



AN ANALYSIS TO URBAN TRANSPORT PROBLEMS AND CHALLENGES IN INDIA

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Abstract

Cities and towns play an energetic role in promoting economic growth and wealth. Although less than a third of India's people live in cities and towns, these regions generate more than two-thirds of the country's 90% of the income and revenue of the government. In the years to come, as India becomes more and more urbanised, urban areas will play an important role in maintaining a high rate of economic growth. But, the pace of economic growth can be maintained if and only if cities function efficiently – that their resources are used to maximize the contribution of cities to national income. urban efficiency to a huge extent Much be contingent on the effectiveness of transportation systems, that is, the efficacy with which people and goods are moved throughout the city. Poor transportation systems impede economic growth and development, and the net effect can be loss of competitiveness in both domestic as well as international markets. Although vehicle proprietorship rates, the number of vehicles per capita, in Indian cities are lesser than their counterparts in developed countries, they suffer from worse congestion, delays, pollution and accidents than cities. industrial world. This paper provides an impression of the issues and challenges of urban transport in India. This paper first reviews leanings in vehicular development and availability of transport infrastructure in Indian cities. This is followed by an argument on the nature and greatness of urban transport problems such as overcrowding, effluence and road accidents. build on Background The paper proposes policy measures to improve urban transport in India.

Keywords: Urban Transport, Urban Transport problems and Challenges India.

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Introduction

India's rapidly growing population, coupled with rising economic conditions, is leading to substantial automotive growth. Currently, India is the sixth largest auto manufacturer in the world. Private vehicle ownership puts India in the middle spectrum of global countries. Hence, any rapid rise in income levels and lack of suitable public transport system is driving the growth of automobiles in India. Annual sales of passenger vehicles are expected to reach 10 million by 2030. The sudden increase in vehicles creates various problems like traffic congestion, fossil fuel consumption and air pollution. Transport sector is considered as an important component in the economy of a country. India's fast-growing transport sector is heavily dependent on fossil fuels and contributes 6.5% to the country's gross domestic product (GDP). India is the third largest emitter of global greenhouse gases after China and the United States. Due to its importance, the global transport sector accounts for 24% of global CO₂ emissions, with road transport contributing the majority.

Transport is a major contributor to climate change. Climate change is one of the biggest threats facing humanity and therefore, most transport policies are designed around it. Efforts are being made globally to reduce emissions from all sources, including the transport sector. The 2015 Paris Agreement is a legally binding international agreement on climate change. Some 196 countries participated in the agreement and pledged to limit global warming to 1.5 degrees Celsius above pre-industrial levels. Despite pledges and targets, emissions continued to grow and target emissions reductions increased five-fold. India has launched several initiatives in recent years to address these issues. These initiatives represent a shift from traditional supply-oriented to demand-oriented policies and planning. After independence, as most of the population lived in rural areas, the Indian transport system focused on connecting rural areas with urban areas. In this respect, there has been significant infrastructural development in the construction of roads, railways, flyovers and tunnels. However, increasing vehicle ownership has presented India with new challenges such as traffic congestion, long travel times, climate change and road accidents. This led to a change in the policy approach of the Government of India. The Ninth Plan Commission recommended a comprehensive mass transport system to address the growing traffic problems. Since then, many initiatives have been taken to solve the transport problem in India with the main objective of achieving a sustainable transport system.

The purpose of this study is to present the evolution of urban passenger transport policies in India. The policy interventions considered in this study belong to the post-independence era and are limited to urban road passenger transport. Although policies from other transport sectors are equally important to examine, including them in one paper may compromise the in-depth review required and, therefore, they are suggested as a future objective of this paper.

Objectives of the Study

1. To review and highlight various transportation-related problems and externalities across in India.
2. To discuss various policy interventions by urban transportation problems.
3. To identify the challenges and problems in the existing transport policies.

Development of Transport System in India

A highly competitive transportation system is critical to the economic development of a country. India urbanized slowly before independence, but gradually thereafter, especially after economic reforms in the 1990s. Urban population increased from 11.4% in 1901 to 28.53% in 2001 and 31.16% in 2011. By 2036, around 38.6% of the country's population is expected to live in urban areas. India's transport system is a mix of public, private and intermodal modes of transport. Urban transport can be divided into pre-independence and post-independence periods. Before independence, bicycle, steam engine, train and tram were the main means of transport. Diesel engines were introduced in the 1920s, leading to the production of cars and buses. After independence, cars have become the main means of transportation for the rich in the country. Intermodal modes of transport such as buses and cars and auto rickshaws were widely used by the middle- and lower-income groups. The first Metro started operating in Kolkata in 1984 and the first high-quality BRTS (Bus Rapid Transit System) in Ahmedabad in 2009. Therefore, current public transport modes include bus, metro, suburban and monorail. Private modes include two-wheelers and cars, and intermediate modes include cycle rickshaws, autos and cabs.

Although transport in India is diverse, personal transport vehicles such as two-wheelers (including motorcycles, scooters and mopeds) and cars (including jeeps) account for more than 80% of the vehicle population in most Indian cities. Vehicle ownership is low in Indian cities compared to cities in developed economies. However, they suffer more from traffic congestion, long travel times, pollution and accidents. Private transport is an important contributor for this. From 2001 to 2011 the registered growth of two-wheelers and cars increased by 164% and 192% respectively. Similarly, in some major cities, the modal share of public transport declined by 20% from 1994 to 2007. Several reasons have been cited in the literature for the increase in private vehicles such as easy availability of auto loans, improvement in productivity of automobile industries and improvement in socio-economic conditions due to increase in Gross Domestic Product (GDP). Other major reasons for switching to private transport discussed in the literature are the inefficiency and poor quality of public transport. These factors encourage people to switch to private mode.

Major cities in India have good intra-city connectivity through intercity bus services, which are mainly run by State Transport Undertakings (STUs). 62% of total trips in India are made by intra-bus transport service, compared to 21, 11 and 15% in Beijing, Chicago and London respectively. Despite this demand, bus operators in most cities in India face huge financial losses. Inadequate number of buses compared to demand, improper route selection, lack of proper mechanism to strike a balance between service and revenue generation are some of the reasons cited in the literature. Also, metro and suburban rail services are operated in 13 and 9 cities respectively. Similarly, BRT service is being operated in 13 cities.

URBAN TRANSPORT PROBLEMS

a) Road Congestion

As population increases, intensity is expected to increase with average travel distance as there is a direct correlation between the two indicators. The average journey length for metro cities including Bengaluru is more than 8 km, while it is 6 km or less. All other metro cities. This trend in travel duration and frequency is expected to increase with rising income levels, migration, female participation and the service-based economy. As more people travel long distances for employment and education purposes, road congestion will inevitably increase.

b) Parking Problem

The acute shortage of on and off-road parking spaces in Indian cities increases the time spent searching for a parking space and leads to traffic congestion. Available data suggest that a large proportion of Indian roads are facing the problem of on-street parking (Rai, 2010). The problem is particularly acute in small, compact Indian cities. 14 percent of the road length in Delhi is used for on-street parking, while Surat has 60 percent of the road length. Blocked by street parking. On-street parking is widely encouraged because it is free or less expensive than off-street parking. Although cities invest in multi-level car parks in key areas, parking charges are not expected to recover costs (Rye, 2010). In Delhi, public parking charges are set at a minimum of 10 rupees for 8 hours during the day, while the minimum parking fee is 40 rupees per hour (Raichowdhry, 2013). Kolkata has the highest parking charges in India and these charges vary by time and location, meaning that parking charges are higher in certain commercial areas and charges increase by the hour. In Kolkata, a car costs Rs 80 for parking for eight hours during the day, while in the Delhi MCD area, car parking charges are as low as Rs 10 for parking up to 10 hours. Figure 5 shows the average eight-hour parking charges in various cities, but there are no special parking charges in parking lots such as malls and airports.

c) Air Pollution

The severity of air pollution in Indian cities is measured on the basis of air quality classification of CPCB (Central Pollution Control Board). According to the available air quality data (Kamyotra et al., 2012), across 180 Indian cities, there is a wide variation in the concentration of pollution and Severity in cities. Cities are considered severely polluted if the level of the standard pollutants (i.e., PM10 and NO2) exceed 1.5 times the standard. Results show half of residential areas in cities monitored by CPCB have severe levels of air pollution (Kamayotra et al., 2012). According to the US-based Health Effects Institute, people living within 500 meters of a road are exposed to vehicular smoke. The danger is especially evident when diesel vehicles are operating, as diesel emissions are known to trigger adverse respiratory health effects. A study of selected Indian cities indicates that the contribution of the transport sector increases when smaller fractions of particulate matter are considered. In Indore, transport contributes 30 per cent of PM10 but 46 per cent of PM2.5, while in Chennai it accounts for 20 per cent of PM10 and 35 per cent of PM2.5.

CHALLENGES

Mobility and Infrastructure

Despite several efforts by the Government of India, traffic congestion and vehicular emissions are still on the rise in India. Most of the policies that exist today have been implemented and evolved over 4 decades. However, the developed policies fail to meet the transport needs of the rapidly growing population. The Motor Vehicles Act (1988) addresses the need to reform the licensing system and reduce accidents. Such policies have been introduced when the density of vehicles on the roads was very low- and the-income level was much lower than at present. Despite substantial economic growth and increasing urbanisation, this policy has failed to address the problems of congestion and pollution. The weak penalties and inefficient enforcement proposed in this policy contribute to a significant proportion of users flouting transport rules and regulations. However, in the recently updated Motor Vehicle Act (Amendment Bill, 2019) the fine has been amended. The effect is yet to be understood. Special attention was given to the national transport sector through the JNNURM and NUTP policies. These policies aim to improve safe, accessible, comfortable and affordable public transport systems, reduce vehicle growth, encourage hybrid/electric vehicles and air pollution. These policies suggest that urban local bodies of major cities should prepare comprehensive mobility plans to manage local transport issues. These CMPs are considered to be the future guide books for the development of the transport system. The CMP discusses emission reduction plans in a vague manner. They discuss the goals but do not present the means to reach the goals. For example, a typical CMP assumes a certain percentage increase in the modal share of public transport. However, how public transport should achieve higher mode shares is not discussed. This lack of comprehensive policy formulation and evaluation creates a gap in knowledge on how to achieve the desired goal. This is one reason why the CMP does not make a significant impact on reducing transport problems, and private vehicles continue to grow.

Human Resource Challenges

Urban transportation is a complex system as it constitutes several activities, stakeholders and processes. Unfortunately, the capability for undertaking a coordinated approach along with a holistic understanding of transport issues and their causes involved is generally lacking at the state government and city level (Ahluwalia, 2011). This is attributed to a lack of urban transport skills amongst city and state officials, along with no dedicated organisation in city or state to deal with urban transport. The most reason for lack of relevant skilled is that the urban transport professionals today do not have adequate job opportunities in governmental agencies managing land use and urban transport at the city, state or national level.

Conclusion

The demand for transport has increased significantly in most Indian cities due to population growth as a result of both natural growth and migration from rural areas and smaller cities. availability of motorized transport, increase in household income, And the increase in commercial and industrial activities has further added to it. Unfortunately, public transport systems in Indian cities have not

been able to keep pace with the rapid and substantial growth in travel demand. Rail-based public transport services and well-organised bus transport services are limited to a few major cities. Qualitatively, the available public transport services are congested especially during peak hours and involve long waiting periods. As a result, there has been a massive shift to personal transport, especially cars and two-wheelers, and the proliferation of Various types of intermediate public transport modes, such as auto-rickshaws and taxis.

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