

THE TAXI AS A DEMAND MANAGEMENT TOOL IN MUMBAI, INDIA

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Introduction:

Mumbai on the West coast of India is the commercial capital of India. It started as 7 small islands, and the intervening sea was gradually reclaimed over the centuries to slowly make it one large land mass. The Island City has further grown over the years with several suburbs and extended suburbs being added to it. Mumbai today has a huge catchment area that feeds on the City, and the area is divided into the Island City, where the population is more or less stagnant, the boundary of the Municipal Corporation of Greater Mumbai, and the Mumbai Metropolitan Region. The areas and populations of these portions are as shown in Slide 4. The Metropolitan Region extends into the mainland and we are now looking to connect the Island with the Mainland through a bridge – the Trans Harbour Bridge

Existing Transport Scenario:

The growth of vehicles in the city has been as high as 9% per annum, but the rate of growth of road lengths has been almost stagnant. We have about 300 new cars added to Mumbai's roads every day, with 1 car for every 1.92 m of road, and the congestion is extremely high. But despite this, Mumbai has a very high ratio of mass transportation users: 42% use buses, while 46% use suburban trains. Only 7% use cars and 5 % use taxis: Taxis & cars account for over 92% of the vehicles on the road, although they carry only 12% of the traveling public; whereas buses account only for 1% of the vehicles, although they carry over 46% of the commuters. It is this 12% therefore that is responsible for the congestion on the roads. The average trip length by bus is 6 Kms, by train is 27 kms, and by car 20 kms. Moreover, the average occupancy of cars is only 1.8 persons, which shows gross under-utilisation of available capacity

Parking demand is very high, and almost all parking is met by on- street parking. Most of our streets are 2-3 lanes wide, so this means that 30-50% of our roadway capacity is lost to parking. Almost all of this is free parking, and where it is charged, it is a nominal Rs 5.00 (about 12 cents US) per hour. There is no deterrent to using the car and leaving it for several hours, occupying valuable public space. Enforcement is also poor, because of limited man

power, so cars often double or triple park, with impunity. Where this causes enough congestion, the footpaths have been cut away to accommodate more parking demand. We have very poor pedestrian facilities in the city & its regions.

Almost 74% of the cars are chauffeur driven, to help the owners cope with the stress of driving to work. An average car trip to work takes about 1.5 to 2 hours. The owner converts the interior of his car into a mobile office, with his cell phone and lap top, making good use of the time spent in traffic. The cost of the journey, including the added cost of the driver is thus worth it, the more so as the parking charges are negligible. An additional responsibility of the drivers is to keep the car in a state of continuous motion, if he doesn't find a parking space. Despite this, a recent study found that car occupancy in Mumbai is as low as 1.8 persons.

Peak traffic starts at about 08.30 am, and congestion levels are so high that the morning peak runs into the afternoon peak, which in turn runs into the evening peak, which finally ends only around 9.30 – 10.00 pm. But traffic in Mumbai continues all through the night.

On the railways, we have 2 main corridors that run along the West and the East Coast, which are actually the lifelines of Mumbai. The average loading on these trains is 16 persons per square meter, with a 9-car rake carrying about 5000 persons against its rated capacity of 1800 persons. Therefore, those who can afford it, get out and use their cars instead. These are generally the First Class passengers, and therefore the number of cars is increasing. This in turn brings down the speeds of the buses, and we are trapped in a vicious cycle. Journey speeds are as low as 15 kmph, and pollution levels are very high. Air-conditioning becomes a must, as you may end up with an asthma attack otherwise on a long car trip

Role of taxis:

Taxis have always played a very important role in the transport scenario of Mumbai. At a time when car ownership was highly restricted, the taxi provided a means of personalized transport to those who did not own a car. The cost of travel by taxi has always been fairly low, and so this mode is used by a large segment of people – from the trades-people carrying their goods from the wholesale market to the retail place, fish mongers and vegetable vendors

carrying their produce, to the rushed commuter, and also school children. The taxi has always been a very safe mode here and very often a small group of school children pool to use the taxi every day to and from school. A contract is entered into with the driver, and he comes every day at the appointed time to ferry the children. It is also used very safely by individual school children. This mode is used largely for social and recreational trips, as car ownership has only recently been on the increase in India. Taxis can be hailed anywhere on the streets, and can be safely used even very late into the evening, in all parts of the city. A very popular route is between the airport and the city, as the airport is not well connected by any mass transportation mode, except the buses, and luggage is not permitted in the city buses.

Taxis have served to connect commuters over the 'last mile' between the train station and their homes/ offices. Additionally, as a large number of commuters from the stations have the same destinations, there is an authorized 'Shared Taxi' service that operates between the stations and fixed points in the various CBDs, ferrying a full cab load of passengers as soon as it is full: this normally takes only a few seconds in the peak hours. Each passenger pays a fixed amount to the taxi driver, which is profitable all around. During peak hours, therefore, it is almost impossible to hail a taxi on the road. Mumbai today has about 45,000 taxis, but during peak hours, there isn't one to be had!

Taxis also serve as the preferred mode for business trips. This is because parking has always been a problem in Mumbai, and if you get a parking space in the morning, then you don't want to give it up until the end of the day. And if you haven't brought your car downtown, then it is an excellent mode for a business trip.

Social and recreational trips to the cinema and the theater also find the taxi a very convenient mode, and are used by all sections of society. The busy housewife almost always uses the taxi for her shopping trips, rather than try to find a parking space close to each shop she has to visit. All hospitals in Mumbai have a taxi stand attached to it, and again, from the very poor to the rich use this mode to access health facilities.

However, over the decades, the taxi has become old and dilapidated, and quite disreputable. All the taxis we have are of a very old model of Fiat – and this model has been out of production for the last 30 years or so: with the result that these vehicles are in a terribly

shabby state, poorly maintained with unauthorized spares, and many of them are in such bad condition that they cannot negotiate the steep slopes of Mumbai's hills. The owners are caught in a dead end, and are barely able to make ends meet – so that they themselves are in a shabby condition- in shabby clothes and a rough manner. All these taxis have mechanical meters, which are very often tampered with, and fare conversion tables are also not the authorized ones, so that passengers very often are left with a sense of being cheated on the ride. The net result is that the taxi in general has become a pathetic vehicle, shunned by the upper class residents and tourists, and used largely by the lower and middle class.

We had 55,000 public taxis: this number was frozen sometime in the 1990s, and no new taxi licenses were issued. However, in the last few years, because of environmental considerations, their number has now been reduced by about 10,000. We have 7,99,000 vehicles on the road, out of which 45,000 are public taxis.

Over the years, as a result of the perceived demand, therefore, there are now over a 100,000 “private or tourist taxis.” These are vehicles that are registered for hire, but only carry a different coloured number plate, indicating their character. These are all well maintained, with well groomed and trained drivers, and look like private cars. These are operated by fleet owners, and cannot be hailed on the street. These are on demand only, and the charges are for the entire day or part thereof, or for distance traveled. Almost all these vehicles are air-conditioned, and are of the latest models of cars. These are therefore preferred by those who can afford it, for business, airport or social trips, as well as for tourism. The cost per trip, however, is many times higher than that of the public taxi.

The Taxi as a Demand Management Tool:

A few years ago, the Government decided to tackle the high levels of congestion on the roads, and has been evolving policies and implementing several pilot projects towards this. While on the one hand it is implementing large infrastructure projects to bridge the limitations in the transport network, it is also trying to limit the use of cars at least for the trip to work. In this context, it examined the functioning of the taxi business, and found that this mode could be used to great effect both to enhance the tourism industry as well as reduce the number of cars commuting to work.

In order to reduce the number of vehicles using the road space and demanding parking spaces, it would need to shift these trips to the taxi. These vehicles are in constant movement, and so the demand for parking spaces at least could be reduced. As has been mentioned earlier, the demand for parking reduces the available roadway capacity by 30-50%, so a reduction in this demand will effectively mean improved flow conditions. With improved traffic speeds, the environmental quality could hope for improvement. Also, with a reduction in the number of vehicles, the road space could be reallocated for pedestrians and other non-motorized modes.

But in order to achieve this, the taxi would have to be given a facelift. We would effectively have to provide the same level of comfort and service that the private car provides, along with the same low fare structure that made it such an acceptable mode of transport amongst all sections of road users. The segment of users that had been lost to the taxi would have to be weaned back – ie, for social, recreational, work and business trips, who had shifted to the private taxi or personal modes because of the disreputable appearance of the black and yellow cabs..

The limitations perceived in the existing cab had to be overcome: old and dilapidated had to become new and good looking; dirty and poorly maintained had to be well maintained and clean. Rude and ignorant drivers to be replaced by well trained and well informed drivers; hot and uncomfortable ride had to become an air-conditioned and pleasant experience; wrong metering and the sense of being cheated had to become fair charges with proof of fare. Additionally, the taxis had to be on demand, so that the slow cruising by the existing cabs that interfered with the traffic would be eliminated. Also, the existing drivers very often refused to take passengers, if the trip was short, or he was at the end of his shift, and this would have to be changed: no-one could be refused a ride. Moreover, the new taxis had to be fitted with GPS and available on demand 24x 7.

The initiative was taken by a corporate NGO, who commissioned a study, and discussions were held with taxi unions, private taxi operators, car manufacturers, banks, and insurance companies, and a report that spelt out the ideal taxi services prepared. Banks were involved

so that loans could be made available for the purchase of new vehicles. This report was accepted by the Government, and its recommendations are now being implemented.

The Government then took the initiative, and fleet taxi operators were invited to take over the existing taxis, after negotiations with the holders of the taxi licenses, on terms that are mutually acceptable. The existing taxi license holders are invited to join the fleet taxi operators as their drivers, where they can retain their license, and drive a new vehicle under better operating conditions. Incentives such as life insurance, medical coverage, monthly salary + earnings from one shift, and the possibility of buying back the vehicle after a certain period, are offered. All dealings with the authorities are the responsibility of the Fleet operators. While today the taxi driver is in a dead end situation, barely making ends meet working 18 hour shifts, he now has a comfortable pay package, with time to relax with his family.

While the taxi driver stands to gain a lot, the user gains equally: the drivers are being trained in courtesy as well as taught the roads and landmarks of the city, electronic meters have been fitted, and a printed receipt of the fare charged is given, the vehicles are clean, well maintained, the drivers well dressed, there are magazines to read if you want to. These taxis are also permitted to earn revenue from carrying advertisements on their exterior, which helps to bridge any loss of revenue while waiting for a call. Most importantly, they are not allowed to cruise, and can only enter the traffic stream when they are responding to a call.

We now have about a 1000 of these new taxis on the road, and the old vehicles will be scrapped. We hope to convert all the existing 45,000 taxis in this manner, within a period of 2 years.

Supporting Policies:

It must however, be understood that this system will not be able to stand on its own, and needs a large number of related policies to make it sustainable.

The first is to make parking a much more expensive proposition, so that people will think twice before parking their cars for long hours on the roadside. We are currently working on

raising the parking charges and making them reflective to some extent of the rentals in the area, so that this will act as a deterrent to long term parking. We also intend to use parking charges as a Demand Management tool, before implementing some form of fiscal restraint to car usage. The amount of parking lots will also be controlled, and all parking will be in off-street lots controlled by a contractor; all arterials are being designated as no-parking zones. With limited availability and higher parking charges, we hope to curb car usage to some extent, and shift a few trips onto taxis.

At the same time, we are encouraging a shift to mass transportation. We need to introduce an efficient mass transportation network, so that the commuter has a few viable options to using his car, at comparable levels of comfort. Mumbai is now working on introducing a Bus Rapid Transit System, and is also constructing a heavy metro to supplement the suburban railway services. Both these will afford a higher level of service than is currently available on our buses and trains. We are also looking to introduce luxury buses on the bus lanes, for those who are willing to pay for it.

To all these services, the taxi will provide the ‘last mile’ connectivity.

We are also encouraging car pooling, and have now got 2 web-sites that help you find a pool partner. High Occupancy Vehicles will be permitted to use the Dedicated Bus Lanes, until such time that we can increase the frequency of the buses, and further induce a shift from cars to buses.

Aided by the above policies, we hope that the taxi becomes synonymous with personal modes, and we will achieve much lower levels of congestion.

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