list of businesses in which foreigners were not allowed to invest.

A few months after the contracts were signed the Asian Financial Crisis struck Indonesia and exposed the underlying weakness of the Indonesian economy. Students and workers took to the streets to protest inflation, job loss, and corruption. The political strife led to the downfall of Suharto and the installation of a new president. During the economic and political tension, the executives of Jakarta Water fled the country, leading the government to take back control of the water supply. An attempt to cancel the contracts failed, leading to negotiations for new contracts, in which PAM Jaya was given greater oversight of the companies.
3. Financial Agreement

Much of the financing of these projects is difficult to determine, because of a lack of transparency. The private companies initially agreed to invest US$318 million over the first five years of the contract to improve the quality of service and expand coverage. Ultimately, the consortia invested only US$188.6 million during this period.

For the total period of 1998 to 2007, the consortium for west Jakarta Water invested US$109.8 million in its water system. Funding went to improve the quality of delivery service, rehabilitate existing distribution networks and expand distribution networks to increase the service area. In May 2008, the Asian Development Bank approved a US$50 million private sector loan for west Jakarta Water to partially fund its capital expenditure program for next five years (period from 2008-2012). East Jakarta Water received a US$5 million loan from the World Bank in November 2007.


In June 1997, each consortium signed a 25-year contract with PAM Jaya to operate and manage the water supply system in its respective area of Jakarta, while PAM Jaya retained ownership of the water supply assets. The customer database and billing were also the responsibility of Jakarta Water. The contract did not grant PAM Jaya access to either the west or east Jakarta consortium’s financial records.

Jakarta Water committed to achieving universal coverage for Jakarta by 2023, and to supplying potable water by 2007. The contract required a US$ 318 million investment over the first five years of the project, which was to be used to expand the existing pipeline, add 1.5 million customers, increase the water supply and reduce non-revenue water (NRW). With the addition of these customers, over seventy percent of Jakarta’s population would have access to piped water by 2002.

To recover costs and repay loans, Jakarta Water received a fee based on the volume of water supplied and billed, not the water tariff or a percentage of cost-recovery. In this way, profit was de-linked from billing revenue, which is typically low in poor neighborhoods in developing countries. The payment mechanism had an additional safeguard in the form of an indexation formula, which tied the rupiah-US dollar exchange rate and the Indonesian inflation rate to the fee paid to the private consortia. Doing this put the risks of cost recovery and currency on the government instead of the private companies.
In 2001, following the Suharto’s departure from power, restated contracts were signed by PAM Jaya and Jakarta Water. The new contracts contained provisions to regularly increase water tariffs and reallocated some of the risks. PAM Jaya was also granted access to financial books during a two-year interim arrangement, which led to the retroactive restructuring of water tariffs.

The contracts were resigned again in 2004 after PAM Jaya and Jakarta Water reached an agreement for the new tariff increase schedule.

5. Implementation Metrics

In the original contract, Jakarta Water was responsible for universal coverage by the year 2023 (at the end of the twenty-five year contracts). Although service has been expanded, Jakarta Water has not reached its goal of seventy percent coverage by 2002; instead coverage increased from 42 percent to just above fifty percent. New connections for low income households remained very low because only twenty-five percent of new connections made between 1998 and 2004 were to these households. In 2003, over eighty-five percent of networked connections were for households that fall into the tariff categories of middle class or above. The majority of poor residents of Jakarta still had to rely on vendors for water.

Jakarta Water did make an attempt to connect poor and very poor households. A twelve-month payment plan was established so that poor families could pay the connection fee along with their monthly bill so that they did not have to pay the fee upfront; however, many poor families still could not afford the payments. PAM Jaya maintained its five-category tariff system, which was based on the floor size in the house. This cross subsidy allowed the poor families with connections to drastically lower their water bills, although not always to the point of affordability.

The loss of non-revenue water rate did not decrease under the management of Jakarta Water, as stipulated in the contract. Before the contract, non-revenue water was fifty-six percent and it increased under Jakarta Water to sixty-three percent.
Commentary:

1. Overcoming Impediments

The Asian financial crisis severely disrupted the PPPs operating the water supply systems in Jakarta. Several consequences arose from the crisis and adjusting to them took a long time. After the crisis struck, the Indonesian government attempted to cancel the contracts, but was unable to do so. It would have been too detrimental to their standing in the world in terms of a safe and foreign investment-friendly environment. In particular, this would have made it more difficult to obtain loans from international financial institutions.

The resulting contract negotiations took several years to complete because of hesitation on the part of the international companies. The original contracts were very profitable and the private did not want to agree to less favorable terms. As a result of the crisis, the rupiah became drastically devalued; revenue from customers fell at the same time payments to Jakarta Water continued to increase, since payments were pegged to the US dollar. In 1997 the water charge paid to Jakarta Water was eleven percent below the average tariff, but in 2001, it rose to over sixty percent above the average tariff and PAM Jaya went into even more debt. While the simple solution was to increase the tariff rate, PAM Jaya was unable to do so right away because of political tension and unrest in the city. In the end, a tariff increase schedule was added to the new contracts.

2. Key Points for Success or Failure

A number of factors led to the lack of initial success of this partnership. First and foremost was a lack of transparency in the competition and negotiation of the contracts, followed by a similar problem in the initial administration of these contracts. While this was understandable during the Suharto political environment, it created significant problems in managing a number of the challenges that this partnership continued to face.

One of the ramifications of this lack of transparency was that a true partnership between the public and private sectors was not fostered to create a cooperative working environment. Under the original contract PAM Jaya was not able to see the financial books and was not able to oversee the implementation of the PPPs as it should have. A strong partnership with both sides working together is necessary for well-functioning and successful PPPs. The subsequent creation of the Jakarta Water Regulatory Board was a good step in the right direction, but there was still
substantial mistrust between the parties and that will need to be resolved for these partnerships to be as effective as they could be.

The PPPs contracts were developed with a substantial lack of specifics for procedures and the status of the current inventory, which are important for a successful PPP. In the original contract, PAM Jaya was named to be the regulatory body, but it lacked the legal authority to question decisions and analyze financial records. With its limited power and mistrust of the private companies, PAM Jaya was unable to act as an impartial and independent regulatory body. In 2001, the Jakarta Water Regulatory Board, a formal and independent regulatory body, was established. The board monitors and regulates the policies and tariffs, as well as acts as a mediator between the parties.

While it may not necessarily be a problem for the public sector partner to retain the risk of demand levels, the lack of specifics goals, coupled with a lack of incentives for the private partners in the contract, made the objective to connecting poor households nearly impossible. Although Jakarta Water’s revenue was not directly tied to water tariff revenue, with the devaluation of the rupiah and constant tariff rate, PAM Jaya’s ability to pay the water charges was diminished, which in turn decreased Jakarta Water’s profits. Setting higher tariffs for wealthier families might have generated the necessary incomes to avoid default in their payments.

The contract also lacked incentives and directions about where connections should have been placed. As a result, Jakarta Water chose to make connections mainly with middle income and wealthy households. There were also no clear sanctions for not meeting performance targets. PAM Jaya witnessed first hand the difficulty of connecting poor households when they were managing the water supply. The nature of growth in Jakarta makes it difficult to connect poor neighborhoods because the majority of the poor move into informal settlements.

There are also a few points of success for these PPPs. The private companies were able to improve the quality of service in a few areas. An almost twenty-four hour flow was achieved in wealthy and middle class neighborhoods. Unfortunately this service was not expanded to other neighborhoods, but it does showcase how capable the private companies are of improving service. The cross subsidy that allows poor families to pay less for their water helps make it more affordable, given their income.

The PPPs for water supply in Jakarta offer many important lessons about structuring contracts for PPPs. Blame for the failure of the PPPs cannot be placed solely on either the private or public
sector; both sides had a role in the limited success seen. Choosing the right partners and creating a good working relationship is almost as essential as creating a clear and straightforward contract.

(1) Indonesia is ranked fifty-eighth out of one hundred and eighty countries for available renewable water resources, with 13,381 cubic meters per capita per annum. Despite this high ranking and relatively large quantity of water, Indonesia ranks just one hundred and ten out of one hundred and twenty-two countries for water quality because pollution is high and sanitation is poor. (Source: The United Nations Educational, Scientific, and Cultural Organization (UNESCO) 2003 "World Water Development Report - Water for People, Water for Life.")