Comparison of bus services in Indian cities

- DTC Delhi
- BEST Mumbai
- PMPML Pune
- BMTC Bangalore
- MTC Chennai
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World class cities – whether it is New York, Singapore, London or Tokyo – invariably have extremely good public transport systems that its citizens are proud of. However, Par sar’s commuter-centric evaluation of the services offered by PMPML showed that it offered very poor service and fell far short of citizen expectations. PMPML received an overall ‘C’ grade and a poor score on all parameters¹.

In this report, we compare PMPML’s performance with bus services from four other Indian cities: BEST (Mumbai); MTC (Chennai); BMTC (Bangalore) and DTC (Delhi) to understand where PMPML stands in relation to other bus systems in India. We compare the services under three heads: Quality of Service, Operational Efficiency and Financial Performance. The comparison is based on data for 2009-10 using the latest “State Transport Undertakings: Profile and Performance” report from CIRT.

Quality of Service

QoS parameters capture the quality of service provided to a bus user and better scores typically indicate greater commuter willingness to use the service.

Table 1: Quality of Service

<table>
<thead>
<tr>
<th>Quality of Service</th>
<th>PMPML</th>
<th>Average</th>
<th>Best score</th>
<th>Best utility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regularity (% of operated km / planned km)</td>
<td>86.1</td>
<td>92.1</td>
<td>99.0</td>
<td>MTC</td>
</tr>
<tr>
<td>Network reach (bus stops / sq km)</td>
<td>1.6</td>
<td>1.9</td>
<td>2.7</td>
<td>BMTC</td>
</tr>
<tr>
<td>Frequency (no. of trips / no. of routes)</td>
<td>4.6</td>
<td>5.3</td>
<td>9.7</td>
<td>BEST</td>
</tr>
<tr>
<td>No. of buses / lakh of population</td>
<td>24.8</td>
<td>27.8</td>
<td>46.8</td>
<td>BMTC</td>
</tr>
<tr>
<td>Break down rate (per 10,000 effective km)</td>
<td>2.5</td>
<td>1.2</td>
<td>0.0</td>
<td>MTC</td>
</tr>
<tr>
<td>Average fare / km (Rs.)</td>
<td>1.0</td>
<td>0.7</td>
<td>0.4</td>
<td>MTC</td>
</tr>
</tbody>
</table>

Graph 1: PMPML's performance over the years

As can be seen, PMPML’s performance is below average on every parameter. Its services are unreliable as it has low regularity and high breakdown rates - more than twice the average breakdown rate for other cities. It has fewer buses, poorer frequency and fewer bus stops. Moreover, it also charges more than other cities. In contrast, MTC (Chennai) charges the least among these cities and also gets the best score for two other parameters. Clearly, something is seriously wrong with PMPML services and management.

Over the years, PMPML has added new buses to its fleet which has resulted in better performance on some parameters such as its regularity and number of buses per capita. However, strangely enough, in spite of adding new buses to its fleet, its performance on the breakdown parameter has actually deteriorated over these years.

Operational Efficiency

These parameters capture how well the utility manages its bus operations. A better score for these parameters would usually have a positive impact on Quality of Service.

Table 2: Operational Efficiency Parameters

<table>
<thead>
<tr>
<th>Operational Efficiency</th>
<th>PMPML score</th>
<th>Average score</th>
<th>Best score</th>
<th>Best utility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average age of buses (Years)</td>
<td>6.1</td>
<td>5.2</td>
<td>3.5</td>
<td>MTC</td>
</tr>
<tr>
<td>Fleet utilization (% of buses on road)</td>
<td>79.1</td>
<td>87.1</td>
<td>89.4</td>
<td>BEST³</td>
</tr>
<tr>
<td>Bus utilisation (km / bus / day)</td>
<td>231.5</td>
<td>227.2</td>
<td>308.4</td>
<td>MTC</td>
</tr>
<tr>
<td>Load factor (% of bus capacity occupied)</td>
<td>59.4</td>
<td>67.9</td>
<td>73.6</td>
<td>BEST⁴</td>
</tr>
<tr>
<td>Staff productivity (Staff / bus)</td>
<td>8.0</td>
<td>7.7</td>
<td>5.8</td>
<td>BMTC</td>
</tr>
</tbody>
</table>

Analysis

Once again, PMPML’s performance on most of these parameters is worse than the average. In fact, it is the worst performer in fleet utilisation and load factor categories. This helps to explain its poor performance in the QoS indicators. For example, PMPML possibly has a high breakdown rate and low regularity because its bus fleet is older. A poor load factor indicates that routes and trips are not planned properly and perhaps also that fares are too high. Low fleet utilization decreases revenue while high staff to bus ratio increases costs.

Financial Performance

Though making profits should not be the primary objective of a public bus service, its financial performance measured as the profit – the difference between revenue and cost – per effective kilometre gives an indication of the bus utility’s ability to manage its finances effectively.

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³ MTC and BMTC have a higher fleet utilization ratio (92.1% and 93.7% respectively) but BEST has been considered the best since it is felt that about 10% of the fleet should be available for backup and emergency use.

⁴ MTC has a higher load factor 80.22 but it is felt that such a high average load factor implies extreme crowding at peak hours, which is corroborated by informal evidence.
**Analysis**

BMTC is the only bus utility which makes a profit. BEST and PMPML earn the highest revenue per kilometre, but both also incur higher costs and hence end up making a loss. Interestingly, PMPML earns the highest non-fare revenue (advertisements, rent, grants etc) per effective km (about Rs. 8), which is more than double the average earned by the other bus services compared.

DTC incurs the highest cost – Rs. 108 per effective km – among the cities studied. This is about twice the next highest city. This is primarily due to a very high interest payment burden (about 50% of the total cost) probably due to loans taken to finance some large asset purchase. Of the other cities, BEST and PMPML have the highest cost per effective km.

**Conclusions**

It is clear that PMPML’s performance is considerably worse even in comparison with other bus utilities in the country. This shows that there is a lot of room for improvement in PMPML’s performance – which would directly contribute to a much better transport scenario for Pune and Pimpri-Chinchwad.

The responsibility for improving its performance can be divided between the current management of PMPML and the leadership at the city and state levels. The current PMPML management, even with its limited capacity and budget, can still bring about significant improvements in PMPML performance through small initiatives such as proper passenger information, better driver training and better bus maintenance. These improvements need not wait for great help from the city and the state.

However, there is also an urgent need for administrative and political leadership at the city and state levels to go beyond paying lip service to the need for good public transport. They need to back up their statements with concrete action on three fronts: a) Empower PMPML with a good and capable management and give them the freedom to restructure it to improve its performance, b) Support the new management financially to help the turn-around and c) Ensure that the support is conditional upon gradual but definite improvement in measurable performance parameters.

We recommend that a detailed action plan for the improvement of PMPML should be created at the earliest. This action plan should define a road map towards a more efficient and effective PMPML, and clearly identify areas of improvement, a financial plan and a timeline for achieving certain milestones. Without such action, Pune cannot even expect to be a good, liveable city, leave alone a world class city.

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5 Revenues include subsidies given to the bus services by the respective Governments, but these form a small portion of the total revenue.