

Managing the problems of commuting in Mumbai city

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Abstract

Mumbai has a population of over 12 million people. It has a mass transit (trains and buses), all forms of private transport and auto rickshaws and taxis – that serve an important role in the transportation system of the city. Mumbaikars face many problems. The major contributing factor to these problems is the growing population. This study has employed a combination of primary data and secondary desk research. The Primary data was collected with the help of a questionnaire administered to those who regularly travel almost every day.

Keywords: congestion, traffic, commuters, problems

1. Introduction

Mumbai is one of the most populated cities in the world. Mumbai is roughly 1 % of the Indian market. Mumbai has a population of over 12 million people; Mumbai has a mass transit (trains and buses), all forms of private transport and auto rickshaws and taxis – that serve an important role in the transportation system of the city. Mumbaikars face many problems on a daily basis such as housing, expensive health facilities, scarcity of open space, water supply, crowded public transport and heavy traffic on roads – especially during rush hours. The major contributing factor to these problems is the growing population.

This project focuses on the problems faced by the residents of Mumbai while commuting with the help of a survey. The analysis of the survey helps to draw conclusions which serve as an eye opener for providing better facilities to the society.

2. Traffic & transportation

There is no scarcity of transportation options in Mumbai. A thick network of roads encompasses the city as well as three train lines, buses, taxis and auto rickshaws. Auto-rickshaws, by law, are relegated to Suburban Mumbai, with Bandra and Sion being the southernmost neighborhoods where auto-rickshaws can ply, while the northern boundaries of operation are the limits of the Mumbai Metropolitan Region (MMR). The road network runs mostly north to south with smaller roads connecting along the east and west. There are three major highways: the Western Express Highway, the Eastern Express Highway and the Sion-Panvel Highway. According to a Road Network Inventory Analysis done in the CTS, 47 percent of roads in Greater Mumbai have “good” pavement condition (over satisfactory or poor). However, there are many old and narrow streets throughout the city that suffer from a lack of maintenance and traffic and parking enforcement.

3. Problems faced by commuters

As per the oral interviews taken by this researcher, the following problems are faced by the commuters in Mumbai:

1. Overcrowding in buses, autos, taxis, trains, subways, pavements etc. Due to over-crowding, the commuters travel into jam packed compartments most of them standing. At times they get into any compartment where

ever they can find an inch of space. As around 22 million passengers travel daily it becomes a big problem to nab ticketless travelers and the Indian railways and the government loses a big chunk of their income due to this.

2. Frequency of buses, autos, taxis and trains is very less in proportion to the commuters travelling.
3. During the rainy season, there is water logging on train tracks and roads making it nearly impossible for trains, buses and taxis to run.
4. The seats in cabs, buses and trains are either broken or not comfortable making it difficult for the commuters to travel on a daily basis.
5. Everyday cases of snatching, robberies, molestation and pick pocketing have created a menace for the commuters as it results in loss of life and property.
6. No tight security on railway stations resulting in people crossing the railway lines without using the skywalks. Crossing the railway tracks and standing on the foot boards leads many accidents.
7. Toilets and washrooms in the railway stations are seldom kept clean. There are insufficient facilities particularly for the ladies travelers.
8. Traffic jams on roads due to congestion is one of the prime problems faced leading to time delays.
9. Rash driving by bus and taxi drivers causing accidents. It leads to loss of life and property. Also it creates a sense of fear amongst the commuters. 10 people die every day in Mumbai as a result of accidents.
10. Inadequate infrastructure leading to derailment of trains. Occasionally the indicators on the platforms do not function and display the time table and it results in a lot of inconvenience to the commuters.
11. Electrocution is also one of the major problems faced while commuting in Mumbai. Due to overcrowding in trains, people sit on the roof of the trains. Also after the conversion of Mumbai local railway lines from DC (direct current) to AC (alternating current), it has become even more dangerous to travel on the roof of the trains.
12. People get hit with the electric poles while leaning out of the trains due to overcrowding. As a result they lose their lives.
13. Mechanical problems and depreciation of the parts used in

trains, buses and cabs become obsolete due to the daily usage of the old parts. Overheated axle bearings cause derailments and break failures leading to accidents.

14. Natural calamities like floods and earthquakes can destroy the tracks and make them treacherous. When curves block the drivers view ahead, collisions with slips are hard to avoid.
15. Accidents also happen at the level crossings where the roads intersect the railway lines. Speeding, not following procedures, missing or ignoring signals, falling asleep and drunkenness lead to error of judgment causing accidents.

4. Research methodology

This study has employed a combination of primary data and secondary desk research. The Primary data was collected with the help of a questionnaire administered to those who regularly travel almost every day. 50 of the usable forms were finally selected for the purpose of the analysis. The secondary data collected with the help of newspaper articles and internet. The suggestions and recommendations by commuters which get published in the newspapers were also considered for the purpose of this study to portray the reality.

Summary table

Question	Most Popular Answer	Inference
Which means of transport is used the most by you?	Local Train	Train is the most convenient mode of transport.
How often do you commute in Mumbai?	Everyday	Frequency of people travelling is more on a daily basis.
How satisfied are you with the facilities provided to commute?	Partially satisfied	Better facilities should be provided to the commuters.
Have you ever been a victim to any kind of mishap while commuting in Mumbai? If yes, then which one?	Snatching, robberies, Pick pocketing, molesting	Safety measures should be undertaken.
How safe do you feel while commuting in Mumbai?	Safe during the day time	Tight security at night for the safety of the commuters
Are the bus stands or railway stations kept clean?	No	Stronger implementation of rules should be done to make bus stands or railway stations clean.
How often do you get to sit while you are in a bus, auto, taxi or train?	3-4 times	Frequency of trains, buses and cabs should be increased.
What is your weekly expenditure on travelling?	Rs200-500	Travelling should be made affordable for all the sections of the society.

Detailed analysis and inferences

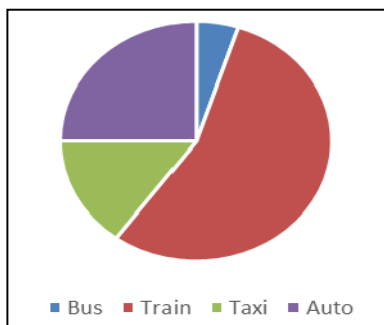


Fig 1: The most commonly used means of public transport

Railways are the lifeline of Mumbai. It is the oldest and the cheapest way to commute. That is why, 55% of the people commute by trains. In fact the frequency of trains is more as compared to the other means of transport. Also the fastest way to commute in Mumbai is by trains as train traffic is less than the congestion on roads. Trains run on electricity which helps in pollution control.

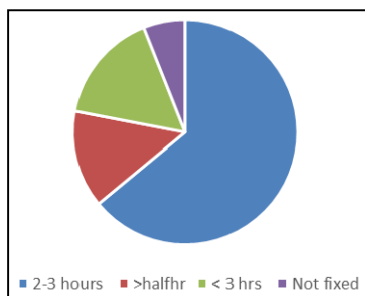


Fig 2: Hours spent commuting daily

Mumbai is a city which never sleeps. It is found that majority of the respondents spend 2 to 3 hours on a daily basis commuting to the place of work. So even have to travel more than 3 hours a day. Since Mumbai is the financial capital of India, the work load of people is directly proportional to their travelling needs. Hence the problems faced by the commuters should be attended at the earliest by the government for the welfare of the society.

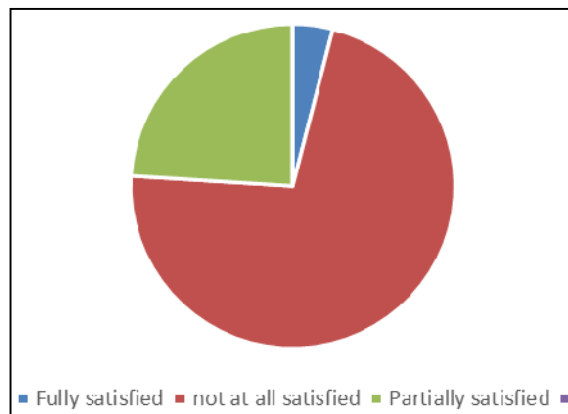


Fig 3: Satisfaction level with the facilities to commute

An absolute majority of commuters are not at all satisfied with the facilities provided to commute. 24% people are partially satisfied. The main reason behind the dissatisfaction among the majority is that the facilities provided for commuting are not enough for the increasing population. Alternative sources like metros, monorails should be developed in large numbers to accommodate the increasing population.

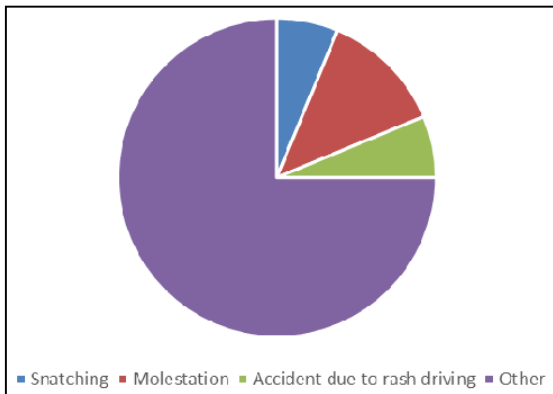


Fig 4: whether any commuter has ever been a victim to any kind of mishap while commuting in Mumbai and the type

Safety is the prime concern while travelling in Mumbai. Hence the commuters should be made aware of all the situations by providing education. Also there should be tight security on railway stations; bus stands etc. to avoid mishaps. Commuters should not be allowed to cross the railway lines without using the skywalks as this can result in immediate death.

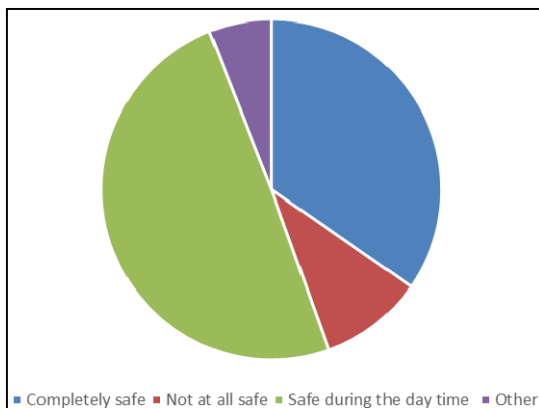


Fig 5: Whether commuters feel safe while commuting in Mumbai

Majority of the commuters do not feel safe while travelling especially during the night time. This is due to lack of tight security on railway stations, bus stands, roads etc. That is why it is important for the government to solve these problems at the earliest.

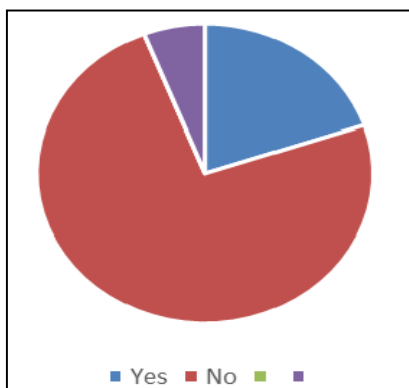


Fig 6: Perception whether the bus stands or railway stations are kept clean

78.9% of the people are not satisfied with the cleanliness maintained on the stations. People litter and spit on the train tracks and roads. According to the Swatch Bharat Abhiyaan, it is necessary to maintain cleanliness at public places. Hence more dustbins should be installed and provision of clean toilets should be made.

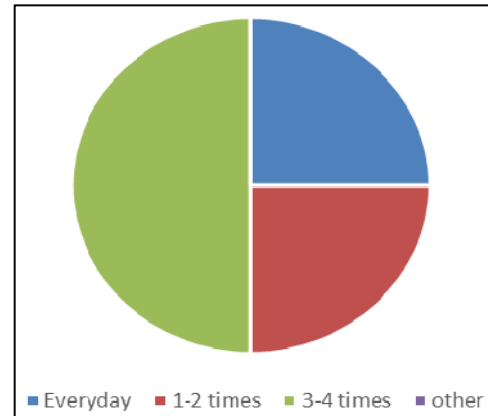


Fig 7: How often commuters get a place to sit do you sit while in a bus or train

Most people are satisfied with the seating facilities provided. Commuters get to sit 3-4 times which is an improvement as compared to the situation some years ago. But to accommodate the increasing population, it is important to increase the number of trains, autos, taxis, metros and monorails.

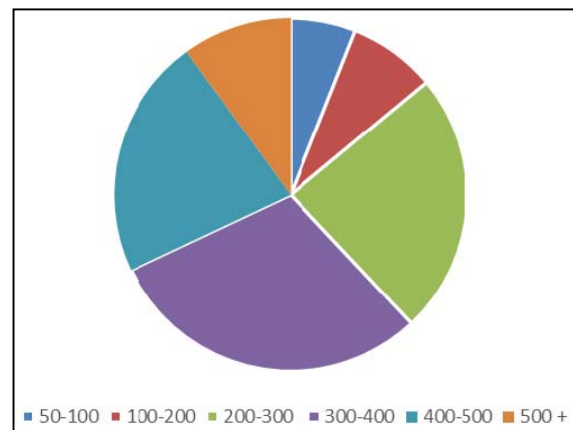


Fig 8: Weekly expenditure on travelling

Most commuters spend Rs 200- 500 on travelling in a week. This is affordable for the middle class but for the people living below the poverty line, it becomes really difficult to spend such an amount. Hence the price of the tickets should be reduced so that they become affordable to all sections of the society.

5. Suggestions and recommendations

5.1 Applying TRIZ to Solve Mumbai’s Transportation Problem

The Theory of Inventive Problem Solving (TRIZ) can help solve the woes faced by commuters in Mumbai to a large extent. The problem is with commuting and hence we should avoid the wastage of time

This physical contradiction can be solved using TRIZ separation principles. There needs to be proper partitions in time, location and conditions.

This can be done by

- Relocating offices
- Setting up virtual offices using existing IT facilities
- letting people work from their residences
- making companies shift from Southern Mumbai to other locations
- offices could be made to work in shifts
- car pooling
- Company buses.

5.2 Dirty toilets

A majority of people find it difficult to use the public facility because of bad hygiene and odour. Sensors could be put on the flush and putting mesh flooring could solve these problems

5.3 Littering

A big issue is littering, water retention and rusting of bins. Chutes could be modeled for extra space. Water stagnation and dirty smell could be tackled by installing wire mesh.

5.4 Track deaths

Proper barricading is required. Public information campaigns could be intensified. Alarms could announce the coming of trains.

5.5 Strict Policing

This is the most unpopular of all. The traffic police should strengthen their patrol and strictly enforce the rules.

5.6 Pavements

Hawkers are not to use public pavements and create a nuisance. This would stop people from walking on the roads and speed up the movement of traffic.

5.7 Transit Terminals

No commercial vehicle should be allowed inside the city limits during busy hours. These vehicles can park themselves at the entry points and then enter the city in quieter hours.

6. Conclusion

The financial capital of India, Mumbai has its own travel problems faced by the commuters daily. Sound planning, fairly disciplined citizen population and efficient management have helped to control the accident rate in spite of a very heavy travel count, the highest in the country. Also the hurdles faced by the commuters can be reduced with their own cooperation. Most of the accidents are due to ignorance, carelessness, flouting of set norms, and drunken driving and over speeding. A loss of an able bodied and/or learned person is not a loss to his/her own family but also to the nation.

We need to undertake a comprehensive awareness campaign to instill discipline in the people at the young age itself. Right from the school days the children should be taught travel safety and the reasons why they need to be followed without carelessness. Programs on TV channels, radio, live street plays, skits on railway platforms, distributing brochures and booklets to instill these values in the grown up people too. The educated children can also be made to contribute in teaching the people about the safety measures to be taken while

travelling and how to fight the obstacles faced while commuting in Mumbai. Past experience shows that a concentrated effort in such a constructive direction always achieves immediate results. All Mumbaikars should help earn a pride of place for AAMCHI MUMBAI among megacities as a safe and a disciplined metropolis.

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