



## Public Private Partnerships in the Essential Services Sector

### Introduction

The basic services essential for a certain quality of life required by the citizens of a particular country are roughly the same across the world. The disruption in their provision could trigger a backlash in terms of health, lifestyle and the economy of a country. These services are, at times, called 'essential services'. Though its definition usually includes power, telecommunications, transportation, water and sanitation, solid waste management, energy sectors like oil and natural gas, these services are generally known as infrastructure services. This briefing paper refers to the sectors, in general, as the infrastructure sectors. The paper restricts itself to discussions on the power, water and sanitation sectors.

The infrastructure services have certain common characteristics: they are expensive to set up (associated with high sunk costs), enjoy economies of scale and are consumed on a massive scale.

Across the world, it is becoming increasingly difficult to meet the growing demand for infrastructure services, fuelled by the growing population and economy. Governments and local agencies alone may not be able to cope with the growing demand for these services. Thus, private investment, as an alternative supplement to government efforts in these key sectors, is increasingly being thought of.

It was not until the late 70s and early 80s that there was a perceptible shift from public sector monopoly to private entry in traditional public sectors in many countries.

This has resulted in modelling Public Private Partnerships (PPP) in providing essential services to consumers. PPP is a partnership between the public and private sector for the purpose of delivering a project or service traditionally provided by the public sector.

PPP recognises that both public and private sectors have certain advantages relative to the other in the performance of specific tasks. By allowing each sector to do what it does best, public services and infrastructure can be provided in the most economically efficient manner.

The idea of a PPP, as a business model, is to allow the private sector to finance the infrastructure needed to remove the necessity of governments to carry debt and, at the same time, improve the delivery of service to the public.

They also provide an effective approach for infrastructure delivery and outsourcing of public services. PPP models are most widely applied in the financing of infrastructure and utility operations. This briefing paper looks at various ways in which PPPs can be undertaken, once a decision to involve the private sector has been taken. It also looks at the current trend in PPP in essential services and some country examples and offers some suggestions as to what should be kept in mind when a PPP is entered into.

### Trends in PPP

Divesting government stake in State-Owned Enterprises (SOEs) is one mode of PPP providing utilities to consumers. Such PPPs follow different approaches in different countries. For instance, transition economies (such as Russia, Estonia, Hungary, Poland, etc.) have taken recourse to privatisation by selling the stock to majority shareholders, while both developed and developing countries have adopted methods such as open bidding for privatisation of their public firms.

PPP was introduced in 121 countries in at least one of the infrastructure sectors between 1990-2000. Developed countries were the first to utilise the PPP option.

The current trend in PPPs (Figure 1) depicts that the telecommunications sector leads the others, followed by electricity, transport, water and sewerage, natural gas transmission and distribution sectors.

In terms of regions across the developing world, Sub-Saharan Africa (SSA) attracted the least amount of PPP

investment during 1990-2000 (Figure 2). Latin America and the Caribbean (LAC) dominated the investment scenario, followed by East Asia (EA), Eastern and Central Europe (ECE), South Asia (with US\$38.1bn) and Middle East & North Africa (MENA).

### Options for PPPs

PPP introduces private sector capital, brings in expertise and delivers public services. The nature of such partnerships is characterised by the sharing of investment risks, responsibilities and rewards between the public and private partners (Table 1). The options (Box 1) for PPPs range from fairly simple levels of private sector involvement through service contracts to more complex arrangements like divestiture. The four broad categories of contractual arrangements for private sector involvement are service contracts, management contracts, concession contracts and divestiture (Box 1), or any combination of these.

Options of involvement of the private sector operators in the provision of services essentially vary in terms of allocation of

risks. At the one end of the continuum (Figure 4) is the service contract and at the other divestiture. Under the former, almost all the risks lie with the public sector entity, which get increasingly shifted to the private sector, as one progress towards the other end. The other forms of private sector involvement lie somewhere in between.

### Choosing a PPP Model

The most appropriate mechanism for introducing private sector participation depends on various factors such as:

- the degree of support (or the lack of it) of the government and the community for private sector involvement;
- the nature and magnitude of the tasks [for example, billing and collection of electricity dues could be undertaken through service contract, while the production of the electricity could be done on a Build, Own, Operate and Transfer (BOOT) basis];
- the urgency to supply the service; and
- the main objectives of PPP (Box 2).

Where there are some apprehensions in the political support for PPP, service and management contracts are considered beneficial forms of involvement and are increasingly being used as stepping-stones towards a more participatory involvement of the private sector. Typically, PPP options generally used for new capacity augmentation are turnkey construction contracts, BOOT contracts and variants of the same. For operations and delivery of services, service contracts, management contracts and concessions contracts (for full or partial systems) are preferred.

In developed countries, asset sales (selling of network assets to private operator, instead of franchises or concessions done in Australia and continental Northern Europe) and concessions or franchises (such as in UK, southern Europe and Canada) have been adopted in most of the infrastructure sectors.

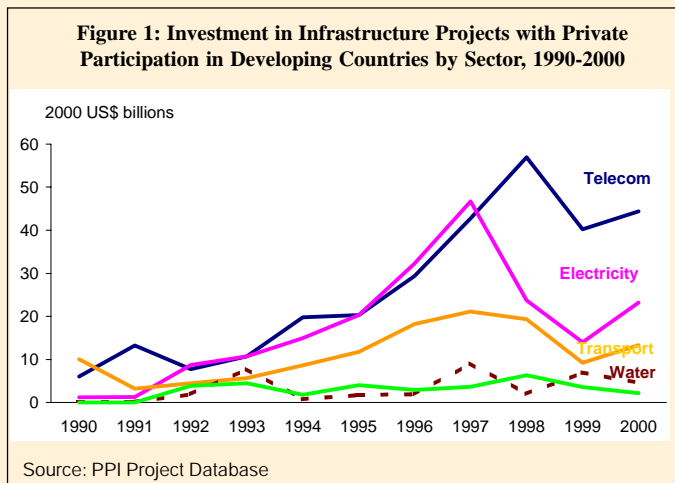
### Country Experiences

The following section illustrates the recent PPP experiences in South Africa and India in the water and sanitation sectors.

#### South Africa<sup>1</sup>

In the past, Johannesburg did not have a drinking water production facility of its own and purchased water in bulk from Rand Water. Water conduits supplied to a network of reservoirs, from which municipal sub-structures used to distribute water to individuals. Water losses that were unaccounted for, were very high. The collection system for domestic and industrial sewerage was old and a uniform metro tariff was applied.

Water supply services were especially riddled with problems. Firstly, financial constraints resulted in under-



investment in networks and the inability to meet the demand for water. The City Council's poor credit ratings made it difficult to raise funds in the financial markets. In 1999, the capital budget for water totalled R6mn (US\$0.75mn) against the R200mn (US\$25mn) required for meeting investments. Secondly, the Council recognised the potential for improvement in this sector. In 1999, water supply services generated a turnover of R946mn (US\$1.2tr), out of which an amount of R240mn (US\$30mn) was lost as "unaccounted for water" due to non-payment by consumers, inefficient collection system and a high number of non-metered consumers.

The solution to these problems were sought through reforms programme, with the creation of wholly-owned private utility companies capable of becoming self-sustaining. The response was to establish an independent and sustainable water and sanitation services utility, Johannesburg Water.

This utility, in turn, offered private parties a five-year management contract, which, after competitive bidding, was awarded to a consortium – the Johannesburg Water Management Company (JOWAM) – led by the UK Northumbrian Water Group and the French Suez Lyonnaise des Eaux water multinationals in 2000. According to the contract, JOWAM would be paid a fixed, delivery-linked fee of R25mn (US\$3mn) a year, plus incentives of up to R20mn (US\$2.5mn), if it meets certain performance requirements.

The South African Municipal Workers' Union (SAMWU) vigorously protested against the deal. The Union argued that Suez Lyonnaise, the holder of an effective 34.5 percent share of the management contract, has "an appalling track record" and cited instances where its international subsidiaries have raised water prices in other cities.

The Council is the sole shareholder of the utility over the five-year period of the management contract. It is also the regulator of the utility. If there are any price increases, the blame would lie on the elected Council officials, who have the sole discretion to adjust water tariffs. All procurement decisions by the Council-owned Company, by virtue of it being public, are to be open to public scrutiny. The Council will still call the shots by taking decisions regarding tariffs, etc.

The Government is responsible for deciding the quality and quantity of the services, but does not involve itself in the delivery of essential services, which are being assigned to private agencies through variety of partnering arrangements.

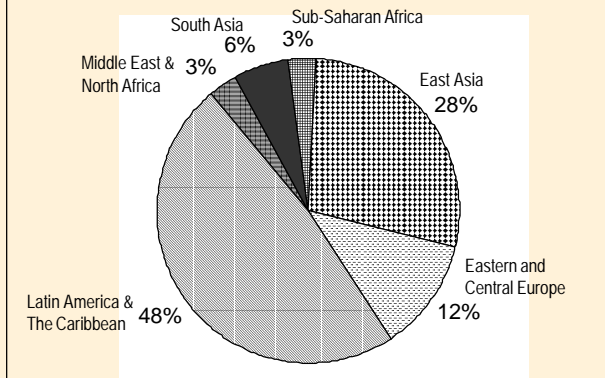
#### India

The majority of the PPP initiatives in India's water sector were introduced mainly to attract capital rather than to improve operational efficiencies such as distribution. The most popular

Table 1: Options for Private Sector Participation<sup>2</sup>

Option Investment	Ownership Risk	O&M (Years)	Capital	Commercial	Duration
Management Contract	Public	Private	Public	Public	3 – 5
Lease	Public	Private	Public/Shared	Shared	8 – 15
Concession	Public	Private	Private	Private	25 – 30
Build-Own-Transfer (BOT)	Private & Public	Private	Private	Private	20 – 30
Divestiture	Private & Public	Private	Private	Private	–

**Figure 2: Investment in PPP in Developing Countries (by region) 1999-2000**

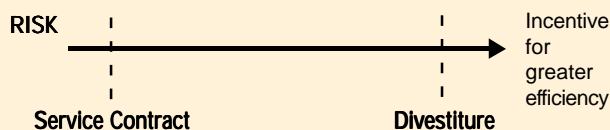


PPP option is that of contracting out (through management and service contracts). In India, only the Tiruppur Project<sup>3</sup>, in the State of Tamil Nadu, out of as many as 30 PPP initiatives using the concession approach, has reached the financial closure stage in 2001-02.

The industry in Tiruppur contributes to about 75 percent of India's knitwear exports and requires an uninterrupted water supply.

A demand for improved water services came up from the Tiruppur Exporter Association way back in 1988, and was supported by the Tamil Nadu State Government. In 1991, the latter prepared a comprehensive Tiruppur Area Development Project (TADP) and, after three years, a public limited company, the New Tiruppur Area Development Company Limited (NTADCL) was set up to execute the project. The latter will

**Figure 3: Illustration of the difference between a management contract and a divestiture<sup>4</sup>**



implement the project on a BOOT basis over a period of 30 years. The Government of India, the Tamil Nadu Government, the Tiruppur Export Association and the Mahindra-Bechtel consortium together contributed equity capital of Rs 3.9bn. The debt part was contributed by various global financial institutions, including the World Bank and the United States Agency for International Development (USAID).

Under the project plan, the NTADCL will execute an integrated water sector programme. This includes: a) establishment of bulk water supply system, including a pipeline network, and distribution to bulk industrial customers and four villages; b) a water distribution system to store and distribute treated water to domestic and industrial customers in Tiruppur; and c) a sewage collection, treatment, and disposal system in Tiruppur.

The finalisation of the contract took almost 13 years. Being the first commercial BOOT project, it raised various concerns, such as how to structure and appraise the project and address the risks associated with the downturn of the knitwear industry. A great deal of consensus and capacity-building was required before stakeholders were convinced and the contract was finalised.

**Box 1: Broad categories of contractual arrangements**

**Service Contracts** are the most rudimentary forms of private sector involvement. Under a service contract, the service is provided by the private sector using the finances and specifications from the public sector. It is not possible to raise additional (private) investment under this option.

**Management Contracts** are arrangements where the private operator is engaged in operation and management (O&M) of the service but does not undertake any investment obligations. The commercial and investment risk still remains with the public sector.

**Concessions Contracts** are usually long-term contracts running over 10-30 years, which pass on the responsibility for operation and management to the private sector and include detailed lists of investments and service opportunities. Concession Contracts award fixed term monopoly rights to a private firm to provide a service within a geographical area. The fixed term concessions are of two types. Either the government (the regulator) fixes the term of the concession and the operator who bids the lowest toll in a competitive auction is awarded the contract, or, the government (the regulator) fixes the toll and the operator bidding for the shortest-term duration is the concessionaire. As concession contracts do not transfer 'ownership' into private hands, something that is politically sensitive, this arrangement has proven advantageous to many public sector units.

**Divestiture** is the sale of a public asset to the private sector. The actual selling procedure can take different forms – public offering of shares, private sales of assets or management buyouts (partial or complete). It gives the private operator full responsibility for operation, management and investment.

**Hybrid Arrangements**

1. **Build, Operate and Transfer (BOT):** The private sector funds, constructs, owns and operates a facility for a limited period (often around 30 years), at the end of which the infrastructure is transferred free of charge to the concession authority.
2. **Build, Transfer and Operate (BTO):** The private operator funds and constructs an infrastructure, but transfers ownership to the concession authority immediately after the completion of the construction phase. The infrastructure is then put at the disposal of the private sector again by the government and is operated for a limited period, at the end of which all rights are restored to the concession authority.
3. **Build-Own-and-Operate (BOO):** The private sector funds and constructs an infrastructure, which owns and operates it for an unlimited period. A variation of this is the BOOT (Build, Own, Operate and Transfer) contract, wherein the private developer obtains exclusive franchise to finance, build, operate, maintain, manage and collect user fees for a fixed period to amortise investment. The facility reverts back to the public sector at the end of the franchise duration.
4. **Rehabilitate, Operate and Maintain (ROM):** Another concept wherein the private operator provides necessary investment for rehabilitating the systems and then sells its services to a public utility manager according to the terms and conditions of the contract. This option allows for bringing in new management expertise. Investment risks remain with private operator.

Box 2: Private Public Partnerships and Objectives					
Options Objectives	Service Contract	Management Contract	Lease	BOT	Concession
Technical expertise	Yes	Yes	Yes	Yes	Yes
Management expertise	No	Yes	Yes	Some	Yes
Operating efficiency	No	Sometimes	Yes	Yes	Yes
Investment in bulk	No	No	No	Yes	Yes
Investment in distribution	No	No	No	No	Yes

## The Role of the Civil Society

Private sector provisioning of infrastructure services is not the only alternative to public sector supply. There have been instances where the provision of services to households, at a local level, has been undertaken by the citizens themselves. The civil society in Chennai, India, managing the solid waste (Box 3) is a case in point. It is important that the informal as well as the formal community structures are involved in any restructuring processes.

Box 3: The Involvement of the Civil Society
<p>The continuously deteriorating situation of solid waste management in Chennai, and the apathetic attitude of the municipal authority, forced its residents take up the issue on their own. Exnora, a group of activists, educated residents to form Civic Exnora associations at the street level. The "Civic Exnora Associations" were grassroot-level non-governmental community-based organisations, comprising about 75-100 families. The member households contributed towards the salary and operational expenses of the street beautifiers (earlier, rag pickers) as well as other related expenses.</p> <p>The residents contribute to hire services of street beautifiers who collect garbage everyday from door-to-door. The street beautifiers extract the recyclable and reusable items from the garbage before transporting the remainder to the municipal transfer stations. Over the years, Exnora has managed to convince several associations to segregate their waste. Exnora associations cover up to 20 percent of the city, by Municipal Corporation estimates. There are about 900 functioning Civic Exnoras actively involved in the solid waste management exercise. Other areas of involvement include recycling, waterways monitoring programme and rainwater harvesting. The scheme has several fringe benefits. Neighbours got together regularly to discuss hygiene and garbage issues of their streets. The infrastructure has been laid to decentralise composting and waste centres. The decentralised composting scheme alone managed to divert up to 1500 tons of garbage everyday from reaching the landfill.</p>
<p>Source. Jayaraman N. <i>CorpWatch India</i>. March 25, 2002</p>

## Future Challenges

The lacunae plaguing the development of effective PPP initiatives, especially in developing countries, are many. Though they are sector-specific, in general, they include lack of:

1. clarity in scope and framework;
2. quality support and funding for project development;
3. rigour in project and contract development;
4. process management and political commitment;
5. 'champions' to guide the process through;
6. private sector capacity and procurement process;
7. policy support at higher levels of government and appropriate regulatory framework; and
8. participation and capacity of stakeholders

## References

- Ahmad, Junaid Kamal, "City-wide Reforms: The Case of Johannesburg" in SAFIR Newsletter, Issue 2, November 2000, pp 5-6.
- Challenges in Private Sector Participation' Water and Sanitation Programme – South Asia (December 2000)
- David Le Page in 'Water Contract Won't Mean Job Losses'. Mail & Guardian (Johannesburg). March 2, 2001
- Eberhard, A.A., Horen Van and Paretorius, B. 'Energy Efficiency and Electricity Sector Restructuring in South Africa'. Journal of Energy in Southern Africa. May 1998.
- GoI, 1996. The India Infrastructure Report: Policy Imperatives for Growth and Welfare. Ministry of Finance, Government of India, 1996. New Delhi, India.
- Philip, Gray. 'Private Participation in Infrastructure: A Review of the Evidence', World Bank. October 2001.
- Hopeton, S. and Winston, S., 'Telecommunications in Jamaica' (www.viipapers.org).
- Indo-USAID FIRE (D) 'Financial Resources and Private Sector Participation in Solid Waste Management in India'. Kirti Devi and V. Satyanaryana (2001).
- Allan K, Gotz G and Joseph C, 2001. 'Johannesburg - an African City in Change'. Cape Town (2001). Zebra Press. Cape Town. 2001
- Kikeri, S. and Nellis, J., 'Privatisation in Competitive Sectors' (World Bank Policy Research Working Paper), June 2002.
- Mehta, Meera (May 1999), 'A Review of Public-Private Partnerships in the Water and Environmental Sanitation Sector in India', Department for International Development (New Delhi, India)
- Nankani, Helen, "Testing the Waters - A phased Approach to Water Concession in Trinidad and Tobago", Private Sector Viewpoint 1997.
- Naryanan, Jayaprakash 2002. 'Skewed Priorities in Infrastructure'. The Economic Times, August 6 2002 (Delhi edition).
- Shambaugh, J. B., 'The Role of the Private Sector in Providing Urban Water Supply Services in Developing Countries: Areas of Controversy' Research Paper, UNDP/Yale Collaborative Programme, 1999 Research Clinic, New Haven (1999).
- Steve, D. Thomas, 'Tariff-setting in the Privatised British Electricity Industry', transition to a liberalised environment, TERI 2000.
- Taylor, R. and Blair, S., 'Public-Private Partnerships in the Health Sector', Private Sector Viewpoint January 2002.
- The Essential Services Act 1958, Act No. 6244/1958' for Victoria (Australia)
- Times of India, 'UK Government takes back railways', 28<sup>th</sup> June 2002 (New Delhi Edition)
- The Economic Times, 'NHAI raises Rs 800 crore from bonds', 28th June 2002 (Delhi edition).

## Endnotes

- 1 For most of the information in this section, the authors have relied on 'Johannesburg: 2001'.
- 2 The tables have been adapted from Selecting an Option for Private Sector Participation, World Bank (1991).
- 3 The Tiruppur Project for Water Supply and Sewerage has completed all the stages of project development, reached financial closure and is awaiting the approval of the State Government to finally take off.
- 4 The illustration has been adapted from Bosquet, F. and Fayard, A. 'Road Infrastructure Concession Practice in Europe (September 2001).

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