

URBAN TRANSPORT IN INDIA MOVING TOWARDS EQUITY AND SUSTAINABILITY



I. WHY URBAN TRANSPORT (UT) MATTERS?

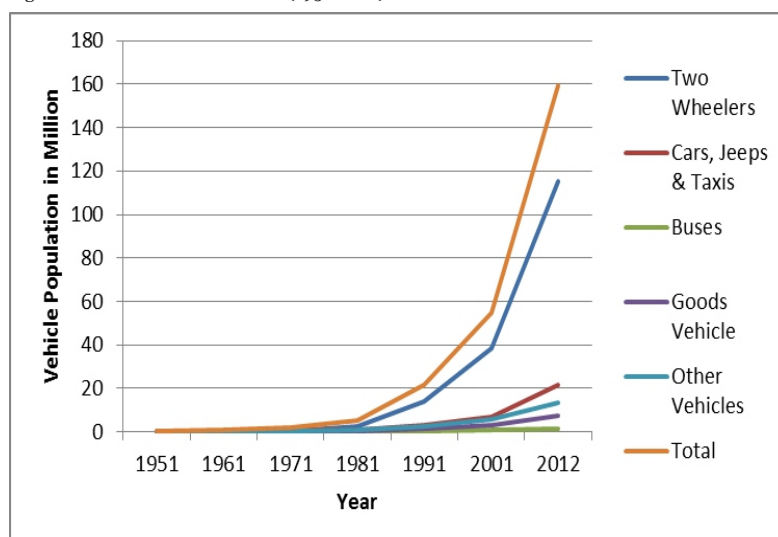
Urban transportation has far-reaching impacts on human health and environment. Respiratory diseases, caused by air pollution, and traffic accidents, are the two biggest public health burdens caused by transportation. India has a high number of traffic accidents – and pedestrians and cyclists are most affected. Almost 2.2 lakh road accidents took place in urban India during 2013, with fatality rate being 25 per cent. A study assessing contribution of transport sector to particulate matter (PM) in six cities concluded that around 30 to 50 per cent of PM is on account of vehicular pollution.

Vehicular pollution is the key contributor to air pollution in urban areas, and also a major consumer of fossil fuels. Given the realities of climate change, urban transport no longer remains a local issue, but one with global implications.

II. URBAN TRANSPORTATION IN INDIA

There has been a rapid increase in number of motorised vehicles in India, as illustrated in Fig. 1. This has led to change in overall vehicular composition, and two-wheelers account for majority of vehicles on the road. This rise in private vehicle ownership – both cars and two-wheelers – is one of the prime reasons for several problems in transportation – particularly road congestion and parking problems.

Fig 1: Growth of Vehicles in India (1951-2012)



Source: MoRTH, 2012

While congestion is visible in Indian cities, India currently has low vehicle ownership rates (15 per 1,000) compared to other countries, e.g. 44 per 1,000 in China and 457 per 1,000 in U.K.

Public Transport (PT)

One of the primary reasons for rise in private ownership is inadequate and unreliable public transportation. Very few cities in India have an organised and regulated PT system. Currently, organised bus services exist in 65 cities, compared to 20 earlier (NTDPC¹). PT often remains poor, inadequate and unreliable – though there have been considerable improvements in last few years. Buses remain the most common form of PT systems. State-run buses have been introduced in several cities as part of JNNURM. There has also been an introduction of Bus Rapid Transit System in some cities – Delhi, Ahmedabad, Pune, Indore etc. – with varying degrees of success.

While only three cities in India have rail-based PT (the sub-urban rail system in Mumbai, Chennai and Kolkata), the previous decade has seen introduction of mass rapid transit systems (MRTS) in Delhi and Bangalore, and planned in many more cities.

¹ National Transport Development Committee

Non-Motorised Transport (NMT)

NMT modes like walking and cycling constitute a large percentage of trips. This is hardly surprising as there is a large captive audience for the same – the poor in urban India often cannot afford even public transport and hence walk or cycle over long distances (Tiwari, 2011). Ironically, these urban poor are being relocated to peripheries of cities – either priced out of the housing market or through forced evictions (Badami, 2009). Despite the high number of pedestrians and cyclists in Indian cities, little or no facilities exist for them.

Number of Trips and Trip Length

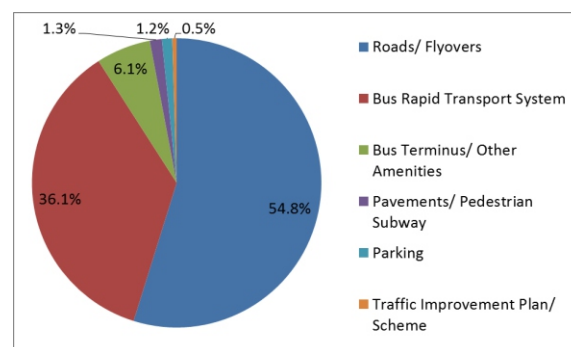
The average trip length in Indian cities remains less than other countries. 80 per cent of trips are less than 10 km, and 70 per cent are less than 5 km – even in metropolitan cities (Tiwari, 2011). The average trip length in small and medium cities is less than five km. These short trip lengths have been identified as a major strength by NTDPC. This is attributed to Indian cities

traditionally having had optimum densities, combined with mixed land use development. However, this is rapidly changing with changing land use patterns, high costs of housing within cities and intense development of peri-urban areas (NTDPC).

III. POLICY & INSTITUTIONAL FRAMEWORK

Until the last decade, the dominant policy response was to facilitate the movement of private vehicles, at the expense of NMT & PT (Tiwari 2011). However, this has changed in the last decade, and a range of initiatives, particularly the National Urban Transport Policy (NUTP) in 2006, have outlined steps to make the sector more sustainable and people-friendly. The stress is on bringing equitable allocation of road space, with people rather than vehicles as its main focus.

FIG 4: Distribution of JNNURM funding within the transportation sector



Source: Wankhade, 2012

More recently, the National Transport Development Policy Committee (NTDPC) Report also outlined a comprehensive set of measures targeting governance reforms and implementation of Avoid-Shift-Improve strategies. The present institutional structure for governing urban transport sector is fragmented at national and state levels, with separate ministries managing various components of urban transport resulting in diffused accountability. There are limited mechanisms for intergovernmental coordination in integrating urban transport networks and services. Unlike most global cities, urban local bodies play a limited role in urban transport decisions.

The last decade has also seen inflow of money in the sector through JNNURM. While JNNURM has led to increase in PT bus fleets in several cities, a large proportion of funding has gone in expanding roads and building flyovers.

RECOMMENDATIONS

For addressing the complex UT challenges we recommend changes in policy, institutions, legislation and dedicated fund generation/allocation across all three tiers of governance as highlighted below:

Central Government Level

Central UT Policy

The centre's main responsibility lies in creating a comprehensive policy, standards for UT performance including safety, environmental impact, public investment management, efficiency, equity, and affordability. The policy focus should be directed towards – Avoid (need for transport through better urban planning to reduce transport needs), Shift (to carbon-efficient modes like PT and NMT) and Improve (quality and affordability of carbon-efficient modes). Additionally, develop a model comprehensive UT law at the national level that would ultimately be adapted by states. Simultaneously, rework UT related Acts to ensure coherence and mutual consistency in treatment of public transit technologies (e.g. Acts regulating various rail-based transit technologies e.g. metro, suburban rail, mono-rail etc.)

Institutions

Set up a dedicated Office of Transport Strategy within the MOUD with a strong technical unit and data cell whose functions will be:

- To develop UT performance standards;
- To prepare guidelines and manuals including for PPP in UT;
- To design, install and manage a national UT data repository built by collating data from state and metro databases;
- To promote research in UT, including safety issues, and organise capacity-building programs for stakeholders in UT;

State level

Each state's focus should be on integrating transport investment, planning and policy across urban and rural areas. The state governments should initially be made primarily responsible for UT. As cities cross million-plus inhabitants, this responsibility should be gradually devolved to city governments, simultaneously ensuring that adequate local governance systems are in place.

Initially, each state should create a separate department or Office of Transport Strategy at state level to deal with UT within the state's Urban Development Ministry. This should be the locus of UT in collaboration with other agencies for urban development. Its role will be to lay down policies, administer laws, rules and regulations for UT, organise capacity building and allot funds from state UTF to its cities in a pre-determined basis.

As capacities and organisational structures develop in cities, the functions should be gradually devolved to Unified Metropolitan Transport Authority (UMTA) once it is established, with independent authority, access to funds and sufficient technical capacity, while the state continues to perform these functions in other cities without UMTA.

Legislation

For setting the UT system, each state should enact a comprehensive UT Act which clearly allocates responsibilities for existing urban land use and transport authorities presently working under the state and city governments. Set structures for liability, pricing, safety, public fund allocations and institutions in the Act. Also ensure that this Act is coherent with the national UT policy framework.

Under the provisions of this Act, UMTA should be established for each million-plus city in its state as a full time professional body for technical planning, monitoring, decision-making and coordination between all transport agencies in that particular city. UMTA should have the representation from all city agencies and stakeholders and from surrounding peri-urban areas bordering that city.

State Funding for UT

Establish a dedicated state level Urban Transport Fund to meet the capital needs for developing UT infrastructure and during initial operationalising the projects in its cities. The state UTF should be funded by state budgetary allocations, collections from imposing a cess on existing personalised vehicles and tax on purchase of new private petrol or diesel vehicles based on the value of the vehicle. A fixed proportion of the state UTF funds should be entitled for urban transport and the rest for developing rural transport infrastructure as stipulated in the state's UT Act.

City level

Larger cities should assume primary responsibilities for their UT as broader reforms occur with constitutional commitments. A three-level institutional structure is proposed for such cities:

Establish the Metropolitan/District planning Committee or Inter-Municipal Cooperative (MPC/DPC/IMC) according to the 73rd and 74th Constitutional amendment subsuming all other para-statal and local development authorities in urban land use and transport. Empower it to take responsibility for inter-sectoral coordination and become the ultimate approving authority for city plans and policies. It should become the focal point for inter-jurisdictional, macro-regional and intra-city decisions which have significant investment impact.

Under the MPC/DPC/IMC, Unified Metropolitan Transport Authority (UMTA) established as per the UT Act should be empowered for city level policy making, technical planning, decision making, inter-agency coordination, fund allocation and monitoring implementation of sanctioned projects.

Project implementation and transport service provision including construction of UT infrastructure, operations and maintenance of PT services should continue with specialised agencies under the supervision and control of UMTA.

City Funding for UT

Establish a dedicated city level Urban Transport Fund to meet the capital and operational needs for managing UT infrastructure and services for each city. The city UTF should be funded by adopting innovative ways as decided by UMTA, market based instruments such as annual registration fee, parking fee, road tax, fuel tax, congestion charges, etc. or betterment levy on

land owners along transit corridors or employment tax on employers, or from commercial utilisation of land resources available with city transport agencies. All UT funds allocated to the various implementing transport agencies in that city must be channelled through UMTA.

Each established UMTA should be responsible to ensure that standardised sets of UT data are periodically collected, analysed, stored and reported in the state's Knowledge Management and Database Centre.

UT Planning Reforms

At the operational level, the UMTA should spearhead the preparation of the Comprehensive Mobility Plan (CMP) for the city in accordance with the standard guidelines framed by MOUD. It should also empower local ward committees to prepare Local Transport Plans and provide necessary technical and financial support whenever required. Procedures for stakeholder participation should be formalised as an integral part in local and city mobility plan-making processes. On preparation of the CMP, UMTA should be obliged to submit it to DPC/MPC for final approval before it is implemented by respective executing agencies and monitored by UMTA.

Bibliography

- Tiwari, G., 2011. Key mobility challenges in Indian cities, Available at: <http://www.internationaltransportforum.org/jtrc/DiscussionPapers/DP201118.pdf> [Accessed March 3, 2014].
- Badami, M.G., 2009. Urban Transport Policy as if People and the Environment Mattered: Pedestrian Accessibility the First Step. Economic and Political Weekly. Available at: <http://www.epw.in/special-articles/urban-transport-policy-if-people-and-environment-mattered-pedestrian-accessibility-> [Accessed August 21, 2014].



INDIAN INSTITUTE FOR
HUMAN SETTLEMENTS

IIHS City Campus
No. 197/36, 2nd Main Road
Sadashiva Nagar
Bangalore 560 080, India
T +91 80 6760 6666

www.iihs.co.in | info@iihs.co.in