1.1 Introduction:

In India, the cities are as historic centers and the road network is often narrow. All kinds of slow moving vehicles, such as hand – carts, bullock carts, and street vendors use the limited network causing chaotic traffic conditions. The newer part of the city is often planned with little consideration to transport requirements. Many people living on the periphery of cities are those of low income they have little paying capacity and yet must travel long distance to work. Inevitably the bus operator is burdened with the task of providing cheap transport for these commuters. This compounds the problem, since the provision of cheap, long distance transport, encourages more low income groups to live out of the city in suburbs where house rents are also cheap.

In big cities, especially in the metropolitan cities, the mass transportation problem is assuming a big proportion. The trends indicate that transport of communities from the agricultural economy to urban industrialization led to the development of urban transport. G. L. Wilson, on international expert on transportation, in his book ‘Transport and communication states’. It is transport which helps human beings in removing the unwanted barrier of physical separation and enables a given flow of resources to produce greater results.

According to Fair and William, “It has been said that improved transportation was a major factor leading to the breakup of the Greek City and its environments. At the same time it created conditions favoring large and more effective population units”¹. Therefore, it has been aptly said that “Modern civilization is largely the child of modern means of transport”

Transport plays an important role in helping to wipe out serious disparities both social and economical. Urban problems are numerous and large in magnitudes. A way out of this would be to disperse concentrated urban population into periphery area such dispersion would need appropriate growth of urban life. The main function of transport
is to bridge the gap which separates the producers and consumers, either by movement of goods or by movement of passengers.\(^2\)

In the development countries, transport has dual role to perform. Not only does it facilitates economic development but also initiates development by opening up new areas or regions. “Transport is the mirror, which reflects the progress of a nation; it is a link between industry, agriculture, trade and commerce of a country.”\(^3\)

In a vast country like India, with higher space of agriculture and industrial development and greater interaction among people, increase in road system and road transport sector is necessary for the well being of the nation. Thus, addition to road network and increase in vehicles are inevitable. In India two major modes of transport have been adopted for goods and passenger traffic. There are railways and roadways. By the very nature of the system, Railways cannot reach every nook and corner of the country where as roads have the possibility of reaching every village in the country. With industrialization and improvement in agricultural produces in the country, it was but natural that greater proportion of transportation was taken by roads.\(^4\)

These three main economic income generation functions i.e. industry, agriculture, trade and commerce, contribute towards the development of an economy of the country. The country needs the essential means of transport in order to have communication among different parts of the country. Transport not only spread the product and the economic benefit of industry, agriculture etc. but also achieves economic, social development and progress, which is directly related to the effectiveness of the transport system in a country.

In other words, we can say that the transport bring unity among different regions of the country. Without adequate facilities of the transport the different regions remain separate independent economic, political, social and cultural units. Organized development of these combined units and economics, political etc. brings about an integration of various sectors of society. For a developing and large county, like India, this is highly essential. Further emphasis of the role of transport in economic development has been rightly described in the following paragraph.

Perhaps, most important of all harmonious development of industry demand good communication. It is not enough for the country to have abundant and varied wealth, enormous distance of the hinders attempts at economic development. The economic development programme is an adequate measure of transportation to carry raw materials to manufacturing points, to help distribute the finished goods to
consumption centre’s, to make manure seeds, etc. easily available to the country – side people and to bring in the ripe produce to hungry towns. India has launched a big industrial and agricultural expansion programme and for its fulfillment, is essential that our transportation system should keep pace with.

“The alarming growth of urban centers is a worldwide phenomenon and has created several social and economic problems civic amenities like housing, roads, drinking water and sewerage has been over-burdened. The phenomenal increase in urban population has considerably affected the quality of life in our urban centers have adversely affected the public transportation system on the other hand, a well planned, well organized and economical bus transport system, in Indian cities, it has been generally accepted as a principal mode to center to the largest portion of traffic demand. “Its efficiency in time to come should be so high that people would not be required to use personalized two - wheelers and is required to use inter – mediate public transport, only when they have luggage and for hospital trips etc. where door to door service facility is a must”.

“That part, the greater the adequacy and efficiency of the public transport system, the more is the contribution to urban life, through efficient transportation network and hence, to national productivity in which urban activities play a very important role. As the urban population increases, most of the additional population is from the poorest sections of the community, who is come an ever proportion of the urban community. Many who live, as squatters on pavements, road sides, river and railways banks, etc. are often moved out to the periphery of cities into resettlement area similarly, those migrating to the city, mainly from rural areas are usually confined to similar location. For example, during 1975-77, thousands of migrants living in the central area of Delhi, India were moved to resettlement camps located between 15-13 kilometers from the city centre. As a consequence, these low income communities become institutionalized and at present from about 20 per cent of the population of the city. Gradually basic services such as water, sanitation, street lighting and domestic electricity have been supplied. Public transport services had to be provided immediately in order to move the residents”.

Between1980-2000 much of world’s urban expansion will take place in Less Developed Countries (LDCs). United Nations Organization (UNO) forecasts indicate that during this period the urban population will increase by over 100 per cent in LDCs, as compared to only about 30 per cent in More Developed Countries (MDCs) of the 57
cities expected to have population in excess of 5 million buy the year 2000, 41 is in LDCs and 16 is in the poorest countries, where income per capita is below and 360 per annum.  

Currently the 340 million urban dwellers in cities of over 1 million population in LDCs. Undertake something like 4-300 million trips per day of which perhaps 30-40 per cent is by some form of public transport.  

1.2 Public Transport Characteristics:  
Public transport in Under Developed Countries (UDCs) comes in a variety of physical and organizational forms conventional standard public transport buses are currently being operated in all cities of more than one million populations. But there is less number of trains, trolley – bus, or metro system in use in UDCs as compared to more developed MDCs. For example, whereas so per cent of cities in MDCs of more than 2 million populations have metros, only one quarter (1/4) of similar sized cities in LDCs have such facility. The supply of conventional busses is usually much smaller in the UDCs, typically, there are 10 to 30 buses per 1 00,000 population in UDCs as compared to 50 to 80 per cent buses per 1 00,000 population in European cities.  

Many cities have large component of unconventional or intermediate public transport (IPT) mini – buses, converted utility vehicles for the provision of public transport services. The contract in institutional frame – work between the operator’s conventional vehicles (public transport) and unconventional vehicle has shaped the profitability, where conventional buses, usually organized in large fleets and often run by local government or central government are seemingly difficult to maintain as a commercial enterprise.  

In the large cities of India, conventional buses are majority operated by public undertaking and play a significant role in the movement of large number of travelers. They have increased their capacity to meet increasing demand for public transport services. However, there has been no evidence of any economics of scale and inflation has advanced unit cost of operation. While at the same time, fares have been kept artificially low by central and local government, for socio – economic reasons. As result losses are being incurred on urban services, which are cross – subsidized from more profitable operations or these losses are covered by government loans with interest. Little internal finance is available for investment in city bus operations, more over they have rely on government support. Consequently service level, either stagnates or deteriorates.
1.3 Significance of Transport:

The Progress of any country is measured by the condition of transport system is that country. Social, economic and commercial progress is the outcome of the transport system. Transport brings the entire world into one organized unit. It carries ideas and the innovations to the people and has considerably contributed to the evolution of civilization. Though the demand for the transport is not fundamental in human nature, as the demand for commodities, now-a-days, economic and commercial importance of the greatest magnitude is attached to the development of transport. The transport industry undertakes movement of the persons and the goods from one place to another or one part to another part of country. In fact the whole structure of industry and commerce rests on well laid foundation of transport.

In the modern age of specialization such as self sufficient society is conceivable. Now people get the advantage of the territorial division of labour and operative of the theory of international trade. Thus, nations depend on other nations, for the supply of raw material and the finished product for the maximization of human satisfaction. Therefore, effective transport is indispensable for economic progress of the world. Manufacturing, merchandising, banking extracting and the like businesses all depend upon the transport activities.

More than a century ago, due importance was not given to transport, because people generally believed that only the manufacturing industries, banking, agricultural could develop national economy. In the 20th century indispensability of transport has now come to all countries of the world.¹⁰

1.4 Urban Transport – Public Utility:

No doubt, urban transport is the public utility as well as welfare activity. There are several activities that are included in the public utility. These are free education, defiance, internal security, flood control, anti – epidemic measures, anti – air and water pollution, low cost housing in urban areas, extension of agricultural and industrial work etc. It must be remembered that public utility services is a static concept with changing content, because a great deal depends upon the status are different in different in countries in the world.¹¹

There are three chief characteristics of public utility services. Collective demand made by the society, efficient and adequate supply and ability to exercise power of discrimination. The collective demand of transport of and organized society with a high standard of living may be exceedingly strong as demand for primary and
essential commodities depend upon and efficient system of transport. It must be remembered that if the transport services are not adequate, the public world suffer.\textsuperscript{12} Now days, the entire economic life of the people of the country depends upon transport facilities provided by state government. Improvement in technique of the modern transport has considerably increased the wealth of society, through the development of trade and commerce; it is clear that, public service obligations have been imposed in all countries of the world upon all forms of transport. Now–a–days, a transport service is either nationalized in interest of public on controlled by state.

\textbf{1.5 Urban Transport – Welfare Activity:}

As well as, public utility approach of the transport, another important aspect is the fact that in a developing economy movement of the people in urban areas is being accepted by the community as a welfare activity and not as a commercial one. Naturally, therefore, fares for this movement are at lower level than that required by the operational cost. In a situation like this a different approach is required. In such circumstances, every system has necessarily to be productivity conscious as for as the operator is concerned and has to be suitably subsidized as far as government is concerned. The approach therefore, will have to be at optimum productivity with suitable subsidization.

\textbf{1.6 Factors Affecting the Public Transport Demand:}

Studies were made by G. D. Jacobs in 1979 and by Vijaykumar and J.D. Jacobs in 1982, in order to compare and contrast some of the factors affecting urban public transport usage in both developed and developing counties. In both studies data prom over 150 cities were obtained and regression analysis was used in establishing relationship between public transport usage, supply and the physical socio–economic parameters of the cities. The analysis showed as might be expected, that the number of the passengers using bus–services increased with size of population and area, though this trend was more marked in the third world cities. Relationship ware found to exit between income and bus investment, increased income in developed countries was shown to result in a decreased investment of the public transport, refracting higher income and vehicle ownership level found in developed world.\textsuperscript{13}

However, in developing countries, an increase in income leads to market increase in public transport usage. Relationship between demands for public transport factors that described bus system indicated a greater demand for third world cities, for example, the number of buses doubled in Bombay and trebled in Madrass and Delhi
between 1974 and 1983. Other factors which were affecting the demand for the transport were the total number of public transport, trips per day, city population, number of routes, fleet size and the fleet in use, increases etc.

1.7 Organization Pattern of the City Bus Transport:

In India, city bus transport system is organized under different patterns. In Bombay, Bombay Electric Supply and Transport (BEST) a Municipal undertaking deals with bus transport and electric supply in Madras, Pallavan Transport Corporation Limited. With deal with metropolitan bus transport, is a company established by government of Tamilnadu, Under the Company Act, 1956. The bus transport system in cities like Hyderabad, Bengalore, Culcutta are part of statutory road transport corporations established by the respective state government and R.T. C. Act, 1950. In case of Delhi, the Delhi Transport Corporation, (DTC) which looks after intra – urban bus transport is an undertaking of the government of India. Municipalized undertakings deal with city transport in many other cities i. e. Ahmedabad, Pune, Pimpri, Chanchwad, Kolhapur and Solapur etc.

There has been a feeling that, large state transport corporations are not enthusiastic about the operative of city services. The case of the Maharashtra State Road Transport Corporation (MSRTC) is with the fleet strength of about 12,000 buses. It provides adequate, efficient and economic and properly co-ordinate transport system throughout the state. Bombay and some other cities was the representative Municipal Corporations shouldering the responsibility of city transport. However, MSRTC has also been operating city services in third urban centers viz. Nashik, Nagpur and Thane etc.

Buses take up over 90% of public transport in Indian cities, and serve as a cheap and convenient mode of transport for all classes of society. Services are mostly run by government owned state transport corporations. Most passenger buses use the standard truck engine and chassis and are not economical for city use — there are virtually no buses in India specifically designed for urban conditions. As a result, available urban mass transport services are overcrowded, unreliable, and involve long waiting periods. However, after the economic liberalisation, many state transport corporations have introduced various facilities like low-floor buses for the disabled and air-conditioned buses to attract private car owners to help decongest roads. Bengaluru was the first city in India to introduce Volvo B7RLE intra-city buses in India in January 2006.
New initiatives like Bus Rapid Transit (BRT) systems and air conditioned buses have been taken by the various state governments to improve the bus public transport systems in cities. Bus Rapid Transit systems already exist in Pune, Delhi and Ahmedabad with new ones coming up in Visakhapatnam and Hyderabad. High Capacity buses can be found in cities like Mumbai, Bengaluru, Nagpur and Chennai. Bengaluru is the first Indian city to have an air-conditioned bus stop, located near Cubbon Park. It was built by Airtel. The city of Chennai houses Asia's largest bus terminus, the Chennai Mofussil Bus Terminus. On the first of June, 2009, to celebrate their first anniversary, the Government of Karnataka and the Bangalore Metropolitan Transport Corporation flagged off a proper bus service called the Atal Sarige. The service aims to provide low-cost connectivity to the economically backward sections of the society to the nearest major bus station.

1.8 Significance of the Study:

Solapur Municipal Corporation came into existence in the year 1964. But Solapur Municipal Transport was incepted in the year 1948. Basic structure of the city is based on working class, especially Mill workers having meager monthly income Rs. 2000/- per month. This naturally leads to public transport as a singular means of transport for commuting. Present population of the city is 9 lakh requiring 120 number of buses and 7-8 hundred number of Auto Rickshaws, in addition to personalized mode of transport like motor cars, jeeps etc. In post liberalized era, availability of easy credit has led to an alarming growth in Special Utility type of vehicles (SUV) like APE Rickshaws, Six setters, Sumos, Commander Jeeps etc. These vehicles came to be owned by educated, especially undergraduates as means of livelihood having an eye on increased floating population due to vibrant economy initiated by liberalization. Ironically instead of having complementary role with public transport system, this illegitimate mode of transport started competing with it.

Like all other Municipal transports and state transports, Solapur Municipal Transport (SMT) also became a victim of this unfair competition caused by illegal transport. This parallel transport started encroaching on the passengers of SMT, thereby causing enormous revenue losses to it. At one point of time, the daily revenue earned by SMT became less than daily expenditure. (daily expenditure in Sept.2006 was Rs. 3/- lakh and earning were in the range of Rs. 80000 to 90,000/-) The fleet was reduced to 34 buses on road. (Fleet 125 i.e. 91 buses were off the road). This started the vicious cycle of degradation of the undertaking. The Revenue loss due to alienation
of passenger reflected directly on maintenance schedule, thereby increasing number of
off road buses which directly led to reduction in frequency of buses, thereby increasing
alienation of more passengers and thus more revenue losses.

Kolhapur Municipal Corporation Transport Department was established on 1st
April 1962. The bus service was started under this department to provide economical,
timely and reliable travel facility to citizens of Kolhapur. The transport department
provides city bus service in Kolhapur city, nearby suburban area and rural area within
15 km from city limits. There are 133 buses with transport department as on October
2006 and 127 buses are on the road for daily service. These buses traveling of different
routes are controlled by 5 transport control centers in the city. The central transport
control center is at Chh. Shivaji square. There are pass issuing centers at Maharana
Pratap Chowk, Gangavesh and Shri Shahu Maidan and open on all week days from
8.00 Morning to 8.00 at night.

Now, KMT has been providing valuable city transport services to the citizens of
Kolhapur as well as to the people in the adjoining predominantly rural areas within a
radius of 15 kilometers. It daily carries thousands of students to and from their schools,
hundreds of factory and office workers to and from their workplaces. It also takes small
businessmen and traders on their visits around city and the nearby villages, housewife
to and from market places. It also enables small farmers in the surrounding villages to
bring their produce to the city’s wholesale and retail markets and then again takes them
back to their villages. In fact, within Kolhapur city, KMT is a life line for thousands of
people engaged in different pursuits. On the rare occasions like Bandhs or the river
Panchaganga’s floods that the KMT is forced to curtail its operations. The plight of the
Bus –users is has to be seen to be believed.

1.9 Statement of the Problem:

The Solapur Municipal Transport is facing perennial problems like fund crisis,
mismanagement, mal-administration, lack of transparency, unfair and un-healthy work
culture and most significant lack of support from civil society, etc. Compare to Solapur
Municipal Corporation Transport the performance of Kolhapur Municipal Corporation
Transport System is better in many fold i.e. number of passengers, various scheme of
the passengers, prompt service to the citizens, fair rates for all category, multi root
services, concession for students, senior citizens and physically disable persons etc.
Among the selected city bus service, Solapur city bus service facing number of
problems at the same time Kolhapur having a better position. Therefore, the main task
of researcher is to find reason behind why critical situation has facing by the Solapur Municipal Corporation Transport and on the other hand the reason behind the well performance about the Kolhapur Municipal Corporation Transport. The present study aims to understand the performance and problems and performance of Solapur and Kolhapur Municipal Corporation Transport as public utilities. Therefore, present study is entitled, ‘A Comparative Study of Municipal Corporation Transport in Solapur and Kolhapur’

1.10 Research Methodology:

The following methodological procedure is adopted.

1.10.1 Objectives of the Study:

The following are the main objectives of the study:

1. To study the role of passengers in the Solapur and Kolhapur Municipal Corporation Transport.
3. To examine the facilities provided by the Solapur and Kolhapur Municipal Corporation Transport.
4. To compare the various concessions schemes provided by the Solapur and Kolhapur Municipal Corporation Transport.
5. To study the problems of Solapur and Kolhapur Municipal Corporation Transport.

1.10.2 Hypotheses:

The following hypotheses are tested in the present study.

1. The Passengers fare of selected municipal corporation transport has been shown positive trend during the study period.
2. The performance of total revenue of selected municipal corporation transport is sound during the study period.
3. The total expenditure of selected municipal corporation transport is shown positive trend.

1.10.3 The Study Area:

The present study covers Solapur and Kolhapur Municipal Corporation Transport. Both Municipal Corporations Transport are the most important segment of the urban transport in the western Maharashtra.
1.10.4 Sampling Plan:
A sample of 50 passengers’ respondent from each category of Urban Passengers, Rural Passengers, Senior Citizens, and Students of Municipal Corporation Transport is selected as respondents by adopting purposive random sampling technique from both Municipal Corporation Transports. From each city 100 passengers respondents are selected. Total 200 passenger respondents’ are selected for analysis. A detail regarding the sample size of respondents from Kolhapur city and Solapur city is given in the Table 1.1.

Table 1.1
Passenger Respondents from Kolhapur and Solapur city

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>City</th>
<th>Urban Passengers</th>
<th>Rural Passengers</th>
<th>Senior Citizens</th>
<th>Students</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Kolhapur</td>
<td>25 (25.0%)</td>
<td>25 (25.0%)</td>
<td>25 (25.0%)</td>
<td>25 (25.0%)</td>
<td>100 (100.0%)</td>
</tr>
<tr>
<td>2</td>
<td>Solapur</td>
<td>25 (25.0%)</td>
<td>25 (25.0%)</td>
<td>25 (25.0%)</td>
<td>25 (25.0%)</td>
<td>100 (100.0%)</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>50 (25.0%)</td>
<td>50 (25.0%)</td>
<td>50 (25.0%)</td>
<td>50 (25.0%)</td>
<td>200 (100.0%)</td>
</tr>
</tbody>
</table>

1.10.5 Period of the Study:
As pointed out earlier, the present study aims to examine the financial performance, problems and prospects of Solapur and Kolhapur Municipal Corporation Transport. In this direction the period, from 1999-2000 to 2011-12 is selected for analysis.

1.10.6 Data Collection:
The analysis is mainly based on both primary and secondary sources of the data. The primary data is collected by personal observation and personal interviews with structured schedule from the selected respondents for the present study. The statistical data on relevant information is collected from the Annual Reports published by Solapur and Kolhapur Municipal Corporation and Collector Office. Additional information is also collected from the books, journals, Govt. publications library and Internet etc.

1.10.7 Data Analysis:
Keeping in a view the objectives of the study, some appropriate statistical techniques such as averages, Percentage change, Standard deviation, Coefficient of
variation, Pearson’s Coefficient of Skewness, Regression, annual compound growth is calculated for relevant variables. Moreover, some graphical devices such as line graph and bar graphs were applied for analyzing the performance of Municipal Transport of Kolhapur and Solapur. The details information of statistical techniques is given below.

Range: The range of a set of numbers is the difference between the maximum and minimum values. Relative range or the coefficient of range is defined by the ratio:

\[ RR = \frac{X_{\text{max}} - X_{\text{min}}}{X_{\text{max}} + X_{\text{min}}} \]

Standard deviation: Standard deviation is only an absolute measure of dispersion, Standard deviation is calculated as:

\[ \text{S.D.} = \sqrt{\frac{\sum X^2}{N} - \left( \frac{\sum X}{N} \right)^2} \]

100 times the coefficient of dispersion based on standard deviation is called the coefficient of variation, abbreviated as C.V. Thus,

\[ \text{C.V.} = \frac{\sigma}{\bar{X}} \times 100 \]

Where,

\[ \sigma = \text{Standard Deviation} \]
\[ \bar{X} = \text{Mean} \]

According to Professor Karl Pearson who has suggested this measure, proclaim that, ‘coefficient of variation is the percentage variation in mean, standard deviation being considered as the total variation in the mean.

For comparing the variability of two distributions, we have computed the coefficient of variation of each distribution. A distribution with smaller C.V. is said to be more homogeneous or uniform or less variable than the other and the series with greater C.V. is said to be more heterogeneous or more variable than the other.

Skewness: An index of the degree to which a distribution is not symmetric, or to which the tail of the distribution is skewed or extends to the left or right. The normal
distribution is symmetric, and has a skewness value of zero. A distribution with a significant positive skewness has a long right tail. A distribution with a significant negative skewness has a long left tail. In a skew distribution the distance between the mean and median is nearly one-third of that between the mean and mode.

A measure of skewness gives a numerical expression for and the direction of asymmetry in a distribution. It gives information about the shape of the distribution and the degree of variation on either side of the central value. We consider Pearson’s Coefficient of Skewness.

$$PSk = \frac{\bar{X} - Mo}{s}$$

CGR: Point to point annual compound growth rate was calculated for the analysis of growth of Kolhapur and Solapur Municipal Transport for twelve year. Annual compound growth rate (CGR) is calculated as:

$$CGR = \text{Antilog}(b - 1)*100$$

Value of ‘b’ calculated as:

$$b = \frac{N * \sum XY - (\sum X * \sum Y)}{N * \sum X^2 - (\sum X)^2}$$

In the above equation, value of b is indicated as the rate of change in the variables. Here Y notation taken for dependent variable such as Passenger Fare, Advertisement Charges, Sale of unused materials, ..., and X for the time.

1.10.8 Data Processing Plan:

The data this collected is processed with the help of Computer Software viz. MS Excel and SPSS etc.

1.10.9 Limitations of the Study:

The present study is limited to the financial performance, and problems of City Bus services in both the Kolhapur and Solapur city.

1.10.10 Chapters in Brief:

The thesis is divided into six chapters. The first chapter entitled, ‘Research Methodology and Review of Literature’ is included scientific research with significance of the study, statement of problem, objectives of the study, hypotheses,
sampling plan, data collection technique, data analysis plan and statistical tools, parameters of the study, chapters in brief etc. The relevant review of literature is given in the same chapter. The second chapter has written as profile of the Solapur city.

The third chapter has written as ‘Empirical Study of KMT and SMT’. This chapter deals with the empirical analysis of Kolhapur and Solapur Municipal Transport activities. The Structured Interview schedule is used to collect data from selected 200 respondents. The selection of respondents from both Cities are same and these are from four categories, like Senior Citizens, City passengers, Rural Passengers and Students passengers with each 25 percent’s respectively. The collected data analyzed with three different methods, these are frequency distribution, City wise cross tabulation and Passenger wise tabulation. It includes Age group of passengers, Education level, Occupation of Passengers, Type of families, Family members, monthly income of families, Number of school going children’s, Student concession pass and taking benefit of it, City Bus stops near to passengers house, Reasons for City Bus travel, Beneficiary schemes and use of it. Opinion about ticket fare, Monthly expenditure on ticket fare and the passenger’s complaints, suggestions to improve the City Bus services and other factors are analysis as follow.

Chapter fourth has entitled, ‘Performance of Solapur Municipal Transport’. This chapter deals with the analysis and interpretation of Solapur Municipal Transport activities in terms of performance with the help of economic variables performed during 1999-00 to 2011-12. It includes revenue and expenditure of Solapur Municipal Transport. In revenue side considered revenue from Transport, Reserve Buses, Advertisement, Sanitation, Sale of unused material, Passenger fine, Welfare fund, Advance from SMC, Bank deposit receipts and other revenue sources. The expenditure side consider that the expenditure on Employee’s salary, Contingence, Expenditure on Buses, Provident Fund, Cash Prizes, Legal Charges, Embracement, Vehicles insurance, Functions, Miscellanies, Transport committee and Central Automobile and Workshop.

The fifth chapter has entitled, ‘Performance of Kolhapur Municipal Transport’. This chapter deals with the analysis and interpretation of Kolhapur Municipal Transport activities in terms of performance with the help of economic variables performed during 1999-00 to 2011-12. It includes revenue and expenditure of Kolhapur Municipal Transport. In revenue side considered revenue from Transport, Mahalaxami Passengers Pass Fare, Sale of Application Forms, Advertisement, Sale of unused material, Position
Charges, Rent Bases Buses, Finance and Bank deposit receipts and other revenue sources. The expenditure side consider that the expenditure on General Administration Employee’s salary and Allowances, General Administration Office Expenditure, General Administration other Expenditure, Workshop Employee’s, Office and Other Expenditure, Traffic Section Employee’s, Office and Other, Vehicles Repairs, Power and Operation Material Expenditure, Government taxes and other charges, Repayment of Loan amount etc.

Last chapter entitled, ‘Findings and suggestions’ are written. This chapter gives major finding and suggestions related various aspects of Solapur municipal transport and Kolhapur Municipal transport.

1.11 Review of Literature:

Transport is the backbone of economic, cultural, social and industrial development of any country besides its two dimensional role of creating time and space utilities. In the word of Alfred Marshall “The transport industry which undertakes nothing more than the mere movement of persons and things from one place to another, have constituted one of the most important activities of men in every stage of advanced civilization.” An attempt is made in this chapter to review the literature selectively in the area of transport and road transport in general and municipal transport in particular.

1.11.1 Foreign Studies on Transport and Road Transport

The evolution of transportation system in different countries and the role played by the transport sector in the economic development of the respective nations provide rich insights in retrospect. Such studies are also of immense practical use in prospect since they form the basis for perspective planning in transportation and development efforts undertaken by the underdeveloped countries.

An attempt made by Owen Wilfred\(^{1}\) on the problems and potentials of transport system by focusing on the mobility of people and goods. A study made by the Ministry of Transport Scottish Development Department emphasizes the free flow of traffic at reasonable speed requires planned improvement of urban road systems. The study also suggested constructing secondary means of access enable goods and service vehicles to load and unload at the stops.

Denys Munby\(^{2}\) opined that the cost of transport influences the size of cities, number of production units, choice of job in general and the quality of life of human beings in particular. In addition to that examined the road accidents in Great Britain and
observed that the behavior of drivers, their habits, carelessness and drunkard driving are responsible for accidents and also stated that they must be punished severely.

Locklin\(^3\) empirically evidenced the rail-road transport systems and opined that the Government ownership of transport systems facilitates the planning and execution of transport system very effectively and the Government, in one way or the other is responsible for providing necessary capital to the transport systems which are functioning in the respective state.

Martin T. Farris\(^4\) felt that the marketing function is important to the public transport corporations which are providing passenger transportation services. Farris and Hardling focus on three areas of passenger transportation viz. (i) the systems of passenger transportation which includes economic, physical, pricing and regulatory systems, (ii) the problem areas of passenger transportation like urban transportation, marketing of transport services, policy problems, social benefits and social costs, (iii) the future of passenger transportation and ways for managing change and the future.

Donald J. Bowersox\(^5\) focus attention on the scope of transportation and its evolution, impact on US economy and observed that the transportation pervades all commercial activities and is integral to the high standard of living of U.S. citizens. This study is confined to the freight transportation in general and passenger transportation in particular.

H. P. White and M.L. Senior\(^6\) were of the opinion that the transport industries by moving men and materials from one place to another are fulfilling and helping the most important activities of man in every state of advanced civilization and thus the transportation is a basic human activity. The stated the importance of transportation to the society and the contributions made by it for the well-being of the society. The nature of markets for transport and the available technology which are identified as key determinants of the structure of transport industry and its environment.

1.11.2 Indian Studies on Transport and Road Transport

Halder D. K\(^7\) extensively evaluated the traffic problems in Calcutta with a focus on Calcutta State Transport Corporation. For the lower productivity of the CSTC during the period of 1964 – 65 to 1972 – 73, the following factors were responsible viz., (i) low fleet utilization (as a result of lack of proper preventive maintenance); (ii) higher absenteeism and (iii) evasion of fare. However, Linear Programming (LP) Model was applied to the problem of efficient allocation of buses on different routes.
Patankar\textsuperscript{8} studied the Road Passenger Transport in different dimensions since 1950s and analyzed the urban transportation in detail with emphasis on operational productivity and efficiency of STUs for the period 1973-74 to 1979-80. He opined that the future of road transport sector in India would brighten only with productivity-oriented planning and offers comprehensive solutions to urban mobility problems in the cities of developing countries.

Khan.R.R.\textsuperscript{9} presented a kaleidoscope of transport network and transport management system in India. Besides, continuing with systems approach, a model was framed for a comprehensive transport system and transport planning. He provides an analytical study of several vital areas along with the benchmark data for transport management.

Satyanarayana.J.\textsuperscript{10} intertwined the costs with revenues and relates losses with profit. Organizational set up, capital structure, financial and personal policies, Management Information Systems (MIS) of Andhra Pradesh State Road Transport Corporation (APSRTC) are discussed and observed that the cost of service of road transport solely rely on the size of the fleet, the vehicle condition and the length and road condition on the basis of the data collected from a comprehensive sample of motor vehicle operators in Andhra Pradesh. He found that the fundamental factor which influences the cost of operations of motor transport industry in Andhra Pradesh is the size of the motor transport unit.

Jain. J.K.\textsuperscript{11} explored on macro level transport operations before and after independence in India and analyzed the problems and prospects of road transport besides the socio-economic significance of road transport for bringing efficiency in all spheres.

Srivastava.S.K.\textsuperscript{12} portrays the historical development of various modes of transport in India keeping in view the means to coordinate the development of transport system. He examined the effect of efficient, cheap and well coordinated transport system to the development of the economy.

Arora S.K.\textsuperscript{13} made a comparative study on the performance of Punjab Road Ways with Andhra Pradesh, Gujarat, Rajasthan and Kerala Road Transport Corporations in general and the public and private sector road transport undertakings of Punjab in specific.

Ratna Kumar Singh\textsuperscript{14} made a study with reference to Bihar State Road Transport Corporation during 1959-60 to 1974-75 and examined the physical and
financial performance of Bihar State Road Transport Corporation. The study advocated the nationalization of more number of bus routes in Bihar State to reach maximum number of public.

Kulshreshta D.K.\textsuperscript{15} evaluated the managerial problems of road transport undertakings in the country and suggested various measures to control the cost of bus operation while improving their revenue.

Rama Mohan Rao P.S.\textsuperscript{16} investigated on various strategies adopted by Andhra Pradesh State Road Transport Corporation for improving its performance. The focus of the study is on various operational and administrative areas of the Corporation during his tenure with the Corporation as Vice Chairman and Managing Director.

Sudarshanam Padam\textsuperscript{17} elaborated in detail the history of bus transport in India, various forms of organizational structures of State Transport Undertakings, the management and performance during 1970-80. For the sake of the study the cross sectional analysis of road transport corporations of Andhra Pradesh, Maharashtra, Gujarat and Karnataka are considered and found the operative as well as financial problems in functioning. The study suggested number of operative measures to resolve these problems.

Baig Nafees and Dr. Iqbal B. A.\textsuperscript{18} emphasized the need of transportation in India in general and Uttar Pradesh in particular. Transportation provides both backward and forward linkages to the economy of a region or a state or a country. The dependence of Indian economy and more so of Uttar Pradesh on agriculture provides large scale opportunities for developing agro-based industries and the same requires adequate availability of transport infrastructure. He found that transportation as a constraint for Agro-Industrial Development in Uttar Pradesh.

Kulshrestha\textsuperscript{19} critically evaluated the functioning of State Road Transport Undertakings, specifically public sector transport organizations. The observations interalia include the public sector transport has been facing competition with other means of transport exclusively from the private operators; management of bus stations, fleet utilization etc., and the study throws light on the bus station management and offers some practical ways and means to improve the conditions with special reference to Uttar Pradesh State Road Transport Corporation.

Agarkar Rajguru\textsuperscript{20} studied the ‘Existing transport facilities and possible future development of transport in Ratnagiri District’ in 1985 and find out the Ratnagiri district has presently starving with adequate road and water transport infrastructure. A
co-ordination between the two modes of conspicuous by absences. Even though the government has declared the district industrial backward, providing incentives to the industrialists to set up manufacturing activities in the regions and gone ahead with the formation of industrial estates, large scale manufacturing activity has not made sufficient roads to the district economy. The industrialists are always worried of quick and assured transport of their industrial raw material and finished products. Often resources in the district are transported to developed region for manufacturing purpose. Therefore, when it comes to choosing between industries first or transports first, in case of Ratnagiri district, the latter alternative will get prominence. True that both the alternatives are sustain each other. But, when it comes to fixing priorities for practical purpose, the transport development has gets and upper hand.

Rajeshirke N. Y.\textsuperscript{21} studied ‘A Study of Administration of KMT with special reference to its service efficiency in June 2000’. He summarized that the public transport is use full, important, cheap, safe and convenient means of transport for the people. On this ground, KMT can become a profitable organization again by improving its efficiency by removing the bottle – necks in the day-to-day working, improving its decision making, process and by rendering city bus transport service according to the passenger’s expectations.

National Transport Policy Committee (NTPC)\textsuperscript{22} cross-section ally diagnosed transport undertakings in India during 1976–1977 and finds that the unit cost was mainly influenced by two variables viz., fleet utilization and vehicle utilization. The Committee advocated the exchequer directly subsidies the urban transport undertakings keeping in view of the societal benefit.

1.11.3 Various Committee Reports on Road Transport Sector:
In order to strengthen and develop transport sector in the country various Committees are appointed by the Government of India from time to time to study various aspects of passenger transport sector in the country. Based on the recommendation of various Committees the Government of India initiated policy measures.

The Government of India was appointed The Road Development Committee\textsuperscript{23} under the Chairmanship of N.R. Jayakar, a prominent road engineer, to find out a suitable solution for non-motor able conditions of roads in rural areas. The observations of the committee \textit{interalia} include the development of roads is imminent in view of the socio, economic and political conditions of the country keeping in view of the
increased use of road transport by the rural mass. The Committee recommended creation of Central Road Development Fund by laying an additional duty of two annas per gallon on motor spirit besides the single point tax on motor vehicles to be levied by the State Governments. The third important recommendation of the Committee to the Local Bodies was impose ‘License Fees’ on motor vehicles. The Government implemented the first two recommendations in due course and considered the third for future policy making.

The Transport Advisory Committee was constituted by the Government of India to draft the Motor Vehicles Bill. The Bill was proposed and put up before the Parliament for approval in 1935. Finally, the Bill was passed in 1939 and the Motor Vehicles Act, 1939 came into existence for operation. The Government of India appointed another Committee under the Chairmanship of R.L. Wedgewood to study and suggest ways and means to protect railways from competition with road transport. The Committee recommended some restrictions to the motor transport sector in general and regulations to the passenger traffic undertakings in specific. However, the Indian Motor Transport Sector was affected severely and in deep waters during the Second World War because of the stoppage of import of motor vehicles during the war period and the demand for motor transport increased enormously. To study the impact and incidence of Second World War on Transport sector the Government of India set up the ‘Post War Policy Committee’. The Committee studied various aspects of motor transport industry and recommended reduction of burden of tax on motor vehicles, and treat motor transport industry with fairness. But, no initiative had taken by the Government on these recommendations.

Later on The Motor Vehicles Taxation Enquiry Committee was appointed in April, 1950 under the Chairmanship of M.N. Dalal, to recommend the scientific system of taxation policy for motor vehicles users and suggest the proceeds of this taxation for road development and maintenance. The Committee noticed that there is a heavy burden of taxation and its pattern was defective. The important recommendations were: (i) use the proceeds of the taxes on motor oil strictly for road development; (ii) Central Road Development Fund for which the duty on motor spirit is the source, has to apportion its funds to the states on the basis of motor spirit consumption; (iii) levy taxes on the land and to use the same for the development of village roads through local bodies; (iv) levy the State Fuel Tax and transfer the proceeds to the proposed ‘State Road Funds’ which are to be used for road development purposes; and (v) postpone the
‘Code of Principles and Practices’ at least for three years. However, no initiative was taken by the Government on the said recommendations of the Committee.

A Steering Group was constituted by the Planning Commission with the object of suggesting the ways and means for the development of transport as per requirements of passenger traffic in the country. The recommendations of the Group include: (i) To let the competition continue among different modes of transport for the proper development of motor transport in the country; (ii) To reduce the then existed level of tax burden on motor transport at least by 20 percent; (iii) To provide opportunity for the development of weak units; (iv) To relax the ‘Code of Principles and Practices’ immediately and changing the zone limits from 75 miles to 150 miles. Finally, all of the recommendations were accepted by the Planning Commission for policy formulation.

Planning Commission of Government of India constituted the National Transport Policy Committee (NTPC) in 1980. The Committee emphasized the road transport sector requires a comprehensive framework to identify problems associated with legislative framework and implementation of Acts, Rules etc., It also states that there is a dire need for policy support and regulatory reform to cater the needs of transport sector efficiently and effectively in future. In 1987 the Planning Commission of Government of India appointed a Planning Group on Road Transport and recommended that private participation may be allowed subject to provide adequate number of vehicles for passenger transport.

1.12 Summary:

Municipal transport services then have to be provided at a cost that they can afford which generally leads to high level of fare subsidies. By the relocation of low income groups to sites distance from the city centre, transport mobility and accessibility reduce travel times and distances. But increase expenditure incurred to meet basic travel needs. This contrasts with life with in city centre as squatters in close walking proximity to most amenities and work places. It is unlikely that factors such as reduced mobility of low income communities or added burden of providing additional public transport services are seriously considered by city administrations when relocating squatters to area distant from the city centre.
References:
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3) Ibid, p.4.
6) Ibid, p.5.
9) Ibid, p.3.
10) Ibid, p.4-5.
15) Ibid, p. 3.

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17) SudarshanamPadam. (1990), Bus Transport in India, Ajanta Publications, Delhi,
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