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## **Public-Private Partnership in India's Urban Water Public Utilities: A Case of Sonia Vihar Water Project**

**Abstract**

Efficient management of public utilities is absolutely important for proper urban development. These days, developing and managing public utilities are not easy for the government. In a country like India, full privatization of public utilities is also difficult to achieve. Partial privatization with a public - private partnership (PPP) can therefore be a viable option. *Lease, contracting out, transfer, build operate own (BOO) and build operate transfer (BOT)* are some of the techniques which can be practiced for efficient management of public utilities. This paper deals with the need, modus operandi and precautions required for public private partnership through privatization of public utilities in India with special reference to the recently implemented PPP in Sonia Vihar Water Project in Delhi.

**Keywords:** Privatization, Public Utilities, Public-Private Partnership

**Theorizing Public-Private Partnership through Privatization**

Public-private partnership (PPP) is an exciting catchphrase in the world today. The concept of PPP is very much linked with the concept of privatization. While privatization needs public support for its implementation without any guarantee of success for private sector, PPP involves public support for private sector participation and success. In a dual preference economy like India, the concept of PPP has a long theoretical history with less practical exercise. Public-private partnership through privatization practically presents so many changes. It is the transfer of assets and service functions from public to private hands. It may be the partial or total transfer of enterprises from public to private ownership. As such, it is the precise reverse of nationalization. The sale of public assets, the introduction of competitive tendering deregulation and the establishment of surrogate markets within public sector organizations are examples of the generic policy referred to as 'privatization'. Privatization, in a broader sense, means giving private actors a greater role in decisions about what, where and how to produce goods and services. A great deal of experience has now accumulated regarding this process. Some of it shows the great potential that privatization has for increasing productivity, income and welfare. It has come to symbolize a new way of looking at society's needs, and a rethinking of the role of government in fulfilling them. It means relying more on society's private institutions and less on government to satisfy the needs of the people (Hanke, 1987, Bos, 1991, Galal et.al., 1994, Savas, 1987). In theories, PPP is a helping hand in the public decisions and welfare.

**Methods in public-private partnership in public utilities through Privatization**

The public-private partnership is exercised through various methods in the world today as discussed below:

*Management Contracts:* Management contracts are also a method of privatization through PPP. The key issues in success or failure are whether performance is related to the contract

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\* Assistant Professor, Department of Humanities & Social Sciences, Indian Institute of Technology, Patna. E-mail: [nalinbharti@iitp.ac.in](mailto:nalinbharti@iitp.ac.in)

\*\* Formerly Member Secretary, Disinvestment Commission and Advisor, 12<sup>th</sup> Finance Commission,

terms, and whether managers have true autonomy in hiring and firing. Management contracts privatize management, leaving ownership in the hand of the state. The results of management contracts have shown remarkable improvement in productivity and profitability in some countries. This method is also less controversial since ownership continues to remain in the hands of the state.

*Lease Contract:* Lease contracts are of different types, varying mainly by who is responsible for financing the project. Under straight forward leasing (sometimes called afterimage) the contractor or lessees pays the public owner a fee for the right to operate a public facility and bears the financial risks of its operation. This method is widely used in power, ports, urban transport, waste disposal and industry. Of late, this method has been in vogue in state run transport, water and electricity departments in India and Bangladesh.

*Concession:* Concession is also termed as build operate transfer (BOT) and build operate own (BOO). This involves longer contractor responsibility than leases. They also last longer normally within 15 to 30 years. Water supply, waste disposal, toll roads and ports are among the common areas of usage. Lease and concession are same in the resonance but different in practice on the basis of the time factor. If government is really looking for a change in responsibility but at the same time also trying to retain the ownership then all these methods are easy to work with. Lease contracts are very popular in developing country because it cannot provide any great political obstacle on the way of privatization. Government can stop anybody if it does not generate any positive move. India and Bangladesh both are practicing the method of concession in various public utilities.

*Contracting out:* This is a process whereby government hires, under contract, a private firm to perform, over a defined period of time, some specific service that might otherwise be provided by public employees using government equipment and facilities. According to Attiat and Hartly (1991), contracting out is identical with outsourcing or subcontracting. This method is widespread in public-sector service provision. It is an extremely diverse form of privatization, especially common for municipal service, and is widespread in the United States. This method is creating right buzz even in a country like India.

### **Rational behind PPP in public utilities through privatization**

Due to growing population in urban areas it is very difficult for the State to run the public utilities efficiently by itself. The need for public –private participation is an easy and important option for dual preference economies like India. However, full privatization of the public utilities is a difficult choice for India. ‘These days the local/state authorities are finding that their existing water, sanitation, energy and other urban infrastructures are unable to service their rapidly expanding urban population. In addition, governments realize that their limited financial resources are not sufficient to cover the needed expansion of these services. Even where governments do find the resources to subsidize public utilities service is often poor and sectors of the population largely unserved. It is becoming increasingly clear that governments cannot meet the continually growing demand for water, waste disposal, energy and other urban services acting alone. Local governments are finding that their tax revenues are not providing sufficient resources to meet these needs, and official development assistance has not been able to fill the gap. It is in this backdrop that we are forced to think of alternative sources of finance, technical excellence and support. One of the most viable options is to

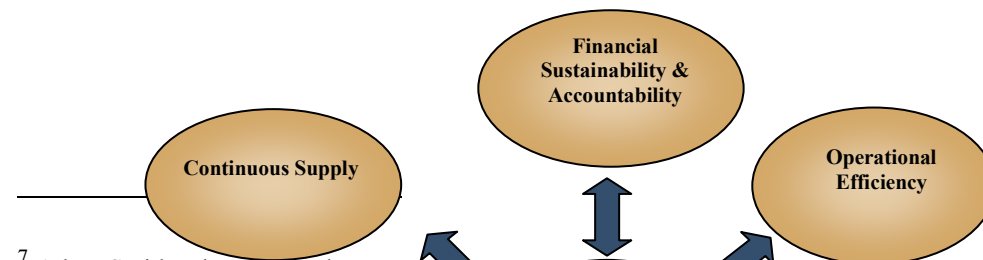
cooperative provision of infrastructure and services. The only essential ingredient is some degree of private participation in the delivery of traditionally public-domain services. Private actors may include private businesses, as well as non-governmental organizations (NGOs) and community-based organizations (CBOs). Through PPPs, the advantages of the private sector –innovation, access to finance, knowledge of technologies, managerial efficiency, and entrepreneurial spirit –are combined with the social responsibility, environmental awareness, and local knowledge of the public sector in an effort to solve problems’. (Kumar and Prasad, 2004).

### **Sonia Vihar Water Project: A case study of public-private partnership in water public utilities through privatization**

How is it that water which is so useful, has such a low price; while diamonds, which are quite unnecessary, have such a high price?<sup>7</sup> Such observation by Adam Smith is not too convincing today in the age of globalization where water has become a costly commodity. Supplying the growing demand of water is a big challenge for the government. Generally in urban areas processing, preserving and distribution of water is an expensive affair. In the post-independence India, many state governments started providing basic necessity such as water as a part of the welfare activities. However, the governments have now realized that meeting such cost is difficult because of a host of problems such as non-payments, illegal connections and free ridings, political interference and the inefficient distribution.

*The Delhi Jal Board (DJB) reform agenda:* The actual water supply available to the residents is intermittent and inequitable. Despite concerted efforts the demand-supply gap is on the rise. This imbalance is further exacerbated by the high level of non-revenue water – including both technical and commercial losses – estimates of which range around 40-50%. The ability to identify the losses is further constrained due to lack of bulk metering for transmission and distribution systems except for supply to New Delhi Municipal Corporation (NDMC) and Delhi Municipal Corporation (DMC). The present zoning arrangements are not conducive for effective monitoring and control. Customer metering is ineffective under the prevailing condition of intermittent supply which further leads to increased health risks from possible contamination of leaking pipes. There are shortcomings at treatment works and the equipment is inefficient. The obvious manifestation of the poor supply situation is high customer coping costs and low level of customer satisfaction (Delhi Jal Board, 2004).

Due to these reasons Delhi Jal Board (DJB) has decided to reform the water treatment and distribution style. Main vision behind the reform is shown on the diagram below.



DJB plans to undertake first phase of implementation of continuous supply as an essential part of a comprehensive improvement in the distribution services in two of its own operational distribution zones – South II and South III having 91,000 and 72,000 connections respectively. It is understood that NDMC will also undertake a similar upgrading of distribution in a zone within its own jurisdiction and this will be included in the Phase I project with the overall project responsibility resting with DJB. Apart from the suitability of their size covering 12% of the total DJB connections and the range of social and economic conditions they exhibit, they receive water from the new Sonia Vihar Water treatment Plant (WTP) thereby ensuring optimum use of the water produced by the plant. In order to introduce best water service industry operational standards into DJB, it is proposed to award *5-year Management Contract(s)* to implement the first phase of distribution improvement (DJB, 2004).

Specialist contractors will be procured on a competitive bidding basis for each zone and they will be required to work with the management and staff of the two zones to meet performance targets. The management contracts will cover the operation and maintenance of the water supply and sewerage services in the selected distribution zones as well as rehabilitation works required to bring about the changes necessary for continuous supply. The operator will be paid fixed management fee plus certain incentives (or imposed penalties) depending upon performance and achievement of output-based milestones. An independent monitoring of the performance of the contractor will be done (DJB, 2004).

*The entry of 'Degrémon'*<sup>8</sup>: Degrémont, subsidiary of Suez Lyonnaise des Eaux Water Division, was awarded a 2 billion rupees contract (almost 50 million euros) for the design, building and operation

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<sup>8</sup> World leader in water treatment engineering, Degrémont is a subsidiary of Suez Lyonnaise des Eaux Water

(10 years) of a 635 MLD Drinking Water Production Plant at Sonia Vihar in New Delhi (India). Won through the collaboration of all the group companies, within the context of an international call for tenders, it was the first contract of this size in India, after Bombay, for Degrémont.

In 2001 Degrémont assured that it would produce 635,000 m<sup>3</sup> per day from two river sources i. e. the Ganges and the Yamuna. To be operational in three years, the plant would be equipped with Degrémont proven technologies of pre-settling and sludge, sand filtration (Aquazur), settling (Pulsator Turbocirculator treatment) (Suez, 2001).

In Delhi, the French company, Ondeo Degremont has been awarded the project of treating the Ganges water to be supplied to posh South and East Delhi colonies (Kaur,2003). The Sonia Vihar Water Treatment Plant is built on the basis of a design-build-operate contract with Degremont. Designed to treat and supply 140 million gallons a day (MGD) of water to South and East Delhi” (Sethi, 2005). The Sonia Vihar treatment plant is being developed on a BOT (Build-Operate-Transfer) basis for a fixed period of 10 years, and profit from it has been guaranteed to Suez by the government. It is clear from this project that the guarantee will ultimately be backed by public money. The fear is that while Suez is getting the raw water for free, the amount it will get as fee for treating the water will be much in excess of what the DJB would charge the consumers when selling the water. International corporations can easily expect to make a 20 percent to 30 percent margin of profit from investment in water service. Multinational water-providing giants *Veolia*, *Suez*, and *RWE* are hugely profitable corporations. In 2006, Veolia made a consolidated net income of €759 million (nearly \$1.12 billion) according to its 2006 annual report. In addition, Food and Water Watch reports that 35 percent of Veolia’s total revenue came from water, with 10 percent from North America. In the same year Suez earned a gross operating income of €7,083 million (nearly \$10.38 billion), and RWE had a net income of €3,847 million (almost \$5.66 billion). Some €689 million (\$1.02 billion) of RWE’s EBITDA (earnings before interest, taxes, depreciation, and amortization) came from its water division, known as U.S. water provider American Water.

The DJB is also providing Suez with land, electricity and treatment cost. At the same time, Suez has been kept free from transmission losses and revenue collection (Frontline, 2003).The contract provides incentives and bonuses for over-production and energy savings. While performance-based incentives make sense, the parameters set for Degremont are far below those set for other DJB plants. The Degremont plant has been allowed 232 Kwhr [kilowatt hour] per million liters of water treated while DJB plants, of similar capacity, consume between 170-180 Kwhr per million liters of water. The contract is designed in a way to ensure that the company always meets its targets. The contract is solely for the management of the plant. The DJB owns the plant and must pay for its maintenance and major repairs. The contract requires that Degremont pay for minor repairs, but union members explain that if left unattended, minor snags soon attain major proportions. What is particularly disturbing is that the issue is not about one bad contract that can be re-negotiated in five years. Sonia Vihar must not be evaluated as a stand-alone project, but as a template for the future of water production and distribution in the national capital. According to a DJB report published in July 2004, the 24X7 water supply scheme is expected to cost approximately \$185 million over the next 10 years, with at least 60 percent of the funding coming via loans from the World Bank (Frontline, 2005).

**What went wrong with Sonia Vihar water project?**

Sonia Vihar Water project has also been questioned on various grounds. Here two major issues are discussed:

*Less-transparent government decision:* The Sonia Vihar plant has been mired in controversies since inception. The Central Vigilance Commission (CVC) had raised doubts over its tendering process (The Hindu, 2006). Not only is the contract restrictive, but the CVC has also raised concerns regarding the tendering process. The CVC had asked its technical examination committee to probe why the contract, which was originally worth Rs.295.75 crores, has been awarded for almost Rs.900 crores without a re-tendering process (Frontline, 2005). The government has not explained the reason behind such a lapse till date. Since the cost of the project is now very high, the people would have to pay higher price for water.

*Less Accountable Customer Service:* Another loophole that is bound to be exploited is that the contract does not force the company to ensure that every household in the zone gets water 24X7. The contract requires every operating zone to be divided into several district metering areas (DMAs). As long as the input point of the DMA is provided with a constant supply of water, the company is deemed to have done its duty and can claim its incentives. Thus, contractually, there is nothing to stop the company from supplying water for a limited period of time to each house in a DMA and still claim to supply water 24X7. Essentially, the entire project revolves around paying private companies to distribute water from the operating zone input to the DMA input (Frontline, 2005).

Regardless of the controversies involved in Sonia Vihar water project, the *DJB* has recently awarded Degrémont a contract for the design, construction and 10-year operation of a wastewater treatment and reuse plant at *Okhla* in the south of the city for a total cost of 27 million euros (Rs 1.5 billion) (Suez,2008)<sup>9</sup>.

Why a new company was not chosen by the *DJB*? Is it good to depend only on a single company in the national capital of Delhi or in any part of India? Will the next project also be awarded to the Degrémont? Or the Degrémont is on the way to monopolize India's water distribution. To find this answer it is imperative to see the results of privatization globally.

### **What went wrong with 'Water' privatization globally?**

*Higher Rates and Profits:* Global experience in water privatization suggests that the price of the water after privatization is very high<sup>10</sup>.

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<sup>9</sup> The treated water produced by the plant will be mainly recycled for use in irrigating the surrounding agricultural land.

<sup>10</sup> U.S based NGO, Food and Water Watch revealed the fact about the water privatization in U.S. The six largest private water providers in New York State charge an estimated average of \$34.25 to families consuming an average of 1,000 cubic feet (7,480.52 gallons) of water per month. A survey conducted by the American Water Works Association estimated that the average monthly water charge for households in this region consuming the same amount of water is \$27.29, making privately owned New York utilities 25 percent more expensive than the

## **What went wrong with ‘Water’ privatization globally?**

*Higher Rates and Profits:* Global experience in water privatization suggests that the price of the water after privatization is very high<sup>11</sup>.

*Serving the Rich:* Critics of the water utilities privatization often raise a hue and cry over the target group which is the rich. Since water is the basic rights for the people, the public agencies carry a moral responsibility to provide water to everyone while private companies don't. In Pennsylvania, thousands of people unable to pay their bill lost their water in 2005<sup>12</sup>.

*Less Accountable and Less -Transparent Customer Service:* It has also been observed that the private firms initially take interest in the services to the customer and once they establish their name they are less accountable for the customer service. Water firms, as long as they work as public utilities, are required to maintain open meetings and open records. However private firms are free to meet in private and keep all financial reports secret. Isn't this against the Right to Information?<sup>13</sup>

## **Is regulation required in urban water utilities?**

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for clean drinking water than households served by either municipal systems or special water districts created by citizens and overseen by government officials. In France and the United Kingdom, where governments have given private companies much greater control of water it was found that choosing to involve private companies in water distribution over direct public management increases the average retail price of water.

<sup>11</sup> U.S based NGO, Food and Water Watch reveled the fact about the water privatization in U.S.The six largest private water providers in New York State charge an estimated average of \$34.25 to families consuming an average of 1,000 cubic feet (7,480.52 gallons) of water per month. A survey conducted by the American Water Works Association estimated that the average monthly water charge for households in this region consuming the same amount of water is \$27.29, making privately owned New York utilities 25 percent more expensive than the average public utility in their region. Data from Black and Veatch's 2006 California Water Rate Survey show that households in districts with privately owned systems are paying, on average, 20.28 percent more per month for clean drinking water than households served by either municipal systems or special water districts created by citizens and overseen by government officials. In France and the United Kingdom, where governments have given private companies much greater control of water it was found that choosing to involve private companies in water distribution over direct public management increases the average retail price of water.

<sup>12</sup> A flagship water privatisation scheme for Africa has collapsed amid claims that the British company involved has failed to improve the supply for millions of people. In Tanzania the deal with Biwater was contracted to bring clean water to the capital, Dar es Salaam, and the surrounding region within five years by installing new pipes. The \$140m (£76.5m) World Bank-funded privatisation scheme - which was supported by the UK government - was one of the most ambitious in Africa and was intended to be a model for how the world's poorest communities could be lifted out of poverty and countries could meet their millennium development goal targets. Tanzania has made a series of allegations against Biwater, which is working in Dar es Salaam with the German engineering firm Gauff under the name City Water. See: The Guardian, Wednesday May 25, 2005.

<sup>13</sup>Africa Action an oldest organization in the U.S. admitted in 2001 that five multinational corporations have bid for the urban water service in Accra, most of them with annual sales larger than the GDP of Ghana, and all of



In a dual preference economy like India, the market forces cannot be stopped but at the same time the role of the government is also very crucial for carrying out certain constitutional obligations.

The International Environmental Law Research Centre (2006) has included the recognition of a fundamental right (or human right) to water, together with a strong revulsion from the statement that water is an economic good or tradable commodity, often leads some (not all) advocates of these views to the extreme position that water cannot and should not be sold but must be supplied free. At the other extreme is the view that water as an economic good and hence should be priced on economic principles with the objective of moving towards 'full cost recovery'. Neither of these extreme views appears tenable.

- In the first place, when the 'right to water' is essentially linked with the water as life-support, i.e., water needed for drinking with a minimal addition for cooking, washing and sanitation (but not necessarily flushing toilets), is the basic water requirement or BWR which is not less than 50 liters per person per day. There is no fundamental right to water for economic uses, such as irrigation, industrial use, recreation, etc.
- Secondly; even a fundamental right does not necessarily have to be free. Food is certainly a basic human need, but no one seriously argues that it should be supplied free; people produce or buy their food. What many argue for is a degree of subsidization of food to the poor, until poverty is eliminated and the problem disappears. A similar approach may be called for in the case of water as well.
- Thirdly, leaving aside private supplies which will of course have to be paid for by the user, nothing that the state or its agencies provide is really free. The supply of water involves costs (storing, purification, pumping, piping, etc), and if the user does not pay for the service, then the general tax-payer pays for them.

An uncertain and insecure regulatory environment is a major deterrent to investment and entrepreneurship. Even when investment occurs in such an environment, aggressive rent seeking and short-term profit taking tend to replace more beneficial long-term investment. Policymakers should ensure that laws and regulations are consistent with the needs of a free market, where contracts and property rights are enforced, due process is efficient in correcting abuses, and legal requirements are transparent and accessible (*World Development Report*, 2005).

India should also work on the legal and judicial reforms through a proper regulatory mechanism for a bright and conducive climate for investment in PPP. Because 'A successful legal reform is not confined to the revision of existing laws and introduction of new laws and regulations. Comprehensive legal and judicial reforms can make an important contribution to the overall development process' (World Bank, 2004). The efficacy of legal institutions can be judged on the ground as how quickly are contractual disputes resolved and how major feature of a regulatory institution is to ensure the expected number of disputes is as low as possible (Gangopadhyay and Mohanty, 2003). *World Business Environment Survey* suggests that the weak investment climate condition with macroeconomic instability, regulatory and tax constraints and weak governance all play a role in an officialdom and affect the size of the 'shadow' economy (Batra (et.al),2003). An effective legal regulatory and enforcement framework is essential for creating the right incentive structure for market participation. The legal and regulatory framework should focus on the improvement of internal monitoring of risk (Thomas (et.al), 2004). India more correctly to say the New *India* is positively

### **Can Privatization work for PPP in India?**

It is clearly realized that the Sonia Vihar Water project is not too different from the other projects in the world. Less -transparent government' decision and less accountable customer service including no assurance for 24X7 water supply and the high price of the water are some of the points which have been noticed from the day of inception of this project. Right to water is an integral part of the right to life. In the absence of any privatization law and the absence of an umbrella law, India is in conflicting situation between the right to life and the economic reforms such as public-private partnership through privatization. Developed economy like U.S as well as least developed economy like Ghana has seen the outcome of privatization in water.

The Sonia Vihar water project should be seen in the global context not only in the local context. Hall and Lobina (2008) have shown how the introduction of private operators' interests into the water supply and sanitation sector may conflict with public interests in a number of socio-economic, environmental and political dimensions and prove unnecessarily risky. Hall and Lobina (2008) have also provided a detailed analysis of the problems with private water concessions and operating contracts, looking at the factors explaining the discrepancy between the theory and practice of private sector participation (PSP). Such factors include the high transaction costs required to attract private operators and the multinational companies' ability to engage in interest seeking behaviour in view of their superior technical, legal and economic resources vis-à-vis local authorities and regulatory agencies.

The main issue which goes against the water privatization is high price. India is at a critical juncture of economic reforms where it cannot say *no to PPP* in water public utilities where the public sector water distributors are in loss but at the same time it cannot say water may be provided on high price where the majority of the people earn less than one dollar a day. Public- private partnership should therefore be regulated through the active social responsibility so that the benefits of that partnership could be shared efficiently by both public as well as private players.

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## **Antecedents of Interpersonal Conflicts at Work-place**

**Shweta\* & Srirang Jha\*\***

### **Abstract**

This paper presents a comprehensive view on the antecedents of interpersonal conflicts at the workplace that would facilitate development of a holistic framework of conflict resolution

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\* Senior Lecturer, Apeejay School of Management, New Delhi (India)

E-mail: [shwetajha.asm@gmail.com](mailto:shwetajha.asm@gmail.com)

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