

# **Choice of Transport Modes in Delhi: Policies, Issues and Implications**

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## **Introduction**

Different modes of transportation system evolve on the basis of distinct technological underpinnings. Since independence various technological changes and upgradations have taken place in the different modes of transportation system in Delhi. In 1962, when the first Master Plan for Delhi was declared, the majority of the commuters either cycled or walked to their work places. Buses were second in preference and Tongas were a close third, followed by private vehicles. By the time the second Master Plan came into being in 1985, the situation changed dramatically. The majority of commuters now depended upon buses and other forms of motorized transport, and non-motorized vehicles and pedestrians became marginalised.

In the past two decades, policy interventions in the city's transport strategy have been ad hoc and lacking in an integrated approach. Motorized vehicles have nevertheless received far more encouragement than ever before, with potentially grave environmental and social consequences. On the other hand non-motorized vehicles and pedestrians have received ignorance and discouragement in the various policy pronouncement of the state. By assessing the choice of transport modes in Delhi in the context of various policy pronouncement of the state, the paper attempts to unravel the issues that led non-motorized vehicles and pedestrians in a critical stage.

## **Present Status of Transport System in Delhi**

Delhi is today predominantly dependent on road transport, with the railways catering to only about 1 per cent of the local traffic. The ring rail network in Delhi is grossly underutilized. Buses constitute only 1.2 per cent of the total number of vehicles, but cater to 60 per cent of the total traffic load. Among personalized vehicles, motor cycles and scooters comprise about 64.5 per cent of the total number of vehicles in Delhi, but cater to only 17 per cent of the total traffic, while cars and jeeps account for 25.4 per cent of the total vehicles, but cater to only 10 per cent of the total traffic.

There has always been controversy on the actual number of non-motorized vehicles and pedestrians. A survey conducted by Centre for Study of Developing Society (CSDS) revealed that close to 30 per cent of the people of Delhi either cycle or walk to their work place. This fact was confirmed by an Operation Group (ORG) survey in 1994, which found 28 per cent of Delhi household earning less than Rs 2,000 a month either cycle or walk to their work place. As per government data 70 per cent of Delhi's population lives in substandard settlements (Unauthorised Colony, Slums and Resettlement colony). According to the survey conducted by Hazards Centre in these settlements, 46 per cent of residents either walk or cycle from 6-20 km to their work and for most of them travel is the biggest hazard because motorization of transportation has left no space for them on the roads.

## **Growth of Motor Vehicles**

There is a tremendous increase in the number of private vehicles during the last decade. As on March 2001, 34.56 lakh motor vehicles were registered in Delhi. The Census 2001 reported Delhi's population to be 137.8 lakh, which implies 251 vehicles per 1000 population in March 2001 as compared to 192 vehicles in March 1991. There has been an increase of about 90 per cent in overall growth of registered vehicles during 1991-2001 at an average annual compound growth rate of about 6.7 per cent. Motorization of transport system in Delhi has not taken place in isolation. There have been a number of factors that have led to heavy motorization in Delhi City. The three prominent factors could be identified as inconsiderate policy measures taken by the government, growth of automobile industry, and road architecture.

### Inconsiderate Policy Measures taken by the Government

There are only three policy documents in the post independence era that deal directly with the policy of the transport system of Delhi. These policy documents are Delhi Master Plan 1962, Delhi Master Plan 1985 and Tackling Urban Transport An Operating Plan for Delhi 2002.

The Delhi Master Plan 1962 can be evaluated in the light of the political vision that outlined most of the policy decisions taken during the early days of independent India. The period when this plan was formulated was the period of planning based on the Nehru-Mahalanobis framework. The prime concern under this framework was the construction of Social Democracy and strong Capital Good sectors. The underlying assumption of this framework is that the induction of development in other relevant sectors could be possible through the development of the industrial sector. That is why the transportation system was viewed as a tool helpful in prospering automobile industry, and it does not mention much regarding non motorized vehicles and pedestrians. And this is precisely the reason why the plan does not consider transport as a service but a part of travel and tourism industry.

Delhi Master Plan 1985 aimed at minimizing the gap between demand and supply by increasing the capacity of the urban transport plan involving projections of past trends which had been snow balling towards increased supply of roads for automobile traffic. This clearly indicates that the plan mainly emphasized on motorized vehicles. It was also realized that the problems of the vast majority of the population relating to the public mass transportation system, bicycle and pedestrian needs was to be immediately attended. According to the plan the problem of the bicycle was to be resolved by the construction of segregated cycle tracks. The plan proposed four major cycle tracks in various parts of the city. Unfortunately the bicycle tracks are yet to be constructed. Transport options in the Second Master Plan are not in any way different from other public issues like housing, health, education etc. in terms of ignoring the poor segment of the city.

Tackling Urban Transport An Operating Plan for Delhi 2002 has a twofold objective- that of achieving a balanced multi modal mix transport system in Delhi and of discouraging personalized transport. It is interesting to note that the whole policy document stresses mainly on the first objective only and the second objective does not figure anywhere in the policy. It is quite unfortunate that the plan fails to tackle the problems associated with non-motorized

vehicles. The issues concerning bicycles, passenger cycle rickshaws and pedestrians have been completely ignored by the policy makers. The policy measures suggested in this plan clearly indicate the intention of policy makers to encourage more and more private vehicles on the roads.

Transportation is a vital sector of any urban locale. In order to provide efficient and convenient transport facilities to the commuters it is imperative to improve the services of the various modes of transport through a time bound programme of action. In this direction the right approach would be the identification of problems faced by each one of these modes individually as well as collectively. However, it seems that this criterion has not been taken into consideration adequately after Independence. Sustainable transport implies that mobility concerns of the 'invisible section' must be essentially addressed. However, unfortunately it rarely happened in our country.

#### Growth of Automobile Industry

Transport policy in Delhi has been directed towards stimulating more and more motorized vehicles because they are considered to be more efficient and fast mode. The question however is that non-motorized vehicles are not only economical but also efficient for short distance travel, why are they being wiped out both from policy and roads. Eventually, it appears that in addition to the question of efficiency and speed, there are many unheeded economic and political issues that needed to be addressed in the context of growth of motorized vehicles. It appears that in the past two decades automobile industry has received plenty of attention and encouragement from government through its policies.

Through 1983, the automobile industry was limited by strict controls on imports and foreign investment. The first multinational company to enter the Indian market was Suzuki in collaboration with an Indian partner company, Maruti, in the mid-1980s. This event initiated a period of rapid growth in the industry. Suzuki and Maruti were granted a variety of concessions including lower import and excise duties, on the condition that they steadily increase the local content of the vehicles. In automobile industry, till mid 1980s, supply was regulated by the manufacturers for their own benefit. Due to mismatch of supply and demand the 'price' was dependent mainly on the 'premium' the product used to enjoy due to artificial shortage created in the market by the manufacturer and the distributor together. The service to the customer and the quality of the product was at its lowest level and at the mercy of the suppliers.

The Indian automobile industry has undergone a sea change after the liberalization policies were announced in 1991. From the tiny sector dominated by handful of manufacturers till late 1980s the auto industry in India suddenly witnessed the entry of world auto transnational in the market. In 1993-94, new automobile policy was introduced and licensing system was eliminated. The post-liberalization period entered into 'supply dominated' era where all the existing auto manufacturers became suddenly busy in augmenting their production capacity, least the new comers with the removal of entry barriers flood the market with their technologically improved well-designed fuel efficient vehicles. Consequently, the growth of personal vehicles in the cities started increasing rapidly. Car sales have been increasing at a rate of about 10 per cent per year since mid- 1970s, though with large fluctuations. This is considerably faster than population growth. The auto industry expects continued growth at that level into the future. Greater

availability of easy financing has also played a role. The current high interest rates (16 per cent) are expected to drop and thereby encourage vehicle purchases. It is an assumption that car ownership in Delhi is going to increase faster than the per capita income.

It is quite clear that since 1985 various policy pronouncements have been made in order to encourage automobile industry. As a result there has been tremendous growth in the number of personal vehicles (motorized vehicles). On the other hand public transport has been totally neglected and non-motorized vehicles and pedestrians had been forced to disappear by giving preferences to the faster vehicles on the roads.

### Road Architecture

The road architecture is one of the most important components of any urban transport system. In Delhi the total length of roads is 28,500 km. Since 1971 road network has increased three times, whereas vehicles have increased sixteen times resulting in heavy traffic congestion and reduced vehicle speed. The consumption of road space per passenger is significantly higher in the case of private transport than that of public transport. The fact that private vehicles occupy much more road space than public transport for carrying the same number of passenger is a matter of common observation.

The road architecture could be understood in terms of design and construction. At present the roads are designed keeping in view the fast moving motorized vehicles. The upcoming flyovers and expressways clearly indicate the intention of policy makers to encourage personal vehicles. Non-motorized vehicles and pedestrians are the most critical element in mixed traffic, but at present there is no space for them on the roads. As discussed above, in second master plan the problem of bicycle was to be resolved by the construction of segregated cycle tracks. The plan proposed four major cycle tracks in various parts of the city. Unfortunately not even single was constructed, which clearly indicates that till today roads are only designed keeping in view the fast moving vehicles.

### **Conclusion**

Provision of a safe, efficient and affordable mode of transportation to majority of commuters has to be the fundamental objective of any transportation system. Delhi does not seem to meet these fundamental objectives. Currently the government's policies have led to an inappropriate mesh of multiple modes of transport dominated by private motorized vehicles with little or no integrated approach with non-motorized vehicles. Due to the motorization of the transport system in Delhi, the average distance covered by an individual is increasing rapidly as a result commuters of non-motorized vehicles and pedestrians are compelled to travel on motorized vehicles. Although the policy talks about multi-modal-mixed transport system, but it has stopped taking cognizance of the large section of the population walking and using non-motorised transportation. Since cycle path and pedestrians are taken over by motorised vehicles, accident rates are increasing day by day. Large numbers of pedestrians and bicyclists lose their lives due to accidents with heavy vehicles. 1646 people have been reported to have died in the year 2002, according to the report of Delhi Traffic Police. 49 per cent people out of these were pedestrians.

It seems that the problem of transportation has been perceived only from the point of people using motorized vehicles. The real technological, economic and political issues have never been taken into consideration while making a transport plan. The present transportation system of Delhi as a part of the overall urban environment is in complete chaos. It shows that despite the various modes of transportation are available, the commuters are bereft of its direct benefits in terms of better services. It is indicative of the fact that the needs of commuters remain unsatisfied under the present transport system of Delhi. There are certain policy issues that call for an immediate attention, in order to provide a sustainable urban transport system for Delhi or for that matter for any other metropolitan in the country.

When a single mode of transport is not able to cater to the needs of commuters then it does not mean that it should be supplemented by other modes of transport. There is an obvious distinction between the use of transport and modes of transport. The policy makers should observe this fact while deciding about the choice of technology made in the transport system. Secondly, there is an immediate need to recognize the importance of non-motorized vehicles and pedestrian in the transport system and immediate measures should be taken in the direction of improving and encouraging non-motorized vehicles and pedestrian. Non-motorized vehicles are not only pollution free but also safe and cost effective and large section of the working class prefers to travel on them. Thirdly, road architecture needs to be redesigned keeping in view that roads are not only used by fast vehicles but also by pedestrians and non-motorized vehicles. Lastly, considering the size to which Delhi has grown, it is obvious that no single mode of transport can cater to the entire transport demand requirement of the city, therefore it becomes essential for a typical commuter to use more than one mode of transport or at times even change over in the same mode. Efforts should be made to link one mode of transport with another.

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