

OPERATIONAL EFFICIENCY OF BUS SERVICE OF THANE MUNICIPAL TRANSPORT UNDERTAKING (TMTU) OF THE THANE MUNICIPAL CORPORATION: A STUDY

Dr. Deepak Verma*
Pragati Santosh Lot**

ABSTRACT

Thane's population has risen dramatically in the recent two decades, from 0.8 million in 1991 to 1.26 million today. The TMTU (Thane Municipal Transport Undertaking) buses are Thane's only source of intra-city public transportation. The TMTU began operations with a small fleet of 28 buses, which has since grown to 264. However, in comparison to population increase, public transportation has grown slowly. According to the guideline of 300 buses per million inhabitants, the TMTU should have more than 380 buses on the road. The TMTU's inability to provide enough public transportation has resulted in a rapid increase in privately owned vehicles. To address the current scenario, significant investments in public transportation operations are required. Furthermore, for the previous few years, the TMTU has constantly suffered significant losses. Since its beginning, overall expenditure has climbed by nearly 27 times, while revenue has increased by 24 times.

KEYWORDS: TMTU, Intra-City Public Transportation, Revenue, Capital Grants.

Introduction

There is the possibility for improved operational performance and, as a result, a reduction in losses. The TMTU has been unable to produce sufficient funds for capital expenses or rolling stock replacement due to recent continuous losses. The TMTU's ability to deliver efficient public transportation services in Thane has been significantly hampered as a result of the resulting financial crisis. This has major ramifications in terms of the likelihood of the Thane Municipal Corporation's capital grants being used to fund fleet augmentation in the future.

Subsidies in Public Transport Provisioning

Decision-makers would be better equipped to make informed decisions concerning tariffs, service levels, capital investments, and overall transportation policies if annual subsidies in public transportation providing were assessed. For the fiscal year 2002/03, the entire annual cost incurred by the TMTU was estimated to be at 525 million rupees. The TMTU's entire annual revenue in 2002/03 was around Rs. 448 million. The majority of this revenue came from the sale of tickets and concession passes, known as Traffic Earnings, with Non-Traffic Earnings accounting for Rs. 5.31 million. The TMTU's operational performance has the potential to be improved, resulting in fewer costs and better revenues. Higher TMTU bus capacity utilisation should result in a higher number of effective kilometres and, as a result, a lower fixed cost per unit of travel. Similarly, a higher Load Factor and higher capacity utilisation should result in more passengers per kilometre and hence more kilometres, and thus more income. Fuel efficiency improvements would result in cheaper expenses due to reduced fuel use. As a result, it is suggested that the TMTU increase its capital usage to 250 kilometres per bus per day, with at

* HOD & Associate Professor of Commerce, Chhatrapati Shivaji Maharaj University, Panvel, Navi Mumbai, Maharashtra, India.

** Research Scholar, Chhatrapati Shivaji Maharaj University, Panvel, Navi Mumbai, Maharashtra, India.

least 95 percent of its fleet on the road every day. Furthermore, on average, at least 95% of the seating capacity should be utilised. Finally, maintenance procedures should be enhanced so that diesel consumption is at least 4.5 kmpl (kilometres per litre). The TMTU would be able to produce a surplus of Rs. 87 million if these were improved. In the last section, we go over the ways for obtaining these efficiency gains. Furthermore, employee remuneration accounts for about 35% of the overall costs in the TMTU and is by far the most expensive component.

Salaries in the traffic department, which includes drivers and conductors, account for more than a quarter of the total. As a result, increasing employee productivity may be the single most important component in cost reduction. The TMTU's actual workforce requirements are determined by the amount of buses they operate. The TMTU's staff to bus ratio for drivers, conductors, administrative people, and traffic supervisors was compared to that of other urban SRTUs in order to identify the exact number of employees required and the amount that is likely to be in excess. According to this analysis, the TMTU would have a surplus of 501 conductors and 347 drivers. A surplus of 88 repairs and maintenance workers, 16 administrative workers, and 119 traffic supervisors would also be available. Either locate areas where the surplus could be redeployed or offer them a lucrative VRS.

Subsidy Beneficiaries and Fare Structure

The TMTU has a telescopic fare structure with many stages, meaning that the fare per kilometre decreases as the distance travelled increases. Monthly pass rates are calculated assuming that a person makes two journeys per day and that the pass is utilised for 26 days per month. Commuters in certain groups are entitled to discounted fares. Students, physically handicapped commuters, freedom fighters, senior folks, and police officers are among those targeted. In terms of the overall tariff, trips longer than 5 kilometres generate more revenue for the TMTU in terms of fares than they cost. Subsidized commuters, students, freedom fighters, police officers, physically challenged people, and senior residents, on the other hand, place a net cost burden on the TMTU.

Reducing Subsidies

As the preceding discussion has shown, subsidy reduction is attainable through increased efficiency and better subsidy targeting. This would minimize the amount of funding necessary by the TMTU to expand public transportation services in the city.

Improved Vehicle Maintenance

Maintenance plans are determined by the service provider's operating goals and policies. Intensive vehicle maintenance comes at a higher expense, but it results in better service in terms of near-zero breakdown rates, punctuality, and dependability. Vehicle maintenance that is minimal or non-existent, on the other hand, involves less investment but results in a decrease in load factor and revenue. Due to a lack of regulatory pressure and financial constraints, the TMTU is not willing to provide high-quality service. The design of a strategy, as well as its operational objectives, goals, and policies, that balance cost reduction with revenue generation, is the first step toward increasing operational performance and, as a result, lowering operating expenses. Selection of spares and tyres, bus replacement policy, and bus selection policy are three major areas in which the TMTU may minimise operating expenses and enhance fuel efficiency.

Route Rationalization

The efficiency of public buses can be improved by analysing the spatio-temporal diurnal fluctuations in demand for public transportation in Thane. In this case, a route rationalisation exercise would be beneficial. This experiment would identify existing routes, route lengths, and daily temporal fluctuations in traffic on each route, buses that travel each route, their frequency, and the number of passengers per trip per route. This exercise would reveal the current demand-supply gap as well as profitable routes. The TMTU could use the knowledge gathered from this exercise to improve bus use. The TMTU has adequate jurisdiction under the Motor Vehicles Act of 1988 to conduct such an exercise and advise the STA. Because Thane is a circular city, a star-and-hub route network plan works well.

Tariff Policy

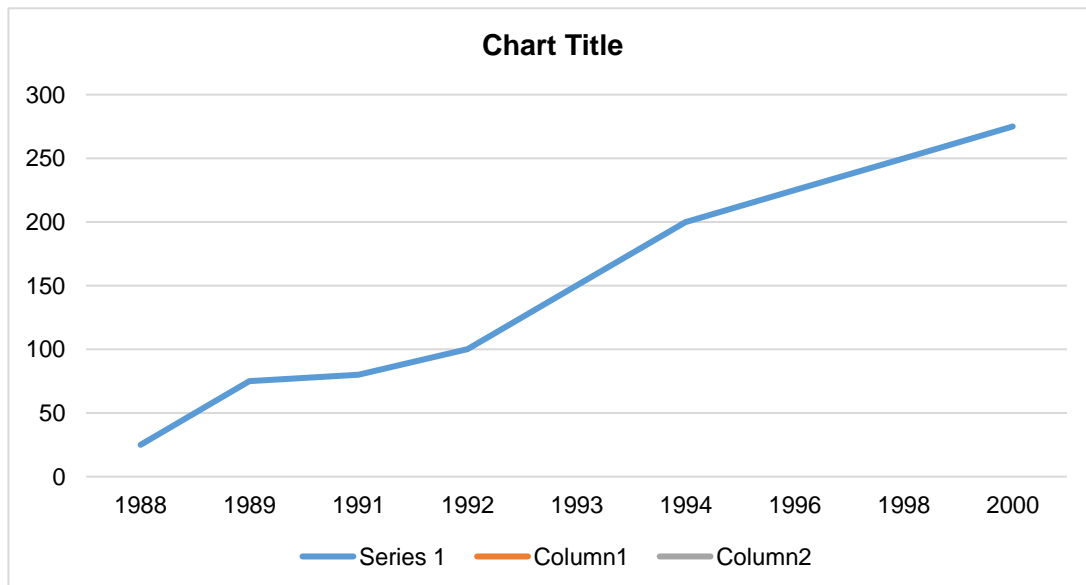
Tariff determination is critical to fostering a dynamic and long-term economic environment in the transportation sector. Tariff determination is based on the premise that pricing should lead to the most optimal level of investment, operation, and demand in the sector. There could be a clash between the various goals. For example, boosting the use of public transportation and addressing social sustainability

issues would necessitate keeping fees low, but efficiency improvements and viability difficulties might necessitate periodic fare rises. To achieve a long-term result, regulatory bodies in this area must strike a compromise between these goals. Similarly, public transportation operations may need to be subsidised to guarantee environmental and social sustainability. Tariffs should also give incentives for improving efficiency in order to lower operating costs. External costs such as congestion and pollution must also be factored into the fare calculation process to reflect the genuine economic worth of the service provided. Because the inclusion of unexpected beneficiaries diminishes the effectiveness of the subsidy and raises the burden on the taxpayer, the necessity for a subsidy should be assessed rather than presumed to exist. Wherever the government wishes to provide subsidised public transportation to a certain group of consumers, it is advised that the allocation be made clearly by the exchequer. Finally, fare changes should be systematic and rationalised. Both the passenger and the operator should consider such a process as rational, transparent, and acceptable.

Institutional Structure of Thane Municipal Transport Undertaking

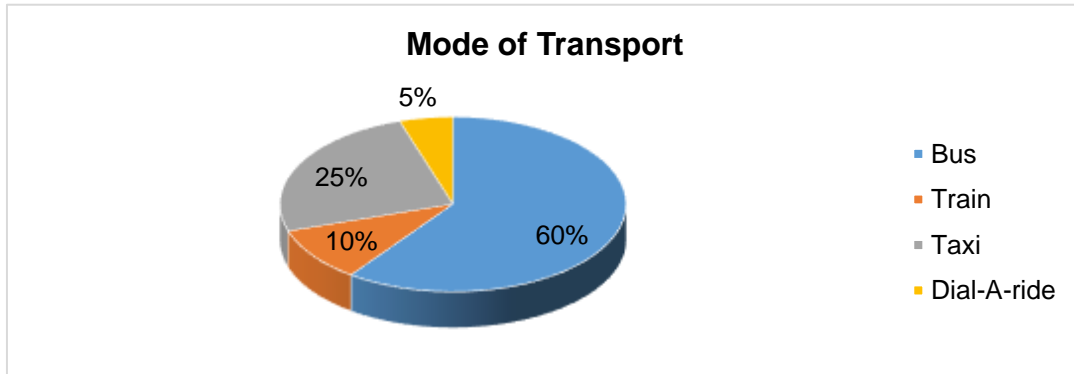
The TMTU is controlled by the terms of the BMC Act, 1949, which apply to all municipal corporations in Maharashtra, with the exception of Mumbai. This is the statute that allows the TMTU to be formed. It enables municipal corporations to establish public transportation companies and operate them in accordance with the Motor Vehicles Act of 1988. The TMC is mandated by this Act to establish or acquire a municipal transport business with the goal of providing mass transportation in Thane. The Transport Committee, which consists of 13 members, is the TMTU's major decision-making body, with one place designated ex-officio for the Chairman of the Thane Municipal Corporation's Standing Committee. The TMC appoints all of the remaining 12 members. They can be elected councillors or professionals in the fields of urban public transportation, administration, transportation, engineering, industrial, commercial, financial, and/or labour. Administration, traffic, and workshop are the three departments that make up the TMTU. The TMTU is managed by the Transport Manager, who is overseen by the Transport Committee and the TMC. The Transport Manager is responsible for ensuring that the TMTU is maintained, operated, administered, and developed in an inexpensive and effective manner. The Transport Manager is also authorised to acquire, sell, rent, or lease any immovable or moveable properties owned by the TMC but operated by the TMTU, with consent from the Transport Committee. The TMC finances the TMTU, which is a subsidiary of the TMC, if sufficient revenue is not generated to cover expenses. The Transportation Committee sets all fare adjustments and the applicability of leviable charges, subject to state government norms and regulations.

Growth in Total Fleet Strength of Buses operated by Thane Municipal Transport Undertaking



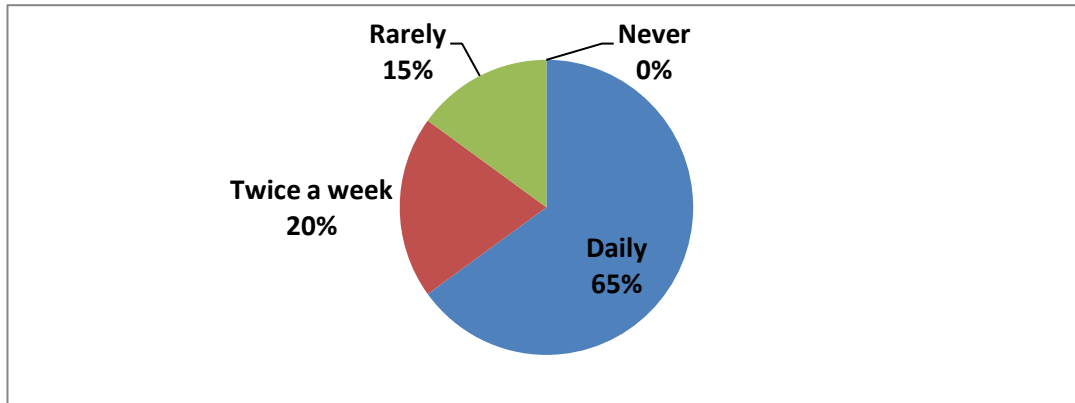
Source. TMTU (2002)

What kind of public transportation is available near where you live?



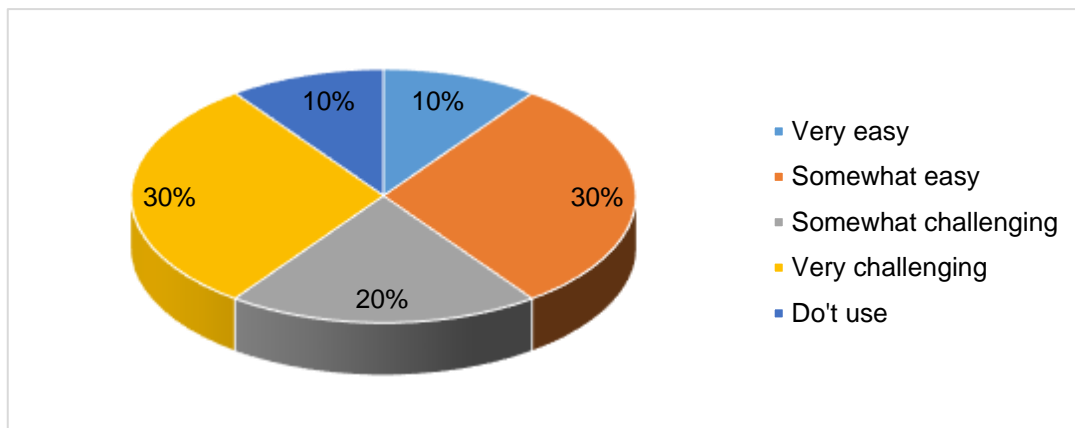
Most of the people use bus as a preferred mode of public transport that is 60% and only 5% opt for a dial-in-taxi in Thane Municipal Corporation.

How often do you ride the bus or use public transportation?



65% of the population use public transport on daily basis to commute, 20% use twice a week and there are 0% population who say they never travel by public transport, so we can conclude that on an average people do use public transport to commute in Thane Municipal Corporation.

Rate the ease of using Bus Service



Majority of population that is approximately 30% find it comparatively easy to travel by public transport in Thane Municipal Corporation. However, 30% people find it very challenging as well to commute by public transport. So, all in all we can say that it's a mixed response towards the use of public transport in Thane Municipal Corporation.

Conclusion

An examination of Thane's public transportation systems finds that there is a lot of room for improvement. The public transportation operator's physical and financial performance in Thane has deteriorated over time. This has had an impact on the proportion of people who use public transportation to meet their travel needs in the city. The TMTU has been unable to produce sufficient funds for capital expenses or rolling stock replacement due to recent continuous losses. The TMTU's ability to provide effective public transportation in Thane has been significantly hampered as a result of the resulting financial crisis. This has been exacerbated by the TMC's increasing unwillingness to offer grants, resulting in a vicious cycle of continual losses, insufficient cash for capital expenses, and bad fleet management, which, in turn, leads to poor operational performance, resulting in even bigger losses.

References

1. http://pdf.usaid.gov/pdf_docs/pnaea753.pdf
2. https://eprocurement.synise.com/etender/secure/rfqupload/3065_additional_1.1.pdf
3. <http://home.iitk.ac.in/~sanjay/ecoprofit.pdf>
4. https://morth.nic.in/sites/default/files/Review_2011_2012.pdf
5. <https://www.scirp.org/journal/paperinformation.aspx?paperid=80499>
6. https://en.wikipedia.org/wiki/Thane_Municipal_Transport
7. <https://www.igi-global.com/viewtitle.aspx?TitleId=93089>
8. <https://cpcb.nic.in/Actionplan/Thane.pdf>

