



ORIGINAL RESEARCH PAPER

Engineering

MEASURES TO ADDRESS URBAN TRANSPORTATION PROBLEMS IN INDIA

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Dr. Jyotirmoy Sarma

ABSTRACT

In India, many cities and towns are facing urban transportation problems such as traffic congestion, less or no vehicle parking facilities near commercial areas and air pollution. Solution of these urban transportation problems lies in improvement of public transportation facilities, development of non motorized transportation facilities such as bicycle and pedestrian track, development of modern parking facilities, etc. But, required investment from Govt. of India and State Governments for the purpose is limited. At the same time, urban local bodies responsible to develop and manage urban transportation infrastructure do not have required technical expertise and financial resources for the purpose. In the research paper, the author high lights the urban transportation problems in India and measures to address them.

INTRODUCTION AND CONTEXT

In India, due to rapid urbanization, many urban areas are facing severe urban transportation and mobility problems. There is traffic congestion in the cities, which has resulted in air pollution, delay and inconvenience to people travelling on the road and degraded overall quality of life of city residents. The main reasons of this problem include increase in numbers of private vehicles on the road, insufficient and inconvenient public transportation systems, non availability of facilities for non motorized transportation such cycling and walking, air polluting vehicles, etc. Solution to the problem lies in providing more and efficient public transportation facilities and use of non motorized transportation by people. These solutions are recognized by Government and concerned agencies. But, there are issues in implementation of these measures. Also, required programs and policies are not initiated Governments to implement the measures. In the research paper, the author identifies the issues faced by urban local bodies and concerned agencies in their effort to minimize urban transportation problems and suggested measures to improve existing situation.

BRIEF OF URBAN TRANSPORTATION AND MOBILITY PROBLEMS IN INDIA

Urban mobility is transportation and quality of the journey made by citizens in urban areas. Improved mobility can improve the quality of life of citizens by reducing air pollution, increase productivity by saving time due to reduced congestion, etc. But, traffic congestion has increased dramatically in India. Traffic congestion and resulting slow urban mobility have made huge adverse impacts on both the quality of life of citizens and the economy. Traffic congestion also is the highest contributor of urban air pollution.

Various urban transport problems faced in India includes the following:

- i) Road Congestion: As population has increased in urban areas, numbers of vehicles, average travel distances as well as intensity have increased leading to road congestion.
- ii) Parking Problem: There is acute shortage of parking spaces for vehicles near commercial areas in Indian cities. This has increased the time spent in searching for parking spots and traffic congestion.
- iii) Air Pollution: Vehicular air pollution in Indian cities is a major problem in India.
- iv) Deteriorating Road Safety: There has been increase in number of fatalities and road accidents.

The reasons of transportation problems in Indian cities can be listed as below:

- i) Increased household access to motorized vehicles.

- ii) Lack of urban land devoted for development of roads.
- iii) Roads in cities used as multi-purpose infrastructures such as vending zone, parking area, pedestrian pathways, etc.
- iv) Non utilization of comprehensive design standards for urban transport infrastructure.
- v) Inefficiencies of public transport systems.
- vi) Bad roads and potholes
- vii) Obstructions from stray dogs and cattle.
- viii) Institutional and legal inefficiencies

SOLUTIONS TO URBAN TRANSPORTATION PROBLEMS IN INDIA

Different solutions are suggested by different researchers to address urban transportation problems in India. Some of the suggested solutions are as below:

- i) Use of clean fuel for vehicles such as electricity and CNG.
- ii) Improve public transportation facilities by introducing variety of buses, increase fleet of buses and coverage of more routes with reduction in fares to encourage citizens to use public buses.
- iii) Develop cycling infrastructure like dedicated cycle track, cycles on rent to encourage citizens to use cycles to work places and for short travel.
- iv) Congestion pricing and parking fee to discourage vehicles to enter market and high traffic areas and route.
- v) Plan and develop grid like road network in cities.
- vi) Better management of roads by repair of pot holes, better traffic management with well planned and modern traffic signals and parking facilities.
- vii) Plan and develop elevated roads over existing roads with high traffic.
- viii) Develop dedicated lanes for pedestrian movement.
- ix) Plan and develop BRT (Bus Rapid Transit) projects on high traffic roads, where required road width and land is available.
- x) Revision of national policies for promoting and implementing integrated public transportation systems such as buses, metros and BRT with special provisions for non motorized transportation such as bi-cycles and pedestrians.
- xi) Development of compact townships within cities to reduce need for long distance travel by citizens.
- xii) Enhance transport coordination to integrate public transportation of all modes.

xiii) Tighten vehicle emissions standards and inspection.

xiv) Development of transportation infrastructure such as improvement of traffic signals, traffic engineering improvement measures for road network and intersections, bus priority lane, new road alignment, service roads, bye passes, ring roads, bus bays, wide medians, intersection improvements and construction and repair of footpaths and roads.

xv) Strengthening urban local bodies and other concerned institutions by increasing institutional capacity and required financial resources to address transportation problems.

PROGRAMS AND WORKS TAKEN UP BY GOVERNMENT AND ULBS

In India, urban roads are developed and maintained by respective urban local bodies. But, urban development was a low priority sector till year 2000. Urban transportation was a lower level sector for Government. Only in year 2006, Ministry of Urban Development of Govt. of India, issued the National Urban Transport Policy, which acknowledged problems of road congestion and associated air pollution in urban areas of India. To address these urban transportation problems, the policy proposed strategies for increasing efficiency of road space by favoring public transport, traffic management measures to improve traffic performance, restrain growth of private vehicular traffic and technological improvements in vehicles and fuels to reduce vehicle emissions. The policy recognized the states as the main facilitators for policy implementation. The role of central government was confined to supporting the states with the necessary financial support and technical expertise.

In India, most urban transport systems and interventions are funded and owned by state governments. National level intervention in the sector started from Jawaharlal Nehru National Urban Renewal Mission (JNNURM). The mission covered 63 cities of India. In the mission, the urban transport sector was allocated 11 per cent of the total investment. The mission attempted to improve the public transport system in larger cities through funding of public transport buses, development of comprehensive city mobility plans and supporting city transport infrastructure projects. The mission included procurement of public buses, develop BRT (Bus Rapid Transit) projects in a few large cities, measures to improve traffic management and construction of roads and flyovers. Subsequent to JNNURM mission, Govt. of India started AMRUT mission covering 500 cities and towns of India. But, fund allocation in AMRUT mission in each town was less and no urban transportation infrastructure was developed. In the ongoing Smart City Mission of Govt. of India covering 100 cities all over India, projects for improvement of traffic management system have been taken up by introducing intelligent traffic management systems. Improvement of non motorized transportation such as cycle and pedestrian tracks are being developed only within limited areas of the selected cities.

DIFFICULTIES FACED BY ULBS IN MANAGING URBAN TRANSPORTATION PROBLEMS

In India, urban local bodies are mainly responsible for development and maintenance of urban roads. There are difficulties faced by the ULBs to minimize urban transportation problems. The difficulties are:

i) Urban local bodies of India do not have adequate financial resources and technical expertise to improve urban road infrastructure, except for constructing minor roads and repair works. ULBs are not capable to take up significant works that can minimize public transportation systems.

ii) Line departments like PWD of state government are mostly not involved construction of urban roads.

iii) It is almost impossible for urban local bodies to widen congested roads within cities to remove congestion or develop cycle tracks, public transport lanes, etc.

iv) ULBs are facing difficulties in finding land to develop vehicle parking facilities.

v) Due to political interference and other reasons, ULBs face difficulties in removing encroachments on existing roads.

vi) ULBs in India are not technically, financially and administratively powerful enough to develop non motorized transport facilities such as city wide bi cycle and pedestrian tracks on the side of existing roads.

SUGGESTED MEASURES TO IMPROVE EXISTING SITUATION

The following measures are suggested to address urban transportation problem in India:

i) National Urban Transportation policy needs to be strengthened to direct central and state governments to take up measures to improve public transportation and non motorized transportation facilities in all cities in India. The policy needs to urge central and state governments to take up investment programs to develop public transportation and non motorized transport facilities. The policy needs to make pedestrian and bicycle tracks compulsory on the side of all major roads in cities.

ii) There needs to be a huge impetus on improvement of public bus services in cities. Separate budget allocation needs to be made by Central and State Governments to improve public bus stand, bus stoppage shelters and other required infrastructure.

iii) Ongoing programs of Government such as Smart Cities Mission, AMRUT Mission and other projects need to include development of pan city level public transportation infrastructure. New urban infrastructure development mission needs to be initiated by Central Government to cover all large cities and towns, where works to improve public transportation and non motorized transport infrastructure are included.

iv) Urban local bodies need to be empowered by State legislations to acquire land for widening of major urban roads for development of cycle and pedestrian track, vehicle parking facilities, dedicated bus lanes, BRT projects, etc.

Disclaimer: The findings and conclusions presented in the paper are personal opinion of the author.