1.1. INTRODUCTION

The urban population of India, as in other developing countries, has increased tremendously since Independence. According to the first census in post-Independent India, 17.6 per cent of the population of the country was classified as living in urban areas. This percentage steadily increased to 18.3 per cent in 1961, 20.2 per cent in 1971 and 23.7 per cent in 1981. The last population census of 1991 enumerated 25.7 per cent as living in urban areas. When we translate this percentages into numbers, the urban population increased by nearly 3.5 times in the last four decades: the population of the urban areas in India increased from 62 millions in 1951 to 213 million in 1991 registering a growth rate of 6.1 per cent per annum between 1951 to 1991.

This rapid growth of urban population poses a challenge to urban planners to maintain a minimum comfortable living as the resources, fiscal or institutional, are seriously inadequate to provide minimum amenities of city life (Sivaramakrishnan, 1974; Arunachalam, 1993; Mitra, 1993). For a minimum comfortable living, for example, there is a certain amount of water required for

The growth of urban population, however, is strikingly different in various size classes of towns. The proportion of urban population in Class I towns increased from 44.6 per cent in 1951 to 65.2 in 1991, while medium size towns (Class II and III) have maintained more or less the same proportion. In case of small towns (below 20,000 population i.e. Class IV, V and VI) the proportion of population has declined continuously as well as significantly from 29.7 per cent in 1951 to 10.7 per cent in 1991. Among these size classes, the most adversely affected towns are of Class V (13.0 per cent in 1951 to 2.6 per cent in 1991). From the distribution of urban population in different size classes of towns it is evident that the population of Class I towns is increasing at a higher rate causing a continuous decline of proportion of population in other size classes of towns. But, it is the million plus cities in the Class I towns which are showing the fastest growth rate. Between 1941-51 and 1981-91 the growth rates of population in the million plus cities were 121.3 per cent and 67.7 per cent respectively, whereas in those decades the growth rate of population in the Class I towns was only 65.2 percent and 46.9 percent. The percentage of million plus cities population to
total urban population has increased from 18.2 (11.7 million) in 1951 to 32.5 (70.7 million) in 1991. Therefore, out of 300 Class I towns in 1991 nearly 50 per cent of the population is living only in 23 million plus cities of India. In these million plus cities the most important cities, as we well know, are Delhi, Bombay and Calcutta. In fact, these three major cities are included in the list of the world’s 16 fastest growing cities (Harpham, 1988).

The rapid growth and high concentration of population in a few large cities, pose a formidable challenge where about one-third population of the cities are forced to live in shanty houses and slums occupying a very small proportion of urban land (Desai and Pillai, 1972; Arangannal, 1975; NSSO, 1980; NBO, 1981; Planning Commission, 1983; TCPO, 1985; Singh and Kumra, 1986; Maitra, 1991; Mitra, 1993). In addition, the lopsided urban development has created a pressure on existing services like shelter, drinking water, sanitation, power supply, garbage disposal, transport etc. The inadequacy in these amenities affects all the sections of the population living in urban areas but, the people living in slum localities suffer the most due to the limited amenities.

The physical features of slums are characterised by low rise, high density, poor housing stock with insufficient ventilation, inadequacies of sewage, sanitation and potable water, irregular collection and disposal of human waste and garbage, dark lane and extremely poor drainage (Sen 1970; Maitra, 1990). As a
consequence of lack of civic amenities and lack of attention of civic authorities towards the problem of slums, the dwellers are subjected to various health hazards and there is an increasing deterioration of social and cultural atmosphere making them localities of crime, tension and conflicts. The living environment in the slums by all measures is unfit for human habitation which contributes to human degradation.

Households in the slums, by and large, are living in one room dwelling unit: there are 77.6, 64.8, 58.0 and 48.8 per cent households in Delhi, Calcutta, Bombay and Madras respectively living only in a single room (Singh and Kumra, 1986). The acute problem of space is one of the most visible characteristics of the slum in the metropolitan cities. The estimates of National Building Organisation shows that 67 per cent of the households of Calcutta lived in one room units, without private toilet or separate cooking facilities (NBO, 1982-83).

A high proportion of the population in slum areas have limited facilities of safe drinking water and toilet. In the Ahmedabad Municipal Corporation the slum population manage with less than 10 per cent of water supplied to the city. In Calcutta, per capita water supply in slums is 20 gallons per day whereas, in non-slum areas it is 60 gallons. In Bombay the corresponding figures are 90 litres per capita per day (lpcd) and 130 lpcd respectively (Kundu, 1993). Due to lack of basic amenities and insanitary living conditions people in slums experience
higher rate of infant and child mortality along with high rate of morbidity caused by water-borne diseases and parasite infections (Oberai, 1989; NIUA, 1991; Population Bulletin, 1992). It is found that the most common illness among slum dwellers are respiratory diseases, gastro-intestinal disorders, skin diseases, fever, worms and tuberculosis (TCPO, 1975; Desai and Pillai, 1972). The high rates of infant and child mortality is one of the important factors for lower family planning performance and high fertility among the couples in slums (Singh, 1978; Oberai, 1989; Population Bulletin, 1992). Recently, a study on Calcutta slums observed a very high birth rate (55.3 per 1000 population) among the slum population and this high birth rate may even be a greater net contributor to the increase of slum population than rural-urban migration (Sapir, 1996). High fertility in slums is also responsible for a large proportion of population in the lower age groups (Majumdar, 1977; Singh, 1978; Alam, 1987).

Apart from the subhuman physical living conditions, the slum population is also deprived of the opportunities of education and acquisition and upgradation of vocational skills (Maitra, 1990). A study on the slums of Delhi has shown that 46 per cent of the adult males and 90 per cent of the adult females were illiterate (Majumder, 1977). The enrolment rate of the children in the school is also very low in the slums. In Calcutta the primary school enrolment of the children was 65 per cent as compared to the state average of 80 per cent and the major
reason for this low enrolment was lack of proper educational facilities in the slums (Sen, 1970; Sivaramakrishnan, 1977).

Since Independence of the country, programmes related to basic amenities for the slums in the urban areas have been set up. The Five-Year plans of the country with their explicit objective to remove poverty have also considered policy measures to improve the living conditions among the urban poor. In the fifth Five-Year Plan, the first formal attempt was made to eradicate poverty by inducting "Slum Clearance and Slum Development Scheme" under the "Minimum Needs Programme" which encompasses basic needs in a broader perspective. In the successive plans a greater weightage was given to the provision of reasonable level of living and basic amenities of the poor. Table 1.1 shows a list of the programmes undertaken by the government for the urban areas. The objectives of all the programmes in Table 1.1 is to ameliorate the living condition of the poor living in slums.

An important feature of different programmes shown in Table 1.1 is that the main thrust of the programmes is mainly to improve the basic amenities of shelter, drinking water, sanitation, health care and education. In case of some programmes in addition to the basic amenities, employment generation was also taken up. Programmes related to basic services are aimed to provide basic amenities in deficient slum areas without altering the physical structure of the
<table>
<thead>
<tr>
<th>Programs</th>
<th>Education</th>
<th>Health</th>
<th>Water</th>
<th>Sanitation</th>
<th>Shelter</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Urban Basic Services for the poor (UBSP)</strong></td>
<td>- Pre-school learning</td>
<td>- Nutritional supplementation</td>
<td>- Drinking water</td>
<td>- Community hygiene &amp; sanitation</td>
<td>- Community participation</td>
<td>- Sports &amp; cultural activities</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Promotion of civic consciousness</td>
</tr>
<tr>
<td><strong>Environmental improvement in urban slums (EIUS)</strong></td>
<td>- Pre-school urban slums centre</td>
<td></td>
<td>- Low-cost potable drinking water</td>
<td>- Pay &amp; use community latrine &amp; baths</td>
<td>- Drains for waste water &amp; storm water</td>
<td>- Widening &amp; paving bastee lanes</td>
</tr>
<tr>
<td></td>
<td>- Mid-day meal</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Street lighting - Recreational facilities</td>
</tr>
<tr>
<td><strong>Urban community development (UCD)</strong></td>
<td>- Formal &amp; informal education</td>
<td>- Low-cost for women &amp; children</td>
<td>- Drinking water supply</td>
<td>- Conversion of dry latrine to pour-flush latrine</td>
<td>- Construction of new latrine</td>
<td>- Community participation - Slum improvement - Female employment - Self employment - Urban social forestry</td>
</tr>
</tbody>
</table>

contd...
<table>
<thead>
<tr>
<th>Programmes</th>
<th>Education</th>
<th>Health</th>
<th>Water</th>
<th>Sanitation</th>
<th>Shelter</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>Integrated scheme of low cost sanitation for liberation of scavenger (ICS)</td>
<td>- Pre-school learning &amp; health education</td>
<td>- Supplementary nutrition &amp; health education</td>
<td>- Drinking water &amp; health education</td>
<td>- Conversion of dry latrine to sanitary latrine</td>
<td>- Providing pour-flush latrine</td>
<td>- Sanitation facilities</td>
</tr>
<tr>
<td>Integrated Child Development Services (ICDS)</td>
<td>- Nutrition &amp; health education</td>
<td>- Immunisation &amp; health check-up</td>
<td>- Drinking water &amp; health education</td>
<td>- Sanitation facilities</td>
<td>- Medical facilities</td>
<td>- Employment Generation</td>
</tr>
<tr>
<td>Slum Improvement Programme (SIP I &amp; II)</td>
<td>- Medical facilities</td>
<td>- Drinking Water &amp; Sanitation facilities</td>
<td>- Employment Generation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Slum Upgradation Programme (SUP I &amp; II)</td>
<td>- Drinking Water &amp; Sanitation facilities</td>
<td>- Housing facilities</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 1.1 (contd.)
house. But, in the shelter-cum-services programmes, serviced land, security of tenure and certain basic services are made available.

An examining of the programmes and schemes undertaken by the central, state and local governments to provide basic amenities reveals that the major concerns and areas of emphasis of the programmes have been changing from time to time and the success in terms of target of the programmes has been extremely limited (NCU, 1988). Kundu (1993) also observed that the reach of the programmes was limited and even the targets were completely missed.

Inspite of the programmes of the government, the slums of metropolitan cities are deficient in terms of basic amenities. A few studies that are available, some mentioned above and in the next chapter on literature survey, provide a mere description of the basic amenities in various slums. These studies have not analysed the reasons for the variations in the basic amenities in the slums. The basic amenities are not uniformly distributed in the slums and they are affected by the socio-economic characteristics of the households in the slums. This study has been conducted to understand the influence of the socio-economic and demographic factors on basic amenities. The households in different slums of Calcutta form the unit of study from whom data have been collected. The slums of Calcutta city (Calcutta Municipal Corporation) have been selected, as the problem of basic amenities in the city is an age old problem. In Calcutta, the
growth of slums goes back to at least 1880s when the Jute industry was first established. Even in the Calcutta Improvement Act of 1911, ‘bustees’ were recognised as a critical problem (Singh, 1978). The large human concentration in the city has a historical base and it is one of the prime nerve centres of the national economy. The urban problems of Calcutta are a great concern for effective planning interventions. The concern about Calcutta can be described in the words of Jawaharlal Nehru: “Calcutta is the biggest city in the country. Its problems are national problems - quite apart from the problems of West Bengal, and it is necessary that something special should be done. If the whole city went to pieces, it would be a tremendous tragedy” (CMPO, 1966: ix).

The Municipal Act of Calcutta Corporation describes a slum as an area containing land occupied by or for the purpose of any collection of huts standing on a plot not less than 10 cottahs (less than 0.75 square km.) in area. Huts means any building, no substantial part of which excluding the walls upto a height of 18” above floor or floor level, is constructed of masonry, reinforced concrete, steel, iron or other metals (Som, 1987). The registered slums which are recorded in the assessment books and for which Calcutta Municipal Corporation collects taxes usually qualify the above mentioned criteria. The slums of Calcutta are popularly known as ‘bustees’.
Although the various Five-Year plans and programmes for improving slums have their aim to improve basic amenities, there is limited discussion in the literature on what constitute as basic amenities. Streeten has discussed the basic needs of a population which can be thought of as defining basic amenities. The objectives of providing basic amenities mainly include the full physical, mental and social development of the human personality (Streeten, 1977). In another way it can be said that basic amenities refer to the minimum specified quantities and level of such things like shelter, water, sanitation, medicine and education that are necessary to prevent ill health and underdevelopment (Streeten, 1984).

Perhaps there is really no need to define what are the basic amenities, because there is a general consensus among the planners that shelter, drinking water, sanitation, health and education are the basic amenities that a population should have. Some programmes, however, also include street lighting in the slums. Electricity can be considered as a basic amenity as the slum dwellers generally face hardship without electricity. For this reason, the slum dwellers often illegally tap electricity. In the present study we have also considered electricity as a basic amenity. The six basic amenities that we have examined in this study are: shelter\(^1\), water supply, toilet, electricity, education and health care facilities.

\(^1\) ‘shelter’ frequently denotes the informal habitats of the urban dwellers living in slums. Shelter is a kind of temporary arrangement for living where the durability and quality of housing is not so good. But for formal housing there are some minimum acceptable norms which include four basic attributes, viz. durability, security, hygienic environment and privacy (Maitra, 1991). One or more attributes of the formal house are absent in most of the dwelling units of slums. So, the living units of the slums are more closer to the connotation of shelter than formal housing. In our study the term housing and shelter is used interchangeably, although most of the dwelling units in slums lack the acceptable norms of formal housing.
1.2. OBJECTIVES OF THE STUDY

i) This study aims to examine the magnitude and dimensions of basic amenities in the slums of Calcutta.

ii) In the study an attempt will be made to identify the relationship between different socio-economic and demographic characteristics of the households and basic amenities.

iii) Finally, after analysing the relationship between socio-economic and demographic characteristics of the households and basic amenities, the study will try to suggest some comprehensive policy measures to tackle the acute situation that is prevailing in the slums.

1.3. DEMOGRAPHIC, SOCIAL AND ECONOMIC CHARACTERISTICS OF THE CITY OF CALCUTTA

In this section we discuss the demographic and social and economic characteristics of Calcutta Municipal Corporation (CMC) which has been selected for our study (Map 1.1 shows the wards of CMC). The brief presentation of the major characteristics of the city by wards is done on the basis of the 1991 census data. The section of demographic characteristics comprises the information on density, sex ratio, and average size of the
households. The next section on social characteristics contains literacy and distribution of SC and ST population. The section on economic activities shows the distribution of work force by gender and economic sector.

1.3.1 Demographic Characteristics

In this part, the important demographic characteristics of the city and their trends over the different census years since independence is discussed first. Then the ward level patterns of the demographic characteristics of the city during 1991 is presented.

Table 1.2

<table>
<thead>
<tr>
<th>Year</th>
<th>Population (in '000)</th>
<th>Growth rate (Decennial)</th>
<th>Density (per sq. Km)</th>
<th>Sex ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>1951</td>
<td>2698</td>
<td>24.50*</td>
<td>25947</td>
<td>580</td>
</tr>
<tr>
<td>1961</td>
<td>2927</td>
<td>8.48</td>
<td>28147</td>
<td>612</td>
</tr>
<tr>
<td>1971</td>
<td>3149</td>
<td>7.57</td>
<td>30276</td>
<td>636</td>
</tr>
<tr>
<td>1981</td>
<td>3305</td>
<td>4.96</td>
<td>31779</td>
<td>712</td>
</tr>
<tr>
<td>1991</td>
<td>4397</td>
<td>6.61</td>
<td>23716</td>
<td>799</td>
</tr>
</tbody>
</table>


Note: *- Figure represents the growth rate between 1941-1951
The Table 1.2 shows the major demographic characteristics and trends of the city in the last four decades. During these four decades the population of Calcutta has increased almost 1.6 times. But the growth rate has declined rapidly after independence. During 1941-51 the decadal growth rate of the population of the city was 24.5 per cent which has shown a sharp decline to 8.5 per cent during 1951-61. Since then, the city has experienced a continuous decline in growth rate, though a marginal increase in 1981-91 has been observed. It is important to mention that since 1961 the proportion of migrants to the city's population has also declined steadily from 50.7 per cent (15.41 lakhs persons) in 1961 to 33.7 per cent (10.62 lakhs persons) in 1971 and 28.1 per cent (9.28 lakhs persons) in 1981. (The figures for 1991 are still not available.)

The decline of growth rate and migration may be due to the industrial recession that the city is facing during the last few decades. The density of population of the city was continuously increasing since Independence but it declined in 1991. This may be due to the expansion of the city towards less densely populated areas of south and east. In 1981 the city had an area of 104 square kilometres which increased to 185 square kilometres in 1991. The Sex ratio of the city has shown a continuous improvement since 1951. This may be due to the decline in migration which was largely male selective.
1.3.1.1. **Density of population**

The average density of the population of CMC is as high as 23,716 persons per square kilometre. Map 1.2 shows the density of population by wards. Out of 142 wards about 41 wards have a density below average whereas the remaining have a density above average of the city. There are 9 wards with a highest density of above 1,00,000 population in the city. The highest density of population that is 1,80,759 persons per square kilometre, is observed in ward 23 (central Calcutta near Barabazar). The majority of the high density wards are concentrated in central Calcutta, close to the bank of the river Hooghly, and these areas are dominated by the major trading activities of the city. This part is identified as the Central Business District (CBD) of Calcutta. Entire south and south east sprawl of the city shows the lowest density of population (see Map No. 1.2).

1.3.1.2 **Sex ratio**

Sex ratio is measured as number of females per 1000 males and it shows a wide range of variation over the wards of Calcutta. As shown Map 1.3 the lowest sex ratio of 365 is recorded in ward 45 (near CBD) while the highest sex ratio of

---

2 The areas of the wards of CMC, used for calculating the density of population, are estimated with the help of GIS (Geographic Information System) software - PC ARC/INFO 3.4D. The map, showing all the boundaries of the present wards and other details of CMC, used for estimating the areas of the respective wards obtained from Calcutta Metropolitan Development Authority (CMDA). All the demographic and socio-economic characteristics of CMC by wards portrayed through maps in this study are prepared by using PC ARC/INFO.
CALCUTTA MUNICIPAL CORPORATION

KILOMETRES

1 0.5 0 1 2

Persons Per Sq. Km.

ABOVE 100,000
80,000 - 100,000
60,000 - 80,000
40,000 - 60,000
20,000 - 40,000 (CALCUTTA-25223)
BELOW 20,000

Corporation Boundary
Ward Boundary
River/Canal/Nala
Rail Road
Road
1201 is recorded in ward number 142 (Fort William). The average sex ratio for CMC is 799. There are 85 wards which recorded a sex ratio above the average of the city. As high as 13 wards have recorded sex ratio below 600. The distributional pattern of sex ratio over the wards of Calcutta shows a very conspicuous pattern where most of the wards with higher density have shown a lower sex ratio. This may be due to sex specific migration in the areas of concentration of economic activities which is mainly in and around of CBD (Map 1.3).

1.3.1.3 *Average persons per households*

The size of the households is measured as average persons per household, and it is quite high in Calcutta (5.13), particularly for a metropolitan city. The average size ranges from 7.9 persons per household to 3.6 persons per household. The highest family size is recorded in Ward 140 whereas, the lowest is in ward 142 which comprise the Army Cantonment of Fort William. As high as 76 wards have below 5 persons per household. These wards are mainly those that have low density and high sex ratio (Map 1.4).
CALCUTTA MUNICIPAL CORPORATION

MAP 1.4

NO. OF PERSONS IN A HOUSEHOLD
- ABOVE 6.00
- 5.00 - 6.00 (CALCUTTA - 5.1)
- BELOW 5.00

KILOMETRES
1 0.5 0 1 2

\[ \text{Corporation Boundary} \]
\[ \text{Ward Boundary} \]
\[ \text{River/Canal/Vala} \]
\[ \text{Rail Road} \]
\[ \text{Road} \]
1.3.2 Social Characteristics

1.3.2.1 Literacy rate

The average literacy rate for CMC is 77.6 per cent where 87 wards have recorded a literacy rate above the average. The highest literacy rate of the city is 93.8 per cent and that is recorded in ward 96 (south Calcutta). The lowest literacy rate (50.8 per cent) is recorded in ward number 58. A majority of the wards of south Calcutta have higher literacy rate. The areas with higher density of population have lower literacy rate. Most of the wards situated in the south-east border of CMC have a literacy rate of below 60 per cent (Map 1.5).

In Calcutta 81.9 per cent of males (above 7 years) are literate. Out of 142 wards 89 wards are having male literacy rate above the city average of 81.9 per cent. About 32 wards of Calcutta have recorded male literacy rate above 90.0 per cent. Again the eastern wards have literacy rate below 70 percent. The southern part of the city shows a concentration of wards with male literacy rate above 90 per cent. In ward number 96 the male literacy is the highest of the city which is 96.96 per cent whereas, the lowest male literacy of 57.9 per cent is found in Ward 58 which is located at the eastern side of the city (Map 1.6).

In Calcutta 72.1 per cent of females in above 7 years age group are literate. Like male literacy, highest female literacy rate of 90.53 per cent is also found in Ward 96 (south Calcutta). Lowest literacy rate of 38.18 per cent is observed in Ward 108. Of the total 142 wards, 88 have recorded female literacy rate above the average. In total, 71 wards have recorded a female literacy rate above 75 per
CALCUTTA MUNICIPAL CORPORATION

PERCENTAGE OF LITERATES TO
TOTAL POPULATION (AGES 7+)

ABOVE 90.00
80.00 - 90.00
70.00 - 80.00
60.00 - 70.00
BELOW 60.00

KILOMETRES

Corporation Boundary
Ward Boundary
River/Canal/Nala
Rail Road
Road
CALCUTTA MUNICIPAL CORPORATION
CALCUTTA MUNICIPAL CORPORATION

PERCENTAGE OF FEMALE LITERATES TO TOTAL FEMALE POPULATION ACES %

- ABOVE 85.00
- 75.00 - 85.00
- 65.00 - 75.00 (CALCUTTA - 75.00)
- 55.00 - 65.00
- BELOW 55.00

Corporation Boundary
Ward Boundary
River/Canal/Nala
Rail Road
Road
cent. Wards with lower literacy rates are mainly concentrated in eastern part of the city and along the bank of the river Hooghly. Like male literacy, female literacy is also high in the southern part of the city (Map 1.7).

The male-female disparity in literacy, computed by using Sopher's Disparity Index, shows that the highest disparity is observed in the wards around Garden Reach area and in the eastern part of the city. Apart from these two patches there are few scattered wards with high disparity. The wards with very low disparity (<0.10) are also scattered. The medium disparity of 0.20 - 0.30 shows a contiguous area in central, south and south west Calcutta (Map 1.8).

1.3.2.2 Distribution of SC and ST population

About 6.6 per cent of the city's population are scheduled population. But there is a wide variation in the proportion of SC and ST population in the wards of Calcutta. In Ward 108, located in the eastern part of the city, as high as 62.0 per cent population belongs to SC and ST category. A concentration of SC and ST population is observed in this eastern part. As given in Map 1.8 four wards numbering 58, 106, 108, 109 have more than one third of the population (33.0 per cent) in the scheduled category. In total 39 wards have percentage of SC and ST above the average of the city. There are 21 wards that have less than 1 per cent population in SC and ST category. The lowest percentage of SC and
CALCUTTA MUNICIPAL CORPORATION

ST population of 0.11 per cent is recorded in Ward 62 located near Taltola in central Calcutta (Map 1.9). Less than 2 per cent of SC and ST population is found in 16 wards located in north west part of the city.

1.3.3 Economic Characteristics

1.3.3.1 Distribution of workforce

The distribution of work force over the wards reveals that the city has 32.8 per cent of total population classified as worker. Of the total number of wards, 63 have recorded percentage of workers above average of the city. The highest percentage of workers (52.2 per cent) is recorded in ward 45 (B.B.D. Bag area). Only 9 wards of the city have recorded more than 40.0 per cent of the population as workers. Just at the south of Ward 45 is the ward 142 which has recorded the lowest percentage of workers (18.4 per cent). This ward comprises the area of Fort William which is mainly cantonment area (Map 1.10). The highest percentage of workers is recorded mostly in the wards comprising CBD of the city and Garden Reach which is the dock of Calcutta Port. Most of the wards of eastern and southern part of the city have less than 30 per cent of the population as worker.

As high as 53.6 percent of the city's male population are worker. There are 62 wards which have more percentage of male workers than the city's average.
CALCUTTA MUNICIPAL CORPORATION

KILOMETERS

PERCENTAGE OF MALE WORKERS TO TOTAL MALE POPULATION

ABOVE 60.00
50.00 - 60.00
50.00 - 50.00 (CALCUTTA-SATYA)
BELOW 50.00

Corporation Boundary
Ward Boundary
River/Canal/Nala
Rail Road
Road
Ward 45 has the highest percentage (70.07 per cent) of male workers. While the ward 123, located in the south west part of the city has the lowest percentage (44.88 per cent). There are 39 wards that have less than 50 percent of the males who are workers. The higher percentage of male workers is mainly concentrated in two zones - in and around CBD of Calcutta and the area around Calcutta Port (Map 1.11).

In contrast to the male workers the percentage of female workers is very less in Calcutta. Only 6.8 percent of the female population is enumerated as workers. There are only 68 wards which have recorded higher percentage of female workers than the city’s average. The highest percentage of females is working in Ward 90 near Taligunja where 20.9 per cent of the females are working. The lowest percentage (0.4 per cent) of female workers is recorded in Ward 140 which is located at the western most part of the city. Only 20 wards have more than 10 per cent of female population as worker. The wards with above 10 per cent female workers are concentrated in south and south central part of the city. Here, it is important to notice that this area is also having high female literacy (Map 1.12).

The disparity in percentage of workers by gender shows that it is high for all the wards of Calcutta. The average disparity for the city is 4.14 and 77 wards have recorded a disparity above that. The highest disparity is 10.43 and is recorded in
CALCUTTA MUNICIPAL CORPORATION
DISPARITY IN WORKFORCE

DISSPARITY INDEX

\[ \text{Above } 0.50 \]

\[ 0.50 - 1.00 \]

\[ 1.00 - 5.00 \] (CALCUTTA-414)

\[ 2.00 - 4.00 \]

\[ \text{Below } 2.00 \]

KILOMETERS

1 0.5 0 1 2

\( \vee \) Corporation Boundary

\( \vee \) Ward Boundary

\( \vee \) River/Canal/Nala

\( \vee \) Rail Road

\( \vee \) Road
Ward 45 which is in the B.B.D Bag area. Almost all the wards in and around
CBD and areas around Calcutta Port have recorded a disparity index above
6.0. These are the areas that show very low sex ratio. The disparity is typically
below 3.0 in south and south central Calcutta where female workers are more
(Map 1.13).

1.3.3.2 Sectoral distribution of workforce

In Calcutta there are less than 1 per cent workers engaged in primary sector
( agriculture and related works), whereas in secondary and tertiary sectors there
is a considerable proportion of workers. Since the proportion of workers in
primary sector is very small, we shall restrict our discussion in secondary and
tertiary sectors only.

The percentage of workers engaged in secondary sector ( household and other
than household industries and construction) has a wide variation over the wards
of Calcutta. It ranges from 4.7 per cent in ward 142 ( Fort William) to 75.5 per
cent in ward 138 ( near to Garden Reach). There are 20 wards in Calcutta which
have less than 20 per cent of the workers in secondary sector. Most of these
wards are along the west bank of the river Hooghly spreading from Beniatola in
the north to Fort William in the south of Calcutta (Map 1.14). There are more
than 40 per cent of the workers in 22 wards of Calcutta engaged in secondary
sector. These wards are concentrated in two broad regions - I) in and around
CALCUTTA MUNICIPAL CORPORATION


PERCENTAGE OF WORKERS IN SECONDARY SECTOR TO TOTAL WORKERS:
- ABOVE 40.00
- 30.00 - 40.00
- 20.00 - 30.00 (CALCUTTA-WEST)
- BELOW 20.00

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CALCUTTA MUNICIPAL CORPORATION


PERCENTAGE OF WORKERS IN TERTIARY SECTOR TO TOTAL WORKERS

- Above 80%
- 70% - 80%
- 60% - 70% (CALCUTTA-60.05)
- Below 60%

KILOMETERS

\[ \text{Corporation Boundary} \]
\[ \text{Ward Boundary} \]
\[ \text{River/Canal/Nala} \]
\[ \text{Rail Road} \]
\[ \text{Road} \]
Garden Reach and ii) Tangra and its surroundings and Beleghata-Narkeldanga area in east Calcutta. Fifty seven wards of Calcutta have more than 30 per cent of their workforce in secondary sector.

A very high percentage of workers are recorded in tertiary sector in the city. In ward 142 (Fort William) and 45 (B.B.D Bag) more than 90 per cent of the workers are in tertiary sector. Both these wards along with other wards which have more than 80 per cent of workers in tertiary sector, mostly coincide with the wards of low percentage of workers in secondary sector. The lowest percentage of workers in tertiary sector is recorded in ward 138 (23.9 per cent). Not only Ward 138 but also areas contiguous to it have low percentage of workers in the tertiary sector. Another such area is in the eastern most part of Calcutta (Map 1.15).

Having described the demographic, social and economic characteristics of Calcutta city, in Chapter IV the socio-economic and demographic characteristics of the households of the slums are discussed and the magnitude and dimensions of basic amenities of Calcutta slums are presented in Chapter V. Chapter III develops a conceptual framework that is used for examining the relationship between socio-economic and demographic factors and basic amenities. A multivariate analysis is used to examine the relationships and the results of these relationships are presented in Chapter VI. The last chapter
develops policy recommendations based on the findings of the study. In the next chapter (Chapter II) we present a review of literature.