

Urban Water Supply in India: A need for a Regulatory Framework

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ABSTRACT

The Indian water sector reforms had been initiated almost a decade ago. Yet, the sector is grappling with issues related to low tariffs, cost recovery, financing of new projects, and dearth of private sector participation. Most of the water sector reforms have happened under an absence of a regulatory framework. The article delves into the importance and facets of a credible regulatory framework. It provides insights into the experiences of various countries, who owe their water sector reforms to the presence of a strong regulatory framework. It also brings out the state of the sector in India, the need for persisting with reforms initiated, but still in the early stages.

KEY WORDS: Water Sector, Regulatory Framework, Water, Regulator.

From the current financial year water consumers in Delhi will see an end of subsidy regime which was as short lived as the tenure of political masters who doled out these subsidies. The promise to provide 20kl (kilo liters) water supply free to the customers in Delhi have incurred a cost of Rs.41 crores to the DJB (Delhi Jal Board) which had to bear the subsidy burden.

If the freebies would have flowed unimpeded it would have incurred a cost to the DJB of around Rs.165crore which is a tall order. In the wake of the inability of the DJB to cope with unprecedented water shortages that occur in peak summer months, the DJB's financial situation would demand a water tariff hike rather than a subsidy.

Not just the DJB, but all urban water utilities in India a regrappling with a host of problems relating

to service delivery and revenue streams which stem from poor finances. The weak financial base is a direct consequence of two factors:

- Institutional Arrangement of urban water supply
- Pricing of water supply

Water supply has specific characteristics that make it a strong case for public sector provisioning. Typical among the characteristics are natural monopolies that lead to economies of scale, and decreasing costs. Further water supply is associated with both positive and negative externalities. These reasons make a strong case for a public good. Across the world, the institutional responsibility of serving water rests with public utilities. In India too, the provision of urban water supply is a public good under public domain.

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The thorniest issue confronting urban water suppliers and consumers in India is the issue of pricing urban water. It is well known that water tariffs in India do not abide by the cost recovery principle. They are determined by political considerations and affordability (Sridhar and Mathur 2011). This translates into under recovery of costs and huge deficits for water utilities.

The past two decades has seen the infrastructure reforms gaining momentum in the developing world as well. It has been increasingly realized that traditional sources of financing urban infrastructure have not only been inadequate to meet the ever-expanding needs of the urban populace, but also shrinking contribution from public budgets that financed infrastructure utilities has further crimped financing. The consequent dilapidation in the structure of infrastructure utilities and limited revenue streams due to distorted pricing policies has led to a search for alternative avenues of financing.

Consequently, the line of demarcation that existed between public and private sector provision for infrastructure is slowly getting blurred. Increased acceptance of private sector financing for urban infrastructure has emerged both in the developed, and the developing world. Private sector has emerged as a potential player to mitigate the challenges of many services like electricity, and roads which once were the exclusive domain of the public sector (Annez 2006).

Water Supply too has not been an exception. The increasing role of private sector in water supply and sanitation has been encouraged by international agencies like the World Bank, and the ADB (Asian Development Bank). Many

countries had started experimenting with private sector participation under a broad range of institutional alternatives. The privatization options fall along a continuum between the extremes of complete public sector responsibility for management and service contracts through a degree a shared responsibility with leases, and at the other extreme, to a complete divestiture. The experiments in privatization of water supply started in the mid-nineties and have evoked a mixed response (ADB 2008).

In countries like the UK, and France, water privatization has evoked rich payoffs in terms of reduction in water tariffs. Even in developing countries like Argentina, and in cities like Manila, price mechanism and markets restored efficient allocation of water resources. However, in many other countries, experiment so privatization were not successful and met with stiff opposition (Bolivia). In Bolivia, the decision to privatize water services in Cochabamba by a US based multinational water company Betchel, and a steep four times hike in tariff led to huge public protests, aborting the idea of privatization itself (Kohl 2004).

The experiences of the developed and developing world in privatization of water services suggest that various internal and external factors make or mar the success of privatized water utility. Chief among them are political will, pace of reforms, governance structure, and most importantly the regulatory design, based on which success and failure of privatization of water impinges.

REGULATION

Empirical results suggest therefore, that the efficacy of water provisioning calls for more accountability and transparency in restructuring

old water supply systems. Viero, with Cordeiro (2002) argue that it is the greater public accountability associated with the system of participatory budgeting that "...is the central factor that explains the city's efficient services."

Whether it is involving of private sector in a relatively new field, or restructuring the public urban water suppliers, or increasing the number of stake holders, there arises a need to restructure the relationship between government/public and the private sector. This forces a reconsideration and readjustment of the role of the state in water management. The transition from a centralized public service to a different arrangement under private participation proves a difficult and complex process. It calls for evolving new institutional structures that represents the interests of all players. The key mechanism to ensure that all stakeholders' interests are fine-tuned calls for the evolution of a regulatory frame work. A watchdog is necessary to discern the impact of private participation, to ensure compliance, to control and monitor activities, and to strike a balancing act between different players. This can only happen when a regulator comes into the picture. Designing of a regulatory regime for the water sector stems from two major reasons, which are given below:

- Market failures, and
- Need to protect water sector from political influences

The principal market failures affecting the water sector are:

- Natural monopoly characteristics
- Information asymmetries

NATURAL MONOPOLY CHARACTERISTICS

Provision of water and sanitation services involves a huge construction cost, which cannot be duplicated by the operation of parallel networks making it a natural monopoly. Hence, public regulation is needed to ensure that the company does not abuse its monopoly power by charging higher tariffs while providing irregular and deficient services. When private participation takes place in this sector, care has to be taken that shift in ownership allocation does not lead to monopolistic exploitation. The viability of any privatization process cannot take place without putting a regulatory framework in place (Walker, Velasquez, Ordonez and Rodriguez 1999).

INFORMATION ASYMMETRY

Another motivation for regulating water services is that information regarding the service is not equally shared between the provider of water services and the customers. For example, the assessment of water quality, and the health hazards associated with it etc. are difficult to discern. Hence, government needs to intervene to define target quality levels and monitor compliance. The service cost of providing water is another important issue. Any restructuring of water utilities and price revision would alter consumer surplus and welfare. Any move towards orienting water utilities on supplying water on cost recovery principles raises the challenge of inclusion of the poor. Conflicting objectives of how efficiency would be juxtaposed with not leaving out the poor from the purview of water supply creates information asymmetry between water providers and users.

These information asymmetries create an opportunistic behavior among water providers and

users. Absence of a strong regulatory intervention may mar the entire process. The poor outcomes of public ownership in improving urban water supply and the competency of new private concessionaires to provide water at lower costs are well documented. Since consumers and water service providers are not likely to be perfectly informed, a regulator is required to see verifiably, and evaluate the effect of prices, provisions, efficiency, and subsidies for the poor in the water sector (Isabelle Brocas, Kitty Chan, and Isabelle Perrigne 2006).

POLITICAL INFLUENCES

Higher subsidies or low tariff has been a political mandate in many developing and some developed countries. When there is a change in the ownership structure and there is a process of increased private partnerships, a credible regulatory frame work helps the sector to remain insulated from opportunistic governments which may take decisions under the pressure of strong lobbies and interest groups that may override societal interests. For instance, in Lima, Peru, a publicly owned water utility failed to provide a pipe water network to the poor since heavy political intervention ensured that water utilities could not charge a tariff on the basis of the cost recovery principle. Non affordability of the water supplied led to the inability in extending water supplied to new payers (Alcazar, Xu and Zuluaga 2000).

Presence of a regulator is beneficial in such instances. A regulator acts as a surrogate for the marketplace, thereby arresting exploitation where private sector initiation in the water sector has begun. Regulation of monopoly water services allows a regulator to formalize and institutionalize

its commitment to protect both investors and consumers. The regulatory goals would be very diverse, such as:

- Promotion of allocation and productive efficiency,
- Minimization of economic rent obtained from asymmetry between regulator and firm
- Avoidance of regulatory capture, and
- Development of credible commitment to regulate

A few would argue that evolving a complex regulatory structure would prove a futile exercise where the dominant mode of water supply is a public utility. Today, regardless of the pattern of ownership, in the face of injection of capital and huge investments in infrastructure in the water sector, a regulatory framework is necessary, as regulation ensures efficient and cost effective service provision. Hence, a precondition to any reform in the water sector requires a credible regulatory framework.

Though public water providers exhibit regulatory influence which is exercised by some department of the government, but such role is not explicitly discernable and identifiable. The regulatory role gets blurred amidst a plethora of activities like setting policy, goals, ownership of water supply, operation and maintenance, water collection, capital works, etc. that the urban water supplier performs. Besides, regulation of such publicly owned water companies is oriented by political considerations which lead to a compromise, loss of accountability, and role conflict between different departments.

Various political and economic developments around the world have infused competition in areas that were considered to be natural monopolies, including the water sector. Many countries are reshaping their institutional arrangements. The experiments in privatization of the water sector in both developed and developing countries have given a mixed response. However, the critical factor ensuring success of reforms has been a credible regulatory framework. It will be worthwhile to study the experiences of developing and developed countries that have undertaken reforms in urban water supply to understand how a lack of regulatory structure or a weak regulator dampened the reforms process, while how a strong regulatory framework ushered in a strong urban water provider. These experiences give an insight into the credibility and success of these institutions, and they also help to identify the reasons for regulatory failures from which our country can draw important lessons as it is contemplating the establishment of a regulatory framework. We take the case of Argentina, and Chile.

ARGENTINA

The regulatory experience of Argentina is a classic case to exemplify how weak regulation has stymied the reform process in water provisioning, which started in 1992. Argentina privatized the water sector for Buenos Aires by granting concession contracts to two private companies. Consequently, a water regulator, ETOSS (Ente Tripartito de Obras y Servicios Sanitarios) was set up in 1992.

The privatization process by the concessionaire promised network expansion and inclusion of the poor among many other things. Among the positives achieved were expansion of service

coverage, and reduction of leakages and water losses. But a lot of other terms of contract like inclusion of the poor, environmental aspects, and investment norms were not complied with. Moreover, the regulator whose role was to overlook the concession contract and regulate tariff revision along with overseeing the water sector as a whole at national, provincial and municipal level was rendered almost ineffective. Within a few months of its establishment, its regulatory powers were clipped. From the beginning of the concession contract, ETOSS lacked regulatory credibility as it was to be financed by levies collected by the concessionaire.

The regulator that was deemed to enjoy autonomy was disempowered by putting it under the aegis of the ministry of environment. This regulatory capture was discernable during the time of renegotiation of the concession contract as it happened after the national government completely bypassed ETOSS. Private companies failed to comply with the desired investments norms. The government completely bypassed ETOSS by altering the plan of financing network expansion. Under this, the concessionaire could finance network expansion by charging all users, instead of charging mainly new users (AFD 2012).

Hence, in this situation, renegotiation happened outside the regulatory ambit. The existing users started crying foul, and thus began the downhill journey of water sector privatization. A weak regulator or in other words, regulatory capture, only stymied the process of privatization.

Later, in 2001, the socio political climate in Argentina and devaluation of the currency too played a catalytic role in stalling the privatization process. In 2006, the regulators who had lost their effectiveness were terminated.

CHILE

The success story of privatization in Chile is well documented. Chile has the most sophisticated water market. Strong regulation and legislation was enacted to define property rights in water markets, and a water code came into existence. Even before privatization began, water legislation and regulation was strongly in place to resolve water conflicts. Steps had been taken to improve service coverage and efficiency of water utilities even when it was a public enterprise. In fact, the water utility in Santiago exemplified governance, efficiency and service coverage. In the early nineties, the regulatory structure was strengthened and functions of supervision and regulation was separated from production, operation, and sales. The water utilities were then privatized by a process in 1998 wherein equity stakes of water utilities was offered to private investors. Even before the privatization process of the water sector began in Chile, the water utility could boast of high service coverage. The strong regulatory framework that was in place allowed private water companies to finance additional investments via increase in water charges to all consumers (Hall and Lobina, 2008).

Privatization saw an increase in tariffs, this saw increased investments (Hearne and Donoso, 2005), and high service coverage. The regulator allowed rational tariff structures based on cost recovery that reflected demand conditions, targeted subsidies to include the poor and ensuring profitability of private companies funded by foreign investments. Water utilities in Chile are profitable entities earning a return on capital invested. All this has been possible because of a strong regulatory framework, backed by political support of giving the right signals for optimal

allocation of water. Hence, it is strong regulatory support, good legislation, and government initiatives that have made the water sector reforms in Chile laudable.

England and Wales too have been success stories in the process of privatization which began in the early nineties. In a bid to attract investment in financially weak water companies, the Thatcher government passed legislation that proved to be a watershed in the history of water supply in England. By selling 10 publicly owned water companies and listing them on the stock exchange, the government could write off public debt to the tune of 4.9 billion. For the first five years, the government had a major stake in these companies. Establishment of a comprehensive regulatory framework followed this. Such a radical move towards private sector participation of water industry that was associated with monopolistic element evoked a lot of controversies. These were silenced as there was a gradual improvement in services by the water industry.

CHOICE OF REGULATORY DESIGN

The success of regulatory framework requires various decisions about the choice of regulatory design. A regulator has to balance the interest of various stake (Government, consumers, developers, investors, and financiers.) Each decision affects the sustainability of the regulatory regime. The regulatory designen compasses set of rules, regulations and legal mandates. The regulatory design of each nation is carved on the anvil of its institutional capacity and legal framework The major components of regulatory design are regulatory governance undertaking regulatory reforms (Spiller 1994). Various factors

determine the regulatory governance choices. Some of them are the constitutional provision, judicial institutions, the administrative capabilities, the extent of privatization in other utilities and sectors. Reforms in water sector in England and Wales are more centralized than reforms in Latin American countries (World bank 2005). These institutional characteristics have a great bearing in deciding whether regulator needs to be decentralized to the local level, or be evolved and vested with powers at national level. Hence a lot of issues need to be considered while evolving a regulatory framework. Besides the scope of regulator needs to be clearly defined. The success of a regulatory framework hence greatly impinges on the choice of regulatory design. Setting up of a robust regulatory framework is a difficult task and needs lot of clarity about the design and scope of regulation.

CONCLUSION

The economic regulator OFWAT (originally, "Office of Water Services", and now known as The Water Services Regulation Authority) is the body responsible for economic regulation of the privatized water and sewerage industry in England and Wales. It has played a catalytic role in tariff setting, ensuring customer interest, and guaranteeing standards of services. The experience of Chile, and England and Wales vary vastly in their levels of economic development. The former is a developing nation with water as a scarce resource, and the latter belonging to the developed world, having a relatively abundant water supply. Both are united by a common theme in their water sector reform process. Both being strong regulators, they are success stories so far as water reforms go, since they have passed the

litmus test of credibility and surpassed fears of "regulatory capture". They have stood out truly as independent, autonomous organizations, maintaining an arm's length relationship from each stakeholder while still truly representing the interests of all. The standard setting and tariff decisions have been kept out of the political realm. Transparent procedures adopted have left no scope for political maneuver. Transparent regulatory processes in tariff setting, standard enforcement, and performance appraisal have ensured smooth functioning of water suppliers. A strong customer orientation makes it democratic and participatory in its sector regulation.

India, which too has initiated water reforms in fits and starts, has important policy lessons to learn. The water sector in India, in which reforms have just begun, can learn from the experience in other countries. The problems of Indian water utilities have their origins in the present institutional arrangements which are characterized by the absence of effective regulation. The regulatory framework for the water sector in India has to evolve bearing in mind the constraints and challenges that are unique to our own water utilities. In contrast to developed countries like the UK and Chile where privatization has undergone a full cycle fortified by a strong regulator, in India water suppliers are still publicly managed. The need for regulation arises regardless of management ownership as even public utilities need to be subjected to some sort of regulatory control.

The case study of restructuring Delhi Jal Board, where sharp public protests thwarted the efforts of the World Bank is well known. Failure to privatize water services is an outcome of absence of credible regulatory frameworks. In India, reforms

in other utility sectors like telecom and power could not have been possible without a strong regulatory regime. Water too is not an exception, and any reform that aims at capacity building and greater professionalization is incomplete without institutional and regulatory reforms.

Some reforms on the regulatory front have been initiated. Maharashtra, through legislation has set up a regulator for water supply at state level called Maharashtra Water Resource Regulatory Authority in 2005. Some states like Uttar Pradesh, Gujarat, and Kerala have followed suite. In Maharashtra humble beginnings have been made in initiating tariff design for irrigation and non-irrigation purposes. However, full-fledged reforms of establishing water regulators at every state, and empowering them to emerge as effective agents for regulating the water sector has not hitherto been initiated. The Indian water sector needs to take a leaf out of the power sector design and regulation with rigor. A robust regulatory framework needs to be evolved after considering various factors the legal and institutional framework, honing administrative capabilities along with experiences of other nations while choosing the regulatory design.

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QUOTES

Opportunity is missed by most people because it is dressed in overalls and looks like work.

Thomas Edison

Example is not the main thing in influencing other people; it's the only thing.

Abraham Lincoln

The most important thing in communication is to hear what isn't being said.

Peter F. Drucker

Coming together is a beginning; keeping together is progress; working together is success.

Henry Ford