Public Private Partnership in Municipal Solid Waste Management in Tamilnadu: An Assessment

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ABSTRACT

Provision of public services and infrastructure has traditionally been the exclusive domain of the government. However, with increasing population pressures, urbanisation and other developmental trends, the government's ability to adequately address the public needs through traditional means has been constrained. This has led the Government's across the world to increasingly look at the private sector to supplement public investments and provide public services through Public Private Partnerships. Therefore, the objective of this paper assesses Public private partnership in Municipal Solid Waste Management in Tamilnadu.

KEYWORDS

Disability, social welfare, right based society, safe guarding

1.1 Introduction

Public Private Partnership (PPP) means an arrangement between a public agency and a private sector participant for the provision of infrastructure through investment made or through design, development, construction, maintenance or operation undertaken by the private sector participant, where risks are allocated between them such that the private sector participant takes on the risk beyond the stage of design and construction and the payment for the services are performance linked, in the form of user charges, annuities or unitary payments.

Development of infrastructure and provision of basic civic services has always been considered as a very important public sector activity for the following reasons:

- Governments have recognised the crucial role of infrastructure in fostering economic growth and reducing poverty.
- Because of its 'public good' and 'essential' nature, Governments have attempted to ensure availability of basic civic services irrespective of market conditions.
- For a number of economic, social and political reasons, private sector involvement in these important areas was slow to develop and thus uneven.

Provision of public services and infrastructure has traditionally been the exclusive domain of the government. However, with increasing population pressures, urbanisation and other developmental trends, the government's ability to adequately address the public needs through traditional means has been constrained. This has led the Government's across the world to increasingly look at the private sector to supplement public investments and provide public services through Public Private Partnerships.

1.2 Solid waste management in cities in the developing countries

Due to increasing problem of municipal solid waste management in most cities in the developing countries, private sector participation in providing solid waste services started as a response to major failures of service delivery by the public sector. In order to overcome the technical and financial deficiencies associated with the current system, state and local governments in India are increasingly resorting to the use of private contractors for collection, transportation and disposal and private capital to supplement the mechanization/improvisation process.

It is often believed and proposed that private sector participation in providing municipal services could be the best possible way to solve the current waste problems in developing countries and in particular public private partnership is seen as a potential alternative to the traditional service delivery system fully controlled by the public sector, more importantly public private partnership is believed to provide the services that the public sector neither have the resources nor the expertise to supply alone. According to UNESCAP public private partnership itself is not a solution option for the service delivery problems but rather a viable project implementation mechanism for a desired solution option.

Public private partnership arrangements pave the way to both the public and private sectors to share the responsibilities in providing the services. Public private arrangements can have many forms, but the common distinguishing characteristic is a shared governance structure and decision-making process. Such a partnership, combines the private sector’s dynamism with the public sector’s responsibility of public interest which makes it work better.

Furthermore, a third party—the people—can also play a considerable role in public private partnership. Citizens can contribute significantly to service delivery for instance they can support private sector participation with payment of service charges and also they can play an active role in accountabilility improvement and service quality of both public and private sector. These kinds of arrangements turn the people’s role from passive service receivers to active service partners that in return lead to high quality and efficiency of work.

1.3 PPP in Municipal Solid Waste Management in Tamil Nadu

Tamil Nadu is one of the pioneering states in the country in experimenting innovating methods in infrastructure projects implementation. Implementation of infrastructure under Public Private Participation mode is not new to the State, for example it earlier had this experience in taking and implemented Under Ground Sewerage Project in one ULB. Alandur UGSS project became a model and it is studied by Academicians, Policy makers, ULB officials of different states and countries, elected representative of Urban Local bodies of various state and countries. Similarly the state extended PPP into the Solid Waste Management Sector.

During 1990s, the Tiruppur Municipal Corporation (TMC)
started facing difficulties in managing the municipal waste generated in the area due to the increasing quantity of solid waste generation. The total waste produced by the town can be broadly categorized into three types: bio-degradable, non-biodegradable and recyclable. The Tamil Nadu Urban Development Fund (TNUDP) suggested that TMC should develop a composting plant on a PPP basis to treat the biodegradable waste. In 1999, IVR Infrastructures and Projects Ltd. was selected through a competitive bidding process to finance, construct and operate the plant on a Build-Own-Operate-Transfer (BOOT) mode for a period of 20 years.

A specially designed 'windrow compost' yard having a 50 day life cycle piles was set up on a seven acre land. This land was taken on lease by the private concessionaire from the TMC at Rs.1.75 lakh per annum. The concessionaire has set up equipment and machineries worth Rs.55 crore. The entire project cost was borne by the concessionaire.

As per the concession agreement, TMC was supposed to provide 100 MT of mixed waste per day to the private concessionaire, of which at least 40 MTD would be bio-degradable waste. The concessionaire would pay Rs.3.5 per ton of waste sold to it. If the municipality defaults in providing the concessionaire the waste, it would compensate the concessionaire by paying it Rs.5.20 per ton of waste not supplied. This meant that the demand risk was completely borne by the TMC. It was responsible for getting the required quantity of a given type of waste, thereby ensuring the sustainability of the project. The waste supplied after composting it into fertilizer would be sold to the farmers. This was the source of revenue for the concessionaire. At present there are about 3 MSWM projects have been implemented directly under PPP mode and 1 project is implemented under BOOT basis. The details are provided in the following tables.

### Table 1: Cost estimates PPP – MSWM project in Tamil Nadu

<table>
<thead>
<tr>
<th>Sl.No</th>
<th>Urban Local Bodies (ULB)</th>
<th>Est. Cost (Rs in Cr.)</th>
<th>Term of Concession period</th>
<th>Obligatory Clause</th>
<th>Cost Estimate (Rs. in Crores)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Coimbatore Corporation</td>
<td>96.51</td>
<td>20 years</td>
<td>Compliance to MSW rules</td>
<td>3.58</td>
</tr>
<tr>
<td>2</td>
<td>Madurai Corporation</td>
<td>74.23</td>
<td>20 years</td>
<td>Compliance to MSW rules</td>
<td>74.23</td>
</tr>
<tr>
<td>3</td>
<td>Namakkal Municipality</td>
<td>3.58</td>
<td>20 years</td>
<td>Compliance to MSW rules</td>
<td>44.21</td>
</tr>
<tr>
<td>4</td>
<td>Venkatamangalam Project (Common facility for Alandur*, Pallavapuram and Tambaram)</td>
<td>44.21</td>
<td>20 years</td>
<td>Compliance to MSW rules</td>
<td>96.51</td>
</tr>
</tbody>
</table>

* *Alandur now excluded from the project as it was merged with Chennai Corporation*

** BOOT basis – Establishment of Material Recovery Facility, Compost plant and developing Scientific Sanitary land fill.

The bid documents pertaining to proposed individual facility for Namakkal, Madurai, Venkatamangalam project and Coimbatore Corporation were analysed and the components of the projects as defined in the scope is presented for comparative purpose in the table 5.9. While looking into the table it is understood there were not much difference between Namakkal, Venkatamangalam and Madurai SWM projects whereas the Coimbatore Corporation’s project is having wide scope than the rest. In terms of cost estimates the Coimbatore Corporation estimate is higher followed by Madurai, and Namakkal.

### Table 2: Scope of Work of ISWM projects implemented in ULBs, Tamil Nadu

<table>
<thead>
<tr>
<th>Sl.No</th>
<th>Componets</th>
<th>Namakkal</th>
<th>Madurai</th>
<th>Venkatamangalam Project</th>
<th>Coimbatore</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Developing compost yard</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>
which about one third or two fourth of the total time it takes to execute the agreement. It is also important to highlight that the more civil works involved in the land fill site only. Delaying handing over the site will result in other issues such as cost escalation and so on. With the available data it is very difficult to decipher this issue.

Table 4: ISWM PPP projects Tipping Fee across ULBS, Tamil Nadu

<table>
<thead>
<tr>
<th>ULB</th>
<th>Transfer Station</th>
<th>Processing Plant</th>
<th>Landfill</th>
</tr>
</thead>
<tbody>
<tr>
<td>Namakkal Municipality</td>
<td>% (75)</td>
<td>(25)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Rs/MT 125</td>
<td>135</td>
<td></td>
</tr>
<tr>
<td>Madurai Corporation</td>
<td>% (75)</td>
<td>(25)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Rs/MT 110</td>
<td>350</td>
<td></td>
</tr>
<tr>
<td>Venkatamangalam Project*</td>
<td>% (80)</td>
<td>(20)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Rs/MT 30</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Coimbatore Corporation</td>
<td>% 100</td>
<td>(25)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Rs/MT 440</td>
<td>185</td>
<td>171.5</td>
</tr>
</tbody>
</table>

Note: % percentage of waste and Rs/MT is tipping fee

*Concession Agreement was terminated and new operator was identified with new technology for Venkatamangalam project

Tipping fee and assured quantity of waste is provided in the Table 5.11. It is interesting to note that for Coimbatore Corporation the Tipping fee is very high and this may be due to 4 transfer stations and 3 scientific closure of existing dump sites are in the project scope. And for Madurai Corporation is concerned the Quantity of waste to be handled is about 450 MT, it doesn’t have transfer station, and this project involves closure of only one site. Namakkal has added advantage that the 100 % source segregation is already achieved, extent and quantity of waste handled by this ULB is very less. In addition it also got 90 % of the project cost as grant from GOI and GoTN and ULBs is contribution is only 10%. Local operator already engaged in collection and transportation is the concessionaire.

1.5 Conclusion

It could be deduced from discussion that a systematic assessment of the PPP Projects in urban services in general and MSWM sector in particular. Further the case studies on the MSWM PPP projects across Urban Local Bodies in India revealed that the that the Tipping fee shall be base variable and a sustainable model which is also highlighted in the SWM po-

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Policy Documents, Municipal Administration and Water Supply, Government of Tamil Nadu. |

Ready Reckoner on Municipal Solid Waste Management for Urban Local Bodies, Commissionerate of Municipal Administration, Government of Tamil Nadu | Paul Shrivastava Source:, Environmental Technologies and Competitive Advan-


... tion paper [Goi, 2000], secondly consortium (joint Venture, Associations) shall be permitted for the integrated municipal solid waste management projects with relaxed qualification criteria and different set of criteria for various stages of project implementation, thirdly the investment risk is for the private player and it is 100 %. The project implementation got delayed in some projects due to labour unrest, land related issues. It is also felt by going through the literature, quantity generation is the base for PPP projects and effective and real-

istic base line quantification to be done which will reduce the risk for the private operator in particular sustainability of the project in general. The first set of MSWM projects implement-
ed in the State of Tamil Nadu and its performance in general is not scalable and replicable. The second set of PPP projects on Integrated Municipal Solid Waste Management Projects in Coimbatore and Madurai is very successful. With these find that this study further focus on developing a PPP project by taking Tambaram Municipality as the case study and for replicating elsewhere.