

## URBAN TRANSPORTATION PROBLEMS IN A MILLION CITY: A CASE STUDY OF A PUNE URBAN AREA.

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Urbanization has been one of the dominant contemporary processes as a growing share of the global population lives in cities. Urban transport mainly consists of those modes and means of transportation forming part of the city circulation system as well as those which provide the city with external links, forming an integral part of the entire system of urban circulation. Urban transportation issues are of foremost importance to support the passengers and freight mobility requirements of large urban cities. Urban transportation is an important dimension of cities notably in high density areas. Development of cheap and efficient means of urban transport is necessary to for the progress of large cities in developing country like India. Need for better urban transport systems in general and the need for a healthier environment has led to an increased level of research around the world. Urban transport in Indian cities is heterogeneous, reflecting the heterogeneity in the socio-economic and land use patterns. It is dominated by walking trips, non-motorized modes such as bicycles and rickshaws, and depending on the size of the city, motorized Para-transit and public transport. Generally, in all cities, two wheelers have been growing at a rate of 15-20% per year. Cars have been growing at a rate of 10-15% per year. Characteristics of urban transport in Indian cities changes with the city size. Share of motorized trips increase with city size as shown in Table 1. However, low cost modes which include walking, non-motorized rickshaws and cycles continue to play an important role. Share of walk trips ranges from 37% in a city of 100,000 populations to 28% in mega cities with a population of 10 million.

**STUDY AREA**—Pune city lies between 18° 25' to 18° 37' N latitude and 73° 44' to 73° 57' E longitude (Fig 1.1). Pune is one of the outstanding cities of India situated at an altitude of 570 m on the Sahyadri hills in Western Maharashtra. Pune city has been established on the banks of rivers Mula, Mutha and Mula-Mutha. The Municipal Corporation of Pune (PMC) is spread over an area of 237.04 sq. km, which includes the recently added 23 villages (PMC was having only 141.11 Sq. km before addition of 23 villages).

**OBJECTIVES**—Against the above mentioned background, this research paper attempts to study

urban transportation problems in Pune city. The main objectives of this proposed Study are:

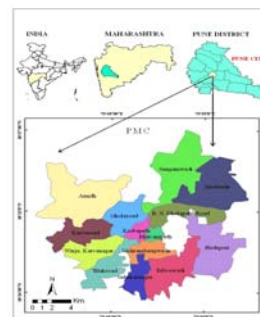
1. To collect the information about urban transportation facilities available in the study region.
2. To find out the numbers of vehicles (Two wheelers, three & LMV) wheelers in the study area.
3. To find out urban transportation's basic problems in the study area.
4. To find out management plan of urban transportation in the study area.

### METHODOLOGY AND DATABASE

In order to fulfill the objectives of the Pune city: Urban transportation problems, the methodology will be adopted for the present study is divided into three phases is namely- Pre-field work phase, Field work phase and Post field work phase.

In the first phase i.e. pre - field work phase literature review i.e. previous work Carried out by other researchers are obtained from various journals, internet, visit to the PMC, PMPML & R.T.O. offices to know the annual growth in various types of vehicles, collection of survey of India toposheet (SOI) having scale 1:25000 (47 F/14/2, 47/F/14/3, 47F/14/6, 47/F/15/NE, 47/F/15/NW), Atlas, Gazetteers, District Census Handbook etc. use for collection of information, District Resource map of Pune published by Geological Society of India, Government published map of Pune district P.W.D. map. In the second phase i.e. fieldwork phase extensive field surveys were undertaken, to existed transportation problems. The questionnaire filled in this phase. During this field surveys problems' regarding urban transportation photographs and related information is noted which were also useful to extensive study. In the third phase i.e. Laboratory worked was carried out

### LOCATIONAL MAP OF STUDY AREA



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**PROBLEMS OF URBAN TRANSPORTATION—**

The importance of Pune as an industrial centre has grown rapidly since the 1960's when industrial expansion in Mumbai region was curtailed. Consequently Pune has become a major centre in the state, having attracted engineering industry such as motor vehicle manufacturing plants (buses, cars and motorcycles). In addition to this, a number of multinational companies like Phillips have manufacturing bases within the city. Much of the local industry is concentrated along the main Pune-Bombay highway, enabling manufactured goods to be dispatched and supplies given to the factories without having to access the more congested centre of Pune. In recent times Pune Metropolitan region was successful to capitalize on its knowledge base, good climate and strategic location near financial capital of India. Within a short span it has attracted prestigious InfoTech and Communication industries like MBT, Satyam, Wipro, Tech Mahindra, Canbay and Zensar. Today Pune competes with cities like Bangalore and Hyderabad for acquiring a larger stake in IT sector. The state government is keen on the industrial expansion of Pune and utilizes incentives to encourage industrial growth and innovative proposals like Mumbai-Pune knowledge corridor. With the construction of Mumbai-Pune Expressway the city is experiencing rapid increase in economic activities.

Various Pune authorities have attempted over the past two decades, to study the growing traffic and transportation problems in the city in order to plan and implement various countermeasures. These causes are categorized into following groups.

**1) Seasonal Cause:** - In these transportation problems in Pune city become chaotic during the rainy season & also in occasional events like Palkhi Procession,

Ganpati Festival & Navratra (Chhatursingi-Yatra).

**2) Temporal Cause:** - In this group transportation problem creates particularly peak hour of the day. During 9.00 –11.00 AM & 5.00 – 7.00 PM. These problems are as follows.

**1. Traffic Congestion**

This is a major problem in Pune city. During the peak hour of day roads in the Pune city were congested. After 9.00 am & 5.00 pm traffic congestion can be taken place on major roads-Karve Road, Shivaji road, J M Road, Fergusson College Road, Dhole Patil Road, Tilak Road , Paud Road, L B Shastri Road, Bajirao Road, Kumtekar Road, Laxmi Road, S.B. Road, Katraj Road, Hadpasar Road Pune Station & other highways.

It has come out very clearly that Increase in population, existence of poor public transport, growing economic activity and increase in student population are the 4 top reasons for congestion on roads

**2. Increasing Vehicles**

In Pune city due to excessive growth of vehicular traffic on the road adds to the problem of road blocking. Growth of vehicles increases day by day in the Pune city causing severe effect on urban transportation. There are many types of vehicles in the Pune city causing traffic congestion & extra burden of road flowing capacity. Another very important factor to be considered is the rapidly growing population of motor vehicles and increasing commerce in Pune city. However, carrying capacity of our roads has not been able to keep with the increase in vehicles. Vehicles increases by 87 times against Population increase by 4 times (4 decades) 30% of Population in Pune city have their own 2-wheelers.

**Table 1.1:** shows the motor vehicles population-

Sr.NO.	CATEGORY	31.3.2001 to31.3.2002	31.3.2003 to31.3.2004	31.3.2005 to31.3.2006	31.3.2007 to31.3.2008	upto30.6.2008
1	Two wheelers	723247	864738	1018346	1214671	1237219
2	Cars	85410	108276	146595	198428	207234
3	Auto rickshaw	54181	55799	56583	60189	60358
4	School Bus	64	222	345	429	429

Source R.T.O. Pune

**3. Environmental Problems**

Emission from industries and vehicles created serious pollution hazards in almost all the big urban areas. The automobile has revolution the entire scenario of commercial, industrial, public and personalized transport systems. However, it has also introduced environmental problems. It is an apparent that urban areas and industrial centers are the most significant contributors of monoxide (CO) because they account for the largest number of automobiles

and industries. Air & Noise pollution are responsible for a remarkable impact on environment and human health. There are many examples of pollution level increases in Pune city.

**4. Parking Problems**

In Pune city, a large number of vehicles are parked in a haphazard manners causing obstruction to traffic flow causing the traffic congestion. Also lowering the speed of the traffic flows in busy roads. Two-wheelers have the highest share among all the vehicles parked on the road. The parking of vehicles is allowed

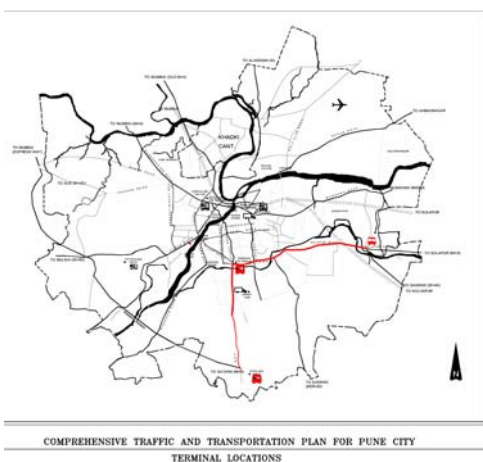
on one of the sides of the section. As compare to other Roads there is worst condition in A.B.C.Chowk, Camp, J M Road, Fergusson College Road, Pune Station and Surroundings, Tilak Road , Paud Road, L B Shastri Road, Bajirao Road, Kumtekar Road, Laxmi Road. Etc .P.M.C has been grouped these roads into small stretches

**5. Public Transport**—Various studies have proved that in order to meet the growing transportation demands of the cheap & rapid public transportation system. Public transport system plays an important role in particular cities growth. In Pune city, public transportation not proper, regular and no management plan to fulfill its growing need of the population. PMPML service not sufficient to growing population.

**MANAGEMENT PLAN FOR URBAN TRANSPORTATION**—This paper attempts to identify the management plan for future in Pune City. Proper attentions have to give on public transport facilities it should be inexpensive, pollution free, clean & simple. Frequency & regularity must be added an advantage in any kind of Public transportation. It is also helpful to decreases private vehicles population this management plan is divided into 2 groups.

**(A) GOVERNMENTS**—Increasing pressure on urban transportation problems in all over India, Many proposals' has been suggested by various Foreign, Government and local institutes. Central, state and local governing authorities suggested following ways to solve the transport problems in Pune city.

#### 1. B.R.T (Bus Rapid Transit System)-Fig-1.2



**Fig. 1.2**

Swargate- Katraj = 5.6 km Swargate -Hadapsar = 8.2 km (ind. PWD 2.4 km)

#### 2. DPR for Metro Rail in Pune Metropolitan

#### 1.2:

#### Map of DPR for Metro Rail in Pune Metropolitan

#### B) PUBLISHERS VIEW

\* P.M.C should implement above mentioned projects.  
\* P.M.C. should charges extra tax on two wheeler & three wheeler owner of the Pune city. \* Build new elevated roads along river side of Pune city. \* Avoid parking on busy roads.\* State Government should implemented ring road project. \* Electronic information board should be display on every bus stop.(indicating speed, fare, distance, time, total KM) \* Availability of Parking spaces. \* Digging of roads is legally prohibited.

#### CONCLUSION

It is a fact that, urban transport system is great strain and stress due to various reasons. A brief discussion of. Some problems speak about the bad condition of urban transportation in pune. Pune Municipal Corporation, State government & Central government should address these issues of prime importance. There is a huge potential to develop existing public transport facilities with the help of modern technology like skyline bus, monorail & GPS Navigation System. PMPML (Pune Mahanagar Parivahan Mahamandal Limited.) should improve heavily congested areas systematically. So that same areas can be use with higher frequency and higher turnover per area. Population growth is occurring exponentially in Pune city. So Pune Municipal Corporation should rearrange the transportation facilities systemically with the help of innovative ways of transportation.

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