CHAPTER 3

PROFILE OF PUNE CITY AND PUNE MUNICIPAL CORPORATION

3.1 Introduction
The city of Pune, which is the subject of this study, is located in the state of Maharashtra. This chapter presents a brief overview of the state of Maharashtra and of Pune District, followed by a description of the growth and characteristics of Pune city and the establishment, functions and finances of the Pune Municipal Corporation.

3.2 Maharashtra
3.2.1 Location
Maharashtra is one of the 28 states that constitute the Union of India. It lies on the western coast of the Indian peninsula, almost in the centre of the country (GoM 2008: 14). (See Map No.1).

3.2.2 Geography
The State of Maharashtra can be divided into four physical regions – (a) the coastal region (Konkan), (b) The Sahyadri Mountains, (c) the plateau region and (d) the Satpura Mountains and the Tapi-Purna Valley (ibid: 14-16). Pune lies in the plateau region.

3.2.3 Population
The population of Maharashtra was 11,23,72,972 in 2011 (censusindia.gov.in/2011-prov-results/chapter_3.pdf :3). The urban population increased from 28.22% in 1961 to 42.43% in 2001, thus making Maharashtra the second most urbanised state in India. (GoM 2010: 18). The literacy rates for males and females was 89.82% and 75.48%, thus giving an overall literacy rate of 82.91% in 2011 (censusindia.gov.in-chapter6.pdf).

3.2.4 Economic Situation in Maharashtra
Maharashtra’s Gross State Domestic Product (GSDP) in 2009-10 at constant (2004-05) prices was Rs. 7,01,550 crore, an increase of 8.7% over the previous year. The Gross State Domestic Product at current prices in 2009-10 was Rs. 9,01,330 cr. and the Net State
Domestic Product at current prices was Rs. 8,17,891 cr. The per capita income of the

Map No.1

INDIA
state at current prices was Rs. 74,027 in 2009-10, the second highest among all states after Haryana (GoM 2011: 9). Maharashtra’s contribution to the national economy is high. It contributed to 9.4% of the total population but accounted for nearly 25% of the gross value produced in India’s industrial sector and 14.7% of India’s Gross Domestic Product in 2009-10 (ibid: 7). The state has achieved high levels of industrialisation, demonstrated by the fact that the secondary and tertiary sectors provided 89.5% and agriculture and allied activities 10.5% of Maharashtra’s GSDP in 2009-10 as compared to the national average of 65.4% contribution from the secondary and tertiary sectors (GoM 2011: 20).

3.2.5 Administration

The state is divided into 6 divisions for administrative convenience. These divisions are further divided unto 35 districts and 355 tahsils. According to the 2001 Census, there were 378 urban centres in the state and 43,711 villages (Directorate of Census Operations, Maharashtra 2007: 30). (See Map No. 2).

3.2.6 Local Government Institutions

Local Government Institutions (LGIs) play an important role in development at the local level in Maharashtra. They are classified into urban and rural, each having its own financial resources and its own responsibilities. There were 28,637 LGIs functioning in the state during 2009-10, of which there were 23 Municipal Corporations (GoM 2010: 1).

3.2.7 Policy Regarding Roads

Although local governments have a fair amount of autonomy in deciding their own expenditure pattern, their policies are influenced by the policies of their state governments. Hence while studying the development and maintenance of the road network in Pune city, it is necessary to understand the policy of the state government in this regard. With reference to urban roads, the Economic Survey of Maharashtra 2006-07 states that ‘the vehicular traffic in the cities over the last two decades has increased substantially. This has resulted in deterioration of roads, which cannot meet the needs of efficient and fast moving transportation. Hence for the state’s industrial, commercial and financial activities and for access to the health and education facilities available in the urban areas, it is essential to improve the road network.
Proper maintenance of roads saves vehicle operating costs, improves traffic flow, reduces accidents and casualties and reduces pollution.

Map No. 2

MAHARASHTRA

![Map of Maharashtra](image-url)
Appropriate initiatives on the part of the government are required to encourage private participation for construction of quality roads and their maintenance’ (GoM 2007: 148-149). Interurban road connectivity in the state, however, is fairly good (GoM 2010: 139).

3.3 Pune District

3.3.1 Location

Pune district is located in central-western Maharashtra. It is triangular in shape, as shown in Map No. 3, with its base along the Sahyadri Mountains that run from north to south along its western boundary and its apex in its southeast corner. It is located between 17º 54’ and 19º 24’ North latitude and between 73º 19’ and 75º 10’ East longitude. It occupies an area of 15,643 sq. kms. on the western edge of the Deccan Plateau (DCOM 2007a: 4-10).

3.3.2 Population

In 2011, the population of the district was 9,426,959, a growth of 30.34% over 2001. The population density was 603 persons per sq. km. Literacy was 87.19% in 2011, with 92.72% males and 81.13% females being literate. Rural population was 39.11% and urban population was 60.89% in 2011 (census2011.co.in). Of the total population of the district, 42% lives in rural and 58% in urban areas. In fact, 89% of the urban population lives in the cities of Pune and Pimpri-Chinchwad (GoM 2009: 3).

3.3.3 Land Use

Forests cover 11% of the area of the district. Of the total area, 65% is cultivable. In 2000-01, 23% of the cultivable area was irrigated and the total cultivated area in the district was 11,72,952 hectares. No major mineral deposits exist in the district (GoM 2011: V-VII).

3.3.4 Agriculture

Wheat, rice, gram, jowar, bajra, sugarcane, groundnuts, chillies, pulses, vegetables, fruits and flowers are the major crops. Both rabi and kharif crops are grown since several parts of the district are well irrigated (DCOM 2007a: 13).

3.3.5 Industry

Pune is one of the most industrialised districts of Maharashtra. Extensive industrialisation has been made possible because of the availability of road, rail and air transport. The important large-scale industries here are sugar, automobiles, textiles, pharmaceuticals, engineering goods, etc. Agricultural tools, pumps, textile, rubber, plastic,
electronics, etc. are the important small-scale industries. There are also several establishments of the central government that manufacture arms and ammunition (DCOM 2007a: 15). The Maharashtra Industrial Development Corporation (MIDC) has a strong presence in the district with large industrial estates at Bhosari, Pimpri-
Chinchwad, Baramati, Jejuri and Kurkumbh. In December 2008, there were 3785 factories under Factories Act, 1948, employing 2,05,002 workers (GoM 2011: IX).

3.3.6 Services

Pune District is an important centre for education and health facilities. There are 911 bank branches throughout the district. Up to March 2009, 1792 villages had been electrified. The district administration implements various welfare schemes, especially for the tribal population (GoM 2009: 6-7).

3.3.7 Transport

At the end of 2008, there were 311 kms of railway tracks and one airport in the district. The state government, Zilla Parishad, and local governments provide roads and maintain them. The total road length in the district at the end of 2005 was 13,949 kms, consisting of 397 kms of national highways, 1324 kms of state highways, 2948 kms of major district roads, 2582 kms of other district roads, 6698 kms of rural roads (GoM 2009: 6, 12).

3.3.8 District Income and Per Capita Income

The Gross District Domestic Product at constant (2004-05) prices was Rs 79,923 cr. in 2009-10 and the Net District Domestic Product was Rs. 71,974 cr. The district domestic product had a share of 22.1% in the state income, just below the 22.6% share of Mumbai district. The per capita income at current prices in 2009-10 was Rs. 1,11,637, which was higher than the average per capita income of Maharashtra which was Rs. 74,027 (GoM 2011: 21 and 31).

3.3.9 Administrative Set up

Pune is one of the 35 districts in the state of Maharashtra. The 2001 Census shows 1866 villages and 25 towns in the district (DCOM 2007a: 5).

For administrative purposes the district is divided into 5 sub-divisions of Pune, Maval, Baramati, Junnar and Bhor. The 14 tahsils in the district are grouped into these 5 sub-divisions. The city of Pune is the headquarters of the Pune District (DCOM 2007a: 6).
3.3.10 Local Government

There are separate institutions for self-government in rural and urban areas in the district. Rural local government consists of the Gram Panchayat, Panchayat Samiti and the Zilla Parishad. Urban local governments are the Municipal
Corporations in the large cities and Municipal Councils in the towns. The number of local governments in Pune District in 2010 was as follows: 2 Municipal Corporations, 11 Municipal Councils, 3 Cantonment Boards, 1 Zilla Parishad, 13 Panchayat Samitis and 1407 Gram Panchayats. These local governments provide various essential services to the local population and implement various developmental schemes sponsored by the central or state government (GoM 2011: 44).

3.4. Pune City
3.4.1. Location

The city of Pune is located on the western margin of the Deccan Plateau at 18° 31' north latitude and 73° 51' east longitude, about 160 kms south-east of Mumbai. It lies on the leeward side of the Sahyadri range, 1850 feet above sea level. As seen in Map No. 4, the city lies around the banks of and the confluence of two rivers, the Mula and Mutha, which after joining are known as the Mula-Mutha. Two other rivers, the Pavana and the Indrayani flow through the north eastern outskirts of the Pune urban area. All these rivers are tributaries of the Bhima River. The city lies on an extensive plain, surrounded by hills on the east and south, from 1900 to 2300 feet high. The highest of these hills is the Sinhagad-Bhuleshwar range, which includes the Sinhagad Fort. The Sinhagad-Katraj-Dive Ghat range is the southern boundary of the urban area (Gadgil 1945: 1).

3.4.2 Climate

The climate of the city is mild. Average temperatures range between 11° C and 44° C. The southwest monsoons bring rain to this area between June and October. The total rainfall received by the city in each year between 1985 and 2009 is given in Table No. 3.1. The average rainfall in Pune during this period varied between 661 mm. and 669 mm. per year. The variation in the rainfall can be observed, with rainfall much above the average in 1991, 2005 and 2006, and drought in 2000 and 2001 (GoM, District Socio-Economic Reviews, Pune District, 1985 to 2010, Table No. 2.1).
Table No. 3.1

<table>
<thead>
<tr>
<th>Year</th>
<th>Rainfall (mm.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1985</td>
<td>618</td>
</tr>
<tr>
<td>1986</td>
<td>570</td>
</tr>
<tr>
<td>1987</td>
<td>679</td>
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<td>571</td>
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<td>1989</td>
<td>620</td>
</tr>
<tr>
<td>1990</td>
<td>781</td>
</tr>
<tr>
<td>1991</td>
<td>1043</td>
</tr>
<tr>
<td>1992</td>
<td>541</td>
</tr>
<tr>
<td>1993</td>
<td>743</td>
</tr>
<tr>
<td>1994</td>
<td>966</td>
</tr>
<tr>
<td>1995</td>
<td>NA</td>
</tr>
<tr>
<td>1996</td>
<td>NA</td>
</tr>
<tr>
<td>1997</td>
<td>977</td>
</tr>
<tr>
<td>1998</td>
<td>809</td>
</tr>
<tr>
<td>1999</td>
<td>680</td>
</tr>
<tr>
<td>2000</td>
<td>380</td>
</tr>
<tr>
<td>2001</td>
<td>23</td>
</tr>
<tr>
<td>2002</td>
<td>516</td>
</tr>
<tr>
<td>2003</td>
<td>335</td>
</tr>
<tr>
<td>2004</td>
<td>652</td>
</tr>
<tr>
<td>2005</td>
<td>1239</td>
</tr>
<tr>
<td>2006</td>
<td>1246</td>
</tr>
<tr>
<td>2007</td>
<td>779</td>
</tr>
<tr>
<td>2008</td>
<td>689</td>
</tr>
<tr>
<td>2009</td>
<td>757</td>
</tr>
</tbody>
</table>

Source: District Socio-Economic Reviews, Pune District, 1985 to 2010.

3.4.3 Socio-Economic History of Pune City

The exact date of the establishment of Pune is not known, but its existence dates from ancient times. In Sanskrit references it is mentioned as Punyapur. It was also known as Punnaka (150 AD) and later as Poorna Nagar (Palande 1981: 23). The earliest historical records in which there is a reference to Pune are two copper plates dating from the 8th century A.D., which show that the Rashtrakuta dynasty was then ruling over this area, then known as Punyavishaya or Punakvishaya and the city itself is referred to as Punakawadi (DCOM 2007a:4). There is a theory that the original name of the city may have been Punyapur because it stood near the confluence of the Mutha and Mula rivers, since such places were regarded as holy. It is generally now agreed that the modern variant ‘Pune’ came into use as early at the 13th century when
the small settlement was named Kasba Pune by its Arab commandant. (Gupta & Diddee 2000: 19). Pune seems, in the beginning, to have been the headquarters of a region (vishaya) which was neither densely populated nor rich in agricultural resources. The location of the town seems to have been determined by the site of the ford on the Mutha River and its proximity to the fort of Kondana (later renamed as Sinhagad) (Gadgil, 1952:1).

For the next eight hundred years, several different rulers ruled over this area which was consequently subjected to almost continuous warfare. During one such conflict in 1631, Pune was completely destroyed. Around the same time there was a severe drought in this area and the population moved away. In 1636, this area was given to Shahaji Bhosale by the then ruler of Bijapur and in 1637, his deputy Dadodi Konddev resettled the city which at that time consisted of four peths, the original nucleus called Kasba Peth and three new ones, Shaniwar, Somwar and Raviwar. Agriculture again started, trade and commerce also developed and soon Pune became the centre of the emerging Maratha Kingdom. Shivaji started his efforts at building an independent State from Pune around 1656 and the city remained a part of the Maratha Kingdom until 1818 (Mangudkar 1960:8; Palande 1981:23-24).

The economic life of Pune was not much developed till the Peshwa rule. The Peshwas, who were the administrators of the Maratha Empire, made Pune their capital. Naturally, there was a spurt in both economic activities and in the population. Trade was the major economic activity, especially trade in all kinds of luxury goods. However, the prosperity and growth of the city received a major setback with the fall of the Peshwas in 1818 when Pune came under British rule.

By the 1840s, the city slowly revived with the establishment of the Cantonment, construction of a railway line and post office and the establishment of several schools and colleges such as the Deccan College and the Science College (presently College of Engineering) in 1865 and Fergusson College in 1885, making the city a centre for education. Most importantly, the first local government of the city, the Poona Municipal Council was established in 1858 (Gadgil 1952: 16-18; Mangudkar 1960: 10-20; Gawde 2000: 211).

Till the end of the 19th century Pune was an important centre for education and also the centre of the freedom movement and of social reform due to the presence of Lokmanya Tilak and other reformers. During the early 20th century, the area of the city expanded
considerably and some industries started, the first of which was Kirloskar Oil Engines Ltd. in 1946.

Soon after independence, in 1950, the Pune Municipal Corporation was established as were several national level organisations like the National Chemical Laboratory and the Pune University. From the 1950s there was a rapid growth of industries, especially along the Pune-Mumbai Road. In 1962, industrial estates were set up by the Maharashtra Industrial Development Corporation (MIDC) at Bhosari, Pimpri and Chinchwad. Pune changed from an educational centre to an industrial hub with various kinds of industries locating in and around the city (Mangudkar 1960: 20-36; Palande 1981: 62-64; Kulkarni 1991: 25; Mahajan 2000: 3; PMC/Span Travers Morgan 2003: 2-9; Mahajan 2004: 18-24).

The process of industrialisation continued at a fast pace up to the 1980s. Most of the industries established during this period were manufacturing industries, with a concentration of engineering industry. From the 1990s, there was a fast growth of the Information Technology industry, which is largely non-polluting. The setting up of the IT Park at Hinjewadi in 1999 gave a fillip to the growth of the IT sector in Pune. At present, the industry in Pune is dominated by IT companies and the services sector which includes large numbers of doctors, lawyers, chartered accountants, tax consultants, etc. (PMC/Span Travers Morgan 2003: 2-11).

Pune has always been at the forefront of cultural activities. Several newspapers and magazines are being published from the pre-independence period and there are many excellent libraries. A large number of authors, musicians and other artists and several cultural organisations have enriched the city (Mahajan 2004: 18-24).

Several Pune-based industrialists such as Kirloskar, Garware, Bajaj, etc., have spread their industrial empires throughout the world from this city. The people, institutions and industries in Pune have contributed towards the development of the country and hence Pune has achieved an important place in the economic development of India (Mahajan 2000: 34).

3.4.4 Administration

Pune City is the district headquarters of Pune district. It is also a fully urban tahsil of Pune district. In Pune city, the statutory urban local bodies are the Pune Municipal Corporation, Pune Cantonment and Khadki Cantonment. For administrative purposes the city is divided into 4 zones and 14 administrative divisions (DCOM 2007a :656).
3.4.5. Population

The population of Pune city according to the 2011 census is 31,15, 431 and that of Pune Metropolitan Region is 50,49,968 (census2011.co.in/a).

The following table brings out the rapid growth in the population of Pune city area, which includes the Khadki Cantonment Board, the Pune Cantonment Board and Pune Municipal Corporation areas.

### Table No. 3.2

**Growth of Population of Pune City**

<table>
<thead>
<tr>
<th>Year</th>
<th>Khadki Cantonment Board 1</th>
<th>Pune Cantonment Board 2</th>
<th>Pune Municipal Corporation 3</th>
<th>Pune City 1+2+3</th>
<th>Growth Rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1901</td>
<td>10,797</td>
<td>-</td>
<td>1,53,320</td>
<td>1,64,117</td>
<td></td>
</tr>
<tr>
<td>1911</td>
<td>14,028</td>
<td>-</td>
<td>1,58,856</td>
<td>1,72,884</td>
<td>5.34</td>
</tr>
<tr>
<td>1921</td>
<td>-</td>
<td>-</td>
<td>1,98,543</td>
<td>1,98,543</td>
<td>14.84</td>
</tr>
<tr>
<td>1931</td>
<td>16,302</td>
<td>35,807</td>
<td>1,98,078</td>
<td>2,50,187</td>
<td>26.01</td>
</tr>
<tr>
<td>1941</td>
<td>26,285</td>
<td>40,447</td>
<td>2,57,554</td>
<td>3,24,286</td>
<td>29.62</td>
</tr>
<tr>
<td>1951</td>
<td>48,552</td>
<td>59,011</td>
<td>4,88,419</td>
<td>5,95,982</td>
<td>83.78</td>
</tr>
<tr>
<td>1961</td>
<td>58,496</td>
<td>65,838</td>
<td>6,06,777</td>
<td>7,31,111</td>
<td>22.67</td>
</tr>
<tr>
<td>1971</td>
<td>65,497</td>
<td>77,774</td>
<td>8,56,105</td>
<td>9,99,376</td>
<td>36.69</td>
</tr>
<tr>
<td>1981</td>
<td>80,835</td>
<td>85,986</td>
<td>12,03,351</td>
<td>13,70,172</td>
<td>37.10</td>
</tr>
<tr>
<td>1991</td>
<td>78,323</td>
<td>82,139</td>
<td>15,66,651</td>
<td>17,27,113</td>
<td>26.05</td>
</tr>
<tr>
<td>2001</td>
<td>77,473</td>
<td>79,965</td>
<td>25,38,473</td>
<td>26,95,911</td>
<td>56.09</td>
</tr>
<tr>
<td>2011</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>31,15,431</td>
<td>21.40</td>
</tr>
</tbody>
</table>

**Source:**

2) census2011.co.in/census/city/375-pune.html.

The very small growth in the population between 1901 and 1911 was due to five epidemics of plague in which 30,000 people died. The population of the Pune Municipal Corporation area showed a marginal fall in the 1931 census, but started growing steadily from 1931 onwards. With growth in the population of the two Cantonments as well, the population of Pune City as a whole grew continuously.

During the 1940s, the population registered the highest growth rate so far both because there were no health problems and also due to the employment created by the establishment of several government offices, industries, research and educational institutions and defence establishments, attracting a large inflow of population from all parts of the country. Another important reason was the influx of refugees from
Punjab and Sind provinces after the partition in 1947. Lastly, seven adjoining villages and Pune Suburban Municipal Committee were merged with the Pune city at the time of the formation of the Pune Municipal Corporation in 1950 (Mangudkar 1960: 31).

From the 1960s to the 1980s, growth of population can be mainly attributed to the rapid growth of industry in and around Pune. Even though many industrial units were located in Bhosari and Pimpri-Chinchwad, their employees chose to live in Pune city, thus contributing to a steady rise in population at over 35% per decade (Palande 1981: 78). The fast growth of population after 1991 was primarily due to the even faster growth in the economy. The rapid expansion of the Information Technology industry and other service sector organizations and tremendous growth in the small scale industrial units caused large scale in-migration. During the period 1981 to 1991 about 3.1 lakh people migrated to the city, and this figure went up to 7.4 lakhs between 1991 and 2001. Migration accounted for about 13-20% of the population of the city. It was observed that about 50% of the growth in population was due to migration (PMC 2009: 3-4). It may be observed that between 1981 and 2001, the population in the two Cantonment areas has shown some decline, but this has been more than compensated by the growth of population in the PMC area, leading to overall growth in the population of the city, which has crossed 3 million in 2011.

3.4.6 Density of Population and Number of Households

The density of population as per the Census 2001 was 5,903 individuals per Sq. km. in the Pune Municipal Corporation area (DCOM 2007a: 657). The number of households within PMC limits was 555,771 at the time of the 2001 census (ibid: 656).

3.4.7 Literacy

The 2001 Census estimated that the literacy rate of the population in Pune was 77%. The literacy rate for females was 72.2% and for males it was a little higher at 81.4% (ibid: 656). In 2011, the overall literacy rate for Pune was 82.07%, with 84.96% males and 79.00% females being literate (census2011.co.in).

3.4.8 Occupation Structure

The Pune Municipal Corporation has estimated that 3% of the population is directly or indirectly dependent on agriculture and 97% of the population is engaged in professional or business activities. Out of the working population, about 23% (2.25
lakh) individuals are employed in the Information Technology industry (PMC 2009: II).

3.4.9 Per Capita Income

The average per capita annual income of Pune City was estimated to have been Rs.36, 500 in 2004-05. This figure increased almost 1.8 times in five years, to about Rs.60, 000 in 2008-09 (TERI 2010: 12).

3.4.10 Growth in Area

The area of Pune city has been steadily growing as the city has expanded in all directions from the initial settlement on the banks of the Mula-Mutha Rivers. When the British captured the city in 1817, its area was barely 5 sq. kms. The city gradually expanded during the British rule with the formation of the Pune Municipality and the establishment of Pune, Khadki and Dehu Road cantonments. At the time of the formation of the municipality in 1858, the area of the city was 15.54 sq. kms. By 1935, the surrounding villages were merged and the area grew to 34.59 sq. kms.

The area of the city continued to grow with the inclusion of more & more surrounding areas from time to time. In the post independence period the city experienced explosive growth as did the surrounding urban area. There was a large growth in the area of the city when the Corporation was formed in 1950 with the merging of the Poona Municipal Committee and the Poona Suburban Municipal Committee. By 1962, the area of the city had increased to 139.70 sq. kms. In 1983, the area was 146.11 sq. kms.

The next large expansion of the limits of the city took place in 1997 with the inclusion of 38 fringe villages in the area of the Corporation. Consequently the area under the Corporation increased to 368.89 sq. kms. However, in 2001, fifteen villages were removed from the Corporation and the area came down to 243.84 sq. kms which has remained unchanged till the present (PMC 2005:6-7). The total area of Pune City at present, including the 13.2 sq. kms of Khadki Cantonment and 13.9 sq. kms of Pune Cantonment, is 270.94 sq. kms (DCOM 2007a: XXVI).

3.4.11 Land Use

The land in the city is being used for diverse purposes. In 2009, 42.52% of the land was being used for residential purpose, 13.04% for transport, 11.91% for agriculture and reserved forests, 8.41% for entertainment, 6.83% for government and semi government organizations, 5.95% for water sources, 5.11% is under hills 4.05%
land is being use by industries and 1.61% by commercial establishments. Finally, civic services are taking up 0.57% of the total land area of the city (PMC 2009: 7).

3.4.12 Industrial Growth

Pune has now become a major industrial centre, with a number of heavy engineering industries such as the motor vehicle manufacturing plants for buses, cars and two-wheelers located in and around the city. Industries have located mainly in the direction of the Pune-Mumbai highway. This has not only enabled better transport of the manufactured goods to other parts of the country, but has also helped to avoid congestion in the centre of the city.

The growth in the number of industries and in their turnover in Pune district between 1985 and 2007 is shown in Table No. 3.3.

Table No. 3.3
Growth in the Number of Manufacturing Units and their Turnover in Pune District

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Units</th>
<th>Turnover (Rs. Crores)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1985</td>
<td>4,529</td>
<td>2,749</td>
</tr>
<tr>
<td>1990</td>
<td>6,766</td>
<td>5,445</td>
</tr>
<tr>
<td>1995</td>
<td>5,838</td>
<td>15,655</td>
</tr>
<tr>
<td>2000</td>
<td>6,670</td>
<td>28,026</td>
</tr>
<tr>
<td>2007</td>
<td>9,500</td>
<td>52,000</td>
</tr>
</tbody>
</table>

Source: Table Nos. 26 and 32, MCCIA (2008): 128 and 135

The table shows that, although there was a continuous growth in the number of industries (except in the early 1990s), rapid growth took place after the recession of 1997-2002 was over. During the recession, many large units cut workforce and reduced working hours, forcing many Small and Medium Enterprises (SMEs) to shut down. When the recovery started from 2002 onwards, the larger units stepped up production to meet the growing global demand and this had a definite multiplier effect on the SME growth. The investments made by the large manufacturers have grown at least four times between 2000 and 2007. The number of industrial units, their turnover and employment grew after 2002 as a result of this expansion (MCCIA 2008: 128).
The location pattern of these industrial units showed that over 12% of these industries are located within Pune city and over 70% units are located around the city in all directions, including Pimpri-Chinchwad and further along the Bombay-Pune road, Chakan, Hadapsar, Pirangut, etc. (MCCIA 2008: 140). The MCCIA report has observed that although a large number of industries are located outside the city, a majority of the employees live in the Pune Municipal Corporation area which has better amenities. Therefore, there is great demand for transport services (i.e., roads and vehicles) for both goods and passenger transport.

The IT and BT (Biotechnology) industries have emerged as the new driving force of the economy and have significantly grown by almost 26 times, from a turnover of Rs.250 crore to Rs.6,500 crore, between 2000 and 2008. The IT sector from Pune contributes to about 10% of national software exports. With over 600 IT companies and about 50 medium and 50 big BPO centres, besides many smaller ones, the IT sector, which is labour intensive like the SME sector, has generated a large number of new jobs, attracting people from all over the country, thus contributing to growth of population (MCCIA 2005-06: 27-43).

Most of the industries within Pune City limits fall in the category of engineering and allied activities. There were 12 large/medium industrial units and 876 small units in the PMC area in 2010 (TERI 2010:22-23).

### 3.4.13 Trade and Commerce

The city of Pune is an important a trading centre because of good communication, banking and other necessary facilities. The city has good road and rail links to the rest of the country which has facilitated the growth of trading activities.

The area around Pune city is mainly agrarian. Therefore, Pune city is regarded as one of the most important market places for the trade of agricultural produce. The city is also considered an authentic market for the trade in food grains, clothes, leather goods, gold and silver etc., not only for the urban residents but also for the customers from the surrounding semi-urban area (TERI 2010: 9; Span Travers Morgan 2003: 2011).
3.4.14 Transport

The transport system in Pune is based on the broad principles laid down by the National Urban Transport Policy, such as: a) to accept that the majority of the citizens live in the central part of the city and to plan the transport system for their benefit; b) to make the city one of the best to live in and to make it an engine of growth in the 21st century and c) to develop the city in such a way that it supports the social and economic development taking place there.

The main objective of the transport policy is to provide the growing population with safe, economical, comfortable, reliable and standardized travel facilities for all their needs such as work, education, entertainment, etc. (PMC 2009: 17-18).

3.4.15 Number of Vehicles

The growth in the number of vehicles in Pune city during the period 1985-86 to 2008-09 is shown in Table No. 3.4. As seen in the table, there has been a continuous and rapid growth in the number of vehicles in the city. The Comprehensive Mobility Plan has estimated the share of each type of vehicle in the total vehicles in Pune City as follows:

1. Pedestrians - 22%
2. Cycle - 11.1%
3. Two - wheelers - 37.2%
4. Four wheelers - 10.2%
5. Public transport - 12.2%
6. Three-Wheelers - 7.2% (PMC 2009: 24)

An important characteristic of the traffic in Pune is the mix of various modes of transportation. There is a mix of two, three and four wheeler passenger vehicles, jeeps, trucks, buses and other commercial vehicles which occupy the road at the same time. Each of these vehicles operates at different speeds and hence creates obstacles on the roads and slows down the speed of movement. Another characteristic of the traffic is the significant presence of both inter and intra-city traffic. The inter-city traffic passing through the already crowded roads further slows down the flow of traffic (Span Travers Morgan 2003: 2-14 to 2-15).

The provision and maintenance of roads in Pune is the responsibility of its local government, the Pune Municipal Corporation. The next section, therefore,
describes the evolution, growth, structure and functions of this body, and the organisation and working of its Road Development Department.

Table No. 3.4
Total Number of Registered Vehicles in Pune City – 1985 to 2009

<table>
<thead>
<tr>
<th>Year</th>
<th>No. of Registered Vehicles</th>
</tr>
</thead>
<tbody>
<tr>
<td>1985</td>
<td>160340</td>
</tr>
<tr>
<td>1986</td>
<td>182756</td>
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<td>1987</td>
<td>212570</td>
</tr>
<tr>
<td>1988</td>
<td>239738</td>
</tr>
<tr>
<td>1989</td>
<td>268446</td>
</tr>
<tr>
<td>1990</td>
<td>269596</td>
</tr>
<tr>
<td>1991</td>
<td>280263</td>
</tr>
<tr>
<td>1992</td>
<td>295828</td>
</tr>
<tr>
<td>1993</td>
<td>313327</td>
</tr>
<tr>
<td>1994</td>
<td>330977</td>
</tr>
<tr>
<td>1995</td>
<td>358338</td>
</tr>
<tr>
<td>1996</td>
<td>411880</td>
</tr>
<tr>
<td>1997</td>
<td>476372</td>
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<tr>
<td>1998</td>
<td>527734</td>
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<tr>
<td>1999</td>
<td>568906</td>
</tr>
<tr>
<td>2000</td>
<td>593182</td>
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<tr>
<td>2001</td>
<td>620220</td>
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<tr>
<td>2002</td>
<td>NA</td>
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<tr>
<td>2003</td>
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<td>2004</td>
<td>NA</td>
</tr>
<tr>
<td>2005</td>
<td>827781</td>
</tr>
<tr>
<td>2006</td>
<td>874409</td>
</tr>
<tr>
<td>2007</td>
<td>929825</td>
</tr>
<tr>
<td>2008</td>
<td>1140920</td>
</tr>
<tr>
<td>2009</td>
<td>1153076</td>
</tr>
</tbody>
</table>


3.5 Pune Municipal Corporation

Municipal Corporations are the largest form of urban local governments in India. They are created for big cities by the enactments of state legislatures, or of the Parliament in case of Union Territories. Since a Municipal Corporation is created by an Act passed by a State Legislature or by Parliament, it has a statutory status and its powers, functions, responsibilities, financial resources and constitution are determined by the Act.
governing it. The Corporation is subject to the control of the State Government which determines its area, size of its council, its term of office, etc. (Sachdeva 2000:148).

The Pune Municipal Corporation which governs the city of Pune in Maharashtra is one of the large Corporations in India. It is the second largest in Maharashtra in terms of its area and the population it serves. The Pune Municipal Corporation is governed by the Bombay Provincial Municipal Corporations Act, 1949. As shown by some studies it is one of the well-managed Corporations in the country that has consistently worked to provide better civic services to the citizens of Pune (Paul 1994: 3133-3134).

3.5.1 Current Status of the Pune Municipal Corporation:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</tr>
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<tbody>
<tr>
<td>2.</td>
<td>Area - Approx 50 sq. km. in 1950 243.84 sq. kms in 2011 (PMC 2011:82)</td>
</tr>
<tr>
<td>4.</td>
<td>Literacy rate - Males: 81.4% Females: 72.2% in 2001. (PMC 2009:1)</td>
</tr>
<tr>
<td>5.</td>
<td>Sex Ratio - 916 females per 1000 males in 2001 (PMC 2009:1)</td>
</tr>
<tr>
<td>6.</td>
<td>Land use - Residential area - 42.52%, Commercial area - 1.61%, Industrial area - 4.05%, Public areas - 6.83%, Public services - 0.57%, Transport - 13.06%, Reserved forests and agriculture - 11.91%, Water bodies - 5.95%, Hills - 5.11%, Entertainment - 8.41% (PMC 2009: I)</td>
</tr>
</tbody>
</table>
9. **Water Supply**
   - Total Water Supply - 650 million litres per day (PMC 2011:82)
   - 229 litres per capita per day.
   - Length of water pipelines - 2400 kms
   - Pumping Stations - 20
   - Water Purification Plants - 7 (PMC 2010:37)

10. **Sewerage**
    - Total sewage collected - 567 million litres per day.
    - Sewage treatment plants - 7 (PMC 2009:III)

11. **Transport**
    - Growth in number of registered vehicles (March 2008 to March 2009) - 7.3%
    - Total buses with PMPML - 1466
    - Length of roads - 1800 kms. Length of cycle tracks - 87 kms. (PMC 2009:II)

12. **Electricity Supply**
    - 32% Residential area, 21% Commercial area, 42% Industrial area, 1% Street Lights, 4% Water Supply (PMC 2010:57)

13. **Solid Waste**
    - 1200 to 1300 m. tonnes per day. 1200 kgs biomedical waste per day. (PMC 2009:V)

14. **Fire Brigade**
    - 10 centres.

15. **Printing Press**
    - 1

16. **PMC Markets**
    - 27

17. **Parks & Zoos**
    - Parks - 83, Zoo – 1, Snake Park – 1, Aquarium – 1

18. **Swimming Pools**
    - 10 (Items 14 to 18 - PMC 2011:82)

19. **Slums**
    - 564
    - of which, declared slums - 353 (PMC 2011:82)

20. **No. of Wards**
    - 144

21. **No. of Councillors**
    - 149 (Elected - 144 + Nominated 5) (PMC 2011:82)

22. **Environmental Status**
    - Air pollution - Sulphur - di - oxide concentrations have been declining since 2000, but the concentration of suspended particulate matter is still 1.5 times the
National Ambient Air Quality Standard.
Noise pollution - Very high noise levels as compared to prescribed standards.
Water Pollution - The three main indicators of water pollution (Dissolved Oxygen, Biological Oxygen Demand and Chemical Oxygen Demand) show an improvement in the quality of water since 2008. (TERI 2010: 16-35)

3.5.2 Establishment of the Pune Municipal Corporation:

Pune city has a long history of local government that started with the establishment of the Poona Municipality in 1857. The functions and sources of income of this body expanded over time as the British government slowly introduced decentralisation of its administration.

The population of Pune city grew rapidly from 1921 onwards and the city spread out, forming several suburbs. By 1933, this entire area was being administered by four local bodies, the Poona City Municipality, Poona Suburban Municipality, Poona Cantonment Board and Khadki Cantonment Board.

After several applications to the Government of Bombay for upgrading the Municipality to a Corporation, the Poona City Municipality and Poona Suburban Municipality along with some surrounding villages were merged in 1949. Both Municipalities were abolished and the Poona Municipal Corporation was officially formed on 15 February 1950, under the Bombay Provincial Municipal Corporations Act, 1949. Since elections to the Corporation could not be held immediately, an advisory body was nominated to aid the Municipal Commissioner who was the head of the Corporation (Mangudkar 1960:64-66).

Elections were actually held in 1952 and the Corporation became a fully elected body. Several changes were brought about in the constitution and working of the Corporation as a result of the adoption of the Constitution of India as well as in the Constitution of the Corporation, which conformed to the Bombay Provincial Municipal Act 1949. The changes included increase in the number of elected representatives, formation of various committees like the Standing Committee, Transport Committee, etc., expansion in the functions of the Corporation and also in its sources of
As a result, the Poona Municipal Corporation started functioning as a full-fledged Corporation (ibid 1960:66).

3.5.3 Current Constitution of the Pune Municipal Corporation:

The Pune Municipal Corporation continued to function as per the provisions of the Bombay Provincial Municipal Act, (BPMC Act), 1949. The next major change in its constitution and functions came as the result of the 74th Amendment to the Constitution of India which gave a Constitutional Status to urban local governments and further expanded their authority and responsibility. The BPMC Act was amended to incorporate these changes in 1994 and the same were implemented in the Pune Municipal Corporation (PMC). As specified by the BPMC Act, the Corporation consists of the deliberative and administrative wings.

3.5.3.1 The Deliberative Wing

The municipal authorities responsible for carrying out the policy making functions of the Corporation are:

1) The Corporation, which consists of the elected councillors.
2) The Standing Committee.
3) Wards Committees.
4) The Transport Committee and
5) The Transport Manager (BPMC Act, 1949: Section 4, p.15).

The General Body, the Standing Committee and other Committees constitute the deliberative wing. The deliberative wing has the task of policy formulation and passes resolutions for the same.

3.5.3.2 Administrative Wing:

This wing of the PMC is the executive wing, consisting of the Municipal Commissioner Department Heads and subordinate staff. The Municipal Commissioner is the Chief Executive of the PMC. He is appointed by the State Government for a period of three years and his appointment may be renewed by the State Government from time to time for a period not exceeding three years at a time. He is responsible for implementing the resolutions passed by the deliberative wing, provided the resolutions are within the framework of the BPMC Act, 1949. As the Chief Executive of the PMC, the Municipal Commissioner has important powers and functions, which are of 3 types, executive functions, financial functions and policy formulation.

Organization of the Administrative Wing
The Pune Municipal Corporation is headed by the Municipal Commissioner, who is assisted by Additional Municipal Commissioner (General) and the Additional Municipal Commissioner (Special). Below these are the various Department Heads, who are Assistant Municipal Commissioners. The Additional Commissioner (General) looks after the Health Department, Estate and Housing Department, Slum Rehabilitation Department, Tax Assessment and Tax Collection Department, Urban Development Department, Education Department and other departments like Personnel, Vehicle Depot and Workshop, Stores, Advisor (Labour), Flood Control, etc. The Additional Municipal Commissioner (Special) looks after departments like Electric Department, Security, Water supply and sewerage, Roads, Hot Mix Plant and other development projects.

At the level of the Assistant Municipal Commissioners are four Zonal Commissioners, each of whom looks after a Zone, which consists of 3-4 Divisional Offices which are headed by Divisional/ Deputy Commissioners. Below these are the individual Ward Offices. At present Zonal Commissioner 1 looks after four Divisional Offices of Kothrud, Aundh, Ghole Road and Warje-Karvenagar. Zonal Commissioner 2 looks after the Divisional Offices of Dhole Patil Road, Nagar Road and Wadgaon Sheri and Sangamwadi. Zonal Commissioner 3 looks after Bhavani Peth, Sahakarnagar, Kasba Peth - Vishrambagwada and Tilak Road. Zonal Commissioner 4 controls the Divisional Offices of Hadapsar, Bibvewadi and Dhankavdi under each divisional offices are several (9 to 13) ward offices (PMC 2011:66-72). There are four other posts at the level of Additional Municipal Commissioner, which are the City Engineer, the Medical Officer of Health, the Municipal Secretary and Municipal Chief Auditor who are to be appointed by the Corporation as required by the BPMC Act, Section 45 (BPMC Act Section 45 and PMC 2011:30-32).

Although there is separation of powers between the deliberative and executive wing, both have to work closely together in the framework laid down by the BPMC Act.

3.5.4 Functions of the Corporation:

The BPMC Act, 1949 divides the functions of the Corporation into obligatory duties and discretionary duties. The list of these duties was amended in 1994 to accommodate some additional functions which were included in the Twelfth Schedule (Article 243-W) which was added to the Constitution of India under the 74th
Amendment Act, 1992 and which specifies the duties of urban local governments. This amended list now includes the following functions.

a) **Obligatory functions:** 1) planning for social and economic development, 2) protection of the environment, 3) construction, maintenance, alteration and improvement and cleaning of public streets, bridges, sub-ways, culverts, cause-ways and the like, 4) lighting of public streets, 5) drainage and disposal of sewage, 6) Medical facilities, 7) Primary education, etc.

b) **Discretionary functions:** 1) Institutions for the care of disabled, handicapped, & sick persons, 2) Slum improvement and upgradation, 3) Urban poverty alleviation, 4) Provision of public parks, gardens and playgrounds, etc. Several other functions for the welfare of the citizens and the municipal employees are included in this list. (BPMC Act, 1949, Section 66).

### 3.5.5 Finances of the Pune Municipal Corporation:

The income and expenditure of the PMC are as laid down in the BPMC Act, 1949.

#### 3.5.5.1 Income

- There are four main sources of income for the PMC, which include
  a) Tax revenue, b) Non-tax revenue, c) Grants-in-aid and d) Borrowings.

  a) **Tax Revenue** - Local bodies in India have not been provided with a separate list of taxes in the Constitution and each State Government is required to assign some taxes to local bodies out of the list of State taxes. In Maharashtra, the taxes assigned to the Corporation have been listed in Chapter IX of the BPMC Act. Accordingly, the PMC is authorized to charge Property tax, tax on vehicles, boats & animals, octroi, theatre tax, toll on animals & vehicles entering the city, tax on professions, trades & calling and a tax on motor vehicles (BPMC Act, Section 127).

  b) **Non-tax revenue** - Mostly comes from charges for various services provided by the Corporation such as hospitals, parks and zoo, sports grounds, cultural centres, markets etc. and from fees such as building licence, hoardings, etc., interest on investments, sale of tenders, sales of books/manuals/maps/forms and parking fees.

  c) **Grants-in-aid** - The Central and State Governments give various grants to the PMC such as the grants for primary and secondary education, slum rehabilitation, health services such as vaccinations, family planning etc., and grants for the ICDS, building public toilets, etc.

  d) **Borrowing** - Includes the loans given by the World Bank, Asian Development Bank, Japan Bank and other financial institutions like Life Insurance Corporation of
India, Housing and Urban Development Corporation (HUDCO), Loans from the State government and the public (Budgets of PMC).

3.5.5.2 Expenditure - The expenditure of the Corporation takes place for general administration including salaries of the municipal staff, tax collection, primary & secondary education, hospitals and dispensaries, roads and traffic regulation, fire fighting, sports grounds, buildings, markets and other local services. Expenditure is made also on repayment of loans & interest payments, and contribution to various funds like depreciation fund, development fund, etc. (Budgets of PMC and BPMC Act Sections 63 & 66).

3.5.6. Income and Expenditure of PMC

The Income and expenditure of the PMC for the period 2000-01 to 2008-09 is shown in Table No.3.5. As can be observed, there has been a continuous and substantial growth in both the income and expenditure of the PMC during this period.

<table>
<thead>
<tr>
<th>Year</th>
<th>Income</th>
<th>Expenditure</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000-01</td>
<td>453.24</td>
<td>400.56</td>
</tr>
<tr>
<td>2001-02</td>
<td>496.02</td>
<td>461.98</td>
</tr>
<tr>
<td>2002-03</td>
<td>561.45</td>
<td>528.30</td>
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<tr>
<td>2003-04</td>
<td>599.21</td>
<td>592.84</td>
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<tr>
<td>2004-05</td>
<td>705.25</td>
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<tr>
<td>2005-06</td>
<td>1046.90</td>
<td>842.99</td>
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<tr>
<td>2006-07</td>
<td>1157.21</td>
<td>1064.51</td>
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<tr>
<td>2007-08</td>
<td>1713.04</td>
<td>1320.94</td>
</tr>
<tr>
<td>2008-09</td>
<td>1575.31</td>
<td>1504.50</td>
</tr>
</tbody>
</table>

Source: Table of Income, Table of Expenditure and Table of Capital Expenditure (2000-01 to 2009-10) PMC Budget 2009-10 pp. PMC Info 1/3 to 3/3.

The financial transactions in the PMC take place according to the provisions made in each year's budget. The structure of the budget of the PMC and the process of making the budget are described in the following section.

3.5.7 Budget of the Pune Municipal Corporation

3.5.7.1 Structure of the Budget:

The PMC prepares the budget for its entire administration, excluding transport. The budget of the PMC is divided into two parts, the 'A' Budget for all
activities except water supply and the 'C' Budget for water supply and drainage. The 'B' Budget is prepared separately for the local transport undertaking (PMPML). This division of the budget is as prescribed by the BPMC Act, 1949 (BPMC Act, Sections 95-98). The present study is confined to the A Budget only, since the expenditure on roads is included in this part.

The A Budget - The activities covered by the A Budget include administration, primary education, secondary education, public health, hospitals and dispensaries, conservancy and waste disposal, roads, machinery, buildings, parks and zoos, playgrounds, theatres and markets. The A Budget is presented in four parts, as described below.

Part I - Budget for the Revenue Income and Expenditure:

This part presents the expected income and expenditure on the revenue account i.e., income and expenditure of a recurring nature. Sources of revenue income include the following:

1) Taxes such as Property Tax, Octroi, Road Tax, etc.
2) Fees such as water charges and conservancy charges.
3) Grants from Central and State Governments.
4) Income from the various services provided by the Corporation such as education, hospitals and dispensaries, fire fighting, sale of licenses, parks, sports grounds, auditoriums, vegetable and meat markets, etc.
5) Others, such as grants from Finance Commissions and grants for specific purposes like those for building toilets and other developmental projects, interest on investments, etc.

Revenue expenditure includes expenditure on 1) Administration and tax collection 2) Primary and Secondary education 3) Slum improvement 4) Public health 5) Conservancy 6) Buildings 7) Grants given to various organizations 8) Land acquisition 9) Allocation to various funds e.g., depreciation fund, development fund, welfare fund, etc. 10) Training of staff and 11) Road repair and street lights.

Each year's revenue budget gives figures of expected income and expenditure for the coming year, revised estimates for the previous year and actual expenditure for three earlier years.

Part II - Suspense Account: This part of the budget presents the suspense account of the Corporation. Each department is given some advance for its expenditure on stores, vehicles, construction material, etc. The department incurs expenditure as and when
required and makes necessary paper adjustments later. Such transactions are shown in this part of the budget.

**Part III - Budget for Capital Income and Expenditure:**

This part gives the estimates of the capital income and capital expenditure for the coming year. The capital fund is created out of savings of the previous year, loans from the public, financial institutions and banks, gifts and donations and transfer from the Revenue Account. The last item is the largest source of funds for capital expenditure.

Capital expenditure is incurred on developmental schemes that need large investments. The major expenditure of the corporation on creating infrastructure is included here. Expenditure is made on tax collection, administration, public health, hospitals and dispensaries, education (primary and secondary), roads, traffic regulation, electrical department, bridges and river development, machinery buildings, fire fighting, parks and zoos, sports grounds, cultural centres, markets and the funds given to the divisional offices to carry out their responsibilities.

The capital expenditure budget shows the total allocation made for each project, the cumulative expenditure made on that project till the 31st March of the previous year, the remaining funds for this project and the expected expenditure out of this remaining amount that is to be spent in the coming year. This structure of the capital budget is different from the revenue budget because of the fact that capital projects usually take more than one year to complete, so that the total allocation for the project is spent in a number of instalments. Once the amount is sanctioned for a particular project, it can be carried forward for two years with the sanction of the Standing Committee provided it is spent on the same project for which it was sanctioned in the original budget under Section 102 of the BPMC Act (BPMC Act, 1949: 68).

**Part IV - Budget for Special Funds and Grants:** This part includes estimate of special funds created by the Corporation for special purposes such as the land acquisition fund, town planning fund, slum clearance fund, fund for welfare of backward classes, women and children welfare fund, depreciation fund, tree authority fund, secondary school development fund, cycle track fund, flood victims fund, welfare of handicapped fund, etc., Resources from the revenue account are transferred to these special funds.

**3.6 Road Development Department of the PMC**
3.6.1. **Organization Structure** - The organization structure of the Road Development Department is as follows. The Road Department is one of the Departments under the Additional Municipal Commissioner (Special). This department is headed by an Additional City Engineer. Two Development Engineers report to him, one of whom looks after the area of the city to the east of the Mutha River and the other looks after the area west of the river. Under each of the Development Engineers is a Deputy City Engineer looking after the eastern and western parts of the city. At the next level are the Assistant Engineers, with about four Assistant Engineers reporting to each of the Deputy City Engineers. Each Assistant Engineer has three to four Junior Engineers reporting to him, who, in turn control one Mistry. Below the Mistry is the Mukadam who is in charge of the workers.

Each Divisional Office of the Corporation is responsible for the roads in its own area and hence in each Divisional Office and Ward Office, there is some staff that looks after the roads. Each of the 14 Divisional Offices of the PMC is headed by a Divisional Commissioner. Under each Divisional Office are Ward Offices for the various Wards under each Division. The Divisional Office and the Ward Offices are responsible for all the functions of the Corporation in their area, i.e., for the roads, drainage, water supply, public health, etc. For each of these functions there is one Assistant Engineer in each Ward Office. The roads in each Ward, therefore, are the responsibility of an Assistant Engineer (Roads) who has one Junior Engineer (Roads) reporting to him. Every Divisional Office has one Deputy City Engineer who also looks after all the functions of the Divisional Office. He is assisted by one Assistant Engineer and one Junior Engineer.

3.6.2 **Functions of the Road Development Department** - The functions to be carried out by the road department and the powers of the Commissioner to carry out these functions are clearly set down in Chapter XIV, Sections 202 to 252, of the BPMC Act, 1949. The Road Development Department is responsible for building new roads and repair and maintenance of existing roads. The Road Department surveys roads continuously, to find where there are potholes or where repairs are required. This work is done by the Junior Engineers. The Road Development Department also takes action on complaints by the people and their elected representatives.

New roads are built where there are mud roads or no road at all or when a new road is included in the Development Plan of the Corporation. The road is built taking
into account the needs of the local population. The first step is to acquire the required land. The owners of the land are given compensation according to the rules of the Corporation. Once the land is acquired, the work of building the road begins (Sections 205 & 216, BPMC Act, 1949).

When new areas are included in the Corporation, the roads in these areas automatically come under the control of the Corporation. These roads are built by the Public Works Department of the State Government or by the Gram Panchayat. After inclusion of the new area in the Corporation, the Road Development Department decides the nature of the work to be done on these roads according to the demand of the local people and their representatives.

Another important function is resurfacing of roads. When a road is damaged, the local people/representatives make a complaint. If the road has only pot holes, they are repaired. Roads are resurfaced fully after every 4-5 years. If a road is damaged before this time, resurfacing is carried out, but funds for this have to be specially sanctioned. Under the development plan, there is a need to widen some roads, after which the entire road is resurfaced. Once the Junior Engineers identify the work to be done, provision is made for the work in the next budget. Financial allocation is made according to the expected cost. Once the budget is approved, a tender is published and the work is awarded to a contractor, who is paid only after the work is completed (PMC 2006: 12-14).

3.6.3 The Budget of the Road Development Department

As mentioned above, the budget of the PMC is divided into four parts, of which the main parts are the Revenue Budget (Part 1) and the Capital Budget (Part 3). The budget for the Road Department is given in both these parts.

3.6.3.1 Revenue Budget: In the Revenue Budget, the income and expenditure on roads is given at serial number 10 under the heading of Road Improvement. The revenue from roads (Budget Code RI 20) consists of the income from the Street Tax, the compensation paid to the PMC by the State government in lieu of the vehicle Tax, rent for machinery, grant from the State government for the various facilities for traffic management, sale of old tar containers, licence fee from hawkers, the compensation paid by the telephone and electricity companies for repairing the roads dug up by them and miscellaneous income from sale of tender forms, etc.

The Revenue expenditure of the Road Department (Budget Code RE 20) consists of 5 major heads, viz., a) salary of the permanent and temporary staff at both
the main office and divisional offices, b) road repair, which includes filling potholes, repairing roads in slum areas, repairing footpaths, tools & other material, repair of the machinery at the hot mix plant, depreciation of machinery, petrol, diesel, tyres and spares, cleaning, maintenance & painting of roads, cleaning statues on the roads, putting up names of roads, etc. c) Repair of roads and clearing debris from roads by the divisional office. d) Expenditure on street lighting, which includes the electricity charges, maintenance and repair of street lights, depreciation, cost of electricity consumption at the Hot Mix Plant at Yerawada, maintenance and repair of sodium vapour lamps (which is carried out both by the main office and the divisional offices), etc. e) Cost of raising loans, loan repayment instalments and interest on loan. (This item was included in the budget of the Road Department only up to 1997-98).

3.6.3.2 Capital Budget: In the capital budget of the PMC, some grants received from the state government and loans raised from the public or financial institutions are a source of income, but these are not received regularly each year. There is no other separate income shown for the Road Department. The capital expenditure for the road department, like almost all other departments of the PMC, is incurred mainly out of the funds transferred to the capital budget from the revenue budget. On the expenditure side of the capital budget, the expenditure on roads is given at serial number 10 (Budget Code CE 20) under the heading of Roads. This expenditure is divided into four broad categories, viz. 10a) Road Improvement, 10b) Traffic Regulation, 10c) Electric Department and 10d) Bridges and River improvement.

The expenditure on road improvement includes expenditure on new roads, resurfacing, footpaths, bridges, subways, walls, street lights, road development, cement-concrete roads, traffic regulation, purchase of machinery and miscellaneous capital expenditure. Traffic regulation includes improvement of squares, speed breakers and dividers, installing & repairing traffic signals, building parking facilities, painting lines on roads for traffic lanes, parking etc. putting up signs such as No Parking etc., building traffic islands, causeways, subways and flyovers. The Electrical Department's expenditure related to roads includes putting up and repairing street lights, timers, switching equipment, replacing old street lights with new types of lights such as sodium vapour lamps, high most lamps, etc. The last category includes the expenditure on building new bridges, widening bridges, building pedestrian over bridges, etc.
The expenditure on roads is one of the major expenses of the PMC. The share of the expenditure on roads out of the total expenditure of the PMC for the period 2000-01 onwards is shown below.

**Table No.3.6**

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Expenditure</th>
<th>Expenditure on Roads</th>
<th>% Share of Expenditure on Roads</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000-01</td>
<td>400.56</td>
<td>61.31</td>
<td>15.31</td>
</tr>
<tr>
<td>2001-02</td>
<td>461.98</td>
<td>74.23</td>
<td>16.07</td>
</tr>
<tr>
<td>2002-03</td>
<td>528.30</td>
<td>75.38</td>
<td>14.27</td>
</tr>
<tr>
<td>2003-04</td>
<td>592.84</td>
<td>110.17</td>
<td>18.58</td>
</tr>
<tr>
<td>2004-05</td>
<td>686.79</td>
<td>108.91</td>
<td>15.86</td>
</tr>
<tr>
<td>2005-06</td>
<td>842.99</td>
<td>174.38</td>
<td>20.68</td>
</tr>
<tr>
<td>2006-07</td>
<td>1064.51</td>
<td>271.89</td>
<td>25.54</td>
</tr>
<tr>
<td>2007-08</td>
<td>1320.94</td>
<td>322.15</td>
<td>24.39</td>
</tr>
<tr>
<td>2008-09</td>
<td>1504.50</td>
<td>341.89</td>
<td>22.72</td>
</tr>
</tbody>
</table>

**Source:** Table of Income, Table of Expenditure and Table of Capital Expenditure (2000-01 to 2009-10) PMC Budget 2009-10 pp. PMC Info 1/3 to 3/3 and Table 5.27.

The above table shows that between 2001-02 and 2004-05, expenditure on roads was between 15% and 20% (average 16%) of the total expenditure of the PMC. From 2005-06, this share has been over 20% each year, reaching a peak of 25.54% in 2006-07 and showing a marginal reduction in 2007-08 and 2008-09, in spite of an increase in the actual expenditure on roads.

### 3.6.4 Budget Process in the Roads Department of PMC

The Junior Engineers in the Road Department as well as those in the Ward Offices identify the work to be done in their respective area during the next year and submit these lists to their respective Assistant Engineers, who make a combined list for the area under their jurisdiction. Rough estimates of the funds required for each of these jobs is prepared by the various engineers as per their authority. Junior Engineers prepare the estimate for roads having width less than 9m, Assistant Engineers for roads having width between 9 & 12m and Development Engineers for roads more than 12m wide. The estimate is made by identifying in detail the various activities involved in each work item and the area/volume of work to be done. The area/volume is
multiplied by the rate per unit of the type of work to arrive at the total estimated cost of the work. The rate of each different type of work is given in the approved rate list of the PMC known as the Departmental Schedule of Rates (DSR). This schedule is prepared by the Estimates Committee of the PMC that is presided over by the City Engineer.

The Assistant Engineers make the rough estimate for the wider roads and the department budget is finalized. This budget is then sent to the Auditor. The auditor verifies that the correct rates (as given in the DSR) have been used for making the estimate. When he receives the estimates of all the departments he tallies the requirements of all departments with the expected income of the Corporation and makes the allocation of funds to the road department.

The budget is then handed over to the Municipal Commissioner who finalizes the budget by making necessary additions/deletions and it is then submitted to the Standing Committee which makes further changes by increasing/decreasing allocations to various projects as per the requirements of various corporators. The revised budget is then presented to the General Body of the Corporation which gives the final approval according to Section 100 of the BPMC Act.

In the Road Department, depending on the budget allocated, the list of work is again revised and those projects that are important are selected. A detailed estimate is then made for each project again by the concerned engineer and sanctioned by the appropriate authority.

If the estimate is more than the budgetary provision, then the estimate for each such work has to be sanctioned by the General Body. This budget is finally published. (Source: Assistant Engineer, Road Development Department, PMC).

3.6.5 Tender and Billing process

The final estimates prepared for each job are then given to the central Tender Cell which prepares the Tender Notice according to the details of work and time period given to them by the roads department. The Tender Cell publishes the Tender Notice in various local/national level newspapers as well as on the website of the PMC. The underlying principle here is to give maximum publicity to the tender notice in order to ensure fair competition.

The Tender form is filled up by registered contractors only, giving the expected cost of the work specified in the tender document. This form is submitted online or delivered to the Tender Cell before the stipulated time. Once the tenders are received they are opened by the Tender Cell at the specified time. The lowest
quotation is selected and sent to the appropriate authority in the dept for approval according to the value of the tender i.e. to the concerned Deputy City Engineer/Development Engineer/Additional City Engineer/Additional Municipal Commissioner or Standing Committee.

The concerned Engineer then prepares a docket for each project that includes the details of the work, the name of the contractor, the rate, amount etc. and sends the docket to the Standing Committee for approval. The Standing Committee approves the tender by passing a resolution. The resolution is sent to the road department where the Deputy City Engineer issues a work order.

**Work Order** - The Work Order gives the exact details of the work to be carried out, the time period in which the work is to be completed and specifications of the material to be used.

**Agreement** - An agreement is then signed between the Department and the Contractor who is awarded the work. There is a standard format to be used for the agreement as per the provisions of the Contract Act. The agreement is signed by the Contractor and the Deputy City Engineer/ Development Engineer and the Additional City Engineer.

**Execution of work** - Once the agreement is signed; the actual execution of the work is started by the Contractor according to the specifications given in the work order. The Contractor is required to procure the different types of material to be used for the work but before he can start the work, each material is tested to verify that it meets certain quality standards. PMC follows the standards laid down in the Indian Roads Congress (IRC) norms or the Ministry of Road Transport and Highways (MORTH) Standards. The IRC has different books for each material and a specific code has been assigned by the IRC to different qualities/types of material.

A sample of the material purchased by the Contractor is tested to see if it satisfies the IRC specifications. Testing is done at the Hot Mix Plant of the Roads Department at Yerawada or at certain PMC approved laboratories. Some material can be tested at the site itself. The characteristics to be tested include the pressure bearing capacity, water absorption and chemical composition of the material such as the gravel, tar, cement, etc. that is to be used.

**Supervision of work** - The work is supervised by the Junior Engineers in charge of the area where the work is being carried out. The PMC has also appointed Engineers India Ltd. (EIL), a public sector company, to supervise and check the
quality of the work. The EIL staff gives a report to the Road Department regarding the quality of work and can also give directions to the contractor's staff.

**Billing process** - The contractor recovers the cost of the work done from the Road Department of the PMC. Billing is done in parts as per the progress of the work. This is known as the Deferred Payment system. Each successive bill raised by the contractor is called a Running Bill. Typically, 3 to 4 running bills are raised for each job.

The concerned Junior Engineers (JE) in the department verify the bill i.e., check that the work has actually been carried out and also check the amount of material used and record the bill in a register known as the Measurement Book. The Measurement Book (MB) is a record of the work done at each site and is maintained by each JE. The bill is then passed on to the Assistant Engineer who verifies the bill with the entries in the MB. If the bill is found to be correct, a Bill Form is prepared by the Department and sent to the Accounts Section in the Road Department, where the bill is verified and entered in the books of accounts. It is then sent to the Chief Accountant's office where it is given a formal inward number, with the code number for the Road Department. The bill is then sent to the Audit Department. The bill is again verified by the Audit Department to check whether the correct rates (as per DSR) have been used and that the calculations are correct. The bill is then sent back to the Chief Accountant's office for the final entry. The bill is then handed over to the Treasury section in the Chief Accountant's office which prepares the cheque and hands it over to the contractor.

Bills of amounts less than Rs.25 lakhs are passed by the Ward Offices and then sent to the Chief Accountant's Office. Bills of more than Rs.25 lakhs are passed by the Road Department at the main office of the PMC.

**Contractor's deposit** - Every contractor has to keep a deposit with the PMC before he starts his work. The deposit is refunded after the completion of the defect liability period of the work, which is usually 2 to 3 years after the completion of the work, depending on the nature of the work. If the work gets damaged within this period, the Contractor is required to repair it at his own cost. If he does not carry out the required repairs, his deposit is forfeited. In some cases, legal action can also be taken under the provisions of the Contract Act. (Source: Accounts Section, Road Department, PMC).

**3.7 Conclusion**

The Pune Municipal Corporation functions according to the guidelines given in the Bombay Provincial Municipal Corporations Act, 1949, which incorporates the
provisions of the Constitution (74th Amendment) Act, 1992. The deliberative and administrative wings of the PMC work together to provide various services to the public such as education, health, water supply, roads, etc. These activities are financed through tax and non-tax revenues of the Corporation.

The Road Development Department is one of the important departments of the Corporation. Its activities are planned through its budget. The expenditure on the various activities of the Road Department is divided into revenue expenditure and capital expenditure. The next three chapters analyze the changes in the expenditure incurred by the Road Department of the PMC during the period 1985-86 to 2008-09.
References


22. PMC (2005): *Model Development Plan 2001 to 2021 (For Areas Included in PMC Limits)*, Pune Municipal Corporation, Pune.


