

Financing water and sanitation in India – bonds, BOTs and reforms

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Since the late 1990s, India's cities have led the way in obtaining financing for water and sanitation infrastructure. This article describes some of the successes, and also points to the reforms that are needed before private investments can really make a difference for India's poorest city dwellers.

India is increasingly using innovative and perhaps unorthodox (in a developing country context) approaches to increase private sector involvement in urban infrastructure. Without improvements in this infrastructure the government fears that the country's future economic growth will be held up. Some of these new approaches, which have been tried with some success in Ahmedabad, include issuing bonds and using Build-Operate-Transfer (BOT) concessions (whereby a private operator builds the infrastructure, operates it and transfers ownership back to the local government after, say, 25 years; see Box 1). In fact, there are as many as 44 initiatives in 25 cities designed to attract private capital and achieve some form of private sector participation in the water sector. These initiatives have largely developed as a result of private and semi-private institutions' indication that they are willing to finance urban infrastructure.

Raising local finance in India

Eventually, all local governments are likely to be linked to capital markets,¹ but a number of conditions need to be satisfied before cities can access the capital market. For example, most local governments require substantial improvement of their municipal accounting and other financial management system reforms. Introducing reforms at the municipal level, improving accounting standards of all Indian local governments and developing uniform financial reporting standards all take time.

Like Ahmedabad, the State of Bangalore has experience issuing bonds to finance investments in the water sector. The Bangalore Water Supply and Sewerage Board (BWSSB) completely subsidizes access charges for the urban poor and is moving towards individual facilities in the case of water supply. The consumption charges remain the same for all users in the city.

Financing mechanisms

The development of domestic debt markets requires an efficient and liquid market for government debt. It also requires the development of institutions engaged in mobilizing long-term savings, especially insurances and

pension funds. An alternative is to enhance credit through partial credit risk guarantees of the type now being offered by several multilateral development banks.² Funding and support from international lending agencies is a prerequisite, as seed capital to leverage finance from the market.

India's efforts at seeking private sector participation (PSP) in urban water supply and wastewater can be divided into two distinct phases.² The first phase was approximately from 1994 to 1999, while the second phase was from 2000 to the present. Following liberalization by the Government of India and decentralization efforts, in the mid-nineties there was an unbridled enthusiasm for innovations in the urban sector.



Successful programmes of slum upgrading need wide participation by local people leading to demand-driven solutions

Box 1. Raising local finance in India

In 2000, The Gujarat State Government prepared and launched an Infrastructure 2000 Plan, which provided a vision and a strategy for infrastructure development.¹ It was the first state in India to draft a Build-Operate-Transfer (BOT) law, and has experience launching concessions to the private sector. The state's largest city, Ahmedabad, has already gained experience obtaining a credit rating and issuing bonds through a domestic debt market; using this finance the Municipal Corporation embarked upon a network extension programme into slum areas of the city. Private financial institutions are eager to deepen their involvement in the infrastructure sector, but infrastructure development in Gujarat State is hindered by the limited borrowing capacities of its municipalities, rather than by limited availability of funds.

The Ahmedabad Municipal Corporation was the first to access the capital market through the issue of municipal bonds in 1998, with support from the Indo-US Financial Institutions Reform and Expansion (FIRE) project. As a result of FIRE, using financial markets to access finance for urban water and sanitation has caught on around the country. Since Ahmedabad's experience, 12 additional municipal bond issues, coming to Rs. 12700 million (US\$270 million) have been issued in India to finance urban infrastructure. The Government of India provided an impetus for this expansion through tax exemption for municipal bonds in 1999. Building on this activity, new models for enhanced services to the urban poor are gradually emerging.

The urban water sector followed what happened in the power sector, where the focus was on attracting capital from the private sector, since resources were not available within the public sector.

Of the projects implemented during the first phase, only a few projects, such as Tiruppur water and sewerage project, Alandur sewerage project, and operation and maintenance contracts in Chennai have proven sustainable. The majority of the remaining projects failed, for the following reasons:²

- there was little genuine commitment to reform, as it was initiated out of necessity rather than conviction
- the scope and framework for PSP was not clear; for example, many of the initiatives in the sector are for Build-Operate-Transfer (BOT) type projects for source development, without adequate concern for management improvements for distribution systems and customer service
- a lack of rigour in project and contract development, including risk management and inadequate concern for financial viability
- insufficient support and funding for project development
- a lack of policy support and an appropriate regulatory framework at higher levels of government
- little participation from a wide variety of stakeholders
- a failure of continuity from champions of the projects when leaders were transferred or defeated in elections

- little sense of ownership for the project within the city
- strong opposition from the existing rent-seeking elements who felt threatened.

This experience resulted in the transition to the second phase, and a different approach to infrastructure financing. There is a gradual emergence of a focus on institutional restructuring and defining separate roles (policy making, regulations and operations) in order to enable a consumer and commercial orientation. During the second phase, the central government and a few state governments have taken initiatives to develop an appropriate policy framework and incentive structure for water sector reforms in the country.

For example, the State of Maharashtra has undertaken a comprehensive review of the water and sanitation sector in consultation with stakeholders and has developed recommendations for the development of the sector. It also restructured the Capital Grants Programme, covering 30 per cent of the state grants to create incentives for efficiency improvements, such as the reduction of unaccounted for water and savings in energy. It also issued guidelines for private sector participation and prepared a draft note on an independent regulatory framework for water and wastewater. The Government of Karnataka is currently working on the development of an urban water policy. Even during the current phase, however,

there are not many successful cases of attracting private sector participation at city level, with the possible exception of service contracts in Navi-Mumbai and management contracts in Bangalore.

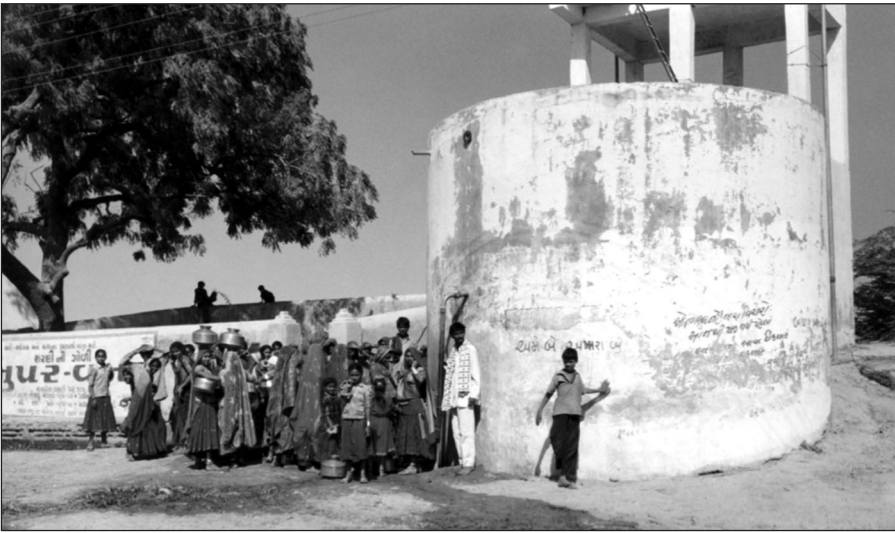
In the case of Ahmedabad, the Municipal Corporation has been implementing infrastructure projects since it raised funding in 1998 (see Box 1). It often worked in partnership with the water industry. For example the Corporation embarked upon a slum-networking programme in Ahmedabad. In that sense the bond raising was a success, although it has taken some time before the money raised in 1998 could be used productively.

Perhaps the most promising instrument for PSP remains the BOT, although a number of factors are necessary for its success. It is necessary to have the required legislation in place, it is important to have bankable projects and the unit going for the BOT should have a good cost-benefit analysis. Finally, the infrastructure financed should generate a cash flow allowing the repayment of the investments made by the private party. If these preconditions are in place, BOTs can be an important instrument to finance infrastructure.

What needs to be done?

It is essential to continue to explore further PSP in management and finance for urban infrastructure. Alternative models are service contracts with performance-based annual contracts; efficiency increases to reduce the costs of private sector participation, and utility-to-utility partnerships or twinning arrangements.

There is an important list of issues that remains to be dealt with at state and city levels. Public sector reform is necessary at local and state levels in order to initiate and sustain widespread and sustainable reform processes in the urban sector.³ Often institutional restructuring is necessary to create autonomous and accountable utilities which will have a more consumer and commercial orientation. Also, shifting the focus of urban local bodies from being providers to facilitators and restructuring of state-level water and sewerage boards is an important change that will need to take place. Then, enhancing the creditworthiness of cities is necessary if the private sector is



It is more difficult to attract private investment for rural than urban water supply projects.

going to be interested in investing. This can happen through innovative resource mobilization, efficiency improvements, and reducing expenditure responsibilities in favour of private sector involvement. Also, existing financing arrangements should be restructured in favour of market-based instruments. Such instruments mean incentives are introduced and performance-based rewards can be given.

Satyanarayana⁴ argues in favour of the establishment of transitional management funds by the state and central government to ease the pain of these reforms; in the case of labour reforms, the provision of safety nets may help. Usually it is desirable to develop state and national programmes for scaling up

demand-driven approaches for enhancing services to the urban poor. Moreover, independent regulatory frameworks for water supply and wastewater removal, treatment and recycling will need to be set up. Finally a genuine decentralization process ('letting go' on the part of cities) and matching functional responsibility with fiscal autonomy is desirable. The development of a state or national-level support framework for capacity building for reforms at the city level will help very much to overcome problems with implementation.

One of the key instruments of change relates to setting up an independent regulatory framework for water and wastewater at state level to regulate all service providers including the pub-

lic sector. The primary objectives will be to improve the service quality, protect the consumers from abuse by the utilities, ensure sustainability of the service and create a conducive environment for investments. Its establishment will serve as a catalyst for reforms by removing the arbitrariness in setting tariffs and service standards and promoting new sector investments. It will also help bring in transparency, accountability and consumer orientation among the sector institutions.

Conclusions

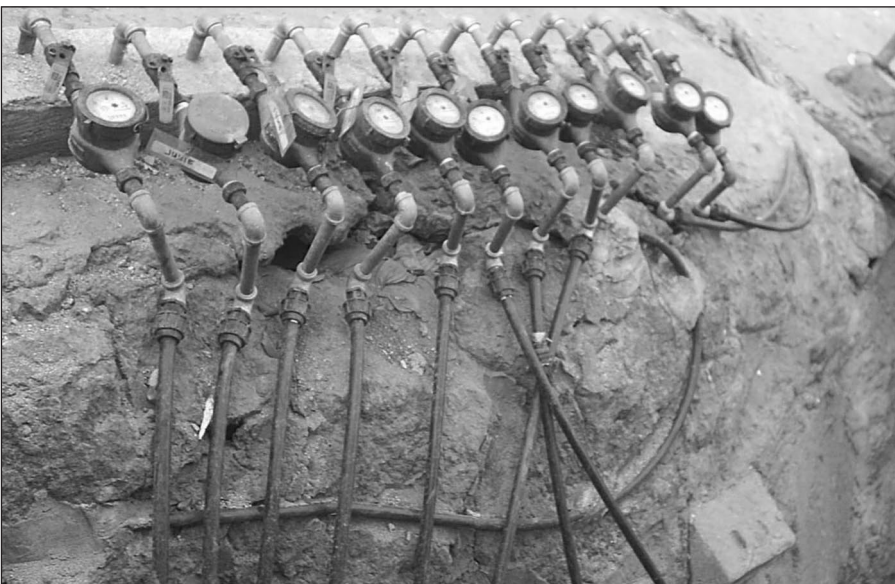
During the last decade, India and its cities have initiated several positive steps for more sustainable finance for urban infrastructure, including water and sanitation. Private sector involvement in infrastructure activities (telecommunication for example), which includes the development of new technologies, combined with unbundling (i.e. separating the different stages, such as water purification, bulk transport and retail networks) to introduce more competition, has led to much lower prices for consumers. The government still plays an important role as supervisor, who sees to it that prices remain affordable, in particular for the poor and that the quality of the services remains at a certain level.

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Household flexible pipe connections can reduce connection costs and make piped water affordable to slum dwellers. Credit: L. Capistrano