Who wins and who loses? Impact of privatization of municipal solid waste management service on stakeholders; Amritsar city, India

Kiran Sandhu
School of Planning
Guru Nanak Dev University
Amritsar, India
• “As the world hurtles toward its urban future, the amount of municipal solid waste one of the most important by-products of an urban lifestyle, is growing even faster than the rate of urbanization” (World Bank, 2012, p.ix).

(ISWA, 2012)
India’s urban population growth

![Urban Population Graph](image)

Source: Kundu, 2011, Census of India, 2011
India: growth of municipal solid waste

Source: computed from CBCB, 2000, CPCB, 2005, GOI, 2010
India’s municipal solid waste management scenerio

Technology Review, 2010
Landfill requirements

Source: Technology Review: 2010
# India’s privatization and municipal solid waste trajectory

<table>
<thead>
<tr>
<th>Year</th>
<th>Economic liberalization</th>
<th>Urban reforms - 74th constitutional amendment</th>
<th>The Surat Plague</th>
<th>J.L. Bajaj Committee Recommendations</th>
<th>Burman Committee Report</th>
<th>MSW Rules</th>
<th>JNNU RM</th>
<th>28 private sector participation projects approved under PPP mode</th>
</tr>
</thead>
</table>

MSW management by municipalities

PSP in MSW operations begin...

**Privatization Rationale/ assumption**

- Private delivery of municipal services as waste management leads to economic efficiency, social sustainability and better environmental management.
Research Question

• Can privatization of municipal solid waste services be seen as a vanguard of social sustainability, steeped in the faith that it stems positive spillovers on all fronts?

This research focuses on the impact on four stakeholders post privatization of municipal solid waste Management.

Informal waste sector

Municipal sanitation employees

Private company sanitation employees

Community
Methodology

- Thirty two semi-structured interviews involves a heterogeneous composition from across stakeholders.
- A purposive (non-proportional quota) sample of community based upon social-economic stratification.
- Documents and archival records.
- Direct observation.
Review of related literature and derivation of analytical framework


However...

Lack of empirical evidence/research into assessing the social implications

Social sustainability Indicators

<table>
<thead>
<tr>
<th>stakeholders</th>
<th>Impact Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Informal waste sector</td>
<td>Loss of employment and income</td>
</tr>
<tr>
<td>Public sector employees</td>
<td>Employee retrenchment and change in working conditions</td>
</tr>
<tr>
<td>Private sector employees</td>
<td>Working conditions and adherence to labour laws</td>
</tr>
<tr>
<td>Community</td>
<td>Distributive equity</td>
</tr>
</tbody>
</table>
Amritsar city context

- Metropolitan City, population 1.13 million (census 2011).
- Political capital & centre stage of Sikh religion
- Attracts tourists from all over the globe
Waste generation trends

**waste generation trends per capita**

- **Population (million):**
  - 2001: 1.08
  - 2011: 1.13
  - 2021: 1.48
  - 2031: 1.84

- **Per capita waste generation (kgs):**
  - 2001: 0.45
  - 2011: 0.49
  - 2021: 0.52
  - 2031: 0.6

**MSW tonnes/day**

- 2001: 489.11
- 2011: 631.22
- 2021: 786.29
- 2031: 1046.04

**MSW composition**

- **Short-term biodegradables:** 5%
- **Long-term biodegradables/combustibles:** 15%
- **Recyclables:** 16%
- **Inert:** 9%
- **Sanitary/others:** 57%
Municipal solid waste management prior to privatization

Improper disposal

Households/waste generators

Secondary storage

AMC

Unsegregated disposal at landfill/dumps

Ragpickers

Small/large scrap dealers

Recycling Units
### Move to Private Sector Participation

<table>
<thead>
<tr>
<th>Date</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>March 2006</td>
<td>AMC passes resolution for MSW management using PSP</td>
</tr>
<tr>
<td>June 2008</td>
<td>Preparation of DPR using a Private Consultant</td>
</tr>
<tr>
<td>July 2008</td>
<td>Publication of EOI</td>
</tr>
<tr>
<td>Sept 2008</td>
<td>Bidding and award to M/S Antony Waste Handling Cell Pvt Ltd (phase I) in PPP mode under JNNURM</td>
</tr>
<tr>
<td>Oct 2008</td>
<td>Contract signing</td>
</tr>
<tr>
<td>Feb 2009</td>
<td>MSW Operations begun</td>
</tr>
<tr>
<td>August 2012</td>
<td>Withdrawal of operations by the private company</td>
</tr>
<tr>
<td>Dec 2012</td>
<td>Unending quest by AMC for privatization...till date</td>
</tr>
</tbody>
</table>
Private Sector Participation in MSW Management
Privatization operations (feb 2009)

Private company → door to door Collection (HH) → Households/waste generators

Secondary storage

AMC

Walled city - all Operations

Street sweeping outside walled city

Collection & Transportation

Unsegregated disposal at landfill/dumps

Informal stakeholders

Ragpickers

Small/large scrap dealers

Recycling Units
IMPACTS ON STAKEHOLDERS; INFORMAL WASTE SECTOR
3000-3500 informal waste collectors estimated. All recycling takes places in informal sector.

W. Bengal, Bihar, Maharashtra

Stay Duration 1-30 years
HH size 6-7 persons
Majority close to BPL line (33.30INR)

- chronic rural poverty
- unskilled
- personal circumstances
## Impacts of privatization on waste picker livelihoods

<table>
<thead>
<tr>
<th>Before Privatization</th>
<th>After Privatization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Door to door access to waste recyclables</td>
<td>Waste pickers no longer had access to household waste, the primary source of recyclables resulting in loss of livelihoods</td>
</tr>
<tr>
<td>Cordial territorial route demarcations</td>
<td>Breach in territorial route demarcations resulting in competition, conflict and rupture in their social fabric enhancing inner tensions.</td>
</tr>
<tr>
<td>Segregation and recovery of recyclables in better quality conditions</td>
<td>Mixing and compaction of waste especially through compaction units of the private company rendered acute reduction of the quality of recyclables like plastic and paper leading to difficulties in segregation and further decline of incomes.</td>
</tr>
<tr>
<td>Access to secondary waste containers</td>
<td>Informal policing by private company staff to enhance waste quantity on which their profits depended (as the payment was tonnage based).</td>
</tr>
<tr>
<td>More possibilities of climbing up the economic ladder</td>
<td>No further possibility due to reduced access to waste coupled with larger competition amongst the waste pickers.</td>
</tr>
<tr>
<td>Customary right to waste</td>
<td>Right claimed by the private company till the disposal took place after weighing waste quantities at the landfill.</td>
</tr>
</tbody>
</table>
# Income loss post privatization

<table>
<thead>
<tr>
<th>Waste picker categories</th>
<th>Income before private operations began (average earnings/month in Rupees)</th>
<th>Income after private operations began (average earnings/month in Rupees)</th>
<th>Average decline (Rupees)</th>
<th>Average decline in %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waste pickers (landfill)</td>
<td>5500</td>
<td>4000</td>
<td>1500</td>
<td>27</td>
</tr>
<tr>
<td>Waste pickers (roadside and secondary bins)</td>
<td>5000</td>
<td>3500</td>
<td>1500</td>
<td>30</td>
</tr>
<tr>
<td>Waste pickers (households)</td>
<td>6000</td>
<td>2000</td>
<td>4000</td>
<td>60</td>
</tr>
<tr>
<td>Itinerant waste buyers</td>
<td>10,000</td>
<td>9000</td>
<td>1000</td>
<td>10</td>
</tr>
</tbody>
</table>
## Impact on Municipal sanitation workers

### Scale of social sustainability

<table>
<thead>
<tr>
<th>Scale</th>
<th>AMC sanitary workers</th>
</tr>
</thead>
</table>
| Low (1)  | - High retrenchment and layoffs  
            - Major adverse impact on income  
            - No absorption of contract municipal employees by private company.  
            - Adverse working conditions.  
            - Irrelevance of the sanitary union. |
| Medium (2) | - Some retrenchment/layoffs.  
                - Minor adverse impact on income  
                - Limited absorption of contract municipal employees by private company.  
                - Average working conditions.  
                - Limited role of the sanitary union. |
| High (3)  | - No retrenchment/ layoffs but follow the course of natural attrition.  
                - No adverse impact on income  
                - Absorption of a majority of contract municipal employees by private company.  
                - Optimal working conditions.  
                - Relevant role of the sanitary union. |
Implications for municipal sanitation employees

- Municipal Commissioner (1)
- Joint/Deputy Commissioner (1)
- Medical Officer of Health (1)
- Assistant Health Officer (1)
- Chief Sanitary Inspectors (3)
- Sanitary Inspectors (20)
- Sanitary Supervisors (40)
- Sanitary Workers (1360 Permanent, 1050 Contract based)

Impact on employee income
- Employee layoff/retrenchment
- Impact on sanitary union
- Working conditions
- Absorption by private company

Impacts:
- High
- Medium
- Low
- Status
## Implications for private company sanitation employees

### Scale of social sustainability

<table>
<thead>
<tr>
<th>Scale</th>
<th>Impacts on private company employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low (1)</td>
<td>• Poor employee wages and service benefits</td>
</tr>
<tr>
<td></td>
<td>• High labour turnover and downsizing</td>
</tr>
<tr>
<td></td>
<td>• Lack of provision of safety gear</td>
</tr>
<tr>
<td></td>
<td>• Adverse working conditions</td>
</tr>
<tr>
<td></td>
<td>• Unjustifiable termination procedures</td>
</tr>
<tr>
<td>Medium (2)</td>
<td>• Low employee wages and service benefits</td>
</tr>
<tr>
<td></td>
<td>• Some labour turnover and downsizing</td>
</tr>
<tr>
<td></td>
<td>• Some provision of safety gear</td>
</tr>
<tr>
<td></td>
<td>• Impact on working conditions</td>
</tr>
<tr>
<td></td>
<td>• Some adherence to termination procedures</td>
</tr>
<tr>
<td>High (3)</td>
<td>• Employee wages and service benefits as per labour laws</td>
</tr>
<tr>
<td></td>
<td>• Minimal labour turnover and downsizing</td>
</tr>
<tr>
<td></td>
<td>• Provision of safety gear</td>
</tr>
<tr>
<td></td>
<td>• Optimal working conditions</td>
</tr>
<tr>
<td></td>
<td>• Justifiable termination procedures</td>
</tr>
</tbody>
</table>
Implications for private company sanitation employees

Manager (1)

Deputy Manager (1)

Sanitary Supervisors (4)

Vehicle Drivers (88)

Vehicle Repair Mechanics (5)

Sanitary Workers (155)

Employee wages and service benefits

Justifiable termination procedures

Impact on working conditions

Provision of safety gear

Labour turnover and downsizing

Provision of safety gear

Impact on working conditions

Justifiable termination procedures

Labour turnover and downsizing

Employee wages and service benefits
Equitable access of service to the community

<table>
<thead>
<tr>
<th>Income category</th>
<th>No access to door to door service</th>
<th>Placement of secondary containers inaccessible from homes</th>
</tr>
</thead>
<tbody>
<tr>
<td>High income</td>
<td>6.5%</td>
<td>35.5%</td>
</tr>
<tr>
<td>Middle income</td>
<td>34.04%</td>
<td>32.6%</td>
</tr>
<tr>
<td>Low income</td>
<td>43.75%</td>
<td>65.9%</td>
</tr>
<tr>
<td>Economically weaker section</td>
<td>51.39%</td>
<td>81.3%</td>
</tr>
</tbody>
</table>
Combined scale of social sustainability

- Informal waste sector
- Municipal sanitation employees
- Private sanitation employees
- Community distributive equity

scale of social sustainability:
- Low
- Medium
- High
Conclusions

- Impacts are contextual and do not match wider beliefs surrounding privatization of waste services.

- Extremely adverse impacts on informal waste sector.

- Extremely difficult to retrench permanent municipal workers due to political compulsions. Contract workers may bear the brunt.

- Down the hierarchy, worker conditions in private sector decline, exploitation and blatant violation of labour laws and most cost cutting takes places in that category.

- Lack of distributive equity and drop in service according to income category.
Quest for viable interventions

- Informal waste sector- Integrating the informal waste sector- options.
- Municipal sanitation employees- Principle of natural attrition and absorption.
- Private sanitation employees- Enforcement of labour laws and inclusion in contractual details.
- Community-Distributive equity must be ensured through civil society support and monitoring by regulating authority.
All efforts to improve municipal solid waste management must be socially sustainable.

THANKS....