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Preface

In recent times, particularly for the last half-decade or so there has been a tremendous increase in land prices witnessed in and around metropolitan cities. This upward movement in the real estate prices is mainly attributed to various factors including setting up of Special Economic Zones, Export Promotion Industrial Parks in a big way, fuelled by the higher economic growth and coupled with higher purchasing power of the individuals. Similar trend is also noticed in the sphere of share markets, metal markets particularly in gold and platinum prices and petroleum products. There is no clear-cut direction from the policy level either to free the shackles of control over the land or a fully controlled or dual policy. In the absence of this, the property scenario has been influenced by speculation on one side and fear on the other side.

The decentralization policies initiated by the Government especially after Liberalization, Privatization and Globalization (LPG) during the initial period of 1990's and opening up of the Indian Economy with other developed and developing nations not only enhanced standard of living of educated and skilled persons but also excluded some sections of the society, which finds shelter in slums of the cities. For these economically weaker sections of the society it is very difficult to purchase land for residential purpose or they are even not in a position to think about the same. In order to overcome this difficulty, Government of India has initiated various measures to uplift them.

The present report on Chennai is seventh in series after Delhi, Bangalore, Hyderabad, Pune, Thiruvananthapuram and Lucknow. The report is fundamentally chapterised in seven sections. The major body of the text is then topped and tailed by introductory and concluding chapters that respectively set the context for urban planning and real estate development and address some of the most pressing questions that presently face the urban economy of India.

It is hoped that the report would give at least some directions to clearly understand the need to have clear cut vision that would help to avoid massive unplanned growth in the metropolitan cities creating law and order problems and human miseries as we have witnessed in recent times in Delhi.

This report on the Urban Land Price Scenario of Chennai is prepared by the Industrial and Economic Planning Division of the Town and Country Planning Organisation under the guidance of Shri J. S. Negi, Industrial Planner and his fertile working team.

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New Delhi
July, 2006

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Introduction 1

The rapid growth of urban population in developing countries acquires serious proportions; the study of urbanization and its relation to the development is attracting greater and more critical attention of researchers, planners and policy makers concerned. The problem is however, enormously complex and of a multifaceted nature, economic, sociological, political, cultural, etc,. It is not amenable to ethnocentric unidisciplinary analysis. As a result, the theories pertaining to urbanization and development are still in their growing stage.

Industrialization does play a very important role in the process of urbanization almost everywhere but the development of cities especially in the metropolitan cities in the developing countries does not owe primarily to industrial expansion. Many of the other factors have played very prominent roles and these factors continue to trigger urban growth even today. The forces that have led to a particular type of urbanization process in the developing countries are quite different and more complex than those in the European and other western countries and the only way to analyze the pattern of the development is to understand these factors well.

In an already urban world the growth of cities will be the single largest influence for development in the first part of the 21st

century. Urban population is growing faster than the world population as a whole. Some cities are experiencing fastest rate of population growth ever seen. Nearly all the urban population increase will be in the present day developing countries. They will account nearly 93 per cent of the 2.06 billion increases in the global urban population between 1970 and 2020. Two out of the three urban people live in developing countries, by 2015 it will be three out of four and by 2025 nearly four out of five. Much of this growth will come in the world's under developed countries and many of the new urban people particularly women and children will be among the poorest people of the globe. A high proportion of global urban population live in the bigger cities. There were 83 cities or city system with a population of more than one million in 1950; 34 of them in developing countries. Presently, there are more than 280 of them and this number is expected to almost double by 2015. All the new cities with more than one million population and 11 of the world's 15 biggest cities are in developing countries. The above quotation is taken from the UNFPA, State of World Population 1996, clearly narrating the importance of growing urban population in the world. This clearly indicates that the urban scene is undergoing dramatic change world over.

In earlier period urbanization had been associated with industrialization, indeed they have been considered synonymous. Presently, people have acquired the knowledge about the living conditions in the cities, manufacturing activities in the cities have

been shifting to outskirts of the city. This is a turning circle as compared with the industrialization period. In contrast to the early days of industrial revolution when employment activities in the urban spectrum usually declined with rapid industrialization and urbanization in less developed countries today services have intended to expand as fastest industry so that process of development so called urbanization is a movement of people to both service and industry from the traditional agricultural oriented activities.

Urbanization is a natural phenomenon that takes place as the nation grows. Some activities are best performed in, indeed require, agglomerations of people while others do not. The area of activities has, therefore, to be seen in the total activities existing in the nation and the exploitation of resources and development in the future. Agglomerations economies are very important for the development of particular country because they want to enter the industrialized or manufacturing or service world. In the provision of infrastructure in the urban area many economies of scale are operating. Service activities such as banking and insurance also exhibit economies of scale. The economic activities thrive in the presence of many other economic activities. Hence agglomeration of economic activities and people, that is urbanization should be seen as positive for over all development. Hence it should be supported by policy actions. The puzzle of India is that, when

industry and overall gross national product grew at unprecedented rates, the rate of growth of urbanization slowed down.

In this condition, the decelerations of urban development in a nation like India is a cause for concern. This could be caused by a deceleration in productivity growth. The main reasons behind this are various factors such as the absence of appropriate technology, wrong system followed in the fixing of tariff especially protecting most of the capital intensive technology used industries where more capital is used with less level of labour, changes in the labour laws, inadequate resources for meeting the adequate level of investment in the infrastructure, negative marginal productivity of labour in the agricultural sector except certain pockets of the economy, etc, would inhibit both tertiary and secondary industrial sector growth.

Approximately 307 million Indians lives in nearly 3700 towns and cities spread across the country. This is 30.5 per cent of its population. In sharp contrast to only 60 million (15 per cent) who lived in urban areas in 1947, when the country became independent. During the last fifty years the population of India has grown two and half times, but Urban India has grown by nearly five times. In numerical terms, India's urban population is second largest in the world after China and is higher than the total urban population of all the countries put together barring China, USA and Russia.

Urban areas are the engines of productivity, growth and over all development of the country. This is manifested in the increasing contribution of urban sector to national income. The estimated contribution of urban sector to the national income of India during 1951 was only 29 per cent and it increased to 60 per cent during the year 2001. It clearly showed the fact that during the last half century the contribution of national income from the urban sector had showed the growth at 107 per cent. Growth of employment of especially in the main workers category in urban sector during 1981-91 was reached at 38 per cent, which was higher than the national level and the rural by 11.9 per cent and 22 per cent respectively. This clearly indicates the fact that there is a wide gap between the incomes of rural and urban India. The main reason behind this was due to the large level of concentration of industrial and service sector activities in urban areas of India. The flux of migrating people from both skilled technically and educationally fitted and unskilled workers in the rural areas to the urban areas also put immense pressure of the already existing scarce availability of infrastructural facilities in the urban areas, especially in drinking water, sanitation, housing, health, education and all other facilities. This ultimately resulted in the downward position of development in urban sector. Infrastructural facilities not cop-up with the required level leads to scarcity of facilities.

Housing is very important for mankind especially after food and clothing. The general notion behind the housing was that

people prefer residential areas, which is near to their work places and other basic required infrastructural facilities. Due to this speculation of land values grows and most of the moneylenders and other rich income category persons purchase the land in pivotal places. The lower income category persons can't even dream for houses in these places because they can't afford to purchase. With the increasing demand for housing and commercial activities in the city area had already used the optimum level of land area and the planners realized it and architectures horizontal expansion will not meet the required demand. Then the vertical expansion was the only solution to check the rocket rise in the land values in the city area.

Hyper inflated rise in the land values in urban areas has also caused hardships to the economically weaker sections of the society as they have compelled to live only in the peripheral areas especially in the outskirts or fringe areas of the city. This had further resulted in the growing problem of slums in the cities. In order to check sky rocketing prices of available land in the urban areas governments both at the center and states have taken certain measures. Because both economically rich and poor people are very essential in our cities because of their interdependency. In this condition Government of India in its Twenty Point Programme under para 10 (C) stressed the need to check the same and also reduce the concentration of ownership of land from the few economically powerful sections of the society and protect the

wishes of all sections. The present United Progressive Alliance Government in its Common Minimum Programme clearly stressed the importance of the development of housing in the economically weaker sections of the society especially slum dwellers in urban areas. It has also intended to achieve optimum social use of urban land and ensure availability of land sufficient for deserving people at the reasonable values.

The information regarding the land values including residential, industrial and commercial purpose, apartment rates, rent rates, costs of building materials, etc, are very limited and not in time series and no agency provide the same even at the city level. The main factors behind this are – to the absence of specialized system for data collection, ignorance of interviewers, lack of training, multiplicity of institutions, etc,. Moreover those who collected the information on land values, rent rates, apartment rates and other details were unknown about the purpose for which they collected the information, its use and other. This often leads to the wide gap between the actual land values and the quoted land values by the concerned agencies. This ultimately leads to wrong data, which in turn leads to wrong policy formulation, implementation, monitoring and evaluation. In order to derive actual picture of land values in a particular city, Town & Country Planning Organisation under Ministry of Urban Development, Government of India has taken up a study for collecting the information on land values, which influence the development of the

city. The study includes the information on urban residential land, commercial land, industrial land, rent rates both commercial and industrial, apartment rates, its contributory factors for the changes in the land prices and suggesting remedial measures for controlling the abrupt changes.

Selection of the City

Once the decision had been made to focus on a single city, it was decided to select one of the metropolitan cities in Tamil Nadu for the study. The urbanization experience of Tamil Nadu was more or less same with the developing countries of the world. Many of the states in the Indian Union had reached the national level of urbanization there will be number of cities from which to choose. In addition to this, the proximity to this region to well known places located both in the national as well as international level was one of the big advantages. Some of the important reasons that led us to select **Chennai** for the proposed study- are:-

1. The policy, planning, implementation, monitoring and evaluation climate in the country had to be receptitive to such a study. In this connection, we wanted policy makers, researchers, planners, academicians and administrators to be interested in the result and capable of absorbing them. It depends upon the quality and availability of professionals working in the urban issues

both in the national as well as regional interest and the development of the city as a whole.

2. To carry out the study in a reasonable time framework, it was desirable for the city to have both a rich information base and well-known and dedicated professionals and specialized institutions that could be involved in the work. In addition, the potential usefulness of study would be enhanced if the research capability existed to utilize the results to that the gained knowledge could be transferred to others researchers and academicians when the study was over.

3. The city had to be enough to exhibit adequate variation in land prices, density pattern and the like so that the analysis could be useful to a wide range of situations.

On the basis of these criteria, the choice was to select Chennai, the capital of Tamil Nadu, one of the information technology hub city of South India, Regional Film City, highly unusual geographical conditions, population density, slum conditions, etc. From the consultations with the Government officials, consultants, researchers, academicians, planners, it has become apparent that a concern for inter-city problems was wide spread in our nation.

Data Collection and Methodology

The Indian government has been conducting population census surveys once in a decade since 1871. The Census of India is considered as genuine and reliable and is used in most of the research studies. It is readily available throughout the globe and with the inception of information technology it is available on the fingertips. Information regarding the same in the capital city of Tamil Nadu, Chennai is also readily available. Moreover this research study topic does not look in to small topic but dealt with whole system of research items, the way of collection of primary data from the field dependant on the type of data required. Various survey technical methods that have been used include policy analysis, questionnaire surveys, formal and informal discussions, interviews with the key persons involved in the field of real estate business and property developers / dealers etc.

The data regarding the historical background of Chennai and those concerning with the formal planning and development policies, implementation, monitoring and evaluation have been primarily collected from the Chennai Metropolitan Development Authority (CMDA), Tamil Nadu State Planning Board and other state government urban departments. The importance, history and maintenance of rich urban heritage have been collected from the Archaeological Survey of India and Tourism Departments of both center and state government. Some other requisite information has been acquired through deskwork statistical data on the extent of

physical, economic growth and development. Most of the statistical information were available with the State Economics and Statistic Bureau Office and its district office in some way or other and were brought together bit by bit from different desks.

The primary data mainly on urban residential land values, commercial land values and industrial land values in Chennai both in minimum and maximum was collected through a pre-tested questionnaire. The questionnaire was prepared after a series of discussions and interviews with the various officials of the Centre, State and Local Governments, academicians, researchers, policy makers, non-governmental organizations, property dealers/ developers, subject experts in this field etc. The study examines both maximum and minimum values of urban residential land, commercial land and industrial land by taking into consideration all possible causes mainly locational advantage, proximity to various infrastructural facilities like hospitals, educational institutions, road, water, electricity and the last but the main cause of speculation among the property dealers. Various statistical techniques have been used to analyze these data such as average, index number, co-relation, time series, trend analysis etc., In addition to all these, interviews with the key persons dealing with this topic from all sectors including government and non-governmental agencies, regular interaction with the local people specialized in this topic have helped significantly to a large extent for gaining a basic insight in this research topic.

Objectives of the Study

1. To analyze historical and socio-economic conditions in the city.
2. To examine the available infrastructure facilities in the city.
3. To know the importance of rich urban heritages within the city and the maintenance of the same.
4. To study the demand for housing and housing shortage.
5. To explain the living conditions of slum dwellers and various development activities and slum improvement programmes adopted by the agencies for the development of slums in the city.
6. To examine various factors responsible for changes in urban residential, industrial, commercial land prices, rent rates apartment rates in the city.
7. To provide a base level data mainly for assessment rate schedule for fixing stamp duty on land transactions and other policy decision and
8. To recommend strategies for removing the existing bottleneck in the system.

Structure of the Report

The report has been presented in seven chapters.

1. ***Introduction:*** This introductory chapter clearly narrates the importance of study, objectives of the study, data collection and methodology used, the selection of the city

Chennai, the capital city of Tamil Nadu, structure of the report etc.

2. ***Profile of Chennai:*** In this chapter an attempt has been made to analyze the historical background of Chennai City, growth of population, economic and other physical infrastructural facilities, land use pattern of Chennai Metropolitan Development Authority.

3. ***The Rich Urban Heritage – Chennai***: This chapter mainly describes the historical importance of various monuments, the emergence and its preservation by the Archeological Survey of India and other departments.

4. ***Housing:*** This chapter analyzes the demand for housing, typology of houses, tenure status, living pattern of household, research and development in housing mainly suitable for the living conditions as well as weather conditions in Chennai City.

5. ***Slums in Chennai:*** This chapter clearly narrates the origin, factors responsible for the creation, definition, characteristics, theories and slums in Chennai. In addition, this chapter analyzes the policy framework programme for action for the improvement of slums in

Chennai by the Slum Clearance department of Tamil Nadu Government and the local governments.

6. ***Trends in Land Values:*** This chapter presents land values in Chennai and analyzes its residential, commercial and industrial, rent rates and apartment values in Chennai. Moreover, an attempt has been made to fit the land values on the basis of trend analysis and predict the land values in some future period on the basis of trends.

7. ***Sum UP and Next Step:*** This chapter contains all the findings observed, suggesting some remedial solutions and conclusions drawn.

Profile of Chennai 2

Chennai previously known as Madras owes its origin to the east India Company, which came to India for the purpose of trade. In March 1639, Francis Day, obtained from Sri Ranga Raya, the Rajah of Chandragiri, the grant of land on which Fort St. George presently stands. A quarter later in 1763, its population was estimated to be one lakh. By the end of the 19th century, the city had acquired a very strategic position both in relation to the country and the southern region of India. Chennai is the fourth most populous metropolitan city of India, after Mumbai, Delhi and Kolkatta. But it is the largest city in the southern region of India followed by Bangalore and Hyderabad. It is the capital of Tamil Nadu State, which ranks first in the degree of urbanization in India with almost 44 per cent of its population being urban. The pre-eminence of Chennai in the urban seen of Tamil Nadu is discernible from the fact that the next biggest agglomeration of Coimbatore and Madurai each hardly account for more than one fifth of the total population of Chennai UA.

Chennai is located on the southeastern sea coast of India at 13^0 40^1 north latitude and 80^0 15^1 east longitude on a flat plain slightly above the sea level. Chennai city stretches nearly 26 km. along the coast from Thiruvanmiyur in the south to Thiruvottiyur in the north. The traces of colonial legacy are still visible from the architecture of some most important buildings like Fort St. George,

High Court Complex, General Post Office, University of Madras, College of Engineering, and Central Railway Station, to name a few. It is a relatively uncongested city of India. The physical expansion of the city is marked by lateral rather than the vertical growth because of the availability of land.

Historical

Chennai has been occupying an important position in the southern region ever since it was founded by the East India Company in the 17th century. Its importance in the region can be attributed to the fact that till recently it has been the major commercial, administrative and military center for the entire south. The contribution of port and laying the trunk railway lines and other major highways radiating from it, linking the major cities in India and vast hinterland have strengthened its pre-eminent position especially during the British period. In 1600 AD the city was formed of a few scattered settlements separated by long distances. Each settlement grew around the nucleus of a religious institution especially of a temple and has its own history. The most important part at that time was Mylapore. In Santhome, the Portuguese, having reached in 1522 AD, constructed a Fort and a settlement. Triplicane on the north was one of the villages. A fishing hamlet, which existed at the present site of George Town called as Chennai Patanam from, which the name of Chennai is said to have been derived.

By 1733, George Town became very congested and the weaving community started settling in Chintadripet area where lot of open space was available for their activities. The washer men, who were in the Mint area move towards the west. Britishers found that Triplicane was good for settlement and large number of people moved there during this period. After that this area become more important which is next to George Town. Because the British started living near the Coovum River, roads were led to give access to them, thus Marshal Road, Halls Road, Montieth Road, Casa Major Road became major thorough fares. In 1800 especially after the inception of Municipal Corporation, the development of the city began. Later, British realized the importance of port and constructed a pier in 1862. The development of Royapuram during 1862 gave an impetus to the establishment of timber sawmills and its depots. Before 1800 roads were in a radical pattern, after 1810 ring roads were developed, residential areas were also developed such as Edward Elliots Road, Pantheon Road, Chamiers Road, Nungambakkam High Road, Spurt Tank Road, Royapettah High Road etc.

The population of Chennai city was half a million during the initial period of 20th century, 1901. The city had doubled its population in 60 years from 3.23 lakh in 1871 to 6.47 lakh in 1931. The electrification of railway line from Beach to Tambaram created another dimension for the development of industries. The period between 1947 to 2001 has seen unprecedented spatial growth of

the city required largely by post independence industrialization, liberalization, privatization and globalization. Apart from the large and heavy industries in the public sector such as Integral Coach Factory, Heavy Vehicles Factory, the Manali Refinery, Fertilizers several automobiles and ancillary industries were also established. The development of two industrial estates namely, Guindy and Ambattur also quantified the development of Chennai to a faster speed.

Demographic Profile

The Indian Economy, seeking stronger integration with the global system has shown many interesting features in its structure of urbanization and process of urban growth during the last few decades of the last century ie. 20th century. Although the basic structure inherited from the colonial regime has dominated and dictated the process and growth pattern since our independence, planned interventions by the central and state government policies have led to some significant departures from the trends witnessed in the past. Interventions have tried to modify or moderate plans. These sought to impose constraints on the pattern of urbanization by market forces and bring about regional imbalance. Although the success of these policies can be at best be described as limited, the country did see a number of growth nuclei and corridors along with the emergence of a number of new towns. Understandably, further opening up of the economy since the early 1990s has had additional impact on the pattern and process of urban growth. As

the country aspires for a new development regime in the coming decades, it is important to take stock of the pattern and process of urbanization and its implications for present and future economic growth in the country.

It is relevant to indicate the major issues that Indian urbanization is concerned with. Lopsided urbanization means that the concentration of urban population in larger towns and cities and this is one of the major issues faced in the Indian Union during the present period. However the level of urbanization varies from states to states. Some of the smaller states are half urban or more. The 2001 Census has witnessed further changes in the growth pattern and level of urbanization across the states. Despite the dominance of the large towns, which are state capitals and million plus cities and class I cities as mentioned in the Census report, the growth pattern of the smaller towns also reflects some interesting features. Various socio-economic and demographic characteristics of urban structure like the level of urbanization, sex ratio, literacy, migration, etc, have been continuously influencing the development of the towns. The last decade is all the more significant from the point of view of urbanization as the 74th Constitutional Amendment, 1992 poised to empower the urban local bodies of the country was adopted. This amendment places the responsibility for managing cities and towns principally on institutions of local self-government.

No account of Indian urbanization can avoid the oft-repeated statement that only about a third of the country's population is urban. The census of 2001 confirms this simple arithmetical figure of 27.78 per cent as the proportion of India's urban population. It was 25.72 per cent in 1991, 23.73 per cent in 1981 and 20.22 per cent in 1971. This single figure alone cannot and does not convey the urban picture. The urban population in several states, big and small like Tamil Nadu 44.04 per cent, Maharashtra 42.4 per cent, Gujarat 37.35 per cent, Karnataka and Punjab at 33.9 per cent is well above the national average. Small states like Goa 49.77 per cent, Pondicherry 66.57 per cent and the city-states or union territories such, as Delhi 93 per cent and Chandigarh 89.78 per cent are predominantly urban.

Absolute number is another way to understand India's urban population at present. Even at less than 28 per cent, the total urban population of 285 million is more than the total population of several countries. It is also a little over 10 per cent of the total urban population in the globe. There are 5161 urban centers in the country, a thousand more than the number in 1981. Of the total urban population, 68.67 per cent or about 196 million live in class-I cities, each with a population of one lakh or more. There are 35 cities or agglomeration each with a population of 10 lakh or more. These million plus cities with a total population of 108 million account for 38 per cent of the country's urban population.

Contiguous groups of cities, towns and urban centers are another major characteristics.

The ever-rising population directly reflects the increased demand for investigable surplus for the increased demand for labour and at the same time this type of growth reduces the supply of investigable surplus. The consumption demand through the rise in dependency later resulted in, increased demand for food and other consumable goods, housing, education, health, etc. In view of the above - said fact that India does not have the capacity to mobilize the requireable resources to cop up with the increased demand for consumption, owing to social as well as biological factors has a cumulative effect with serious social and economic consequences. Thus, the increased population has tended to remain and endemic problems not only to the Government of India but all the development programmes initiated by the governments, voluntary associations and multinational companies. Now a days the process of development and industrialization are growing very fast especially after the inception of present United Progressive Alliance Government at the center. Industrial, capital and service oriented cities in India are developing at a faster rate as mentioned in the growth rate of Reserve Bank of India and the latest Economic Survey published by the Ministry of Finance, Government of India. The information regarding the population of India and Tamil Nadu both urban and rural during the last half-century is presented in Table 2.1.

Table 2.1 Populations of India and Tamil Nadu During 1961-2001

(Million)

No	Years	India	Tamil Nadu	Per cent
1.	1961	439.23	33.67	7.67
2.	1971	548.16	41.20	7.52
3.	1981	685.18	48.41	7.07
4.	1991	846.30	55.86	6.60
5.	2001	1027.02	62.41	6.08

Sources: 1. Census of India, Various Issues.
2. Urban Statistics, Town & Country Planning Organization, September 2005.

It may be observed from Table 2.1 that population of Tamil Nadu is growing at a lesser rate than the national level. The percentage of population of Tamil Nadu to the national level has gone down by 7.67 per cent in 1961 to 6.08 per cent in 2001. The reduction in percentage showed a gradual process and in every decade the reduction was very less. The reason behind the less level of contribution of Tamil Nadu population to the national level was especially due to awareness among the people, increasing the level of standard of living especially during the last two decades, adoption of various family planning programmes initiated by the central, state and other various non-governmental institutions, spread of education from the rich as well as lower sections of the people in all walks of life etc. The other reason behind the slow growth of population may be due to high level of migration of people from Tamil Nadu to other states in Indian Union and abroad etc.

The information regarding the population of Tamil Nadu and India on the basis of rural and urban classification during the last four decades, i.e. 1961-2001 is presented in Table 2.2.

Table 2.2: Classification of Population (Rural and Urban) of India and Tamil Nadu During 1961-2001.

(Million)

No	Years	India			Tamil Nadu		
		Rural	Urban	Total	Rural	Urban	Total
1.	1961	361.07 (82.2)	78.16 (17.8)	439.23	24.67 (73.3)	9.0 (26.7)	33.67
2.	1971	440.34 (80.3)	107.82 (19.7)	548.16	28.74 (69.7)	17.46 (30.3)	41.20
3.	1981	525.78 (76.7)	159.46 (23.3)	685.18	32.46 (67.0)	15.95 (33.0)	48.41
4.	1991	628.70 (74.3)	217.61 (25.7)	846.30	36.78 (65.8)	19.08 (34.2)	55.86
5.	2001	741.66 (72.2)	285.36 (27.8)	1027.02	34.93 (55.9)	27.48 (44.1)	62.41

Sources: 1. Census of India, Various Issues.
2. Urban Statistics, Town & Country Planning Organization, September 2005.

Note: Figures in parenthesis relates to percentage to total.

It may be inferred from Table 2.2 that during the last four decades covered under the study the percentage of rural population was always less in Tamil Nadu than in the nation as a whole. Its difference has enhanced from 8.9 in 1961 to 16.3 in 2001, which clearly showed the fast development as well as the level of urbanization of Tamil Nadu. During the last census survey, 2001 clearly narrated that more than 44 per cent of the total

population of Tamil Nadu is urban. The high level of urbanization in Tamil Nadu during the last two decades may be due to the fast development of science and technology especially in information technology, textile industry, small and tiny industries in small and growing cities in Tamil Nadu like, Madurai, Tiruchi, Tirunalveli, Coimbatore, Salem, Erode, Tirupur, etc. In addition to this, Chennai city is very much linked with other southern regions especially Bangalore, the silicon city of India, Hyderabad, the information technology hub of India, Thiruvananthapuram and Cochin the tourist and capital oriented cities in Kerala etc.

Presently, the flow of migration from other towns and states to Tamil Nadu as well as abroad to the state of Tamil Nadu is also increasing due to the development of business outsourcing and information technology, medical transcription, etc. But at the same time the development of small and medium towns within the Tamil Nadu state reduces the flow of rural population to the mega city of Chennai, which already used optimum level of available resources. Because the majority of the rural educated and skilled personals get employment opportunities in their own cities and they are never interested to migrate from their own native places. That is why, majority of the small and medium towns developed during the last two decades, which give more impetus to the large level of educated and skilled unemployed hands in the rural areas of Tamil Nadu. This has concentrated the development of cities within the

cities itself. The decadal growth of population of India and Tamil Nadu during the period 1961- 2001 is presented in Table 2.3.

Table 2.3: Decadal Growth of Population of India & Tamil Nadu 1961-2001.

(Per cent)

No	Years	India	Tamil Nadu
1.	1961-71	24.80	22.36
2.	1971-81	25.00	17.50
3.	1981-91	23.52	15.39
4.	1991-2001	21.35	11.73

Sources: 1. Census of India, Various Issues.
2. Urban Statistics, Town & Country Planning Organization, September 2005.

It is evident from Table 2.3 that during all the periods covered under the study the decadal growth rate of population of Tamil Nadu was always lesser than that of India. The Table also showed the fact that during the last four decades; the growth rate of population of India and Tamil Nadu has been reducing considerably. The main reason behind the reduction in the growth rate of population both India and Tamil Nadu may be due to the strict implementation of various family planning methods, increasing the awareness of people especially in field of health, education and other development activities by the governmental and non-governmental agencies. But the result showed that the fact the growth rate of population has considerably reduced in Tamil Nadu than the reduction in India. The difference in the growth rate of population between India and Tamil Nadu was increasing during

the last four decades covered under the study; 2.44 per cent in 1961-71 increased to 9.62 per cent in 1991-2001 which clearly showed the positive trend of most modernized form of living in the state of Tamil Nadu. In order to understand the growth rate of urban and rural population an analysis has been done. The information regarding the growth rate of population both in India and Tamil Nadu on the basis of rural and urban trends during the period 1961-2001 is presented in Table 2.4.

Table 2.4 Rural and Urban Growth Rates of Population of India and Tamil Nadu- Absolute & Decadal: 1961-2001.

No	Growths	1961-71	1971-81	1981-91	1991-2001
1	***India***				
	a. Absolute (million)				
	1. Rural	79.27	85.44	102.92	112.96
	2. Urban	29.66	51.64	58.15	67.75
	3. Total	108.93	137.08	161.07	180.71
	b. Decadal (%)				
	1. Rural	21.95	19.40	19.57	17.97
	2. Urban	37.95	47.90	36.47	31.13
	3. Total	24.80	25.00	23.52	21.35
2.	***Tamil Nadu***				
	a. Absolute (million)				
	1. Rural	4.07	3.72	4.32	-1.85
	2. Urban	3.46	3.49	3.13	8.40
	3. Total	7.53	7.21	7.45	6.55
	b. Decadal (%)				
	1. Rural	16.50	12.94	13.31	-5.03
	2. Urban	38.44	28.01	19.62	44.03
	3. Total	22.36	17.50	15.39	11.73

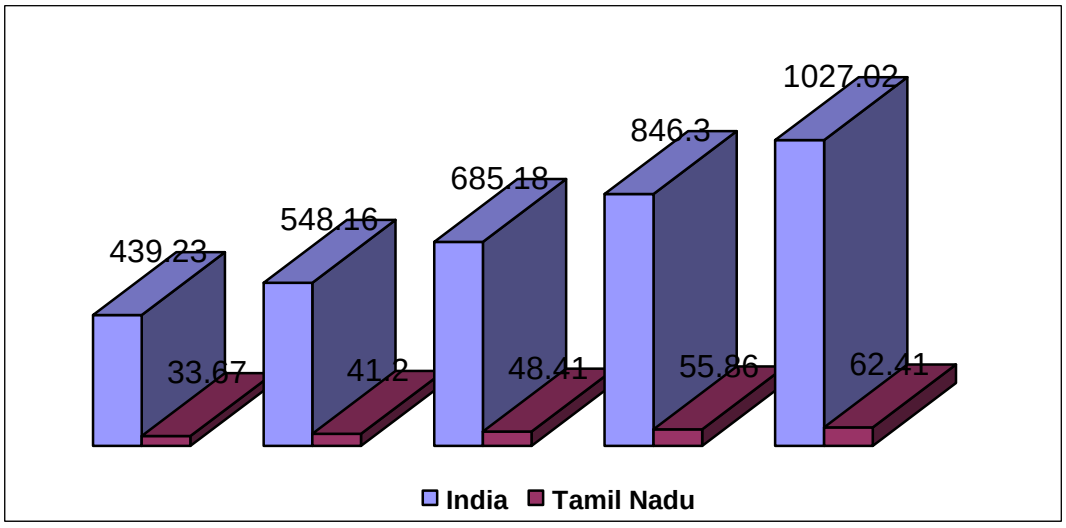
Sources: 1. Census of India, Various Issues.
2. Urban Statistics, Town & Country Planning Organization, September 2005.

It may be observed from Table 2.4 that the annual growth rate of population of Tamil Nadu was lesser than the national level by 1.2 per cent during the last four decades covered under the study. In the case of the rural growth of population Tamil Nadu showed 1.04 per cent per annum during the last four decades while in India it was 2.64 per cent and the difference between the two during the same period was 1.60 per cent per annum. This clearly indicates the fact that the annual growth of rural population in India was always higher than that of Tamil Nadu and it was more than double per cent of annual growth of population of the state of Tamil Nadu. This is same in the case of urban growth of population but only difference is that the difference between the growth rates of urban population in India and Tamil Nadu was less and it constituted near about 1.5 per cent per annum during the last four decades covered under the study.

In every decade covered under the study, the population growth of India showed a positive trend from 1961 to 81 and after the two decades it increased but at a lesser rate. This is same in the case of urban population only. In the case of rural population growth showed a complicated picture, first decade covered under the study showed a positive growth, next one was positive but decreasing as compared with the previous decade then an increasing and the last decade showed a decreasing trend. But overall picture in the case of Tamil Nadu showed the positive growth and at a decreasing rate. But only difference is that rural

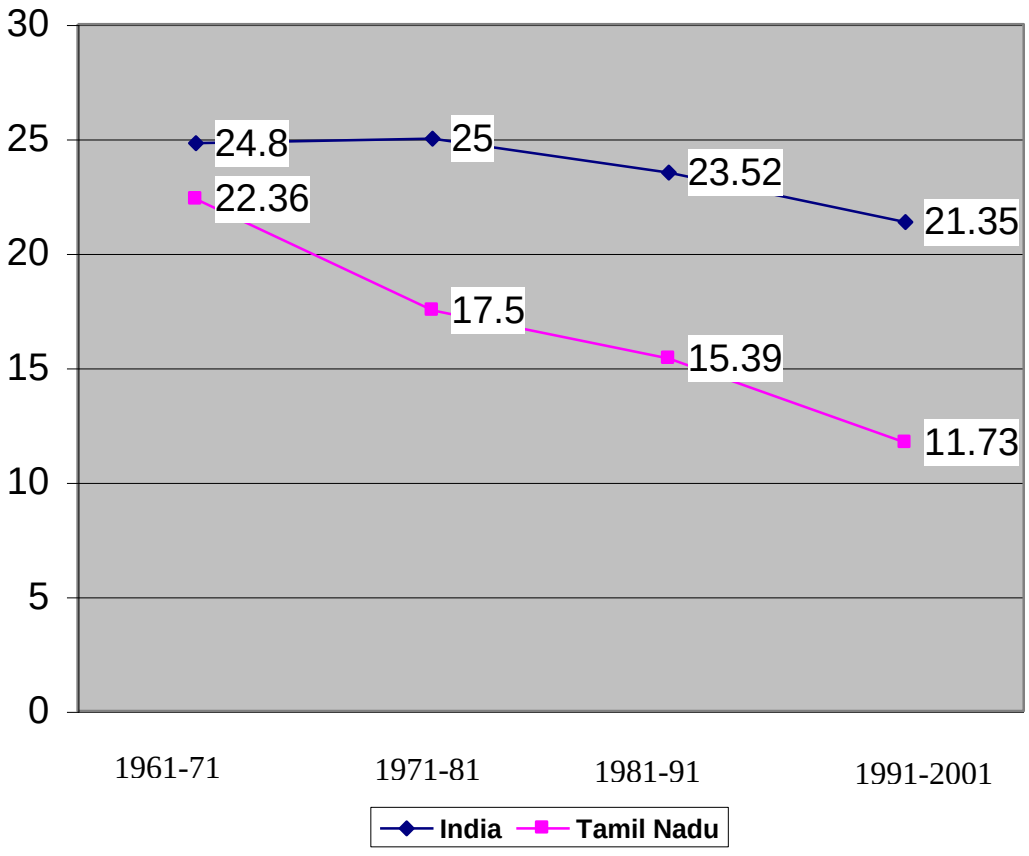
population during the last decade showed a negative growth of 0.52 per cent per annum. On the other side, urban growth of population showed a high positive growth at 4.4 per cent per annum during 1991-2001. This clearly indicate the fact that most of the towns especially small and medium towns in Tamil Nadu had grown at faster rate during the previous decade, due to the development of large level of employment opportunities in the growing cities especially in information technology, business process outsourcing, medical transcription technology, development of infrastructure and other service sectors. The population growth of India and Tamil Nadu during the last four decades is depicted in Figure 2.1.

Figure 2.1: Population of India and Tamil Nadu During 1961-2001. (Million)



The growth rate of population in India and Tamil Nadu during the last four decades (1961-2001) is depicted in Figure 2.2.

Figure 2.2: Growth of Population in India and Tamil Nadu During 1961-2001.



The information regarding the urban population of India, Tamil Nadu and Chennai (UA) during the last four decades, 1961-2001 is presented in Table 2.5.

Table 2.5: Population of India & Tamil Nadu (Urban) and Chennai (UA) During 1961-2001.

(Million)

No.	Years	Urban		Chennai (UA)
		India	Tamil Nadu	
1.	1961	78.16	9.0 (11.51)	1.94 (21.56)
2.	1971	107.82	12.46 (11.56)	3.17 (25.44)
3.	1981	159.46	15.95 (10.00)	4.29 (26.90)
4.	1991	217.61	19.08 (8.77)	5.42 (28.41)
5.	2001	285.36	27.48 (9.63)	6.56 (23.87)

Sources: ***1. Census of India, Various Issues.***
2. Final Population of UA and Towns-2001, Town & Country Planning Organization, June 2005.

Notes:- ***1. The Figures in brackets mentioned in the Tamil Nadu column presents the Percentage to urban India total.***
2. The figures in parenthesis mentioned in Chennai column relates to percentage to Tamil Nadu urban total.

It may be observed from Table 2.5 that the contribution of Tamil Nadu urban population to the urban population in India had been decreasing from 11.5 per cent in 1961 to 9.63 per cent in 2001. The last decade showed some considerable increase as compared with the previous decade, nearly 0.86 per cent. The concentration of urban population in Tamil Nadu was mainly in Chennai city, which accounts near about 24 per cent of the urban population of the state. This was more or less same during the last four decades covered under the study; some little bit increase or

decrease in percentage. The main reason behind the high concentration of urban population in Chennai city may be due to large level of small and medium and large level industries and the opportunities for getting employment for both skilled and unskilled workers in service and informal sectors. The other reason behind the high growth of population in this city is due to the large level of infrastructural facilities especially in health, education, and other linked activities. But as compared with the previous decade the concentration of urban population in Chennai has considerably reduced near about 5.7 per cent. The information regarding the growth rates of urban population in Tamil Nadu and Chennai UA during the last four decades is presented in Table 2.6.

Table 2.6 Growth Rates Urban Population and Chennai UA 1961-2001.

No	Years	Tamil Nadu Urban	Chennai UA
1.	1961-71	38.44	63.40
2.	1971-81	28.01	35.33
3.	1981-91	19.62	26.34
4.	1991-2001	44.03	21.03

Sources: 1. Census of India, Various Issues.
2. Urban Statistics, Town & Country Planning Organization, September 2005.

It may be observed from table 2.6 that in all decades covered under the study the growth rates of population in Chennai UA was higher than Tamil Nadu Urban except during the last decade. During the last decade the growth rate of urban population

in Tamil Nadu was higher than the Chennai UA by 23 per cent. It may be due to the reduction in the natural growth of population in Chennai UA, concentration of migration of people to other metros in Tamil Nadu is growing at a faster rate than Chennai because of the optimum use of the resources, large level of employment opportunities in other metro cities in Tamil Nadu, etc.

As per the latest Census of India 2001, Chennai UA stands at fourth position in terms of population of the megapolitan cities in India. The comparative picture of population and growth rates of population of other main megapolitan cities in India as per the Census of India 2001, are mentioned in Table 2.7.

Table 2.7: Population and Its Growth Rates of Megapolitan Cities in India

No.	Cities	Population (Lakh)			Annual Exponential Growth Rate	
		1981	1991	2001	1981-91	1991-01
1.	Greater Mumbai	82.43	125.96	163.68	4.22	2.62
2.	Kolkatta	91.94	110.22	132.17	1.72	1.82
3.	Delhi	57.29	84.19	127.91	3.80	4.18
4.	Chennai	42.89	54.21	64.25	2.23	1.70
5.	Bangalore	29.22	41.30	56.86	3.36	3.20
6.	Hyderabad	25.46	43.44	55.33	5.20	2.42
7.	Ahmedabad	25.48	33.12	45.19	2.58	3.11

Source: Handbook of Urbanization in India by K.C. Sivaramakrishna and Amitabh Kundu, B.N. Singh, 2005

It may be observed from the Table that the highest level of exponential growth rate during 1991-2001 was observed in Chennai among the seven-megapolitan cities in India. Chennai recorded the lowest among the megapolitan cities in India at 1.7 per cent. The highest exponential growth rate of population in other megapolitan cities in India may be due to large level of migration by the enormous increase in the level of employment opportunities in all sectors, mainly in service and small and tiny industrial sectors. The Table also narrates the fact that in most of the megapolitan cities exponential growth rate of population had considerably declined as compared with the previous decade except Kolkatta, Delhi and Ahmedabad. In all the three above-mentioned cities the exponential growth rate showed a slight increase as compared with the previous decade, 0.1 per cent in Kolkatta, 0.38 per cent in Delhi and 0.53 per cent in Ahmedabad respectively.

Most of the megapolitan cities showed growth in the peripheral areas because majority of the people can't afford to stick on the core areas of the cities due to high level of standard of living, very high cost of living. Majority of the core areas are highly concentrated with industrialists, politicians, administrators etc, who can afford to live in these areas. Most of the peripheral areas are concentrated with small and large level industries where large numbers of employment opportunities exist. So automatically people are interested to live just near the areas of their own work places. It in turn leads to the development of the peripheral areas

of the city. Moreover, the people in these areas are enjoying most of the facilities that are enjoyed by the people staying in the core areas of the city. Sivaramakrishna and Amitabh Kundu, in their books clearly narrated the development of the megapolitan cities in India by the way of development in core as well as peripheral areas. Most of the metro cities in India are multi municipal corporations such as agglomerations comprise a large city in the core with smaller urban areas in the periphery. In this analysis growth of metropolitan cities in terms of core city, vis-à-vis periphery areas. In this growth of megapolitan cities in India two consecutive decades viz. 1981-91 and 1991-2001 and four important features should be noted that is, declining in core – growing in periphery, growing in core – declining in periphery, growing in core and periphery and declining in core and periphery. The information regarding the development of megapolitan cities in terms of growth tendencies of population in the core and peripheral areas is mentioned in Table 2.8.

Table 2.8: Growth Tendencies in the Megapolitan Cities of India

No	Cities	1981-91		1991-2001	
		Core	Periphery	Core	Periphery
1.	Greater Mumbai	1.86	4.22	1.82	2.62
2.	Kolkatta	0.64	1.72	0.40	1.82
3.	Delhi	3.59	3.80	3.09	4.18
4.	Chennai	1.59	2.23	0.93	1.70
5.	Bangalore	0.71	3.36	4.79	3.20
6.	Hyderabad	3.31	5.20	1.58	2.42

Source: Handbook of Urbanization in India by K.C. Siva Ramakrishna and Amitabh Kundu, B.N. Singh, 2005

It may be observed from Table 2.8 that intra urban agglomeration of large megapolitan cities indicates that within the area of large metropolitan cities in India mainly Greater Mumbai, Kolkatta, Delhi and Chennai have recorded a fast growth in periphery areas than the core main areas. Huge population lack of infrastructure, basic amenities, cost of living, stringent land laws may have degenerated the capacity of the core areas of these cities to absorb the net increase in population, which as a matter of fact find a place in and around the core main city indicating a faster growth rate of urban agglomeration. This tendency of the fast development of urbanization clearly indicates an agglomerated trend. The above Table clearly shows that Bangalore has a reverse trend that is the core of the city is growing faster than the peripheral area of the city. This may be due to the concentration of people in the main city areas through the higher purchasing power of the new immigrants especially in the information technology sector working in the great silicon valley of India called Information Technology Hub in India.

In order to know the level of urbanization in India and Tamil Nadu during the last three decades i.e. 1981 to 2001 under different class towns is presented in Table 2.9. In the class town category Census of India has classified seven types, known as class –I, class – II, class - III, class - IV, class – V, class – VI and class – VII. The information regarding the same is presented in the

Table 2.9 in a summarized form. In this Table class IV – VII summarized in a single column.

Table 2.9: Population in Different Size Categories to the Total Urban Population in India & Tamil Nadu – 1981-2001

No.	Class/India/Tamil Nadu	Percentage of Urban Population		
		1981	1991	2001
1.	**India**			
	Class I	60.32	64.89	68.67
	Class II	11.63	10.96	9.67
	Class III	14.30	13.33	12.23
	Class IV-VII	13.75	10.82	9.43
	Total	100.00	100.00	100.00
2.	**Tamil Nadu**			
	Class I	62.19	65.96	56.35
	Class II	15.99	15.21	11.64
	Class III	12.52	11.19	12.21
	Class IV-VII	9.30	7.64	19.80
	Total	100.00	100.00	100.00

Source: ***Handbook of Urbanization in India by K.C. Siva Ramakrishna and Amitabh Kundu, B.N. Singh, 2005***

It may be observed from Table 2.9 that the percentage of urban population in class – I cities in Tamil Nadu was higher than the national level except during the last decade covered under the study. The difference between the percentage of Tamil Nadu and the national level had decreased from 1.87 per cent in 1981 to 1.07 per cent in 1991 and increased the gap to 12.32 per cent in 2001

respectively The last decade showed the fact Class I cities population in India was higher than Tamil Nadu at 12.32 per cent. The highest reduction in the percentage of class-I cities population in Tamil Nadu during the last decade covered under the study may be due to the development of small and other towns, showing a dramatic increase in the percentage of population in class-IV to class – VII during the same period. In the case of class-II cities, the percentage of population was higher in Tamil Nadu than the national level during the last three decades. While in the case of class-III cities, the percentage of population was more or less same with the national level. In Tamil Nadu, the percentage of urban population in class IV – VII was at 9.3 in 1981, reduced to 7.64 in 1991 and once again significantly increased to 19.8 in 2001. The recent development in information technology, small and tiny industries in and around the towns of Tamil Nadu, the growth of the cities in this group had witnessed a higher growth during the last decade. On the other hand in the national level the percentage of urban population in class IV – VII had reduced marginally during the last three decades covered under the study, from 13.75 in 1981 to 9.43 in 2001.

The level of urbanization in India and Tamil Nadu had been analyzed on the basis of the growth rate and exponential growth rate. The information regarding the level of urbanization: through the growth rate and annual exponential growth rate during 1971 to 2001 is mentioned in Table 2.10

Table 2.10: Level of Urbanization in India and Tamil Nadu.

No.	States	Growth Rates (percentage)			
		1971	**1981**	**1991**	**2001**
1.	India	20.22	23.73	25.72	27.78
2.	Tamil Nadu	30.26	32.98	34.20	44.10
	Annual Exponential Growth Rate				
		1971-81		1981-91	1991-2001
3.	India	3.79		3.09	2.73
4.	Tamil Nadu	2.45		1.76	3.56

Source: ***Handbook of Urbanization in India by K.C. Siva Ramakrishna and Amitabh Kundu, B.N. Singh, 2005***

It may be observed from Table 2.10 that the level of urbanization in Tamil Nadu was very much higher than the national level during the four decades covered under the study and last decade showed a higher percentage of 16.3 per cent. The highest difference during the last decade in Tamil Nadu showed a positive sign of urbanization, mainly due to the development in small and medium towns, especially majority of the people involving in informal and service sector activities. The annual exponential growth rate during the last decade in Tamil Nadu was higher than the national level by 0.83. While during the previous two decades showed the fact that the growth rates in Tamil Nadu was less than the national level.

The information regarding the population of Chennai during the last one-century is presented in Table 2.11.

Table 2.11 : Population in Chennai UA- 1901 – 2001

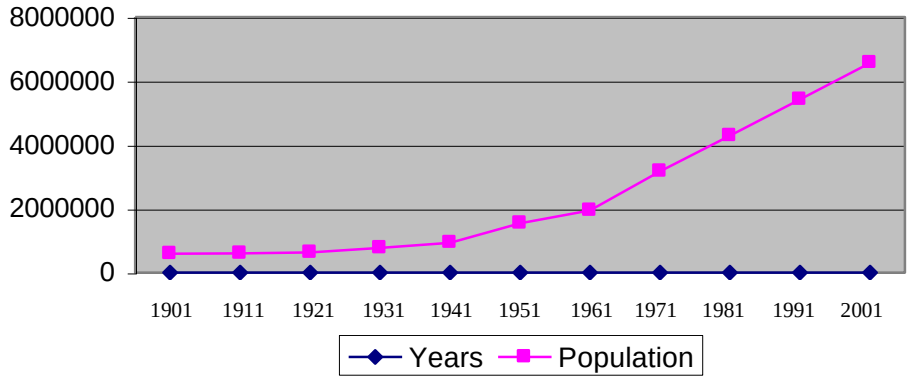
No.	Years	Population	Variation	Per cent
1.	1901	594396	-	-
2.	1911	604304	9638	1.62
3.	1921	627824	23790	3.94
4.	1931	774513	146689	23.36
5.	1941	930356	155843	20.12
6.	1951	1542333	611977	65.78
7.	1961	1944502	402169	26.08
8.	1971	3169930	1225428	63.02
9.	1981	4289347	1119417	35.31
10.	1991	5421985	1132638	26.41
11.	2001	6560242	1138257	20.99

Sources: 1. Census of India, Various Issues.
2. Final Population of UA and Towns-2001, Town & Country Planning Organization, June 2005.

It may be inferred from Table 2.11 that the population of Chennai UA had increased from 594396 in the starting of the previous century, 1901 to 6560242 in the last census conducted by the Government of India in 2001, showed an annual increase of 10 per cent. During 1941-51 the growth rate of population was highest in Chennai showed at 66 per cent and it was due to the partition and the concentration of big and other industries in the city areas. Due to the development of industries especially heavy and large industries required mass level labour that lead to the high rate of growth of population. This had happened during the decade of

1961-71. During the last four decades the growth rate of population showed a more or less stagnant rate. The last decade showed the annual growth rate of 2.1 per cent. The reduction of growth rate as compared with previous decade may be due to the saturated level of employment opportunities, recent development of other metro and non- metro cities in Tamil Nadu, where the scope for the employment opportunities for large both skilled and unskilled workers. Moreover these cities have more avenues for the recent developments in the information technology sector where most of the educated unskilled workers are getting employment opportunities in recent times. The population of Chennai UA during the last one-century is depicted in Figure 2.3.

Figure 2.3: Population of Chennai UA 1901-2001.



For knowing the living pattern and other socio economic conditions of Tamil Nadu, we have made an analysis: in comparison with the Indian Union. The information regarding socio-economic indicators of Tamil Nadu and India during 2001 is mentioned in Table 2.12.

Table 2.12: Socio-Economic Modules of Tamil Nadu and India- 2001.

No	Modules	Unit	Tamil Nadu	India
1.	Urban Population	Per cent	44.10	27.78
2.	Urban Growth Rate	Annual Per cent	3.60	2.70
3.	Per Capita Income	Rupees	12287	9660
4.	Per Capita Foreign Direct Investment	Rupees	3050	2402
5.	Average size of Land Holding	Hectare	0.93	1.57
6.	Status of Unemployment (15+age) 1. Urban 2. Rural	Per cent	 3.50 2.00	 7.40 6.70
7.	Urban Poverty	Per cent	19.85	23.62
8.	Rural Poverty	Per cent	13.74	27.09
9.	Registered workers 1. Urban 2. Rural	Per cent	 36.50 4.90	 40.00 6.80
10.	Road	Per 100 sq. km.	158.78	75.01
11.	Rail	Per 100 sq. km.	3.07	1.91
12.	Telephone	Per 100 people	3.43	2.15
13.	Electrification	Per 100 people	100.00	85.95
14.	Per Capita Bank Deposit	Rupees	7321	6967
15.	Per Capita Credit to Industry	Rupees	3375	1876
16.	Sex Ratio 1. Urban 2. Rural	Ratio	 979 991	 900 945
17.	Slum Population to total population	Per cent	9.29	14.12
18.	Literacy 1. Urban 2. Rural	Per cent	 73.62 58.99	 70.10 49.44
19.	Hospital	Per 100 people	1.175	0.541
20.	School	Per 100 pupil	0.090	0.197

Source: ***Handbook of Urbanization in India by K.C. Sivaramakrishnan, Amitabh Kundu and B.N. Singh, 2005***

It may be inferred from Table 2.12 that majority of the socio-economic modules showed the fact that there was development than the nation as a whole. In the case of urban population growth during the last decade Tamil Nadu had an upward trend annually 0.9 per cent difference from the nation. This is more or less same in the case of development modules like per capita income, per capita foreign direct investment, average size of land holding, both urban and rural poverty, unemployment and various other infrastructure modules. In the case of per capita income, Tamil Nadu stands at a higher level than the national level at 27.2 per cent and 27 per cent in the case of per capita foreign direct investment.

Poverty means an income level, which is inadequate to maintain a decent standard of living, as judged by the standards of the society. Here two types of classifications are mentioned, both urban and rural. In both the categories Tamil Nadu stands at comparatively better position, 3.77 per cent better level with nation in the case of urban population and 13.35 per cent in the case of rural population. As in compared with the unemployment rate of the nation, Tamil Nadu faces lesser problems of unemployment both in rural and urban sectors, 4 per cent in the case of urban and 4.7 per cent in the case of rural respectively. In Tamil Nadu all the physical infrastructure facilities mentioned in the Table have higher levels than the national level. To mention one, from electrification point of

view all the villages in Tamil Nadu are electrified: while in India it is only 86 per cent.

Banking plays a key role in the development of a particular area especially for providing timely credit and loans to its members particularly in the industrial sector. This in turn reflects the higher growth of output of various industrial activities, business of banking, investment etc. Here per capita bank deposit of Tamil Nadu was also higher than the national level by 5.08 per cent. On the other side, the per capita credit from the bank to the industry was also higher, which constitute near about 80 per cent higher than the national level. Chennai is the fourth megapolitan city in India, slum population is also on a higher level, but in Tamil Nadu slum population constitutes only 9.29 per cent of the total population while it is 14.12 per cent in India. Literacy level as per the latest Census Survey figured a comparatively good position in Tamil Nadu than the nation as a whole, both in rural and urban category. Likewise, the sex ratio of Tamil Nadu is also in a better position than the nation as a whole both in rural and urban areas and more or less at par.

Economic Profile

The tendency to ascribe failure of development policy to bad or inadequate governance has become nearly universal. It seems development of finance institutions, multilateral agencies like World Bank, Asian Development bank, policy makers have all come to the

conclusion that poor governance, like a multiplicative factor, reduces even the best policy and prescription to naught. One can dispute the contention in many ways. Since all acts of omission and commission, poor design of institutions and their improper working can be considered as governance failure, the contention is neither an explanation of development failure in a casual sense nor particularly useful from the point of bringing about change in economic performance. The notion of governance failure has to be narrowed down and carefully understood. As a truism it has the danger of masking our inadequate understanding of societies and economies or even our unwillingness to understand the specific features of our society.

India, which started out with nearly all the institutions current in advanced societies, but limited to serve only a miniscule proportion of its population, failed in the apparently easy task of simply extending the domain, and to access to these institutions, to the whole of society. Today we know that in India such extension has been more formal than the real. In contrast, East Asian societies starting out without the institutional benefit of the colonial yoke were able to create institutions as they went along and as the need arose.

During the last century, the world has undergone a change from the agricultural society where the manual labour was the critical factor, to an industrial society where the management of

technology, capital and labour provided the competitive advantage. The information technology era was born in the last decade where the connectivity of software products are driving the economy of some nations. In the present century, 21st century, a new society is emerging where knowledge is primarily production resource instead of the most sophisticated capital and labour. The knowledge society is empowered by innovative capacity. Efficient utilization of available resources at the optimum level by way of existing technology can create an advanced society, more output which in turn leads to wealth of the nation, improving the quality of life, especially in education, health, and all other social infrastructures. The ability to create and maintain the infrastructure based on knowledge, develop knowledge workers and enhance their productivity through the creation of knowledge, growth and use of new technology will be the key factors in deciding the prosperity of the nation in the coming future. Whether a nation has arrived at a stage of knowledge society is judged by the way of country has effectively deals the knowledge creation and deployment of knowledge in key sectors like information technology, industrial sector, agriculture, health etc. Innovation is the key factor in building the knowledge society, which leads to the development of an advanced society.

In the advanced society so called knowledge society where the knowledge is converted into the wealth for social good through the process of innovation. Innovation is the key role for the

competitiveness of both service and industrial sectors. It is mainly fed by dynamic changes in the organization and also in various walks of life born out of experiences of individuals and groups and at a time research and development in all walks of life. Hence, there is an urgent need to establish an efficient system of innovation in the country. The fundamental to the achievement of the above said aspirations lies in achieving the economic development. Economic development is a process where the real per capita income of the country increased over a period of time and distributive justice secured by introducing necessary social, economic, cultural and institutional changes by making the optimum use of available resources. For achieving this, all the resources are productively used and try to use in the optimum level for a particular period of time to achieve well-defined objectives as stipulated by the policy makers. Thus it means, the growth with structural changes.

The need for economic growth is one of the pivotal aspirations of the development of a country, irrespective of the status of governments, socio-economic conditions, the basic comparison between the developed, developing and under-developed nations in the world. Most of the advanced developed countries of the nations always try to maintain the development and also to accelerate the growth rate of them simultaneously with other advanced countries of the nation. While on the other side, for under developed countries it is a matter of their survival and try to

reduce the hurdles for growth. In the case of developing nations of the world the main idea is to achieve higher economic growth, within a limited time span and also to achieve the welfare objectives of the people, provide a world-class infrastructure facilities to them.

Over the years, research and development has been one of the key drivers for enhancing the competitiveness of global economies. It is now an accepted fact that economies that do not innovate ultimately leads to stagnate condition. India is now one of the preferred locations for carrying out research and development. Presently developing countries are looking towards India to find technological solutions for their social problems, while co-operation in advanced countries are initiating research and development activities in India, to develop faster and cheaper service products. Developed as well as developing nations in the world find India a suitable destination for research and development investments due to its value propositions.

India offers a vast pool of talented researchers, low cost research, a robust infrastructure in research and development activities which are more are less equipped up with the other advanced nations of the world, favourable government regulations etc. It is the second largest knowledge resource bank in the world comprising engineers, scientists, and skilled personnel's in all walks of economic life. It also offers a significant cost savings and more value on every international monetary unit. The present

government at the center has been a pioneer in providing infrastructure in social sector. It has been conducting various research activities in all sectors of the economy especially in agriculture, space, and defence, good quality of health and education, exploitation of non-conventional energy sources by the available domestic technology and has developed numerous technologies enabling the country to achieve self-sufficiency in all economic fields.

Tamil Nadu ranked sixth populated state in the Indian Union as per the census of India 2001. It has a multi pronged character, which clearly means there is a well developed, world class, well linked infrastructural facilities in the selected urban areas, while majority of the rural areas are facing the problem of absence of all the basic facilities. Chennai is the capital of Tamil Nadu – the highest urbanized sector in Tamil Nadu. It has a good percentage of literally and educationally qualified work force, high quality of life index, world-class communication network, higher percentage of F.D.I. (Foreign Direct Investment), Foreign Technology transfer, higher level of equity participation and offshore sourcing making an excellent venue in the state of Tamil Nadu mainly in information Technology, Film industry, electronics, tourism mainly linked with ancestral Dravidian Hindu culture, floriculture, agro-based units etc. Health facilities based on the latest modern allopathic, homeopathic, and traditional ayurvedic lines can also be ideally located in Tamil Nadu because of its world linked transportation

facilities, its geography with the availability of well equipped and trained technologists, nursing personnels etc. These activities will have a direct positive impact of the economy of Tamil Nadu especially in Chennai being the Rajdhani.

Work participation rate plays a very important role for analyzing the economic status of any state or district. It gives an idea about the percentage of people worked; the Census of India classified the work participation rate in two forms called main workers and marginal workers. As per the Census of India, main workers means number of workers engaged in various activities more than 180 days in a year, while marginal workers means people engaged in various economic activities less than 180 days in a year. Non-workers are another category mainly consisting of children below 14 years of age and old age people. The information regarding the main workers and marginal workers of Chennai district and Tamil Nadu during 2001 is presented in Table 2.13.

Table 2.13 Main & Marginal Workers of Chennai & Tamil Nadu in 2001

No.	Details	Tamil Nadu	Chennai
1.	Main Workers	23684611	1343578
2.	Marginal Workers	4127036	97804
3.	Total Workers	27805347	1441382
4.	Work Participation Rate	44.76	34.19

Source: ***Tamil Nadu – An Economic Appraisal 2001-02, Department of Evaluation and Applied Economic Research (DEAR), Government of Tamil Nadu, Chennai.***

It may be observed from the Table 2.13 that near about 45 percentage of the population had the responsibility of taking care of the remaining 66 per cent of the population, mainly in the age group of less than 14 years commonly called as children and old age people. In Tamil Nadu more than 85 per cent of the workers belonged to the category of main workers, receive employment more than 180 days in a year. Only 15 per cent of the workers belonged to the category of marginal workers. In case of Chennai district marginal workers contribute less than 7 per cent of the total workers. This clearly narrates the fact that more than 93 per cent of the workers were main workers. The work participation rate of Chennai district was less than the state level of 10.57, which showed the fact that; the dependency burden of the workers in Chennai district was higher. The information regarding the workers in Chennai district and Tamil Nadu during 2001 on the basis of different categories namely cultivators, agricultural labours, workers engaged in household activities and other workers is presented in Table 2.14.

It may be inferred from Table 2.14 that majority of the workers both in Tamil Nadu and Chennai district were engaged in other activities, which are mainly involved in the tertiary sector jobs. In Tamil Nadu more than 45 per cent of the workers were involved in the service sector activities, which provided livelihood for them.

Near about cent percent of the workers in Chennai were engaged in service activities. Very few of the workers were engaged in household activities. Because of the metropolitan character of Chennai, the cultivators, agricultural labourers were very few; the cultivation land is more or less very less.

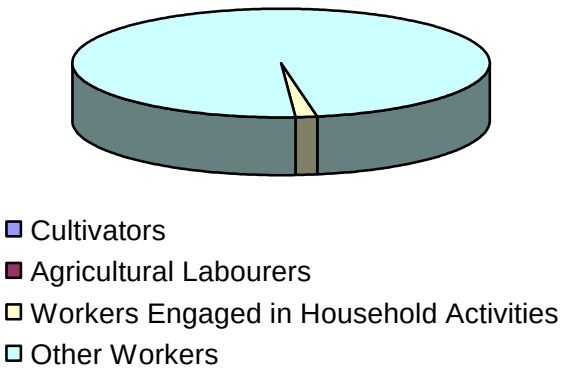
Table 2.14 Category of Workers in Chennai District &Tamil Nadu – 2001.

No.	Category	Workers	
		Chennai	Tamil Nadu
1.	Cultivators	788 (0.05)	5114384 (18.39)
2.	Agricultural Labourers	715 (0.05)	8665040 (31.16)
3.	Workers Engaged in Household Activities	22108 (1.54)	1458546 (5.24)
4.	Other Workers	1417771 (98.36)	12573677(45.21)
5.	Total Workers	2882764 (100.0)	27811647(100.0)

Source: *Tamil Nadu – An Economic Appraisal 2001-02, Department of Evaluation and Applied Economic Research (DEAR), Government of Tamil Nadu, Chennai.*
Note:- *Figures in parenthesis relates to percentage to total.*

The information regarding the category of workers in Chennai district 2001 is depicted in Figure 2.4.

Figure 2.4: Category of Workers in Chennai - 2001



Chennai holds immense attraction to investors from all over the country and world in industry and trade and commerce, technology and education on account of its advantage location, availability of skilled manpower, finance institution, communication network and institution of higher learning, management and research. In addition to this amicable and tolerant nature of the inhabitants of Chennai is also the factor. The information technology had given more job opportunities to the younger generation in Tamil Nadu during the last half decade. Most of the software units in Tamil Nadu are ideally located in Chennai itself due to its vast number of educated and skilled labour force, availability of institutions for higher studies etc. The information regarding the distribution of software units in Chennai and Tamil Nadu during 2000-2001 is presented in Table 2.15.

Table 2.15: Distribution of Software Units in Tamil Nadu 2000-01.

No	Place	No. of Units	Per cent
1.	Chennai	676	89.30
2.	Tamil Nadu	757	100.00

Source:- ***Tenth Five Year Plan, Tamil Nadu, State Planning Commission, Tamil Nadu.***

It may be observed from Table 2.15 that near about 90 per cent of the software units of Tamil Nadu State exists in Chennai metropolitan area itself. This clearly narrates the fact that most of the software units were set up in and around Chennai city itself because software units were required more level of physical as well as social infrastructural facilities than in other types of the

industries. In addition, Chennai city has sufficient number of educated and skilled personals available at the reasonable wage rates. That is why most of the software entrepreneurs are interested to start software units in Chennai itself.

In order to understand the position of small Scale industrial units in the state of Tamil Nadu and Chennai district, an analysis has been carried out. A good percentage of the small-scale industrial units in Tamil Nadu existed in Chennai district itself. The information regarding the registered small-scale industrial units in Chennai district and the same in Tamil Nadu state during 2001-02 is presented in Table 2.16.

Table 2.16 Registered Small Scale Industrial Units in Chennai District & Tamil Nadu- 2001 & 2002.

(No)

No	Area	2001	2002
1.	Chennai	40094 (10.34)	43664 (10.41)
2.	Tamil Nadu	387597	419524

Source: ***Tamil Nadu – An Economic Appraisal 2001-02, Department of Evaluation and Applied Economic Research (DEAR), Government of Tamil Nadu, Chennai.***
Note:- ***Figures in parenthesis relates to percentage to total.***

It may be inferred from Table 2.16 that more than 10 per cent of the small-scale industrial unit in the state of Tamil Nadu exists in the Chennai district itself. During the period covered under the study increase in the number of industrial units both in Tamil Nadu state and in Chennai district was more or less same but some little ups in Chennai district. The small increase of small-scale

industrial units of Chennai district as compared with the state of Tamil Nadu may be due to the higher level of infrastructural availability in the city area and the raw material for the production of finished goods. Now the number of industrial units especially in the small-scale industrial units in Tamil Nadu state has been increasing considerably due to the favorable conditions of the industrial policy of the Government of Tamil Nadu. While in comparing the number of industrial units mainly large and medium industrial units Chennai district ranks the fifth position in the state of Tamil Nadu. The information regarding the distribution of main large and medium factories in the state of Tamil Nadu during the year 1998-99 is presented in Table 2.17.

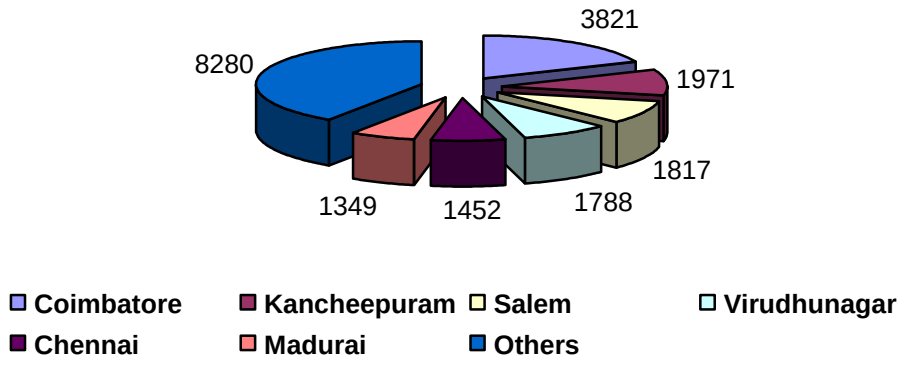
Table 2.17 Distribution of Factories on the Basis of Highest Number of Industries During 1998-99.

No	District	No. of Factories	% to State Total	Rank
1.	Coimbatore	3821	18.66	1
2.	Kancheepuram	1971	9.62	2
3.	Salem	1817	8.87	3
4.	Virudhunagar	1788	8.73	4
5.	Chennai	1452	7.09	5
6.	Madurai	1349	6.59	6
7.	Others	8280	40.43	-
8.	Total	20478	100.00	-

Source: ***Tamil Nadu – An Economic Appraisal 2001-02, Department of Evaluation and Applied Economic Research (DEAR), Government of Tamil Nadu, Chennai.***

It may be inferred from Table 2.17 that Coimbatore ranks the first position in the number of factories mainly large and medium level factories in the state of Tamil Nadu. Chennai district ranks the fifth position in this case. The large level of factories in Coimbatore may be due to the large number of informal sector activities which in turn leads to the existence of industrial units because of the availability of raw materials and large level of skilled personnel. Moreover in this district large level of cloth manufacturing units, which are world famous in the production of textiles. Kancheepuram is ranked second position in the number of industrial units in the state of Tamil Nadu mainly concentrating the silk production and textile items. Kancheepuram saris are well known in the international market because of it's weaving and silk quality. Salem, Virudhunagar, Madurai, etc are also having large number of factories in the state of Tamil Nadu. The information regarding the number of factories in the state of Tamil Nadu in different districts during 1998-99 is depicted in Figure 2.5.

Figure 2.5. District-wise Distribution of Factories on the Basis of Highest Number of Industries



Since the inception of liberalization, privatization and globalization policies of the Government of India since 1991 the foreign direct investment in the state has been increasing steadily. During the last one decade the foreign direct investment in India was nearly Rs. 274715 crore. The information regarding the major state received foreign direct investment during the last one decade, from August 1991 to January 2002 is presented in Table 2.18.

Table 2.18 Major State-wise Foreign Direct Investments After LPG Period (From August 1991 to January 2002)

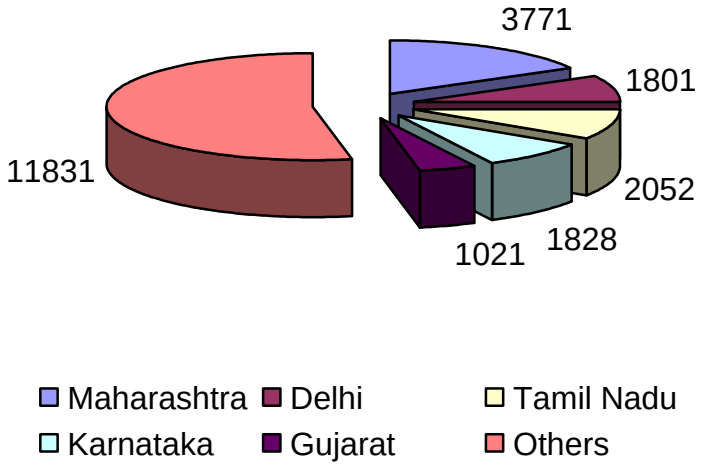
No	States	No of Approvals			FDI (Rs. Crore)	% to Total
		Technical	Financial	Total		
1.	Maharashtra	1130	2641	3771	48035	17.49
2.	Delhi	205	1596	1801	33251	12.10
3.	Tamil Nadu	527	1525	2052	23100	8.41
4.	Karnataka	443	1385	1828	21294	7.75
5.	Gujarat	499	522	1021	17367	6.32
6.	Others	4162	6492	11831	131668	47.93
	All India	**6966**	**14161**	**21127**	**274715**	**100.00**

Source:- ***Secretariat for Industrial Assistance, Government of India.***

It may be observed from Table 2.18 that during the last one decade the FDI (Foreign Direct Investment) in India had reached at the level of Rs. 274715 crore sanctioned through various technical and financial projects totaling 21127. More than two third of the approval of FDI was linked with financial matters and the remaining less than one third is approved through the technical projects.

Major share of the FDI in India went to Maharashtra state that ranked the first position and it constituted nearly 17.5 per cent of the total FDI. Rs. 48035 crore received by the Maharashtra state during the last one-decade. Tamil Nadu occupies the third position and it received Rs. 23100 crore during the last one decade and it constituted 8.41 per cent of the total F.D.I. in India. More than 12 per cent of the F.D.I. in India received in Delhi during the period covered under the study. Karnataka and Gujarat are the other major states receiving the higher F.D.I. during the last decade. The information regarding state-wise foreign direct investment after L.P.G. is depicted in Figure 2.6.

Figure 2.6 State-wise F.D.I. After LPG (from August 1991 to January 2002)



The state policy on Industrial development lays special emphasis on the development of small-scale industrial sector as well as large and medium industries on the strength of inherent merits such as high employment generating potential capability to induce dispersal of industrial activity, widening the organization as well as entrepreneurial base etc. Efforts in recent times have been paying particular attention to the upgradation of latest technology for adoption in this industrial sector.

Infrastructural Profile

The seeding for the national independence took place around 1857 or even earlier, and we see the relationship between the urge for independence and the emergence of great minds. As the independence movement grew, it brought out best leaders in the world such as Jawahar Lal Nehru, Mohandas Karamchand Gandhi, Lokmanya Tilak, etc. The list if we take from each part of the country will be prolific. Coming to the industrial field, Jamsetji Nusserwanji Tata brought steel industry in India even though the British rulers were not favourably disposed to the idea. Acharya P.C. Ray brought up the chemical and pharmaceuticals industry in India. There are some Indian Maharajas who started and nurtured various institutions and organizations, which became later well known institutions in the world. In all these cases the basic motivations have been to show the urge to build the nation and demonstrate to the world that India can do it.

Infrastructure mainly covers those activities, which provide physical framework for the functioning of industry, agronomy and it is generally treated as covering transport, communication, power, housing, medical etc. The basic infrastructure of the Indian economy is comprising mainly its transport network, ports, harbours, fuel and energy, construction activity, technology apparatus is of immense importance and it determines the trend and pace of growth. It is a capital intensive, means a technology which is used with more level of capital than the labour for producing the required level of output, has a long gestation period, covers multiple economic sectors or geographical regions and can normally be promoted largely by the government. The role and significance of infrastructural facilities in the national economy is exceedingly important on sustainable development.

We need to spell out that the highest priority is given to infrastructure development by the Government; in deed this has also been higher priority in the earlier Five Year Plans of India. In regard to infrastructure, there is need for attention to both economic as well as social infrastructure and it is necessary to spell out both.

Economic infrastructure – quite contrary to the current policy thrust - is a pivotal requirement, which is best, served by the government. Adam Smith – the father of Economics refers social infrastructure (by way of education institutions) and economic infrastructure (by way of public works), transportation facilities via

canals being the one he specifically mentions. Currently, the Government of India has invited to private investors including foreign investors to develop infrastructure and in deed has guaranteed minimum profits for such investors. The guaranteed minimum profits mentioned earlier was just above 16 per cent per annum is extremely short sighted, infrastructure provides a solution to manifold problems of externalities, which impede the development of hitherto of under developed countries and is, therefore, the first requisite for any government wishing to impart a development thrust to the economy. Secondly, infrastructure must be available at a low cost to spur the development and for investment is likely only to raise the cost of infrastructure.

Social infrastructure by way of education is the prime responsibility of the Government and not only did Adam Smith give considerable space on expounding this idea, currently the education up to higher secondary level is freely provided by the state in all economically developed countries. In deed rapid development of some countries in recent times is in part due to the policy of universal education allotted by the United Nation Organisation. In addition, the primary health is another part of social infrastructure, and again all developed countries have an extensive system of medical care for all its citizens, in deed it is only an educated and healthy populous which can quickly adapt itself to the demands of quick changes and specific needs of the development.

The higher priority attaches to the agrarian development, social and economic infrastructure build up by the state and an employment intensive / domestic demand oriented pattern of industrial development, with a modern industrial system being built up simultaneously in order to both provide the basis for a gradual transformation of the production system and to protect employment in the interim. The focus herein has to be on raising the required capital domestically.

The tertiary sector dominates the economy of India today contributing more than one half of the national income. It is the fastest growing sector with an annual average of growth of 8 per cent during the second part of 90's. The main reason behind this may be due to the diverse attitude of the service sector of our economy encompassing professionals like neuro surgeons, lawyers, college professors, medical professionals, research scholars and housemaids etc. The span of career ranges from the traditional favourite, IAS to the latest development in the management, software technology, fashion technology, real estate business, etc. taking in its fold some of the latest professions as well as some of the oldest. In this modern era, in tertiary sector, the workers are highly paid and best educated. The development in Information Technology fuelled the upsurge in some selected sectors such as telecom, software, banking, finance, medical transcription just when consumer taste and globalization of

business powered the increase in all other sectors. What made the boom in tertiary and even more visible and fascinating was a decrease in growth and painful restructuring of our industrial sector and virtual stagnation in the agricultural sector. For achieving a higher growth in the industrial sector the industrial sector in India should work to achieve status of developed nation and multi-national type and have the vision with stability, goal both technological and economical and above all a national level.

Thus the imperatives of economic development, however, call for shedding tardiness and making a concerted effort to not only consolidate but also to further gain that has been already achieved. Like any other development effort, infrastructural development cannot be an isolated enterprise by one or few sectors alone. The set up of institutions and all sectors of the economy mainly industry, finance, bank, policy makers, as well as implementers, the scientist, the engineers, the research and development activists, technologists etc. will have to contribute their might, with responsibility and a far reaching future vision, to operationalize the nation's development programme.

The employment position occupies a pivotal role in the development of society. It gives a vital input for analyzing the position of the particular area, can understand the purchasing power of the people etc. Now most of the urban people think both husband and wife need employment for smooth functioning of their

family, especially for meeting the high cost of living. The information regarding the employment position of Chennai district and Tamil Nadu during 1995 – 2002 is presented in Table 2.19.

Table 2.19 Employment Position in Chennai District & Tamil Nadu During 1995-2002.

(No)

No	Area	Public	Private	Total
1.	Chennai			
	a. 1995- 1996	281274	106529	387803
	b. 1996- 1997	282801	103034	385835
	c. 1997-1998	275914	107906	383820
	d. 1998- 1999	283533	110572	394105
	e. 1999- 2000	281406	110673	392079
	f. 2000- 2001	281287	102358	383645
	g. 2001- 2002	316553	94674	411227
2.	Tamil Nadu			
	a. 1995- 1996	1645473	850743	2496216
	b. 1996- 1997	1645295	909796	2555091
	c. 1997-1998	1628513	931965	2560478
	d. 1998- 1999	1630002	915968	2545970
	e. 1999- 2000	1597240	927233	2524473
	f. 2000- 2001	1586290	919484	2505774
	g. 2001- 2002	1612297	904061	2516358

Source: Tamil Nadu – An Economic Appraisal 2001-02, Department of Evaluation and Applied Economic Research (DEAR), Government of Tamil Nadu, Chennai.

It may be observed from Table 2.19 that more than 16 per cent of the employment position in Tamil Nadu existed in Chennai during 2002. The increase in the percentage of contribution of

Chennai district to the total employment position in Tamil Nadu during the period covered under the study (1995-96 – 2001-2002) was very nominal i.e. 15.54 per cent in 1995 – 1996 to 16.34 in 2001-2002. During the seven years covered under the study the growth of employment in Chennai district was higher than the state level by 0.75 per cent per annum. This clearly indicates the fact that Chennai district has higher scope for employment position during the said period covered under the study and it may be due to various factors such as availability of infrastructural services which are basic requirements for the development of industrial as well as tertiary sector activities, provides high level of employment opportunities to the growing skilled and educated people both in Tamil Nadu as well as other States in Indian Union.

In Chennai district more than three fourth of the employment position during the year 2001-02 was in public sector and the remaining less than one fourth of the position in private sector. In addition, the people of Tamil Nadu were interested in working in the public sector than the private sector because of the security of the jobs. In Tamil Nadu near about two third of the employment position was found in public sector and more than one third of them in private sector. The difference in higher percentage in the private sector employment position in Tamil Nadu than the Chennai district may be due to the large level of industries providing employment to the large number of skilled workers especially in Salem, Coimbatore, Tirupur, Madurai district, operated by the private

people. Recently, the growth of employment among the female workers in the Indian Union had considerably increased due to the awareness of female members among the society, education, etc. The information regarding the employment position of Chennai and Tamil Nadu during 1997-2002 among the female workers is presented in Table 2.20.

Table 2.20 Female Employment Position in Chennai District & Tamil Nadu During1997-2002

(No)

No	Area	Public	Private	Total
1.	Chennai			
	a. 1997-1998	50229	24946	75175
	b. 1998- 1999	52844	26060	78904
	c. 1999- 2000	52126	27381	79507
	d. 2000- 2001	53069	26965	80034
	e. 2001- 2002	70845	25484	96329
2.	Tamil Nadu			
	a. 1997-1998	407925	324583	732458
	b. 1998- 1999	425854	328086	753940
	c. 1999- 2000	414015	325743	739758
	d. 2000- 2001	402014	327546	729560
	e. 2001- 2002	440275	322123	762398

Source: ***Tamil Nadu – An Economic Appraisal 2001-02, Department of Evaluation and Applied Economic Research (DEAR), Government of Tamil Nadu, Chennai***

It may be observed from Table 2.20 that more than 30 per cent of the total workers in Tamil Nadu were females during 2001-02. While in Chennai district the percentage of female workers in the employment position was less than one fourth of the total

employment position during 2001-02. During the last five years covered under the study the growth of female workers in the total employment position in Tamil Nadu had increased to 0.82 per cent per annum. During the same period, the female employment position in Chennai had increased annually by 5.63 per cent. The high difference of the growth of female employment position of 4.81 per cent per annum during the period covered under the study may be due to higher scope for employment opportunities especially in information technology, globalization, trends, various service related sectors etc. Moreover, the urbanization trend of Chennai also provides large number of employment opportunities to the educated and skilled females. In Chennai district near about three fourth of the female employment position was found in public and the remaining more than one fourth of them in the private sector. The higher concentration of female employment position in Chennai district in the public sector may be due to the coverage of risk, flexible time, less exigencies of work etc.

In Tamil Nadu less than three fifth of the employment position among the females were found in the public sector and the remaining more than two fifth of them in private sector. The main reason behind this, may be due to the large level of private sector oriented businesses in other districts of Tamil Nadu, less concentration of other public enterprises in other district than Chennai district. Chennai is also having higher number of employment seekers, treated as unemployed. The department of

Evaluation and Applied Economic Research, Government of Tamil Nadu provides the information regarding employment seekers in Tamil Nadu during 1995 – 2002. The information regarding the above is presented in Table 2.21.

Table 2.21 Employment Seekers in Chennai District & Tamil Nadu During 1995-2002.

(No.)

No	Years	Chennai	Tamil Nadu
1.	1995-1996	562831 (16.39)	3433329
2.	1996-1997	567104 (15.73)	3606024
3.	1997-1998	590809 (15.02)	3932334
4.	1998-1999	604651 (14.57)	4149265
5.	1999-2000	604400 (13.83)	4371485
6.	2000-2001	648215 (13.90)	4662999
7.	2001-2002	657930 (13.40)	4908853

Source: *Tamil Nadu – An Economic Appraisal 2001-02, Department of Evaluation and Applied Economic Research (DEAR), Government of Tamil Nadu, Chennai.*
Note:- *Figures in parenthesis relates to percentage to total.*

It may be observed from the Table 2.21 that more than 13 per cent of the employment seekers in Tamil Nadu were found in Chennai district during the year 2001-02. The percentage of employment seekers in Chennai district during 1995-2002 showed the fact that the decrease in trend from 16.4 per cent in 1995- 1996 to 13.4 in 2001-02. The reduction in percentage of employment seekers in Chennai district may be due to large level of call centers and information technology units, which provides major share of employment opportunities to the educated and skilled workers in

the metropolitan areas. This indirectly showed the fact that the educated and skilled persons had the avenues in Chennai district itself and most of the IT units, call center type work, medical transcription etc. absorbing young dynamic personnel. During the period covered under the study the growth of employment seekers in Tamil Nadu was very much higher than Chennai district, the difference was observed at 3.71 per cent per annum. This may be due to the concentration of areas of services sector activity like IT units, medical transcription, communication facilities, fashion designing etc. were found in the metropolitan area itself.

In order to protect the consumers from the retailers through charging high margin or called profits, the most of the southern states have introduced the fair price shops, owned and operated by the government guidance. All the fair price shops in Tamil Nadu and all other states supply the necessary items mainly food and other articles to the consumers at the reasonable level and not charging the price fixed by the government which was mainly meeting the necessary cost of production helping the consumers on one side and on the other protecting the small producers to get their reasonable rewards of their produce and helping them form the big producers, who can fluctuate the market. In Tamil Nadu also more than twenty seven thousand fair price shops operated during the year 2000. The information regarding the fair price shops and the number of cardholders in Tamil Nadu and Chennai during the year 2000 is presented in Table 2.22.

Table 2.22 Fair Price Shops & Card Holders in Chennai and Tamil Nadu During 2000.

(No.)

No	Details	Chennai	Tamil Nadu
1.	Fair Price Shops operated by		
	a. Co-operatives	898 (3.44)	26109
	b. Others	354 (26.50)	1336
	c. Total	1252 (4.56)	27445
2.	Card Holders	1618380 (10.42)	15533697

Sources:- ***Civil Supplies and Consumer Protection Department, Chennai. Banking Statistics, Quarterly Handout, Various Issues, Reserve Bank of India, Mumbai.***

It may be inferred from Table 2.22 that near about 5 per cent of the fair price shops both operated by the co-operatives and others were found in Chennai during the year 2000. Only very less number of fair price shops operated by the co-operatives were found in Chennai and it was constituted at 3.44 per cent. Majority of the fair price shops operated by the co-operative were found in other districts of Tamil Nadu. While more than one fourth of the fair price shops operated by others in Tamil Nadu existed in Chennai during the year 2000. More than 10 per cent of the cardholders in Tamil Nadu existed in Chennai during the year 2000.

Inadequate water supply and sanitation are the major problems in most of the Indian metropolitan cities. Till recently, Chennai city is dependent for its water supply entirely on surface storage in the reservoirs of Poondi, Red Hills and Cholavaram with the capacity of 78 mcl, 80.71 mcl and 25 mcl and a storage of 1.15 mcl, 2 mcl and 30 mcl respectively. Most of these lakes received

the supply during the rainy season, especially monsoon stretching from October to December. The source of water supply in Chennai Metropolitan area is presented in Table 2.23.

Table 2.23 Sources of water Supply in Chennai Area.

No	Sources	Water Supply (mld)		Areas Served
		Available	Supply	
1.	Poondi, Cholavaram, Red Hills	236	195	Ambattur, Avadi and HVF
2.	Tamaraipakkam	148	-	City and Manali, ground water industries
3.	South Chennai Coastal Belt	10	5	Southern part of the city
4.	Palar	25.5	25.5	Alandur, Tambaram Pallavapuram, MFPEZ
5.	Checkdam on Kortalayar	20	20	
6.	Local Borewells	6.5	6.5	Thiruvottiyur, Avadi
7.	Total	426	231	

***Source:- Chennai, 2011, by Chennai Metropolitan Development Authority*.**

The great water problems were faced by Chennai during 1969, these sources were supplementary from newly discovered acquifers along the seashore areas on the north and south of the city accounting for 150 mld and 10 mld respectively. About 54 mld is directly used by the industries mainly outside the city. The piped water supply is supplemented by very large number of wells, near about 600 open public wells, 4300 shallow tube wells and 4700 hand pumps.

The demand for water supply has been growing up in Chennai during the last one and half decade, in order to cope up with the estimated requirements Government of Tamil Nadu had reached an agreement with Government of Andhra Pradesh for supplying 930 mld of water from Krishna river. This is to be completed in two stages, first stage covers 400 mld and remaining 530 in the second stage. The first stage of the work has already been completed and it has increased the total supply to 826 mld as against 945 mld required by 2001, a shortfall of 119 mld. With the completion of second stage, the total supply will be 1356 mld which will fall short of the projected requirements of 1140 mld by 94 mld in 2011 the same would increase to 319 mld in the times of severe drought. For meeting the requirements of water the Government of Tamil Nadu has introduced various programmes. First of all the requirement of water supply has to be estimated in the near future. In this connection, the Chennai Metropolitan Authority has estimated the water requirement of Chennai Metropolitan area during 1991, 2001 and 2011 and it is presented in Table 2.24.

Table 2.24 Water Requirements of Chennai – 1991- 2011

(mld)

No.	Details	1991	2001	2011
1.	Chennai City @150lpcd	600	735	900
2.	Rest of Chennai Urban Agglomeration @100lpcd	150	210	290
3.	Industrial Uses	160	200	250
4.	Total	910	1145	1440

Source:- ***Chennai: The Constraints of Public Amenities by A.N. Sachithanandan*.**

In order to meet the requirements various suggestions were made such as bringing 40 mld of underground water from Neyveli Lignite Mines, harnessing about 90 mld surface run off by creating additional storage by deepening the tanks, sewage recycling 100 mld and desalination of sea water. The estimated recycled water at the end of 2011 is in the order of 450 mld which could meet the demand of 250 mld from industries and rest could be used for horticulture purpose.

Chennai Metropolitan Development has published the information regarding the per capita consumption of water in selected towns in India. The sufficiency of a per capita rate is however not a fixed factor for all cities. It has to be assessed on various factors like climatic conditions, habits of people, type of water supply (continuous intermittent) availability of water from private sources for non drinking purposes, pressure in the pipe line etc,. Western countries include provision for fire fighting as a mandatory provision. The information regarding the Percapita consumption of selected towns in India is presented in Table 2. 25.

Table 2.25 Percapita Consumption of Water in Selected Towns in India

No	Towns	Liters Percapita Per Day
1.	Bangalore	90
2.	Mumbai	150
3	Calcutta	190
4.	Delhi	160
5.	Hyderabad	205
6.	Pune	275
7.	Chennai	70

Source: ***Master Plan for Madras Metropolitan Area, 2011. Madras Metropolitan Authority***

It may be inferred from Table 2.25 that per capita consumption of water was lowest in Chennai among the cities covered under the study and highest was in Pune.

The sewerage from each area was pumped from one pumping station to another and finally to Kasimode, north of the Chennai port from where it was disposed off into the sea through a long out fall. As the city grew, relay pumping of sewerage was given up and the city was divided into the self-contained zones. Each zone was connected to its own treatment plant. As population grows the area is also increased but the sewerage system cannot cope up with the requirement. Due to the inadequacy of the system, the over flow from pumping station finds its way to Coovam, Buckingham Canal and Adyar. The entry of

cattle waste results in clogging of sewer. The servicing of slum area particularly in low-lying areas and newly extended areas pose the real problems for Chennai.

Banks and financial institutions play a vital role in the process of economic development of the developed, developing as well as under developed nations. In the developed as well as developing nations its role is very important for increasing the higher level of economic growth, while in most of the under developed countries it is very essential for achieving the desired level of economic development. They create an awareness of saving habits among the people, mobilize it and provide them to the dynamic and well versatile result oriented entrepreneurs to invest the same for providing employment to the needy, educated and skilled workers as well as to enhance the over all economic development. They automatically lubricate the service sector and commerce and trade of any nation by providing the requisite finance and to reduce the inequalities in some levels. Presently, banking systems are treated as the main pillar of all economic activities and they can cure major economic problems. The banking indicator in Chennai and Tamil Nadu during 1999-2002 is presented in Table 2.26.

Table 2.26: Banking Indicators in Chennai & Tamil Nadu During 1999-2002.

No	Details	1999-2000	2000-2001	2001-2002
1.	Percapita Deposit (Rs)			
	a. Chennai	52158	61679	73642
	b. Tamil Nadu	8896	10546	12350
2.	Percapita Credit (Rs)			
	a. Chennai	63962	75560	84865
	b. Tamil Nadu	7972	9040	5761
3.	Credit Deposit Ratio			
	a. Chennai	122.6	122.5	115.2
	b. Tamil Nadu	89.6	85.7	46.6

Source:- Banking Statistics, Quarterly Handout, Various Issues, Reserve Bank of India, Mumbai.

It may be observed from Table 2.26 that Chennai occupies a comparatively better position as compared with Tamil Nadu in banking indicators in all the period covered under the study. The per capita deposit of Chennai was always higher than Tamil Nadu during the period covered under the study, its difference also increased from 486.3 in 1999-2000 to 496.3 in 2001-02. Another noticeable fact found in the table was that the per capita credit of Chennai was always higher than the per capita deposit in all the period covered under the study. While it was just opposite in the case of Tamil Nadu as a whole, the per capita credit was always lesser than the per capita deposit. The banking officials lend most of their banking sources only in metropolitan areas where there was a high scope of returns. This in turn, leads to a wide gap between

the rural and urban. In order to avoid this Government of India has introduced the scheme called Lead Bank Scheme for investing money in priority sector. But the information mentioned above shows a negative tendency, creating an imbalance position. Commercial banks are also playing a pivotal role for providing banking facilities in India. The detail of commercial banks in Chennai and Tamil Nadu during 1999-2002 is presented in Table 2.27.

Table 2.27: Commercial Banking Details in Chennai & Tamil Nadu During 1999-2002.

No	Details	1999-2000	2000-2001	2001-2002
1.	Number of Banks			
	a. Chennai	753 (15.80)	771 (16.11)	775 (16.32)
	b. Tamil Nadu	4767	4785	4748
2.	Aggregate Deposits (Rs. Lakh)			
	a. Chennai	2290332 (40.82)	2600585 (40.25)	3105033 (40.48)
	b. Tamil Nadu	5610884	6455527	7670723
3.	Gross Bank Credit (Rs. Lakh)			
	a. Chennai	2808694 (55.86)	3185852 (56.74)	3578184 (57.41)
	b. Tamil Nadu	5028171	5615304	6232263

Source:- ***Banking Statistics, Quarterly Handout, Various Issues, Reserve Bank of India, Mumbai.***

Note:- ***Figures in Parenthesis relates to percentage to Tamil Nadu total.***

It may be observed from Table 2.27 that more than 16 per cent of the commercial banks in the state of Tamil Nadu existed in Chennai during the year 2001-02. The number of commercial banks in the Chennai has increased from 753 in 1999-2000 to 775 in 2001-02 and recorded the growth of 2.92 per cent. While on the same period the number of commercial banks in the state of Tamil Nadu had decreased from 4767 in 1999-2000 to 4748 in 2001-02. The reasons behind the reduction in the number of commercial banks in the state may be due to the closure of loss making commercial banks, which are commonly found in the rural areas of the state. In the urban areas most of the commercial banks are running with profit making and most of them earning highest level of deposits also. More than two fifths of the total deposits in the state of Tamil Nadu were from Chennai itself during the period covered under the study. This was same in the case of credit also. More than one half of the total credit of the commercial banks in the state of Tamil Nadu was given to Chennai district itself during the period covered under the study. In addition, in all the period mentioned, the credit of Chennai was higher than the deposits and the difference was more than 15 per cent. The difference in the percentage of total credit of the state of Tamil Nadu to Chennai and the same of deposits had increased from 15. 04 per cent in 1999-2000 to 16.93 percent in 2001-02. This clearly indicates the fact that Chennai had received good per cent of the credit from the commercial banks during the period covered under the study, which in turn leads to overall development of Chennai city. However, the

lending habits of the commercial banks in the state of Tamil Nadu showed a negative trend that is lending more and more money in the urban sector, which will definitely enhance the ever growing problems faced by the urban sectors in India. Most of the studies conducted by the Reserve Bank of India, National Banks and other financial institutions showed the fact that lending in rural areas is essential which will definitely enhance the over all economic development other wise it will lead to pocket wise development. In addition the Government of Tamil Nadu has been collecting small-scale savings from the public for the development of the state. The information regarding the collection of Small savings in Chennai and Tamil Nadu during 1994-2002 is presented in Table 2.28.

Table 2.28: Collection of Small Savings in Chennai & Tamil Nadu During 1994- 2002.

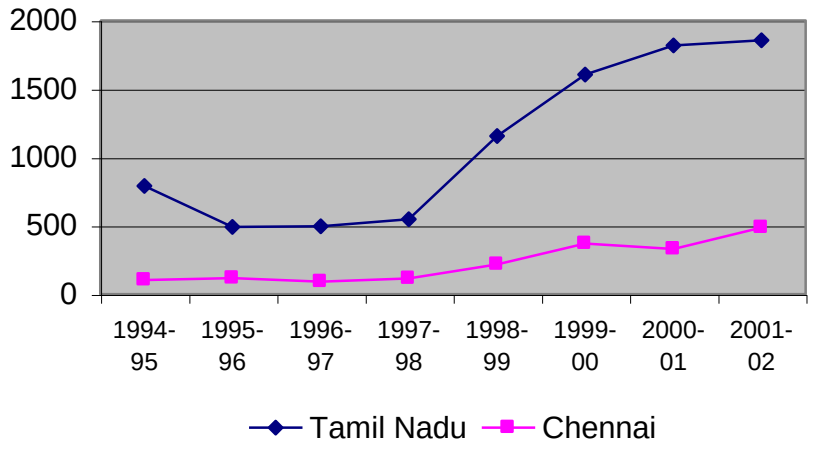
(Rs. Crore)

No	Years	Chennai	Tamil Nadu
1.	1994-1995	102.65 (12.98)	791.08
2.	1995-1996	117.60 (23.97)	490.70
3.	1996-1997	91.25 (18.40)	495.80
4.	1997-1998	115.71 (21.13)	547.51
5.	1998-1999	217.89 (18.87)	1154.95
6.	1999-2000	370.70 (23.10)	1604.72
7.	2000-2001	329.00 (18.10)	1818.04
8.	2001-2002	486.46 (26.23)	1854.39

Source:- ***Director of Small Savings, Government of Tamil Nadu, Chennai.***
Note:- ***Figures in Parenthesis relates to percentage to Tamil Nadu total.***

It may be inferred from Table 2.28 that more than one fourth of the total savings of Tamil Nadu through the Small Savings Department was from Chennai during 2001-02. The savings of Tamil Nadu through the Small Savings Department had increased from Rs. 791 crore in 1994-95 to Rs. 1854 crore in 2001-02, recording a growth of 16.8 per cent per annum. At the same time, the savings through Small Savings Department in Chennai enhanced from Rs. 103 crore in 1994-95 to Rs.486 crore in 2001-02 showing a growth rate of 46.7 per cent per annum. This indicates the fact that Chennai people have more money for saving as compared with other districts in Tamil Nadu. This clearly indicates the positive aspect of economic development. The Small Savings in Chennai and Tamil Nadu during 1994-2002 is depicted in Figure 2.7.

Figure 2.7 Small Savings in Chennai & Tamil Nadu:1994- 02 (Rs. Crore)



In addition to this, Chennai Central Co-operative Bank also played a very important role for over all economic development of t Chennai city. This institution provides long term and short term loan facilities to the small industrialist, dynamic entrepreneurs and others through its grass root level institutions called Primary Agricultural Credit Societies (PACSs), Primary Land Development Banks (PLDBs) etc. The performance of Chennai Central Co-operative Bank during 1999-2002 is presented in Table 2.29.

Table 2.29 Performance of Chennai Central Co-operative Bank

(Rs. Crore)

No	Details	1999	2000	2001	2002
1.	Share Capital	38.75	46.00	58.63	78.25
2.	Reserves	103.67	123.72	141.08	145.14
3.	Deposits	585.10	777.90	890.55	942.11
4.	Borrowings	11.63	0.43	0.23	0.97

Source:- ***Tamil Nadu State Apex Co-operative Bank, Various Issues, Chennai.1.***

It may be observed from the Table 2.29 that the share capital of Chennai Central Co-operative Bank had increased from Rs. 39 crore in 1999 to Rs. 78 crore in 2002, recording a growth rate of 25.5 per cent per annum. This indicates the fact that the confidence of Chennai Central Co-operative Bank among the people has been increasing continuously and new members are added each year. During that period the reserves of the Chennai Central Co-operative Bank showed a growth rate of 10 per cent per

annum. For the development purpose the bank had borrowed money from various sources such as other financial institutions, borrowing from the government, and other sources. The Table clearly narrates the fact that the borrowing of the bank has been reducing considerably during the period covered under the study, Rs. 11.63 in 1999 to Rs. 0.97 crore in 2002. During the same period the deposits of the bank has increased considerably, recording a growth of 15.2 per cent per annum.

The growth of Chennai city in the past two decades exhibits in itself very clearly the traffic congestion that is witnessed on the roads. The total number of vehicles is increasing considerably during the recent times. The roads are not well equipped for taking this huge traffic. The commuting population of the city has grown considerably. The traffic congestion on the roads calls for huge investment in developing roads, sub-ways, flyovers, etc. The road and rail system of Chennai city are dominated by a radical pattern converging on George Town, the oldest part of the city and the main business district. The inter-city rail traffic as well as the sub-urban commuter traffic from Ambattur and Avadi on the western side and Tiruvottiur on the northern side terminates at the main central station. The south inter –city traffic emanating from the south west terminates at Egmore which is one kilo meter west of central station and bulk of commuters road system corresponding to the rail system are Grand Northern Trunk Road, (north- west) Periyar EVR Salai or Mount Road in the South west. The other

traffic attracting location is the Annai Salai stretch from Gemini Flyover and Periyar Salai due to the concentration of various corporate and multi-national activities in this area.

In recent times the number of vehicles in Chennai increased considerably. During the year 2002 the number of vehicles increased to 13,55,550 in Chennai. The information regarding the population of vehicles in Chennai and Tamil Nadu during 2001 and 2002 is presented in Table 2.30.

Table 2.30 Population of Vehicles in Chennai & Tamil Nadu

No	Vehicles	2001		2002	
		Chennai	Tamil Nadu	Chennai	Tamil Nadu
1.	Motor Cycles	319419	1142550	362514	1334348
2.	Scooters	195784	684567	212544	752129
3.	Mopeds	415683	2335885	436014	2514088
4.	Tri Cycle Auto	2557	3731	2557	3813
5.	Motor Car	218002	446824	234381	483799
6.	Jeep	8344	35546	8450	36877
7.	Station Wagons	325	2089	326	2146
8.	Tractor	1147	66955	1152	70209
9.	Three Wheelers	3822	8398	4200	11589
10.	Four Wheelers	1280	4575	1283	4833
11.	Road Rollers	58	427	60	471
12.	Others	5388	9170	5605	11689
13	Non Commercial (Total)	1171809	4740717	1269086	5225991
14.	Commercial	85089	421365	86464	432106
15.	Total	1256898	5162082	1355550	5658097

***Source:- Commissioner of Transport, Government of Tamil Nadu, Chennai. 5*.**

It may be inferred from Table 2.30 that both in Chennai and Tamil Nadu non commercial vehicles constitute lion's share of the vehicles. In both the years covered under the study non-commercial vehicles constitute more than 90 per cent of the vehicles in Chennai as well as Tamil Nadu state, but some higher level of non-commercial in Chennai than the Tamil Nadu state as a whole in both the periods covered under the study. It may be due to higher level of ownership vehicles in the urban areas, which is the general phenomenon, found in most of the urban areas of the world. In both the periods covered under the study, mopeds ranks first in the total number of vehicles in Chennai, motorcycles, motor car and scooters ranks second, third and fourth position respectively. This was same in the case of Tamil Nadu state as a whole. In Chennai all the vehicles mentioned in the table showed an increasing trend except in the category of tri cycle auto, which stands at stagnant position. But in Tamil Nadu all the vehicles mentioned in the table increased as compared with the previous period. The only cause of stagnant position of number of vehicles in the category of tri cycle auto in Chennai may be due to less preference of this vehicle used by the customers as well as pollutant nature of engine. But in rural areas and other districts in Tamil Nadu still this type of vehicle is preferable.

The Chennai port also handles more than 36 million tonnes of sea cargo comprising more than 23 million tonnes of imports and the remaining near about 13 million tonnes of export items. The information regarding the cargo handled in Chennai Port during 1995-2002 is presented in Table 2.31.

Table 2.31 Cargo Handled in Chennai Port 1995-2002.

(000' Tonnes)

No	Year	Import			Export		
		Coastal	Foreign	Total	Coastal	Foreign	Total
1.	1995-96	8740	10833	19573	1028	8400	9428
2.	1996-97	10331	11091	21422	1187	8216	9403
3.	1997-98	11299	12054	23353	1047	9779	10826
4.	1998-99	12660	11653	24313	893	8440	9333
5.	1999-00	13488	12459	25947	688	9827	10515
6.	2000-01	15547	13001	28548	733	11567	12300
7.	2001-02	10407	12631	23038	1023	11953	12976

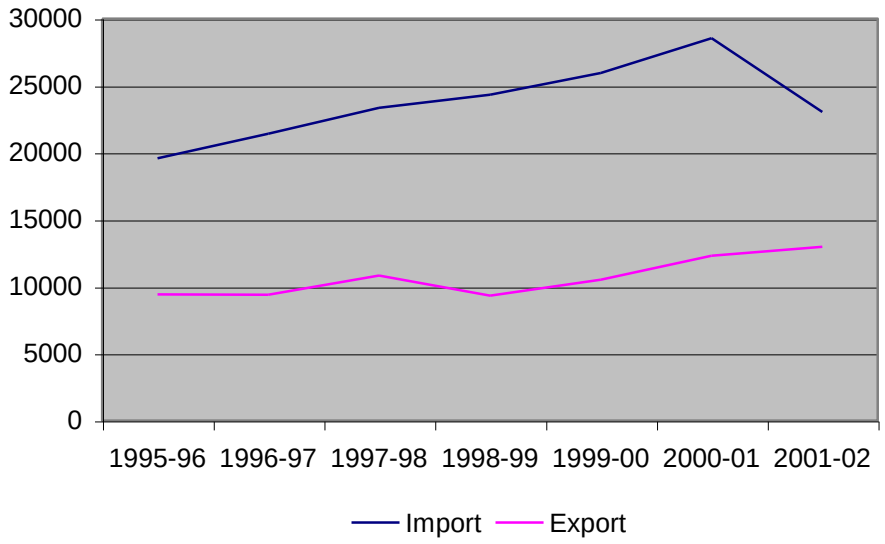
Source:- Port Trust, Chennai.1.

It may be inferred from Table 2.31 that Chennai port handled Good percentage of import commodities during the year 2001-02 and it constituted nearly two third of cargo. During the period covered under the study both export and import of commodities handled in the Chennai Port showed a positive growth. Export of commodities handled in the Chennai Port outweighs the import, export growth at 5.34 per cent per annum while import at 2.53 per cent per annum. Export and import of items are divided in to two

broad categories called coastal and foreign. In the export of items foreign outweighs in all periods covered under the study while import items outweigh in some periods. The information of cargo handled in Chennai port during 1995-2002 is depicted in Figure2. 8.

Figure 2.8. Cargo Handled in Chennai Port 1995-2002.

(000'Tonnes)



Generally we import some selected commodities such as food grains, iron and steel, fertilizers, machinery, paper, chemicals,

others, etc,. The information regarding the major import of principal commodities in Chennai Port during 1995-2002 is presented in Table 2.32.

Table 2.32 Import of Principal Commodities in Chennai Port

(000'Tonnes)

No	Commodities	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02
1.	Food Grains	63	66	149	207	270	106	-
2.	Iron &Steel	314	347	279	238	421	554	169
3.	Fertilizers	963	520	949	714	731	460	459
4.	Machinery	1188	99	118	131	111	230	48
5.	Paper	70	124	147	37	39	69	-
6.	Chemicals	433	452	456	523	624	715	326
7.	Others	17611	19814	21255	22463	23751	26422	22036
8.	Total	20642	21422	23353	24313	25947	28548	23038

Source:- Port Trust, Chennai.1.

It may be observed from Table 2.32 that other items mentioned in the table recorded the higher percentage in the import of principal commodities during all the periods covered under the study. Chemicals and fertilizers are other major importing commodities in the Chennai Port during the period covered under the study. The major exports of commodities in the Chennai port are hides and skins, ores, tobacco, food grains, cotton, bone and bone meal, sugar and other items. In the export of principal commodities ores mentioned in the table occupies the higher

position in all period mentioned in the study. Other mentioned in the table ranked the second major principal export of commodities. The information regarding the principal export of commodities through the Chennai port during 1995- 2002 is presented in Table 2.33.

Table 2.33 Export of Principal Commodities in Chennai Port

(000'Tonnes)

No	Commodities	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02
1.	Hides & Skins	-	-	-	-	1	1	-
2.	Ores	5687	5111	6892	6017	6618	7667	8096
3.	Tobacco	4	5	6	6	7	9	-
4.	Food Grains	145	81	85	46	58	58	3
5.	Cotton	161	163	179	158	114	268	-
6.	Bone & Bone Meal	12	10	9	7	2	3	-
7.	Sugar	91	195	7	5	13	8	-
8.	Others	3327	3839	3647	3094	3703	4286	4876
9.	Total	9428	9403	10825	933	10515	12300	12975

Source:- Port Trust, Chennai.1.

Balance of payment is the systematic record of all economic transactions between the reporting country and the rest of the world during the particular period of time, generally a year. This clearly indicates the development pattern of the economy. Most of the developing countries try to boost export of their products and import

the necessary capital equipments as well as other products. Moreover it is one of the indicators for measuring the progress of any development. Value of foreign trade through Chennai port and Airport and the whole of Tamil Nadu during 1993-99 are presented in Table 2.34.

Table 2.34 Value of Foreign Trade in Chennai Port, Airport & Tamil Nadu

(Rs. Lakh)

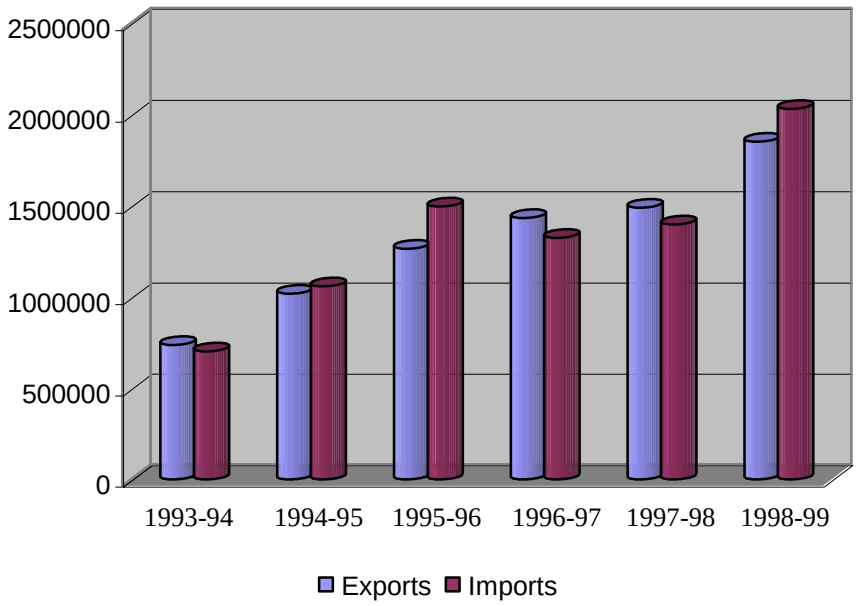
No	Years	Chennai			Tamil Nadu
		Airport	Port	Total	
I	**Exports**				
	1993-94	213112	523925	737037	908580
	1994-95	246339	771843	1018182	1246009
	1995-96	300769	962794	1263563	1583283
	1996-97	349661	1082099	1431760	1759627
	1997-98	386320	1102178	1488498	1917719
	1998-99	568197	1281079	1849276	1877128
II	**Imports**				
	1993-94	116900	584718	701618	811180
	1994-95	188527	868937	1057464	1254153
	1995-96	247552	1247477	1495029	1741672
	1996-97	250055	1073564	1323619	1496654
	1997-98	253521	1142607	1396128	1603314
	1998-99	377930	1651256	2029186	2348290

Source:- ***Directorate of Economics and Statistics, Government of Tamil Nadu, Chennai.6*.**

It may be observed from Table 2.34 that the growth of import outweighs the growth of exports in Tamil Nadu and Chennai during the period covered under the study. The annual growth rate of

exports during the above mentioned period covered under the study was observed at 17.8 per cent. On the other hand the same in the case of import was at 31.6 per cent. More than 98 per cent of the export of Tamil Nadu was from Chennai itself during the year 1998-99. This was same in the case of import and the percentage was little less and it was recorded at 86.4 per cent during the year 1998-99. As the general phenomenon that both export and import through the port outweighs the airport. In this case also transaction through the Chennai port outweighs the Chennai airport during all periods covered under the study. The value of foreign trade in Chennai is depicted in Figure 2.9.

Figure 2.9 Value of Foreign Trade in Chennai



Marine fish production is another way of earning the foreign exchange especially those states with sea as boundary. Tamil Nadu is one among the states in the Indian Union. The information regarding the marine fish production in Chennai district and Tamil Nadu during 1996-2002 is presented in Table 2.35.

Table 2.35: Marine Fish Production in Chennai District & Tamil Nadu 1996- 2002.

(Tonnes)

No	Years	Chennai	Tamil Nadu
1	1996-1997	15589 (4.53)	350790
2	1997-1998	16040 (4.50)	356547
3	1998-1999	14555 (3.86)	377483
4	1999-2000	13997 (3.86)	363001
5	2000-2001	11416 (3.07)	372402
6	2001-2002	11477 (3.07)	373861

Source: *Tamil Nadu – An Economic Appraisal 2001-02, Department of Evaluation and Applied Economic Research (DEAR), Government of Tamil Nadu, Chennai.*
Note:- *Figures in parenthesis relates to percentage to total.*

It may be inferred from Table 2.35 that the marine fish production of Tamil Nadu has increased from 350790 tonnes in 1996-97 to 373861 tonnes in 2001-02. It clearly showed the fact that the annual growth of marine fish production in Tamil Nadu was worked out to be at 1.1 per cent. The percentage contribution of Chennai district to the Tamil Nadu state for the production of marine production had decreased from 4.53 per cent in 1996-97 to 3.07 per cent in 2001-02. Moreover the growth rate of marine fish production in Chennai district during the period covered under the study showed a retarded one; ˉ 4.4 per cent per annum. Generally

marine fish production is in three modes. They are mechanized, non-mechanized, motorized, shore seine, etc. The Department of Evaluation and Applied Economic Research, Government of Tamil Nadu also publishes the information regarding the same. The same is presented in Table 2.36.

Table 2.36 Modes of Marine Fish Production in Chennai District & Tamil Nadu 1999-2002.

(Tonnes)

No	Modes/Year	Chennai	Tamil Nadu
1.	Mechanized		
	a. 1999-2000	13037	189745
	b. 2000-2001	10456	203252
	c. 2001-2002	10558	187142
2.	Non- Mechanized		
	a. 1999-2000	527	127033
	b. 2000-2001	634	114833
	c. 2001-2002	344	128107
3.	Motorized		
	a. 1999-2000	433	43795
	b. 2000-2001	326	50913
	c. 2001-2002	575	54650
4.	Shore Seine		
	a. 1999-2000	-	2428
	b. 2000-2001	-	3404
	c. 2001-2002	-	3962
5.	Total		
	a. 1999-2000	13997	363001
	b. 2000-2001	11416	372402
	c. 2001-2002	11477	373861

Source: Tamil Nadu – An Economic Appraisal 2001-02, Department of Evaluation and Applied Economic Research (DEAR), Government of Tamil Nadu, Chennai.

It may be observed from Table 2.36 that the main mode of marine fish production in Tamil Nadu was through mechanized and non-mechanized. Both these modes constituted a lion's share in marine fish production in Tamil Nadu. Shore seine is another form of marine fish production in Tamil Nadu and it constitutes very little percentage but it is growing speedily as the figure reveals.

Tourism is another major sector for providing employment to a large section of people. It directly as well as indirectly provides the development of the economy through various activities in the informal sector. Majority of the Asian countries as well as southern states in the Indian Union have been continuously giving various incentives to the tour operators and tourism related sector. Its development will affect the economy in multiplier.

Tamil Nadu Government also provides various schemes for the development of tourism sector like development of various picnic spots, hill stations, rich urban heritage centers, seacoast areas, pilgrimage areas etc. The development of these areas will attract not only the visitors from the state of Tamil Nadu but also the visitors from other states as well as the globe. During the year 2002, tourist arrivals in Tamil Nadu constitute nearly 25.5 million. The growth of tourist arrivals both domestic as well as foreign was worked out to be 2.38 per cent per annum during 2000-2002. The growth rate of tourist arrivals in Tamil Nadu, both domestic as well as foreign was more or less same during the above-mentioned

period. The domestic tourist arrival in Tamil Nadu was little higher than the foreign visitors. The growth rate of tourist arrival in Chennai was at 2.98 per cent per annum during the period covered under the study. The foreign tourist arrival constitutes very little growth and it worked out to be at 0.11 per cent per annum during 2000-02. The information regarding the tourist arrivals in Chennai and Tamil Nadu during 2000-02 is presented in Table 2.37.

Table 2.37: Tourists Arrivals in Chennai & Tamil Nadu 2000-02

(No)

No	Years/Tourists	Chennai	Tamil Nadu
1.	2000		
	a. Domestic	4230709	22981882
	b. Foreign	309178	786165
	c. Total	4539887	23768047
2.	2001		
	a. Domestic	4361559	23812043
	b. Foreign	300979	773073
	c. Total	4662538	24585116
3.	2002		
	a. Domestic	4635278	24661754
	b. Foreign	310198	804641
	c. Total	4945476	25466395

Source:- Statistical Handbook, Tamil Nadu, Government of Tamil Nadu, Chennai. 6

An estimate conducted by the Tamil Nadu state Pollution Control Board showed the fact that SPM in Thiyagarajanagar was very high at 511 which is very high above the permissible limit of 140. This was same in the case of Kilpak, Vallalar Nagar localities

in Chennai areas. In the case of RPM, the permissible limit was higher in Anna Nagar, Kilpak, Thiyagarajanagar, Vallalar Nagar localities in Chennai. The information regarding the ambient air quality in selected localities in Chennai is presented in table 2.38.

Table 2.38: Ambient Air Quality in Selected Localities of Chennai During 2001-02.

No	Localities	Annual Average Concentrations of Air Pollutants ($\mu g/m^3$)					
		SO_2	NO_X	RPM	SPM	Lead	CO
1.	Anna Nagar	2.33	17.70	66	105	0.042	--
2.	Adyar	1.68	13.96	35.65	51.39	0.018	--
3.	Kilpak	4.93	35.77	121	356	0.41	<1145
4.	Thiyagarajanagar	4.76	28.60	128	511.1	0.044	<1145
5.	Vallalar Nagar	7.87	50.70	112	306	0.09	<1145
Permissible Limit		60	60	60	140	0.75	2000

Source:- ***Annual Report, The Tamil Nadu Pollution Control Board, 2000-01*.**

It is the general belief that with greater level of urbanization that a developing nation experiences there will be more devastating effects manifested in terms of high level of health consciousness among the public especially by reducing the growth rate of birth as well as death rate. While the life expectancy in the people of Tamil Nadu experiences another story i.e. despite its mass rapid level of urban development, the development of health sector has not been developed as compared with other states in Indian Union especially in the rural areas of Tamil Nadu. Availability of medical facilities in

terms of number of hospitals, doctors, para-medical staff, number of beds, etc. determine the quality of medical facilities in a particular area. The information regarding number of beds and doctors in Chennai district and Tamil Nadu during the two period i.e.1998-99 and 1999-2000 is presented in Table 2.39.

Table 2.39: Number of Beds and Doctors in Chennai District & Tamil Nadu During 1998-99 to 1999-2000.

No	Details	Chennai	Tamil Nadu
1.	Beds		
	a. 1998-1999	10015 (55.21)	18140
	b. 1999-2000	10015 (53.44)	18742
2.	Doctors		
	a. 1998-1999	1646 (51.21)	3214
	b. 1999-2000	1646 ((50.54)	3257

Source:- ***Directorate of Medical Education, Government of Tamil Nadu, Chennai, 10.***
Note:- ***Figures in Parenthesis relates to percentage to Tamil Nadu total.***

It may be inferred from Table 2.39 that more than one half of the doctors and beds were observed in Chennai district. The table clearly narrates the fact that Chennai district had good infrastructure facilities in health sector. However, the overall picture of Tamil Nadu showed a negative development because more than one half of the available doctors were working in the metropolitan city itself and giving less importance to the rural people. Actually rural people are the real backbone of our economy and political leaders not only ruling but also the opposition giving less importance to this sector.

Urban Planning is a state subject under the Indian Constitution and such as Government of India has broad advisory powers, which are exercised through Ministry of Urban Development. However, the states Plan Schemes, which may have allocation for urban development, have to be approved by the Planning Commission. Most of the development activities of the municipal corporations were done through the corporation itself through collecting their own revenue sources. In Chennai, Municipal Corporation was collecting various receipts as well as the expenses also. The information regarding receipts and expenses of Chennai Municipal Corporation during 1996-97 – 1999-2000 is presented in Table 2.40.

Table 2.40: Receipts & Expenses of Chennai Municipal Corporation During 1996-97-1999-2000

(Rs. Crore)

No	Details	1996-97	1997-98	1998-99	1999-2000
1.	Receipts	211.63	283.37	308.34	332.91
2.	Expenses	197.57	241.80	320.91	340.79

Source:- Municipal Year Book, Tamil Nadu, Chennai.

It may be inferred from Table 2.40 that the receipts of Chennai Municipal Corporation had increased from Rs. 211.63 crore in 1996-97 to Rs. 333 crore in 1999-2000. The annual growth rate of receipts was observed at 14.3 per cent. During the same period the expenses of the Municipal Corporation also increased from Rs. 197.57 crore to Rs. 340.79; showing an annual growth

rate of 43.1 per cent. In the table two periods showed deficit budget in the Municipal Corporation and the remaining two periods showed surplus. The difference in the budget picture showed the fact that the necessity of increase in the expenses of the corporation was very essential for the development of the area. The source of revenue of Chennai Municipal Corporation is presented in Table 2.41.

Table 2.41: Sources of Revenue of Chennai Municipal Corporation 2001-02

(Rs. Crore)

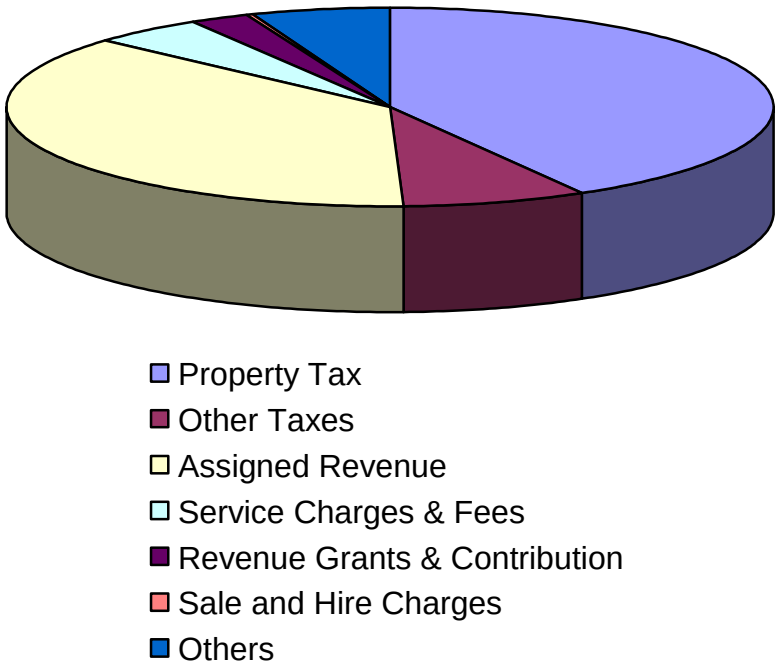
No	Category	Revenue	Per cent
1.	Property Tax	148.49	41.54
2.	Other Taxes	28.68	8.02
3.	Assigned Revenue	132.52	37.07
4.	Service Charges & Fees	17.41	4.87
5.	Revenue Grants & Contribution	8.98	2.51
6.	Sale and Hire Charges	0.43	0.12
7.	Others	20.94	5.86
	Total	357.45	100.00

Source:- ***Income & Expenditure and balance Sheet, 2001-02, Corporation of Chennai***

It may be observed from Table 2.41 that the revenue of the Municipal Corporation during 2001-2002 was at Rs. 357.45 crore. A large share of the Corporation's revenue was from property taxes, which constitutes near about 42 per cent of the revenue. Assigned revenue was another source of revenue of the

Corporation, which constitutes more than 37 per cent of the revenue of the Corporation. Services charges, fees, revenue grants and contribution, sale and hire charges and others constitute the remaining sources of revenue of the Chennai Municipal Corporation. The source of revenue of Chennai Municipal Corporation during 2001-02 is depicted in figure 2.10.

Figure 2.10: Sources of Revenue of Chennai Municipal Corporation. 2001-02.



Land is a basic and vital resource in the planning especially urban areas of any nation. Primary land use must be correlated to various activities, which a city performs. Land use change is a difficult phenomenon generally in urban areas concerned. This may be due to various factors such as personal choice, legislation, government policies and plans, decision of property developers, nature of land itself or availability of technique to the development of land, etc,. The importance should be given to the economic efficiency of land and address the problems related to the management of urban environment. The information regarding the proposed land use pattern of Chennai Metropolitan Authority for the year 2011 is presented in Table 2.42.

Table 2.42 Proposed Land Use Pattern of Chennai Metropolitan Authority-2011.

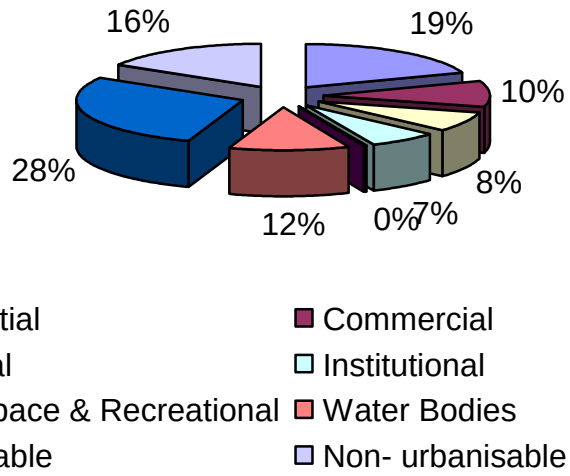
(Hectare)

No	Land use	Area	Per cent
1.	Residential	19277.65	19.40
2.	Commercial	9706.76	9.77
3.	Industrial	7481.50	7.53
4.	Institutional	6543.67	6.59
5.	Open Space & Recreational	332.06	0.33
6.	Water Bodies	11696.33	11.77
7.	Urbanisable	28099.15	28.29
8.	Non- urbanisable	16200.85	16.33
Total		99337.97	100.00

Source:- ***Master Plan of Madras Metropolitan Development Authority, (Draft) July1995.***

It may be observed from Table 2.42 that more than one fourth of the available area is not suitable for land use development especially water bodies and non urbanisable area. Near about one fifth of the area is planned for the development of residential purpose during the year 2011. Open space and recreation constitute very little percentage, less than one per cent of the earmarked area, 0.33 per cent of the total. Commercial, industrial and institutional activities constitute 10 per cent, 8 per cent and 7 per cent of the total area for land use development. The information regarding the proposed land use plan of Chennai Metropolitan Authority during 2001 is depicted in Figure 2.11.

Figure 2.11 Proposed Land Use Plan of Chennai Metropolitan Authority, 2011



Urban Heritage- Chennai 3

Chennai or erstwhile Madras is the fourth most populous metropolitan city of India, after Mumbai, Delhi and Kolkatta. However, it is the largest town in the southern region followed by Bangalore and Hyderabad. It is the capital of Tamil Nadu, which is the most urbanized state in India as per the latest Census of India Report, 2001. Madras as it was then called came in to the limelight after the British East India Company took possession of it in 1639. Soon, it became the provincial capital of the then Presidency of Madras comprising of present Tamil Nadu, Andhra Pradesh and parts of Kerala, Karnataka and Orissa. Even though geography did not provide for a natural harbour, the East India Company and later the British created an artificial harbor. An effective network of railways and roads were established to link the hinterland with the port.

It is little difficult to think of Madras as Chennai, a bit like saying mulligatawny soup instead of the comforting milagu rasam. Chennai is about stately garden houses giving way to the matchbox apartments. It is about empty state coffers and perpetual water shortages; it is about old rivers being reduced to effluent cesspools. Madras on the other hand, is entirely in the mind. It is a study in contrasts as rich as her favourite Kancheevararam sari or his dearly beloved myillkannu veshti. It is like the bewitching fragrance of mallipoo found in every street corner. It is about filter kapi

connoisseurs who will just as easily indulge in a cup of cappuccino at one of the thriving coffee pubs. Whatever the differences, both Chennai and madras will bemuse, pique and demand affection in return for a wholesome chutney of unexpected flavours.

The first British settlement in India, Chennai is also the country's oldest Municipal Corporation, based on the charter issued by James II in 1688. Only briefly occupied by the French and Portuguese, the seaport grew and ebbed with the changing fortunes of the Raj. From the top of the hill of St Thomas Mount, that Col William Lambton laid the first baseline in 1804 for what was to be hailed as the Great Arc-2400 km incredibly precise topographical measurement that took 50 years to complete. That began the scientific voyage that gave India, Bhutan, Myanmar, Thailand, Tibet and Nepal their maps. A bronze icon of the mild and patient Yorkshireman now stands at the place where he started, commemorating the 200th year of his awesome quest.

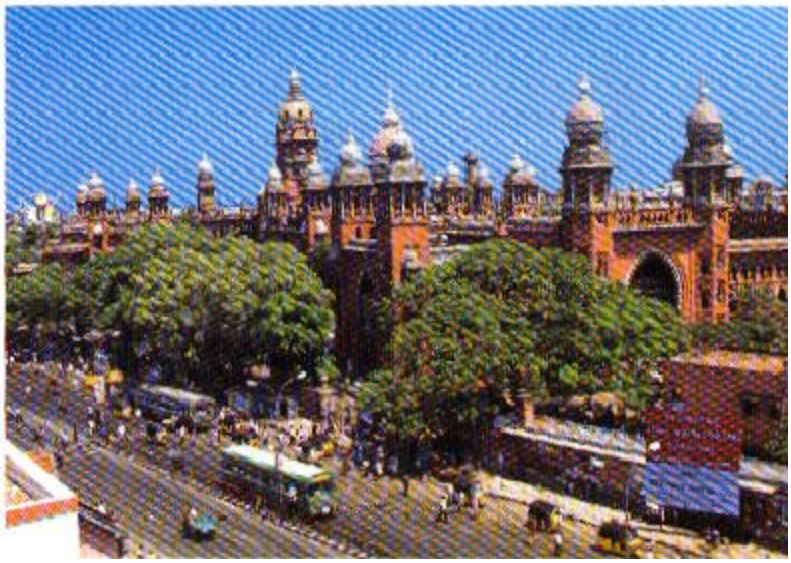
North Chennai

Chennai's foundation was first laid in its north at Fort St George, now the seats of the Tamil Nadu State Government. The area around it, George Town is a busy hub of wholesale markets and Corporate Offices as well as multi national companies offices. The Fort Museum stands on the north of the state Secretariat of Tamil Nadu. It houses a large number of colonial antiquities and

paintings. In George Town one can assess Chennai's 500 years of Church Architecture.

The East India Company purportedly erected the first ever Protestant Church, east of the Suez at Fort George in 1680. Meant for the companies' residence, St. Mary's Church was so named, construction started only annunciation day of the blessed virgin. The church is the work of a master gunner-cum-mason, William Dixon, whose primary aim was to build the church in such a way that it could withstand bombardment. On the side of the George Town another church exists called Armenian Church (1772). It has a baroque facade and a verandah with columns. A Bible in Armenian Script, dating to the 1600s, is still preserved here.

Madras High Court



According to the architect Tom Inglis, the St. Andrew's Kirk Cathedral, (1821) on the busy Poonamallee High Road is a work of genius. Ingli's exclamation does not refer nearly to the church's unique circular form, based on a designed originally meant for London's St. Martin in the fields, or its dome painted deep blue with tiny stars, said to resemble the skies of Scotland. Its most astonishing feature is its foundation that consists of 150 wells sunk into the earth. A stone's through from George Town on Rajaji Road, is a row of shops built for refugees from Rangoon during the World War-II. Burma Bazar continues to be a place for cheap and important cosmetics, electronics goods and faux articles. Down the same road is the Raj's first Indian Supreme Court, established in 1800, now the Madras High Court.

Opposite Parry's Corner another Chennai milestone built in 1795, it is an imposing Indo-Saracenic building in red brick. Popham's Broad way now called Prakasham Salai, off George Town, has a cluster of old shrines that include Kandaswamy Koil, Tucker's Church a Wesleyan Chapel and Anderson's Church. The western entrance of Fort St. George leads to Poonamallee High Road, home to some of the best edifices in town, most of which are in a dilapidated condition. The Victoria Memorial Hall (1860) is a crumbling marketplace. The southern railway Headquarters is a grey sandstone edifice blending European and Dravidian styles. North of Ponamallee High Road stands the Ripon Building, office of the Chennai Corporation, a stunning example of neoclassical

architecture, painted bone white. The south bound Mount Road known as Anna Salai was built in 1795 to facilitate the movement of troops between Fort St George, where the British worked, and St Thomas Mount where their residences were located.

Ripon Building

The Government Museum Complex on the Pantheon Road in Egmore has four main buildings, the Museum Theatre, the Connemara Library, the National Art Gallery and the madras Museum. Henry Irwin designed the grand Connemara Library. This public library is a veritable storehouse of rare books. The National Art Gallery a part of the Pantheon Complex is unlike any other

complex in Chennai and has a foyer full of sculptures. The Madras Museum has two wings in the separate buildings with a large collection of Chola, Pallava and Vijayanagara sculptures. In 1933, after a long period of neglect, Chennai decided to remember the famous rebel point, Subramanya Bharathi. His house is called Bharatiyar Illam is now a museum that traces his life.

Paintings at Madras Museum

Triplicane before the British, Chennai knew it as Thiru Alli Keni, Tiruvallikeni in colloquial parlance. Located at a tangent from

south beach road that leads to Santhom and Mylapore, the Parthasarathy Temple was its cultural hub. The ancient temple inscriptions say it was built by king Dantibarman Pallava (796 – 846 AD). The presiding deity is Vishnu as Partha's Sarthy. (Arjuna's charioteer).

The Parthasarathy Temple at Triplicane

Central Chennai

In the beginning, before Madras, there was Mylapore. Tiruvalluvar, patron saint of the Tamils is said to have stayed in Mylapore in the first centure B.C. Mylapore's landmark is the

Kapaleswarar Temple and its Thepakulam. In the fifteenth century the temple is said to have stood on the seashore. Then the area served as a port of the Pallavas, who were called Mylai Kavalar. Interestingly, Mylapore was also called Mayura Sabda Pattinam that means the city of the peacocks call, perhaps because the area had many peacocks. 63 beautiful bronze idols of the Nayanamars (the great saint of Shiva) are found in the shrine.

Tenth century Arab travelogues describe Santhome as Betumah, the town of Thomas. The majestic of Basilica of Santhome is a neo-goithic cathedral with a 183 feet high spire. Mylapore's links with Christianity dates back to first century AD, when St. Thomas or Doubting Thomas said to have lived here in his last days. Just near to the Basilica, hidden by bungalows and apartment complexes is the Luz church or the Church of Our Lady of Light. It is the only church in Chennai that has not been rebuilt or remodelled from the time it was constructed, in 1516. En route to the air port on top of the mount of St. Thomas, Church of Our Lady of Expectations exists. The Portuguese between 1543 – 47, built it. St. Thomas is said to have meditated here. The church is famous for its unusual relic, a stone cross embodied in the altar wall, which is said to have bled between 16th and 17th centuries.

Marina Beach is one of the longest urban beaches in the world. Constructed in an Italian style promenade its Sicilian inspiration lead to its name given by Mountstuart Grant-Duff, the

Governor of Madras in 1884. The Marina procedure is to find a good spot on the sands and plonk down. An impressive row of Indo-Saracenic buildings lines in the entire 4 km. stretch opposite Marina, stands Chennai's first Masonic Lodge, an elegant rectangular and white structure, now the Police Head Quarter. The Senate House, the public Works Department, the Presidency College and Madras University are other distinguished buildings that mark this heritage enclave.

South Chennai

South of the polluted Adayar River lies the sprawling headquarters of the Theosophical Society, founded in 1878 by Madame Blavatsky and Col. Olcott. The universal brotherhood movement drew followers like Annie Besant. The society's is best known symbol is the Adayar Banyan Tree, all of 400 years old with roots spanning a vast cordoned of area.

Temple of Arts called Kalashetra is located on a green campus in Thiruvanmiyur, the southern most suburbs. The founder Rukmini Devi Arundale is credited with liberating Bharatnatyam from the confines of temple performance. Thiruvanmiyur, lies the Marundeeswarar temple where lord Shiva presides as the Divine physician. The area was famous for its herb gardens.

Kalashetra

India's contribution to the sartorial world includes the humble hand woven Madras cloth known as Madras Checks. Its influence on men's prêt-a-porter went as far as America, where ad guru, David Ogilvy advertised it as a shirt "guaranteed to bleed" in the 1960's. The original technique of bleeding Madras involved dyeing hand woven white cotton fabric (called gada) in a combination of aliziru (a rust red colour) indigo, (blue) and myrablum (yellow plus white) and all vegetable dyes. The warp and weft of the cloth would be hand woven in a combination of two colours, after which it was washed. With each wash, the colours would smudge and bleed, creating a faded effect. As far back as 12th century Madras was exporting un-striped gada for making head dresses in West

Africa and West Asia. Centuries later, it is said to have caught the eyes of American visiting the Caribbean and made its way to north America. In 1800s weavers of the Madras Cotton started imitating Scottish tartan weaves owned by the Scottish Regiments in Madras.

The tartan pattern is a juxtaposition of unevenly strips criss-crossing at right angles. And these versions of gada became renowned as Madras Check. Today Ralph Laurel comes out with Madras plaids called the checks in Chennai bleeding Madras in America. A little town near Oregon in North America has even been named Madras, in France, the Madras has come to mean any checked cotton fabric.

Shelter in Chennai 4

Shelter is a basic need of man; it is one of the basic human needs just next to food and clothing. The importance of shelter was internationally accepted from the dawn of history. The traditional people, who lived between 10,000 and 2,000 B.C. built houses like pit dwellings, lake dwellings, huts, etc. However, the importance of housing increased over the years due to development of civilization. In the Asiatic age people gave importance to housing, wanting only a protection against wild animals, natural calamities and also against enemies.

The requirement of housing is growing in the context of the development of knowledge, changes in the civilization, people becoming more aware about the privacy, sanitation, consciousness of health, environment, infrastructural facilities etc. He becomes a rational of better physical as well as infrastructural facilities, which provides a comfortable and easy life. With the discovery of electricity and other infrastructure housing has become very important, having electricity, toilet, bath, washbasin etc. within the house itself. The house becoming a comfortable place has changed the old concept of protection from animals and extreme weather conditions. In most of the well-developed nations, the technocrats, as well as executives bring work to their homes in briefcases and get it done in the home at night. With the invention

of television, radio, computer, recorded music etc. the recreational activities within the house has also enhanced considerably. As per the knowledge the man spent a considerable part of his lifetime within the house. It clearly shows the fact that the house is a part and parcel of a man's life.

The requirements of housing are growing in the context of rapid pace of urbanization, increasing the level of migration especially from the rural areas to cities in search of livelihood, employment and all, mis-match between the demand and supply of shelter and other services at affordable prices and inability of most of the new as well as poorer sections to assess formal land markers in urban areas due to the high cost of land values and their low incomes, leading to a non – sustainable situation. Urban population of India is likely to grow from 285.3 million in 2001 to 360 million in 2010, 410 million in 2015, 468 million in 2020 and 533 million in 2025 as per the projection based on the historical growth pattern of our population (1901-2001). The current projection of population based on the historical growth pattern (1901-2001) nearly 36 per cent of the population is likely to urbanize by 2025. However, the current pace of development is particularly high and that will increase further growth in growing investment, the actual growth of urban population is likely to be more than these projections.

The decadal growth rate of urban population in India is significantly higher than the rural population, being 23.9 per cent and 20 per cent during 1981-1991 and 21.4 per cent and 18 per cent during 1991 - 2001 respectively. Although India is under growing rapid pace of development, job opportunities are not growing in the same proportion. This is largely contributed to a near stagnation in the primary agricultural sector during the recent period; although the employment in tertiary / service sector such as trade, commerce, hotel, restaurant, transport, insurance, communication, financial, real estate and other business activities have shown significant increase.

Housing, besides being a very basic requirement for the urban people, also holds the key to accelerate the speed of the development of the nation. Investment in housing industry like any other industry, has a multiplier effect on income and employment, which in turn leads to the overall development of the economy. It is estimated that overall employment generation in our economy due to the additional investment in housing as well as construction industry is eight times the direct employment. Housing provides employment to a cross section of people, which importantly includes the weaker sections of the society. Housing also provides opportunities for home based economic activities. At the same time, adequate housing also decides the health status of the occupants. Therefore, on account of health, income and employment considerations, housing is a very important tool for

removing poverty, generation of employment and improving the health status of people. Therefore, on account of health and income considerations, housing is a very important tool to alleviate poverty and generate employment.

Magnitude of housing requirements is linked to pattern of growth, settlement status and overall shelter quality. Cities and towns, which are growing at faster rate, need to develop and deliver a faster and greater supply of housing. Growth of slums in India has been at least three times higher than the growth of urban population, leading to sizeable number of urban population living in the slums. Therefore housing activities are to be planned according to the growth pattern of different settlement/ cities. The people themselves with their own resources construct majority of the houses in India. Therefore, the main role of the government at all levels is not to seek to built houses itself but to act as a catalyst and make appropriate investments and create conditions where the poor people may gain and secure good housing and remove the existing difficulties in the housing system. In order to remove these problems National Housing Policy was framed and it has certain well-defined aims.

Aims of Housing Policy

The housing and habitat policy aims at:

1. Creation of adequate housing stock both rental as well as the ownership basis.

2. Facilitating accelerated supply of serviced land and housing with particular focus to economically weaker sections and lowest income groups categories and taking in to account the need for the development of supporting infrastructure and basic services to all categories.
3. Facilitate upgradation of infrastructure of towns and cities and make these comparable to the needs of the times.
4. Ensuring that all dwelling units have easy accessibility to basic sanitation facilities and drinking water.
5. Promotion of larger flow of funds to meet the revenue requirements of housing and infrastructure using innovative tools.
6. Providing quality and cost effective housing and shelter options to cities especially the vulnerable groups and the poor.
7. Using technology for modernizing the housing sector into increase efficiency, productivity, energy efficiency and quality. Technology would be particularly harnessed to meet the housing needs of the poor and also specific requirements of green housing.
8. Guiding urban and rural settlements so that a planned and balanced growth is achieved with the help of innovative methods such as Provision of urban Amenities in Rural Areas (PURA) leading to in-situ urbanisation.
9. Development of cities and towns in a manner which provides for a healthy environment, increased use of

renewable energy sources and pollution of free atmosphere with the concern of solid waste disposal, drainage, etc,.

10. Using the housing sector to generate more employment and achieve skill upgradation in housing and building activity, which continues to depend on unskilled and low wage employment to a large extent.
11. Removing legal, financial and administrative barriers for facilitating access to tenure, land, finance and technology.
12. Progressive shift to a demand driven approach and from a subsidy based housing scheme to cost recovery cum subsidy schemes for housing through a pro-active financing policy, including micro financing, self help group schemes.
13. Facilitating, restructuring and empowering the institutions at state and local governments level to mobilize land and planning and financing for housing and basic amenities.
14. Forging strong partnership between the private, public and co-operative sectors to enhance the capacity of the construction industry to participate in every sphere of housing and urban infrastructure.
15. Meeting the special needs of the scheduled caste/ scheduled tribes/ disabled/ freed bonded labourers/ slum dwellers, elderly women, street vendors and other weaker sections of the society.

16. Involving disabled, vulnerable sections of the society, women and weaker sections in formulation, design, and implementation of the housing schemes.
17. Protecting and promoting our cultural heritage, architecture and traditional skills and
18. Establishing a management information system in the housing sector to strengthen monitoring of building activity in the country.

On the basis of the aims of the housing policy of the Government of India, both center and state governments would be carrying out certain initiatives at all levels of governments. They are

1. Take steps to bring in planning, housing, financial, regulatory, institutional and legal reforms.
2. Devise macro economic policies to enable flow of resources to the housing and infrastructure sector.
3. Evolve plans, strategies and parameters for optimal use of available resources, including land for sustainable development.
4. Devise action plans for the provision and creation of adequate infrastructure facilities like water sources, connectivity and power supply.

5. Develop and enforce appropriate ecological standards to protect the environment and provide a better quality of life in human settlements.
6. Continue and pursue urban reforms with focus on revision of bye-laws, municipal laws, simplification of legal and procedural framework, initiation of partnership, reduction of municipal manpower, introduction of property title, introduction of regulators, implementation of urban street vendor policy, etc,.
7. Provide fiscal concessions for housing, infrastructure, regulatory and monitoring mechanism to ensure that the concessions are correctly targeted and utilized.
8. Develop convergence and integration between the urban sector initiatives and financial sector reforms.
9. Mobilize global resources in housing and urban infrastructure sectors.
10. Strengthen a nation wide, state wide and local level Management Information system on house building activities to help in designing and developing housing programmes and also assist in decision making.
11. Promote incentives in private sector and co-operatives in undertaking housing and infrastructure projects for all segments in urban areas.
12. Encourage non-governmental organisations/ central business organisations and partnership with Urban Local

Governments/ Government Bodies in housing, micro finance and infrastructure activities.

13. Facilitate training of construction workers by converging other developmental programmes.
14. Promote Research and development, innovative building materials, transfer of technology, energy efficient construction to these sectors.

From being a problem to be sold by constructing large number of houses not only by the public sector but it is the co-operation of both public and private, called joint venture, shelter activity must now become means of mobilizing the motivations, energies and resources of the people so as to lead a fast sustainable development. This was the main idea behind the housing sector especially in urban areas of India. It must be treated as an integral factor for attaining economic growth with stability of the country with special emphasis on economically poor sections of the society. In order to attain the aims of the housing policy in the coming years, the policy makers, researchers, academicians, social scientists, planners, etc. should take into account certain well-established norms, which are very essential for successful implementation as well as preparation of policy decisions.

1. Benefit cost ratio analysis should be conducted, which shall give more importance to structural change, irrespective of all the sections of the society.

2. A well-coordinated, versatile and well-defined policy of housing aims at exploiting all the available resources, co-operation of private as well as public leads to a self-reliance in the housing problem.
3. The top most aim of the housing policy is the dwelling place for house less people. For attaining this aim an improvement in the built environment of the neglected homeless is very essential and it place as a catalyst of socio-economic development.
4. A well-oriented housing activity creates a multiplier effect through widespread social, economical, psychological and other benefits.
5. The role of informal sector especially in urban sector has a vital importance and perspective role to play, provided that necessary support systems are available to it.
6. Generally accepted norm of the housing is that of low cost building and long-term durability of houses. This is very important especially for poorest sections of the society and informal sector.
7. The easy way for attaining development in housing sector or to speed up the activity is through the improvement in the informal sector mainly by providing material goods at the lower level, cash aid, technical advise, use of locally available resources, etc,.
8. To attain the optimum potential that improved shelter has to offer to the nation, the decision must necessarily be

self financing and viable. Moreover before implementing any scheme regarding housing needs a well-defined study that clearly aims at economic conditions of the concerned people. Only in a professionally sound manner, can we attain the level of efficiency of activities required.

9. In addition to the above-mentioned, well defined technologies and institutions which specialize in these type of activities and judicious mix of old and new methods, considering our age old traditional, conservative and most modern, sophisticated world can provide more broad based access to these facilities.
10. The worthiness of the shelter technologies must now be measured in the international standard that have rarely been used in the past.

Inspite of the efforts of governments, center, state and local governments, the active co-operation of public and private and non-governmental organisations, the housing problem continues to be a big issue in our economy. The difference between the demand for housing and supply of housing in our country especially in urban areas of India has been continuously widening. In order to assess the housing problem of India as well as Tamil Nadu, first we want to know the number of households as well as the number of residential houses. The information regarding the number of

residential houses and households in India and Tamil Nadu during 1991-2001 is presented in Table 4.1.

Table: 4.1 Residential Houses and Households in India and Tamil Nadu During 1991 & 2001.

(Lakh)

No	Area/ Year	Households	Residential Houses
1.	**India**		
	a. 1991		
	i. Rural	1115.90	1079.40
	ii. Urban	404.20	390.70
	iii. Total	1520.10	1470.10
	b. 2001		
	i. Rural	1382.72	1290.53
	ii. Urban	536.92	502.23
	iii. Total	1919.64	1792.76
2.	**Tamil Nadu**		
	a. 1991		
	i. Rural	84.33 (7.56)	83.70 (7.75)
	ii. Urban	41.08 (10.16)	40.42 (10.35)
	iii. Total	125.42 (8.25)	124.13 (8.44)
	b. 2001		
	i. Rural	82.74 (5.98)	80.38 (6.23)
	ii. Urban	58.97 (10.93)	55.62 (11.07)
	iii. Total	141.71 (7.38)	136.00 (7.59)

Source:- ***Tables on Households and Amenities, Census of India, Ministry of Home Affairs, Government of India, 1991 and 2001.***

Note:- ***Figures in parenthesis relates to percentage to India total.***

It may be observed from table 4.1 that in Uttar Pradesh 136 lakh occupied residential houses existed during the year 2001. More than two fifth of the residential houses existed in the urban areas of Tamil Nadu during the year 2001. While the national level

it was only 28 per cent. The growth of residential houses in Tamil Nadu during 1991-2001 was observed at 0.95 per cent per annum. During the same period, the national level it was observed at 2.19 per cent per annum, which clearly narrates the fact that the growth of residential houses was very much lesser than the national level and there was slow process of development in the housing construction activities in Tamil Nadu.

The growth of households in India during 1991-2001 was observed at 2.63 per cent per annum. The growth of the same during the period in Tamil Nadu was observed at 1.3 per cent per annum, which is less than the national level by the same per cent. This clearly indicates the fact that the growth of population in Tamil Nadu was very much less than the national level. As same in the case of residential houses more than two fifth of the households in Tamil Nadu during 2001 existed in urban areas. The gap between the household and residential houses means the required level of houses in a particular area. During 1991 it was observed at 50 lakh in India and 1.29 lakh in Tamil Nadu respectively. After a decade it increased to 126.88 lakh in India and 5.71 lakh in Tamil Nadu respectively. The growth of the demand for housing clearly indicates the fact that the problem was worse in Tamil Nadu than at the national level. In Tamil Nadu the housing problem shows a typical nature, the available figure shows the development of housing sector was treated as negligible. The growth of the demand for housing in Tamil Nadu was higher than the national

level by 18.9 per cent per annum during 1991-2001. The information regarding the growth of households and residential houses in India, Tamil Nadu and Chennai during 1991-2001 is presented in Table 4.2.

Table: 4.2 Growth of Households, Residential Houses in India, Tamil Nadu and Chennai UA During 1991-2001.

(Lakh)

No	Year/ Item	India	Tamil Nadu	Chennai
1.	1991			
	a. No. of Households	1520.10	125.42	11.39
	b No. of Residential Houses	1470.10	124.13	11.30
2.	2001			
	a. No. of Households	1919.64	141.71	8.28 *
	b No. of Residential Houses	1792.76	136.00	7.79 *

Sources:- ***1. Census of India Various Issues.***
2. Metropolitan Housing Statistics, National Building Organisation, Ministry of Urban Development, Government of India, 2002.
**** means Chennai district only.***

It may be observed from Table 4.2 that the percentage of contribution of households from Tamil Nadu to the national level had slightly decreased during the period 1991-2001. This was the same in the case of Chennai district to the Tamil Nadu state but the reduction percentage was higher than the national level. More than 7 per cent of the households and residential houses existed in Tamil Nadu. The percentage reduction may be due to the development of education, less flow of migrants from other states to

Tamil Nadu during the previous decade, etc,. Generally the flow of people from the state of Tamil Nadu to other states found during the previous decade, showed the fact that there was less development of Tamil Nadu state as compared with others southern states in the Indian Union especially the states of Andhra Pradesh and Karnataka. Near about 6 per cent of the households and residential houses of Tamil Nadu state existed in Chennai district during the year 2001. During the year 2001 the housing shortage in Chennai district was around 0.5 lakh. But during the year 1991 it was only 0.09 lakh in Chennai UA. This clearly indicates the slow development in the housing sector during the last decade. On the other side the available houses accommodating more number of persons as compared to previous decade, suggesting that there is an urgent need for houses in Chennai in near future. The main reason behind this may be due to low level of income of Chennai people constructing new houses, acceptance among the family accommodating more number of persons, high cost of material and other cost of construction of houses, less mind setting nature, etc,.

The main problem facing the housing development in India relates to the provision of required level of housing to the economically weaker sections of the society. The present government at the center aims at developing housing for these people and it was mentioned in Common Minimum Programme. The rising tendencies of the land prices and the increasing gap

between the poor and rich in the urban areas of India had no doubt eliminated these socially and economically downtrodden people not only from the land markets but also from the housing markets. This gap also reduced the scope for integrating them in to the formal housing system as mentioned in housing policies of the state as well as national level. Moreover, the economically downtrodden sections of the society do not have access to finance from the formal system due to the absence of permanent source of income, collateral securities and other required items. Despite various programmes introduced by the governments from time to time the housing situation continues to be a big issue in our nation. The information regarding the housing shortages in urban India and Tamil Nadu during the Ninth Five Year Plan is presented in Table 4.3.

Table: 4.3 Urban Housing Shortages in India and Tamil Nadu 1997-01

(million)

No	Year	India	Tamil Nadu	Per cent
1	1997	7.57	0.95	12.5
2	1998	7.36	0.92	12.5
3	1999	7.18	0.90	12.5
4	2000	6.93	0.87	12.6
5	2001	6.64	0.83	12.5

***Source:- Compendium of Environment Statistics, Central Statistical Organisation, Ministry of Statistics and Programme Implementation, Government of India, 2001*.**

It may be observed from Table 4.3 that the urban housing shortage in Tamil Nadu had declined from the 095 million in 1997 to

0.83 million in 2001. During the same period the urban housing shortage in urban India had decreased from 7.57 million to 6.64 million. But the percentage of urban housing shortage in Tamil Nadu to the national level was more or less same during the period. During the five year period nearly 0.12 million houses constructed in the urban areas of Tamil Nadu. During the same period nearly 1 million houses were constructed in urban areas of India. National Institute of Urban Affairs, Ministry of Urban Development had published information regarding housing shortage in metro cities in India, taken into account congestion factor and obsolesce factor. The information regarding the housing shortage of metropolitan cities in India and Chennai UA during 2000 is presented in Table 4.4.

Table: 4.4 Housing Shortage in Chennai UA & Metros in India

(in 000)

No	Items	Metros	Chennai UA	% of Col 3 to 2
1	Number of Households	13728	1085	7.90
2	Number of Houses	13421	1071	7.98
3	Housing Shortage*	927	127	13.70
4	Congestion Factor	656	52	7.92
5	Obsolesce Factor	564	45	7.97
6	**Total Housing Shortage**	**2147**	**224**	**10.43**

Source:- ***Urban Statistics Handbook, National Institute of Urban Affairs, Ministry of Urban Development, Government of India, 2000.***
**** means without congestion and obsolesces factor***

It may be inferred from Table 4.4 that the housing shortage in metropolitan cities in India during 2000 was 21.47 lakh. More

than 10 per cent of the housing shortage was found in Chennai UA. The housing shortage of Chennai UA was 1.27 lakh without considering the congestion factor and obsolesce factor and it constituted nearly 14 per cent of the total housing shortage in metropolitan cities of India. Taken into account the factors of congestion and obsolesce, it increased to 2.24 lakh. The information regarding the houses and the uses to which they are put in Chennai district during 2001 is presented in Table 4.5

Table: 4.5 Houses and the Uses to Which They are Put in Chennai During 2001

No	Details	Number
1.	Census Houses	957076
2.	Vacant Census Houses	44828
3.	Occupied Census Houses	912248
4.	Residence	779057
5.	Residence cum other uses	12626
6.	Shop/Offices	76193
7.	School/ College	1928
8.	Hotel/ Lodge/ Guest Houses	2884
9.	Hospital/ Dispensaries	2956
10.	Factory/ Workshop/ Work Shed	9881
11.	Place of Worship	2474
12.	Other Residential	24249

Source:- ***Tables on Households and Amenities, Census of India, Ministry of Home Affairs, Government of India, 2001.***

It may be observed from Table 4.5 that in Chennai 9.57 census houses existed during 2001. Nearly 4.7 per cent of the

census houses shown as vacant census houses and the remaining 95.3 per cent census houses were occupied. As like general phenomenon good per cent of the census houses were used as residence, Chennai has also showed the same tune, more than 81 per cent of the census houses were used as residence. Nearly 13 thousand houses used as residence-cum other uses in Chennai district during 2001. More than 76 thousand census houses used as shops as well as offices in Chennai district during 2001 and it constituted nearly 8 per cent of the total census houses in Chennai district. Other uses of census houses mentioned in the table are very less like educational institutions, medical institutions, hotels, restaurants, factories, workshops, religious places, etc. More than 2.5 per cent of the census houses in Chennai district during 2001 were mentioned in the table as other residential.

The main reason behind the slow growth of housing in most of the urban areas of India may be due to the level of poverty among the economically weaker sections of the society. This group can't afford to construct the house due to various reasons such as the high cost of living in urban areas, facing problem of meeting day-to-day expense etc. In this sense, the definition of poverty is very important to narrate. Poverty means an inadequate income level that is very difficult to maintain a decent standard of living as judged by the standards of the society. In some times it may be mentioned in calorie terms or income levels or any other modes introduced by the institutions conducting the ground level surveys.

In this condition level of poverty played an important role for the construction of houses in any area. The information regarding the population below the poverty line in the urban areas of India as well as in Tamil Nadu during 1973-2000 is mentioned in Table 4.6.

Table 4.6: Percentage Distribution of Population Below Poverty Line in Urban India and Tamil Nadu.

No	Area	Years					
		1973-74	1977-78	1983	1987-88	1993-94	1999-2000
1.	India	49.01	45.24	40.79	38.20	32.36	23.62
2.	Tamil Nadu	49.40	48.69	46.96	38.69	39.77	22.11

Source:- ***Compendium of Environment Statistics, Central Statistical Organisation, Ministry of Statistics and Programme Implementation, Government of India, 2001.***

It may be observed from Table 4.6 that the population below poverty line had been continuously declining due to the successive implementation, monitoring as well as the evaluation of various policies of the central as well as the state government. The table itself clearly narrating the fact the considerable reduction of percentage of poverty affected people in the urban areas during the two and half decades covered under the study. In the urban India it had declined considerably from 49.01 per cent in 1973-74 to 23.62 per cent during 1999-2000. The case was more or less same in the case of urban areas of Tamil Nadu but with little difference between the periods covered under the study. During 19978-79, 1983 and 1993-94 the percentage of people below poverty in the urban areas of Tamil Nadu was little higher than the national level. It may be

due to various problems such as the cyclone effects and other climatic conditions, slow implementation of various poverty eradication programmes by the Tamil Nadu government, etc. During the new era of the opening of the 21st century the population below poverty in the urban areas of Tamil Nadu was more than one fifth of the population. This was little higher in the national level. Various policies of the present United Progressive Alliance governments at the center as well as DMK led government at the Tamil Nadu the level of poverty can be eradicated in the near future.

Condition of Houses

Housing, one of the basic human basic needs after food and cloth is one of the integral factors for the development strategy to reach the targeted rate of development. As the civilization has been undergoing dramatic changes from time to time, the condition of houses also changed in accordance with the requirements, available technology that increases the durability of the houses. The traditional system brought about a series of lacunas from the introduction of money especially in all building materials, reducing the age-old skills, inadequate finance, less durability of houses, increases the number of poverty affected people, houseless population, etc,. Chennai is one of the main metropolitan cities of the southern states in India, the availability of land for construction of houses, the required level of finance especially for the weaker sections of the society for the construction of new houses plays a

creating factor in the development of housing. The main factor for this may be due to the development of education and social changes, which in turn leads to the use of science and technology in housing sector. Till today majority of the poor people in the urban areas are using traditional resources for the construction of houses, which are less durable and majority of them are not good for living. In this condition policy makers on the housing policy emphasized the need for using modern building materials such as cement, steel, fixed bricks, which have reduced considerable expenditure on to the development and production of these and long durability but the poor have very little access to these due to their economic insecurity. The Census of India published the information regarding the census houses by good, livable and dilapidated during the year 2001. The information regarding the same in the urban India, Tamil Nadu and Chennai during 2001 is presented in Table 4.7.

Table 4.7: Condition of Urban Residence & Residence cum Other Uses in Urban India, Tamil Nadu & Chennai District During 2001.

(Lakh)

No	Condition	India	Tamil Nadu	Chennai
1.	Good	333.04	52.01 (15.62)	7.14 (13.73)
2.	Livable	168.18	5.38 (31.99)	0.71 (13.20)
3.	Dilapidated	18.90	0.42 (2.22)	0.04 (9.52)
4.	**Total**	**520.12**	**57.81 (11.11)**	**7.89 (13.65)**

Source*:-** ***Tables on Households and Amenities, Census of India, Ministry of Home Affairs, Government of India, 2001.

Notes:- ***1.Figures in parenthesis in Col. 3 relates to percentage to Urban India total.***
2.Figures in parenthesis in Col. 4 relates to percentage to Urban State total.

It may be inferred from Table 4.7 that near about two third of the urban houses in India were good for living. This percentage was higher in Tamil Nadu and it was higher than the national level by 25.93 per cent. The high percentage of good houses in the urban areas of Tamil Nadu may be due to higher number of middle income groups, secured income pattern of the households, higher level of literacy, the knowledge of separate houses of separate family, the proper maintenance of house at right time, availability of the raw materials, etc,. In Chennai district during the year 2001 the percentage of good living houses was more than 90 per cent, which was little bit higher than the urban Tamil Nadu. Urban Tamil Nadu as well as Chennai district had more ore less same proportion of livable houses and dilapidated houses during the same period. These percentages show the fact that both the urban Tamil Nadu and Chennai occupy better position than the urban India. In the urban India the livable houses constituted nearly one third of the available houses and dilapidated houses were at 18.90 lakh during the year 2001. In 1991 the classification of the houses were in different form and not like good, livable and dilapidated. In 1991 it was mentioned as pucca, semi pucca and kutcha category of houses. On the basis of materials used in the construction of houses mainly wall and roof, Census of India classified the houses in to three above-mentioned categories. For arriving this typology of housing, the norms adopted by the National Building organization have been made use of. The main base of the typology of housing by the National Building Organization is presented in Table 4.8.

Table 4.8: Criteria of Typology of Houses By NBO

No	Materials		Typology
	Wall	Roof	
1	Burnt bricks, Glass sheets or other metal sheets, stone, cement concrete	Tiles, slate, shingle, corrugated iron, zinc, or other metal sheets, asbestos, cement sheets, bricks, lime stone and RBC/RCC Concrete	Pucca
2	Grass, leaves, reeds, bamboo, mud, un-burnt bricks, woods, etc,.	Grass, leaves, reeds, bamboo, thatch, mud, un-burnt bricks, woods, etc,.	Kutcha

Sources: - ***1. National Buildings Organisation, Ministry of Urban Development, Government of India.***
2.Census of India Ministry of Home Affairs, Government of India, 1991.

It may be inferred from Table 4.8 that those houses, which have both, wall and roof made pucca material are called pucca. When both wall and roofs are made of kutcha materials the house is called kutcha. If either wall or roof is made of pucca material and the other of kutcha material, then the house is classified as semi-pucca. The kutcha houses have been further classified as serviceable and non-serviceable. If wall is made up of materials such as grass, leaves, reeds or bamboo and roof is made of material like grass, leaves, reeds, thatch, wood, mud, un-burnt bricks or bamboo then the house has been classified as un-serviceable kutcha and other kutcha houses as serviceable. The information regarding the distribution of households by the typology

of houses and proportion of structure in bad condition in India and Tamil Nadu as per the 1991 census is mentioned in Table 4.9.

Table 4.9: Distribution of Households by Typology and Proportion of Structure in Bad Condition in India and Tamil Nadu- 1991

(Per cent)

No	Typology	India	Tamil Nadu
1	Pucca	73.84	69.25
2	Proportion in Bad Condition	3.44	2.22
3	Semi Pucca	17.89	17.22
4	Proportion in Bad Condition	18.66	12.39
5	Kutcha	8.27	13.53
6	Proportion in Bad Condition	52.63	43.20

Source:- Statistical Abstract, Central Statistical Organization, Ministry of Statistics and Programme Implementation, Government of India, 2001.

It may be inferred from Table 4.9 that the contributions of pucca houses in India were higher than Tamil Nadu by 4.59 per cent during 1991. On the contrary the proportion of pucca houses was in bad condition and was little higher in India than Tamil Nadu. This may be due to various factors like the maintenance of the houses at right time, consciousness of the people, literacy level, etc,. The percentage contribution of semi pucca houses in India as well as Tamil Nadu was more or less same during the same period and in this case also the percentage of semi pucca houses in bad condition was higher in India. The percentage of kutcha houses to the total houses in Tamil Nadu was higher than the national by 5.26 per cent during the year 1991. But these conditions overcome in a

span of a decade. The condition of residence and residence cum other use has been mentioned in earlier Table 4.7. In addition, Census of India published the information on census houses by their type of structure in Chennai district during 2001. The houses were classified as permanent, semi permanent, temporary and unclassifiable. The information regarding the same in Chennai district is presented in Table 4.10.

Table: 4.10 Distribution of Census Houses by their Type of Structure in Chennai District –2001.

(Lakh)

No.	Census Houses	Chennai	Per cent
1.	Permanent	6.88	87.09
2.	Semi Permanent	0.57	7.22
3.	Temporary	0.45	5.69
	a. Serviceable	0.17	2.15
	b. Non-serviceable	0.28	3.54
4.	Unclassifiable	---	----
5.	**Total**	**7.90**	**100.00**

Source*:-** ***Tables on Households and Amenities, Census of India, Ministry of Home Affairs, Government of India, 2001.

It may be inferred from Table 4.10 that more than 87 per cent of the census houses in Chennai district were permanent, semi permanent constituted 7.22 per cent and the remaining 5.69 per cent were temporary. In Chennai district there was no unclassifiable house during the year 2001. This was the new term introduced by the Census of India during the year 2001. In 2001 the Census of India published the information of the census houses

on the basis of predominant materials used for the construction of roof and wall. The information regarding the same in urban India and Chennai district during 2001 is presented in Table 4.11.

Table 4.11: Distribution of Houses on the Basis of Predominant Material of Roof and Wall in Urban Tamil Nadu & Chennai district During 2001.

No	Material Used	Roof		Wall	
		Chennai	TN	Chennai	TN
1.	Grass, Thatch, Bamboo, Wood, Mud	90735	914978	33959	258272
2.	Plastic, Polythene	2966	16196	1671	13592
3.	Tiles	71403	2345116	-	-
4.	Slate	1662	11503	-	-
5.	GI, Metal, Asbestos	65392	369502	9061	58097
6.	Burnt Brick	18908	185465	622304	4679397
7.	Stone	5246	20890	49363	324167
8.	Concrete	696997	3373608	208516	696565
9.	Others	3767	34635	1556	17892
10.	Mud & Unburnt Brick	-	-	29438	1208424
11.	Wood	-	-	1208	15497

Source*:-** ***Tables on Households and Amenities, Census of India, Ministry of Home Affairs, Government of India, 2001.

It may be observed from Table 4.10 that near about three fourth of the census houses in Chennai district used concrete as the material for roof during 2001. Grass, thatch, bamboo, wood mud etc. used as the material for roof, constituted near about 10 per cent of the houses in the Chennai district. Tiles, the summation of galvanized iron metal and asbestos and burnt brick used as the

material for roof, constituted at 7.5, 6.8 and 2 per cent of the census house in Chennai district respectively. Other materials, such as plastic, polythene, stone and others used as the material for roof, constituted the remain percentage of houses in Chennai district. This case was more or less same in the urban Tamil Nadu, only a little difference of percentage was observed.

In urban Tamil Nadu, concrete used as the material of roof was nearly 47 per cent. The difference of percentage as compared with Chennai district may be due to the concentration of middle-income group in the city area etc. Tiles were used as the material for roof in 32 percentages of the urban houses of Tamil Nadu. The grass, thatch, bamboo, wood and mud used as the material for roof nearly 13 per cent of the urban houses in Tamil Nadu, clearly narrating the fact that Chennai was comparatively in better position economically.

For the construction of wall, majority of the houses in urban area Tamil Nadu as well as Chennai used burnt brick and it was constituted near about two third of the census houses. In Chennai district near about 22 per cent of the houses used concrete as the material for wall, while it was less per cent in urban Tamil Nadu at 9.6 per cent. The mud and unburnt bricks used as the material for Wall nearly 17 per cent of the houses in urban Tamil Nadu and 3 per cent in Chennai district. This clearly showed about the gap between the development of metropolitan city and other cities in

Tamil Nadu. The information regarding the census houses on the basis of the materials used in the construction of floor in urban Tamil Nadu and Chennai district during 2001 is presented in Table 4.12.

Table 4.12: Distribution of Houses on the Basis of Predominant Material of Floor in Urban Tamil Nadu & Chennai District During 2001.

No	Material Used	Floor		
		Tamil Nadu	Chennai	% of Col 4 to 3
1.	Mud	955203	32729	3.43
2.	Wood and Bamboo	9546	1003	10.51
3.	Brick	149668	4782	3.20
4.	Stone	31472	5712	18.15
5.	Cement	5024425	611892	12.18
6.	Mosaic, Tiles	1080325	296953	27.49
7.	Others	22354	4005	17.92

Source*:-** ***Tables on Households and Amenities, Census of India, Ministry of Home Affairs, Government of India, 2001.

It may be observed from Table 4.12 that both in urban Tamil Nadu and Chennai more than two third of the houses had cement floor. Mosaic and tiles were used as the material for floor nearly 15 per cent of houses in urban Tamil Nadu, while it was 31 per cent in Chennai district. More than 27 per cent of the houses having mosaic / tiles as the material for floor exist in Chennai district itself. The materials like mud, wood, bamboo, stone, etc. used, as the material for floor was less among the Tamilians because the

contribution of these materials used as the material for floor was very less. Information regarding distribution of households by source of drinking water in urban India, urban Tamil Nadu and Chennai district during 2001 is presented in Table 4.13.

Table 4.13: Distribution of Households by Source of Drinking Water in Urban India, Tamil Nadu & Chennai District – 2001.

(Lakh)

No.	Sources of Drinking Water	India	Tamil Nadu	Chennai
1.	Tap	358.65 (66.79)	38.58 (65.23)	3.73 (45.05)
2.	Hand pump	87.19 (16.24)	8.48 (14.38)	2.74 (33.09)
3.	Tube Well	27.46 (5.11)	3.61 (6.12)	0.62 (7.49)
4.	Well	41.40 (7.71)	5.67 (9.62)	0.45 (5.43)
5.	Tank, Pond, Lake	1.67 (0.31)	0.11 (0.19)	0.004 (0.05)
6.	River, Canal	1.03 (0.19)	0.15 (0.25)	0.003 (0.04)
7.	Spring	1.33 (0.25)	0.25 (0.42)	0.02 (0.25)
8.	Others	8.18 (1.52)	2.12 (3.60)	0.72 (8.70)
9.	**Total Households**	**536.92 (100.0)**	**58.97 (100.0)**	**8.28 (100.0)**

Source*:-** ***Tables on Households and Amenities, Census of India, Ministry of Home Affairs, Government of India, 2001.

Note: ***Figures in parenthesis relates percentage to total.***

It may be inferred from Table 4.13 that more than three fifth of the households in urban India and Urban Tamil Nadu had tap as the main source of drinking water. While the cosmopolitan city of Chennai had comparatively lesser percentage of urban households using tap as the main source of drinking water, constituting more than 45 per cent. Hand pump was the second main source of drinking water in urban India, Tamil Nadu and Chennai during the

year 2001. The percentage of household using hand pump as the main source of drinking water in Chennai during 2001 was 33 per cent. The percentage of source of drinking water, hand pump was comparatively lesser in urban India in Tamil Nadu. Tube wells and wells are the other main source of drinking water in all the areas covered under the study. The other source of drinking water was comparatively lesser during 2001 in urban India, Tamil Nadu and Chennai. The source of lighting is another important factor for analyzing the housing conditions of any particular area. In India after the invention of electricity, it became backbone of not only for industrial purpose but also the residential purpose for day-to- day life. The distribution of urban households by the source of lighting in urban India, Tamil Nadu and Chennai during 2001 is presented in Table 4.14.

Table 4.14: Distribution of Households by Source of Lighting in Urban India, Tamil Nadu & Chennai District During 2001.

(Lakh)

No.	Sources of Lighting	India	Tamil Nadu	Chennai
1.	Electricity	470.28 (78.28)	51.91 (88.03)	7.78 (93.96)
2.	Kerosene	62.31 (11.61)	6.57 (11.41)	0.43 (5.19)
3.	Solar Energy	1.28 (0.24)	0.18 (0.31)	0.03 (0.36)
4.	Other Oil	0.38 (0.07)	0.02 (0.03)	0.002 (0.02)
5.	Others	0.78 (0.15)	0.05 (0.08)	0.006 (0.08)
6.	No Lighting	1.88 (0.35)	0.25 (0.42)	0.03 (0.36)
7.	**Total Households**	**536.92 (100.0)**	**58.97 (100.0)**	**8.28 (100.0)**

Source*:-** ***Tables on Households and Amenities, Census of India, Ministry of Home Affairs, Government of India, 2001.

Note: ***Figures in parenthesis relates percentage to total.***

It may be observed from the Table 4.14 that a good percentage of urban households in India, Tamil Nadu and Chennai had electricity as the main source of lighting during the year 2001. Naturally, Tamil Nadu position was comparatively better than the national level, due to the development of the state, literacy, fast level of economic growth etc. Chennai position was one of the best, but electricity was still not used in more than 6 per cent of the households as the main source of lighting. Of this group, majority of them were using kerosene as the main source of lighting. In urban India near about 2 lakh households had no lighting facilities, 25,000 of the households in Urban Tamil Nadu, 3000 households in Chennai had no lighting facilities respectively during 2001. This clearly indicates the fact that the importance of providing light facilities to this group; majority of them were under below poverty line. This was the case of urban areas; a bitter position was in the rural areas. If we want to develop as compared with other growing nations, there should be a need to enhance lighting facilities immediately. In more details, the Census of India published information regarding distribution of 1000 population by the availability of electricity as well as toilet facilities in urban India, Tamil Nadu and Chennai during the last census, 2001. The information regarding households and distribution of 1000 population by the availability of electricity and toilet facilities in the above-mentioned areas are presented in Table 4.15.

Table 4.15: Households & Distribution of 1000 Population by Availability of Electricity and Toilet in Urban India, Tamil Nadu & Chennai District During 2001.

(Lakh)

No.	Details	India	Tamil Nadu	Chennai
1.	No. of Households	536.92	58.97	8.28
2.	Electricity Available			
	a. No. of Households	470.29	51.91	7.78
	b. Population per 1000	875	897	942
3.	Toilet Facility Available			
	a. No. of Households	305.81	37.95	7.43
	b. Population per 1000	741	653	899

Source*:- *Tables on Households and Amenities, Census of India, Ministry of Home Affairs, Government of India, 2001.

It may be inferred from Table 4.15 that good percentage of households in urban India, Tamil Nadu and Chennai had electricity facilities. It constituted in Chennai at 94.2 per cent, 89.7 per cent in urban Tamil Nadu and 87.5 per cent in urban India respectively. But there is a need to provide the remaining percentage of households with electricity because electricity is the primary requirement of everyone. No one can imagine the life without electricity. Toilet facilities are available at 741 populations per thousand in urban India, 653 and 899 in urban Tamil Nadu and Chennai respectively during 2001. As compared with national level the toilet facilities in urban Tamil Nadu was less, there is an urgent need to expand the toilet facilities. Otherwise, it may lead to social problems as well as environmental. The condition of toilet facilities in Chennai, one of the mega cities in India, southern top town, was

also not up to the level as compared with other nations in the world, there is a need to make the policies for improvement of the same with the help of the experts of concerned agencies within the stipulated period. Otherwise it may lead to expand epidemics and other health as well as environmental problems. Census of India, in its report 2001 published the information on households by type of fuel used for cooking. The information regarding the same in urban Tamil Nadu and Chennai during the year 2001 is presented in Table 4.16.

Table 4.16: Distribution of Households by Type of Fuel Used For Cooking in Urban Tamil Nadu & Chennai District During 2001.

No	Fuel Used for Cooking	Tamil Nadu	Chennai	% of Col 4 to 3
1.	Firewood	1993931	39686	2.00
2.	Crop Residue	107857	7611	7.06
3.	Cow Dung Cake	9434	802	8.50
4.	Coal, Lignite	2749	367	13.35
5.	Kerosene	1559829	280426	17.98
6.	Liquid Petroleum Gas	2169627	492082	22.68
7.	Electricity	5651	569	10.07
8.	Bio-Gas	20996	2024	9.64
9.	Others	4749	1031	21.71
10.	No Cooking	24017	3213	13.38

Source*:-** ***Tables on Households and Amenities, Census of India, Ministry of Home Affairs, Government of India, 2001.

It may be observed from Table 4.16 that a large section of urban household in Tamil Nadu as well as Chennai used liquid

petroleum gas (LPG) as the fuel for cooking. The percentage of household using LPG in Chennai was significantly higher than Tamil Nadu and the difference was observed at 22.7 per cent. In Chennai near about three fifth of the household were using LPG as the fuel for cooking. The second highest fuel for cooking by the households in Chennai district during 2001 was observed as kerosene (33.87 per cent). While in urban Tamil Nadu the second highest fuel for cooking by the household was observed as firewood, which constituted at 33.8 per cent. This clearly indicates the fact that Chennai was far better as compared with other towns in Tamil Nadu. Near about one fourth of the LPG using households in Tamil Nadu exist in Chennai.

Census of India published the information regarding the household by the availability of kitchen and the pattern of cooking food in urban India and state and district level information. The information regarding the availability of kitchen differentiated by the Census of India as available, not available, cooking in open and no cooking. This is an economic module that can access the quality of life of households of any area. Generally most of the urban households are having separate kitchen for cooking. This is a very important indicator for making the housing policy of the state as well as district level by using the locally available resources as well as the technology adopted by the state. The information regarding the same in urban India, Tamil Nadu and Chennai during 2001 is presented in Table 4.17.

Table 4.17: Distribution of Households by Availability of Kitchen in Urban India, Tamil Nadu and Chennai District - 2001.

(No)

No.	Availability of Kitchen	India	Tamil Nadu	Chennai
1.	Available	40785759 (75.96)	4769407(80.86)	744271(89.91)
2.	Not Available	9659964 (17.99)	806337 (13.67)	70618 (8.53)
3.	Cooking in Open	2926290 (5.45)	299075 (5.07)	9709 (1.17)
4.	No Cooking	320363 (0.60)	24017 (0.40)	3213 (0.39)
5.	**Total Households**	**53692376**	**5898836**	**827811**

Source*:-** ***Tables on Households and Amenities, Census of India, Ministry of Home Affairs, Government of India, 2001.

Note: ***Figures in parenthesis relates percentage to total.***

As is evident from Table 4.17 that more than three fourth of the urban households in India had the kitchen facility. Tamil Nadu and Chennai occupy a better position than the national level in all the categories covered under the study. In urban Tamil Nadu as well as urban India more than 5 per cent of the households were cooking food in open spaces. Very little percentage of households found in the category of no cooking which was less than one per cent in all the areas covered the study. This clearly indicates a positive fact that the households in urban areas of India as well as state and towns had the facility of kitchen. The Census of India clearly narrating the economic background of the households publishes the information regarding households on the basis of availing banking facility and certain specified assets. This is not only depicting the economic background of the household but the

social levels also. The information regarding the same in urban India, Tamil Nadu and Chennai during 2001 is presented in Table 4.18.

Table 4.18: Households on the Basis of Availing of Banking Facility & Specified Assets in Urban India, Tamil Nadu & Chennai During 2001.

(Lakh)

No.	Details	India	Tamil Nadu	Chennai
1.	Availing Banking Facilities	265.91 (49.53)	17.70 (30.02)	3.72 (45.65)
2.	Radio/Transistor	238.75 (44.47)	29.79 (50.52)	5.50 (66.43)
3.	Television	345.00 (64.26)	35.82 (60.74)	6.77 (81.76)
4.	Telephone	123.31 (22.97)	11.71 (19.86)	2.42 (29.23)
5.	By-cycle	246.88 (45.98)	27.16 (46.06)	3.82 (46.14)
6.	Scooter/Motor cycle/Moped	132.62 (24.70)	13.92 (23.61)	2.55 (30.80)
7.	Car/Jeep/Van	30.21 (5.63)	2.21 (3.75)	0.68 (8.21)
8.	None of the above	102.09 (19.01)	12.74 (21.60)	0.87 (10.51)
9.	**Total Households**	**536.92 (100.0)**	**58.97 (100.0)**	**8.28 (100.0)**

Source*:-** ***Tables on Households and Amenities, Census of India, Ministry of Home Affairs, Government of India, 2001.

Note: ***Figures in parenthesis relates percentage to total.***

It may be inferred from the Table 4.18 that near about one half of the urban households were availing banking facilities. This indicates not only the economic background but also the social level especially the educational background. In Tamil Nadu as well as Chennai percentage of households availing banking facilities was comparatively lesser than the national level. It may be due to the presence of non-banking institutions in areas concerned. The categories of assets owned by the households in urban India, Tamil

Nadu and Chennai showed the fact that majority of them are having TV in their houses. In Chennai district more than 80 per cent of the households had TV during the year 2001. As a general phenomenon the percentage was less in urban Tamil Nadu and urban India. In urban India near about 23 per cent of the household had the facility of telephone in their houses, which was comparatively higher than the Tamil Nadu state level by 3.11 per cent. Chennai is one of the megapolitan cities in India, had only less than 30 per cent of the households having the facility of telephone. The percentage of household that had the assets of bicycle was more or less same in urban India, Tamil Nadu and Chennai during 2001. This was more or less same in the case of motorcycle / moped / scooter. In Chennai less than 9 per cent of the household had the assets of car / jeep / van. In the national level it was only at 5.63 per cent of the households. None of the above-mentioned assets owned by the households in urban India was constituted at 19 per cent, 21.6 and 10.5 in the case of urban Tamil Nadu and Chennai respectively.

Tenure Status

Tenure status of the household in a particular city is a vital factor for analyzing and interpreting the housing condition. As a general phenomenon found in the Indian cities majority of the housing stocks both in the urban as well as rural areas were under the category of owned. The percentage of owned category houses in the rural area was comparatively higher than the urban area. The

main reason behind this was due to the expectation of rich income group that they can earn more income through rent. The information regarding the tenure status of urban India, Tamil Nadu and Chennai district during 2001 is presented in Table 4.19.

Table 4.19: Distribution of Households by Ownership in Urban India, Tamil Nadu and Chennai District-2001.

(No)

No.	Ownership	India	Tamil Nadu	Chennai
1.	Owned	35862144 (66.79)	3452816 (58.54)	389911 (47.12)
2.	Rental	15317352 (28.53)	2266215 (38.42)	426053 (51.49)
3.	Others	2512880 (4.68)	179805 (3.04)	11487 (1.39)
4.	**Total**	**53692376 (100.00)**	**5896836 (100.00)**	**827811 (100.00)**

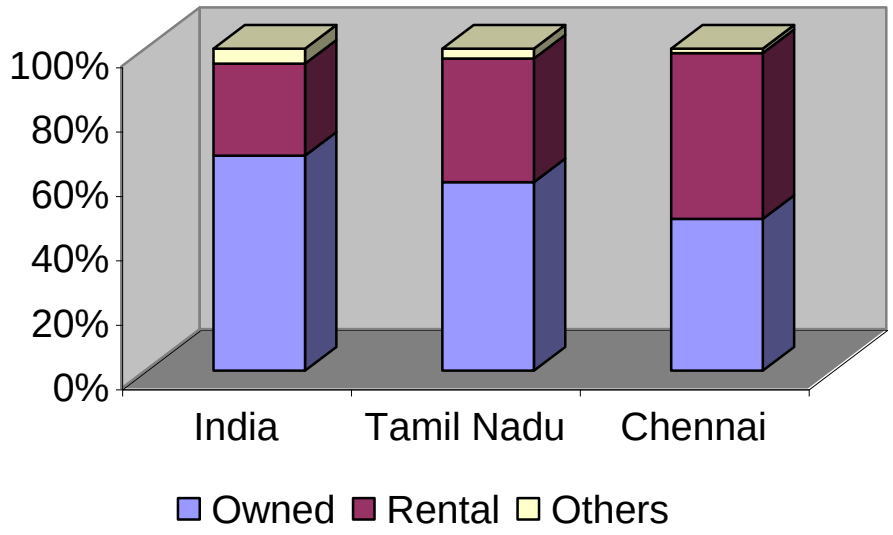
Source*:-** ***Tables on Households and Amenities, Census of India, Ministry of Home Affairs, Government of India, 2001.

Note: ***Figures in parenthesis relates percentage to total.***

It may be observed from Table 4.19 that majority households both in urban India and Tamil Nadu were under the category of owned during the year 2001. But the percentage of owned households in Tamil Nadu was lesser than the national level by 8.25 per cent. It indirectly reveals the fact that the comparatively high income people in Tamil Nadu constructed houses in the urban areas and rented were out and earning a good lump sum. In Chennai district during 2001 the percentage of owned households was lesser than the rental. The rental category of households in Chennai district during the same period was observed at 52 per cent. The information regarding the Tenure status of houses in the

urban India, Tamil Nadu and Chennai district during 2001 is depicted in Figure 4.1.

Figure 4.1: Tenure Status of Housing in Urban India, Tamil Nadu & Chennai During 2001.



Living pattern of Household

Standard of living of the people in a particular area can be assessed on the basis of household by number of rooms occupied. This clearly reveals the development pattern of the area. Moreover, policy makers, social scientists and researchers can easily find the difficulties of the people in the area, how the bottlenecks can be solved within the minimum available resources. The information regarding number of rooms occupied in Chennai district during the year 2001, as published by the Census of India is presented in Table 4.20.

Table 4.20: Households by Number of Rooms Occupied in Chennai District During 2001.

(No)

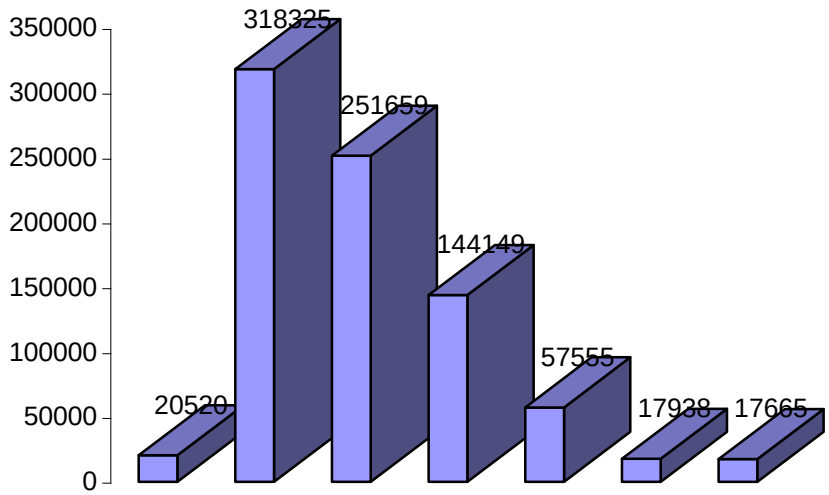
No.	Rooms/Households	Chennai	Per cent
1.	Non Exclusive Room	20520	2.48
2.	1 Room	318325	38.45
3.	2 Rooms	251659	30.40
4.	3 Rooms	144149	17.41
5.	4 Rooms	57555	6.95
6.	5 Rooms	17938	2.17
7.	6 + Rooms	17665	2.14
8.	**Total Households**	**827811**	**100.00**

Source*:-** ***Tables on Households and Amenities, Census of India, Ministry of Home Affairs, Government of India, 2001.

It may be inferred from Table 4.20 that more than one third of the households in Chennai had single room accommodation for living. Near about one third of the households in Chennai district stayed in two-room accommodation during the year 2001. This clearly indicates the slow development of the urban areas in Tamil Nadu as compared with other states in Indian Union and the pathetic living conditions among the people of Chennai during the year 2001. Near about 2.48 per cent of the households in Chennai district during the 2001 had no exclusive room for living. On the contrary 17 per cent of the households in Chennai district had the facility of three rooms. Only just above 11 per cent of the households in Chennai district had stayed in four rooms or more during the year 2001. Thus, the above table showed a clear picture of the inequalities in income and wealth of the Chennai district. The

information regarding households by number of rooms occupied in the Chennai district during the year 2001 is depicted in Figure 4.2.

Figure 4.2: Households by Number of Rooms Occupied In Chennai -2001.



For finding the actual cost of the construction of the building the price of building materials such as cement, bricks, wood and other items play a vital role. National Building Organisation under the Ministry of Urban Development published the information regarding the average price materials and average wage of Masons

and others in Chennai during the year 2000. The same is presented in Table 4.21 and Table 4.22 respectively.

Table 4.21: Average Price Building Materials in Chennai

No	Items	Unit	Rupees
1.	Bricks	Per thousand	1850
2.	Sand	Per Cu mt	259
3.	Stone Ballast (20 mm gauge)	Per Cu mt	545
4.	CP Teak	Per Cu mt	21008
5.	Sal Wood	Per Cu mt	24083
6.	Cement	Per M Tone	3040
7.	MS Round	Per M Tone	15725

Source:- Metropolitan Housing Statistics, National Building Organisation, Ministry of Urban Development, 2002.

Table 4.22: Average Wage Rate of Building Workers in Chennai.

No	Workers	Wage in Rupees
1.	Manson (First Class)	193
2.	Carpenter (First Class)	165
3.	Unskilled Workers	
	a. Males	115
	b. Females	90

Source:- Metropolitan Housing Statistics, National Building Organisation, Ministry of Urban Development, 2002.

It may be observed from Tables 4.21 and 4.22 about how much of money is needed for the construction building in Chennai

during the year 2000. The common layman can easily find out the required level of funds for the construction of their building in the particular district.

Research and Development in Housing

Development is process of changes in the mankind in developing the material requisites for better standard of living and effectively uses them for productive purposes without affecting the environmental conditions of the system. If this created imbalances in the existing environmental system, it will create a disaster. Therefore it is not only concerned with optimizing the development but also for protecting the environment. Environment friendly and user-friendly construction is not a familiar concept in India. For this purpose a collaborative effort has developed in coming together of experts on environment friendly, housing material technology, new energy technology which required less level of energy and less level of cost, using the locally available building materials at a cheaper prices and intelligent building technocrats. Proper and optimum use of lightning, energy, reducing the noise, pollution, humidity, stablising the temperature and host of other factors go in to a user-friendly housing. Excess of any of the factors create imbalance that become harmful. Some studies suggested the fact that excessive use of concrete results in radon emission, which would be major cause of cancer, vertical fluctuation could cause viral fever and other related ailments. Moreover it leads to carbon monoxide and carbon dioxide emission that are highly poisonous in

nature. In this condition policy makers on housing should adopt the policy that covers energy rating system for houses based on insulation, bricks, concrete and other materials used that will definitely make a sustainable balanced ecological and environmental systems. Presently housing sector is facing number of problems like lack of knowledge and availability of information on appropriate building and construction technology, limited use of design that covers local needs, lack of trained personnel and institutions that are capable of supporting construction, design and research on housing especially in rural areas of India, an inadequate understanding of local resources and design practices which is necessary for any successful attempt to upgrade them, lack of adequate production and distribution system to disseminate innovative system of design, etc,. Any way, various research and development activities on this aspect are going on and it is expected that a new technology in housing which costs less, is eco-friendly, local resource based, energy saving, etc, would emerge in the near future.

Slums in Chennai 5

Perpetual inflow of rural population to the most modern urban centers for searching jobs is one of the main factors which has hindered elimination of the menace of slums in all countries of the world irrespective of developed, developing and under developed. Shortage of all basic amenities in the cities persists, as no country is able to provide adequate facilities to meet the increasing demand due to high pace of urbanization. Slums have always been there in the past; they still exist; and they will continue to exist in the forthcoming years till the present flow of people from the rural area continues to cause over crowding the population and congestion in the urban centers. The ultimate result has been that more than half of the population of under developed countries in the continents of Asia, Africa and Latin America have either been staying in public places like street roads, adjacent to government buildings and government properties or is living in group form in overcrowded dwelling units causing great damage to health and human dignity.

In the ancient period, the creation of camp and countryside was started to meet the local imperatives of sustenance and defence. Twelfth and thirteenth centuries saw the inception of more towns due to the importance of Industrial Revolution. Under the economic conditions prevailing seventeenth century localization of collective work process started adjacent to the source of fuel. Then

urban concentration provided cheap transport and other economic facilities. The concentration of commercial, geographical and technological factors in United Kingdom made it the workshop of the world with London as its base. Concentration of manufacturing labour force in mill towns and coke towns gradually changed traditional structure and relationship. The Industrial Revolution converted the cities in to workshops. The accompanying revolution in communications made them commercial, cultural and intellectual centers of their respective countries. It is thus true to say that the city is man's creation. Moreover city has been one of the principal instruments in social and economic advancements of man and society. The man with his organizational capacity has moulded the shape and adjusted the city to his own conveniences. Now the city reflects the manifold character of individuals, their composite conventions, needs and aspirations.

Urbanization is, however, a development oriented sign of economic prosperity in any country. The increased level of urbanization is important for socio-economic development of the people and is to be encouraged but we require more development planning to do that. Due to the concentration of number of industrial units and other service sector activities near the existing cities, unplanned urbanization and unabated migration and concentration of poor population from the depressed rural areas to the urban settlements, numerous problems of complex nature have emerged. It has created an imbalance situation in the urban centers

especially social and economic conditions. The migration has strained infrastructure facilities in the cities to the breaking point. The intermixing various land uses has created confusion and chaotic conditions. There has been acute shortage of housing in urban areas with the result that the cities face grim situation with the fast increasing number of shanty dwellers, squatters, pavement dwellers and slums in all the metropolitan and other cities throughout the nation.

Origin of Slums

Majority of the developed countries, developing countries and less developed countries are facing this problem of slums and there is no panacea to eradicate the same from the surface of the earth. Slums are universal in character and no country is able to get rid of them. Unplanned urbanization with its attendant evils of negating the fundamental purpose of human society- a secure, rewarding and happy life- is no doubt a matter of great concern. Infrastructure facilities like housing, safe drinking water supply, transport, health care, educational institutions for children, parks, etc,. have become woefully inadequate and will soon reach a critical stage threatening the civilized existence itself. As per the latest information more than one fifth of urban population living in slums and squatters, settlements, the future can only be one of still larger population living in such conditions if public neglect continues. It is said every second there are two additional mouths to feed. At the last count, more than 74 million people were added

to the world population in one year. The overcrowding population, poverty, ignorance, diseases, mal nutrition, etc, must be eliminated and the society should seek improvement of living standards and quality of life of the people.

S.N. Singh narrates the position regarding creation of slums in his article entitled " Slum Clearance in Uttar Pradesh". According to him rapid urbanization while paving the way for prosperity has also been responsible for creation of slums, degeneration of human society and it is the base for its enhancing character. In the western countries the problem of housing and slums came to the forefront after the Industrial Revolution. In United Kingdom the rapid establishment of Industrial units and simultaneously mechanization of agricultural sector, there was a sudden influx from the rural to urban areas. This had resulted in massive level of migration from the rural to urban areas and earning more income than the previous one at their native places. Once the income earning member reaches to the centers of developed area automatically his relatives move towards the urban centers not only for income earning through working in employment sectors or in informal sectors but also learning latest development of technology.

In the present day world especially in developing countries, the growth of slums is usually parallel to the growth of urbanization. In India is no exception to urbanization. In India, one important reason for the migration of the rural population to the metropolitan

cities, apart from the fact that urban areas offer better job opportunities appears to be that the development of rural areas has lagged far behind, with the result that the rural population is attracted to the amenities and entertainment facilities which are available in the cities. Housing has, without exception, failed to keep pace with staggering rate of migration in to the cities and inevitable result has been unplanned growth of the cities and the consequent growth of slums. A recent assessment of slums growth as obtained by the Census of India indicates that about 20-25 per cent of the population of the urban areas is living in slums. On this basis, out of 2001 urban population of 285.4 million nearly 62 million may be living in slum areas.

India, a land of colorful contrasts, had a population of about 120 millions at the time of Ashoka (22BC) and the population remained almost static till the time of Akabar i.e. upto 17th century AD (during 1901 Census India's population was 236 million). In a span of one century the population of India increased to 1027 millions in 2001. Planned urbanization is a necessary component of the infrastructure of economic development as towns provide, inter alia, a variety of centralized services for the surrounding area. Rural urbanization in India, however, has grown at a much faster rate than the provision of this infrastructure mainly because of the low living standards of a large proportion of the rural population, who migrate to the towns in search of livelihood. The most disquieting feature of the urbanization process has been

significantly large rate of growth of the large number of metropolitan cities as compared to small and medium towns. During the decade 1991-2001, while the overall population of India increased by 21.4 per cent, the urban population grew by 31.3 per cent.

Factors Responsible for Creation of Slums

Various factors influence the creation of slums in most of the developing countries of the world. Some of the major contributory factors responsible for the growth of slums especially in Chennai during the early periods can be summarized as follows;

1. In the early phase of industrialization, there is large-scale migration to the cities due to employment opportunities and other community facilities and advantages offered by the city, which are absent in majority of the rural areas of developed countries of the world.

2. The poverty which means an income level which is inadequate to maintain a decent standards of living as judged by the standards of the society and low paying capacity of the migrants, force them to find refuge either in low rental areas or to squat on the unused land located near their work places.

3. There is a housing shortage in urban areas due to low level of income among the economically weaker sections of the society, underprivileged sections of the society, etc,.

4. Proximity of their houses, close to the source of employment for economic reasons especially due to the low level of transportation cost.

5. Due to the high and fast growth of migration especially from all rural areas of Indian territory to the urban centers mainly searching for livelihood, there is great strain on the existing transport system and there is absence of cheap and rapid transport, existing roads are not good for smooth transportation as per the latest scientific development of the mechanized vehicles to the work place.

6. There is often absence of comprehensive development planning and if it is there, it may not have taken in to consideration the existing socio economic conditions and requirements of the ever growing population belonging to the economically, politically weaker sections of the society.

7. There is always inadequate and insufficient municipal civic amenities which increase to the problems of the slum squatters and cause many other problems. In addition to the above mentioned the available municipal civic facilities are not properly maintained and not functioning at the appropriate time.

8. The high rents accompanied by the evil high rates of pagree (premium required to be paid to secure possession) in Chennai, have encouraged occupiers or owners even of average dwelling unit to part with portion of their buildings. These sub divisions of small dwelling units have further added to overcrowding and congestion.

Home is the place where people in general carry out the basic domestic and personal functions of family life. Physical and mental health, working efficiently, emotional security and social status are likely to be influenced by housing conditions. The dwelling is the oldest branch of building, from man's first crude solutions of his most pressing problems, protection from the elements, wild beasts and human enemies. Acquisition of suitable home is though, vital to the modern family, but an average family cannot do so merely on its own initiative. Thus housing is of direct significance to the community and the nation. No country in the world, developed or developing or under developed is able to

provide cheap and adequate accommodation to the man, which is very essential to eliminate the menace of slums. However, it will be too simplistic to say that slums owe their origin to the shortage of houses alone. They emerge, continue and grow because of serious imbalances in the social and economic set up. To control slums, we have to check these imbalances otherwise nothing substantial is likely to be achieved.

Like poverty, it may be that slums will always be with us, however energetic the local authorities may become in eliminating these. But it must not be forgotten that even the slum landlord of fiction has rights and owner of the slum or today is often a small man or woman depending on few rents for a livelihood just above social security level. Thus, slums are not a new phenomenon with the developed or developing or under developed countries. They have existed, are existing and will remain with us perhaps for quite a long time. The slums are the result of forces, events and deficiencies in our socio economic structure. Industrialization and urbanization especially in the development of secondary and tertiary sectors during the last three decades in India are equally responsible for the creation of slums.

Definition of Slums

The term slum is used in a loose sense to designate areas which are overcrowded dilapidated, faultily laid out and generally lacking in essential civic services. Slums have been defined as

poverty areas, run-down, overcrowded, inhabited by persons who are not acceptable in other areas, characterized by unsanitary surroundings, high death rate and high delinquency and crime rate. As it is generally known, there is no exact definition of the term slums available and even various writers on the subject differ on its fundamentals. From the available sources, it can be seen that a slum has got the characteristics like sub standard housing, thickly populated squalid part of the city, and over crowded neighbourhood inhabited by the poorest people. The Webster International Dictionary narrates slum as a thickly populated street or alley, especially one marked by squalor, wretched living conditions, or degradation of its inhabitants. The Encyclopedia of Colombia described slum as sub standard housing, especially in cities. Chamber's 20th Century Dictionary explains it as an overcrowded squalid neighbourhood. Oxford Dictionary defines slum as a street, alley, court, etc, situated in a crowded district of a town or city and inhabited by people of low classes or by the very poor, number of these streets or courts forming a thickly populated neighborhood or district where houses and conditions of life are of squalid and wretched character. Herbert J Gans in his book 'People and Plans' stated that the slum dwellings and the like may be defined as those which are proved to be physically, socially or emotionally harmful to their residents or to the community at large. On other hand, low rent dwellings and so forth provide housing and the necessary facilities which are not harmful to the people who want or for economic reasons must maintain, low rental payments and willing to accept

lack of modernity, high density, lack of privacy, stair climbing and other conveniences as alternative costs. According to AR Desai and S Devadas Pillai, slum offends the eyes, nose and conscience but it exists all the same. They narrated that the worst conditions occur when the physical slum is accompanied by overcrowding. The position has been explained in the Encyclopedia Britannica under the head of Slum Clearance as " Slums are residential areas that are physically and socially deteriorated and in which satisfactory family life is impossible. Bad housing is a major index of slum conditions. By bad housing is meant dwellings that have inadequate light and air and toilet and bathing facilities; that are in bad repair, dump and improperly heated; that do not afford opportunity for the family privacy; that are subject to fire hazard and that overcrowd the land, leaving no space for recreational use.

The definition and concepts of slum vary from country to country depending upon the socio economic conditions of the concerned nation. Irrespective of location, whether it is in the nodal point or in the heart portion of the city, in the form of old dilapidated structures or in the outskirts of the city in the form of squatting, slums often have been characterized;

1. Physically an area of the city with inadequate housing, deficient basic requirements, over crowding and congestion.

2. Socially, slum is a way of life, a special character which has its own set of norms and values reflected in poor sanitation, health values, health practices, deviant behaviors and social isolation.

3. Legally speaking, Section 3 of the Slums Areas (Improvement and Clearance Act), 1956 defines slums as areas where buildings-

   (1) are in respect unfit for human habitation.
   (2) Are by reason of dilapidation, overcrowding, faulty arrangement of streets, lack of ventilation, light or sanitation facilities or common combination of those factors, which are detrimental to safety, health and morals.

Thus, slum problem is not only a problem of shelter; it is a problem of health and hygiene. A number of widespread epidemic diseases emanate from the slums. These slums are not only a nuisance and danger to the slum dwellers but to the rest of the population. In the Encyclopedia of urban planning, the slum is defined as ‘ no precise definition is given in the dictionaries of the term Slum which is of comparatively modern origin (1812) possibly as a contraction of slum meaning to fall or since in a swamp or muddy place. A slum is usually understood to be an area of overcrowded squalid, closely built and unhygienic housing. Urban

slums rose in great numbers during the growth of industrial cities and towns in the 19th century. A legal definition is based on Marvin vs Housing Authority of Jackson Ville, which appeared in Corpus Juris Secundum and the same is reproduced as follows; " The word slum has a well defined meaning and is applicable to sections of almost every city or town proportions (Fla. Marvin vs Housing Authority of Jackson Ville). It is usually understood to mean a squalid, dirty street or quarter of a city, town or village ordinarily inhabited by the poor, destitute or criminal classes, with overcrowding as usually a prevailing characteristic. The word is comparatively recent and is of doubtful origin and it has been doubtfully connected with a dialectical use of the word slump in the sense of a marshy place. From the above-mentioned discussion on slums it appears that they stand for the wretched socio economic conditions of the city life of the people who are living in the filthy blight areas. The combination of words of ***SLUM*** appears to have unconsciously acquired the modified form of existing conditions in the abbreviated form if we take ***S*** for ***Shell, L*** for ***Languishing, U*** for ***Urban*** and ***M*** for ***Masses.*** Thus the word slum denotes ***Shell of Languishing Urban Masses***. This clearly narrates the natural condition prevalent in any slum area of the nation irrespective of developed or developing or under developed.

Characteristics of Slums

On the basis of observation from slums, we can outline its major characteristics, which are given below:

1. **Appearance:**

This may be called a universal mark of the slum; its aspect of neglect and disorder with respect to building, yards and streets. The appearance is generally one of dilapidated and old structures and a declining trend in respect of amenities.

2. **Economic Status:**

Generally, the people of the lowest income group inhabit a slum; although there may be occasional buildings of equally run down appearance inhabited by families that are not so poor. However, in general, poor people inhabit the slum.

3. **Over-crowding:**

We may find that the cluster is over crowded. Most of the buildings / tenements are crowded with the people. If the slum is retreating many buildings are unsafe for habitation, but there can be overcrowding in the building occupied. Uninhabited spaces are occupied by undesirable occupants and use it as junkyards.

4. **Population:**

In a slum of a heterogeneous occupancy many of the inhabitants are not welcome in other residential areas, or they cannot afford to live elsewhere. Thus, it may be a refuge area of the homeless, socially mal adjusted.

5. **Health and Sanitation:**

For understandable reasons when compared with other area of residence, the slum is characterized by low standards of sanitation. The slum is often most neglected by the public services for sanitation. For variety of reasons it may also be an area of high sickness and death rates.

6. Morals:

The slums may be an area of delinquency, crime but this is more likely to be true of the socially disorganized slum. While such a slum may not be the habitat of successful criminals, it may be the habitat of marginal types or the hiding place of fugitive criminals.

7. Way of Life:

Slums differ widely with respect to the social organization of their inhabitants. They range from the slums in which the inhabitants are strangers to one another and wish to be, to the family slum in which there is wide acquaintance between inhabitants.

8. Social Isolation:

Every residential area within the modern city tends to be socially isolated from others, partly by choice and partly by location, the slum is especially so. It is the area of lowest status inhabited by slum dwellers.

Thus, the overcrowding in the cities, extensive slums, broken homes, the frustration and despair of poverty, unfavourable conditions in home and neighbourhood, large number of immigrants, high rate of unemployment, low socio economic status and physical deterioration are the general characteristics of the cities and all these have combined to create the situation in the cities, in which a new inducement for crime and delinquency have risen. The common factors contributing to the creation of slums are manifold like, low wages and poverty preventing people from paying for decent dwellings; invasion of incompatible business and commerce in to residential areas leading to neglect of dwellings, unplanned growth of cities, lack of maintenance and enforcement of building codes of failure to prosecute for housing code violations; leniency towards the owners of dilapidated property in tax assessment, and low standards in remodelling old dwellings social or other restrictions limiting the location or quality of housing available to certain group; non adoption and non enforcement of regulations with respect to satisfaction and safety by municipal governments and finally human apathy towards menace of slums. Therefore, a slum is characterized by a place where basic necessities of life i.e. proper shelter, employment, health, sanitation, education facilities etc are absent. In south India especially in Chennai slums are often called cheris, which usually consists of mud wall and thatched roof. In India majority of the slum people exist in metro-cities.

Theories of Slums

Slum is a relative term and it differs from nation to nation. Since this is a grave social problem prevalent irrespective of developed or developing or under developed nations, different writers have put forth different versions on the subject. A. R. Desai and S. Devadas Pillai in their book entitled 'Slums and Urbanization' expressed following theories of slums;

1. The slum develops within the zone surrounding the central business districts.

2. The slum develops in to an area of high land values but cheap rents, a curious contradiction that results from the lands of being held ' in pawn' to so to speak on the assumption that the central business district will expand bringing in to the area of new business firms, manufacturing establishments and high priced rental units like hotels and apartment hotels.

3. A modification of this theory based on the city growth is that of the city pattern as a pie, divided in to wedge shaped sections. According to this theory industrial areas follow river valleys, water courses and rail road lines out from the center and working men's houses cluster along them with factories tending to locate even at the outer fringes of the city.

Durkheim was one of the initial writers to state clearly that urbanization inevitably results in a high rate of crime and juvenile delinquency and it has been validated by later research. Many sociologists and criminologists have agreed that the crime is much more commonly found in urban than rural environment. It is also agreed that large cities and big industrial or commercial centers have higher crime and juvenile delinquency rates than smaller more isolated and more stable communities. This superficiality, anonymity and transitory character of urban social relations make intelligible the sophistification and rationality of city dwellers. Thus, moral standard may possibly go down in the city and certainly many crimes are particularly associated with urban life. In a developing country like ours, the main problem is to provide houses for those who have no shelter at all. Next in order of priority will be those who are living in sub standard houses in slums. It is obligatory on the part of today's welfare state to provide houses the most vulnerable sections of our society and save the slum people from the indignation and protect human dignity.

Slums are described as the dark spots on our grossly over populated urban areas and treated as non-required element of the system. These are a menace to health and dignity of the human being. It has been rightly said that the slums offend the eyes, nose and conscience. Slums are generally infested with poverty and ignorance, which further accelerate the rate of crime particularly

amongst the delinquents. The blight and squalor areas affect the development and personality of most of the individuals and particularly the teenagers. The personality is the result of social relationship and the environment plays a major role in that. According to Sutherland, crime is always a personal situation complex. Personality traits and environmental surrounding play an important role. He further points out that criminal behavior is learnt in interaction with other people in the surrounding areas. M.A. Elliot also supports this view maintaining that criminal activity is behaviour, which occurs because of the stimulus to the individual, which his relationship to other people and the concerned group he is involved. According to them, association and environment play an important role in the causation of crime; undesirable environment cannot train the individual according to the accepted ways of society- on the contrary it teaches the anti social ways.

The poorest sections of the community generally inhabit slums and poverty is widely accepted as a general phenomenon and a potent cause of deviant behaviour. Most of the economists and sociologists agree that poverty is the cause of moral decay in our society. It may be defined as an income level, which is inadequate to maintain a decent standard of living as judged by the standards of the society. The famous revolutionist Karl Marx in his world-renowned book entitled *The Das Capital* has expressed the view that crime prostitution, vice and moral evils are primarily due to the above-mentioned reason, poverty. Inadequate, very low per

capita availability of living space in the existing living place and deplorable housing conditions have further accelerated causation of crime particularly amongst the delinquents. Marshall B Clinard has narrated as follows, ‘ a high incidence of deviant behavior of crime, juvenile delinquency, prostitution, drunkenness, drug usage, mental disorder, suicide, illegitimacy, family maladjustment, etc, have long been associated with slum living from the inception of slums in the world’.

On the contrary Clyde B Vedder and others, however do not agree with the theory of causal relationship between the high delinquency rate of slum areas and its neighbourhood. They however agree that neighbourhood characteristics are important to understand the high rate of delinquency. According to him there can be no doubt that neighbourhood characteristics are important for understanding the high delinquency rates of slum areas, but whether there is a casual relationship between these characteristics and delinquency remains as uncertain and vague’. These writers opined the fact that habitual type of crime flourishes in slums. The persons living in areas characterized by poverty, overcrowding, low rents, prevalence of vice, drinking, violence, commit crimes, which are more or less in harmony with habitual character of the persons guilty of these. George G Thompson is of the view that environmental opportunities for criminal action, and prevalence of environmental controls are the factors contributing to juvenile

delinquency. In crux, the following factors are responsible for the high rate of crime and delinquency;

1. Undesirable environments,
2. Ignorance and Poverty,
3. Broken Houses,
4. Inadequate and bad housing,
5. Overcrowding in the house,
6. Indiscipline and parental indifference thereto and
7. Absence of eternal and moral values.

In the urban life the above- mentioned factors play a vital role in accelerating the crime and also point towards characteristics of habitual crime. Overcrowding leads to rather results in, friction and psychological disorder and this makes people vulnerable to social conflicts. Lack of sanitation and inadequate civic basic facilities in the over crowded slum areas in majority of our metropolitan cities help the growth of flies, mosquitoes, bugs, pigs, mice, etc, which cause scores of diseases such as cholera, typhoid, malaria, tuberculosis, etc, to which infants and children are easy prey. In the congested and overcrowded areas people keeping rubbing shoulders with each other causing mental tension, which manifests in social tensions leading to riots and various other communal problems. We have been facing the problem of these due to the existence of large level of slum people in our metropolitan areas and are obeying and following the rules of high

rich and politically linked people in their surrounding areas. The urban population and slum population of India and Tamil Nadu during the last two-decades is presented in Table 5.1.

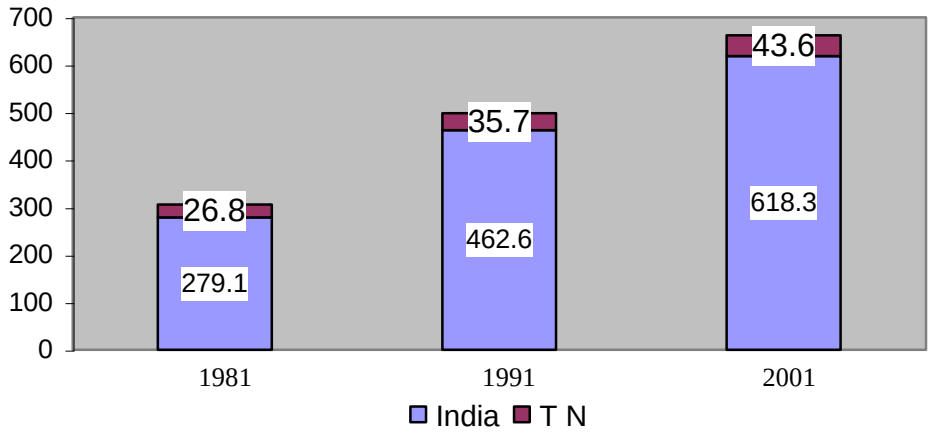
Table 5.1 Identified / Estimated & Slum Population in Urban India and Tamil Nadu during 1981-2001.

No.	Year	Population (Lakh)		Per cent
		Urban	Slum	
1	**India**			
	i. 1981	1594.6	279.1	17.5
	ii. 1991	2176.1	462.6	21.3
	iii. 2001	2909.4	618.3	21.3
2	**Tamil Nadu**			
	i. 1981	159.5	26.8	16.8
	ii. 1991	190.8	35.7	18.7
	iii. 2001	233.1	43.6	18.7

Source:- Compendium of Environment Statistics, 2001.

It may be inferred from table 5.1 that more than 8 per cent of the urban population of India was staying in Tamil Nadu during 2001. During the same period 7.1 per cent of the total slum population of urban India was also staying in Tamil Nadu. In India 21.3 per cent of the total urban population was identified as slum population during the year 2001. While its percentage in Tamil Nadu was less than that of the national level at 2.6 per cent during the same period. The information regarding slum population in urban India and urban Tamil Nadu during the last two decades is depicted in Figure 5.1.

Figure 5.1 Urban Slum Population in India and Tamil Nadu During 1981- 2001 (lakh).



The annual growth rate of slum population of urban India was higher than that of Tamil Nadu by nearly 3 per cent during the last two decades covered under the study. In all the period covered under the study the growth rate of slum population of Urban India was higher than that of Tamil Nadu. During 1981-91 national growth rate of slum population was higher than the slum population in Tamil Nadu by 3.25 per cent, in 1991 – 2001 by 1.16 per cent respectively. The higher rate of growth of slum population in urban India was due to the inclusion of mega cities population especially from Mumbai, Delhi and Kolkatta. The information regarding the growth rate of urban slum population in India and Tamil Nadu during 1981-2001 is presented in Table 5.2.

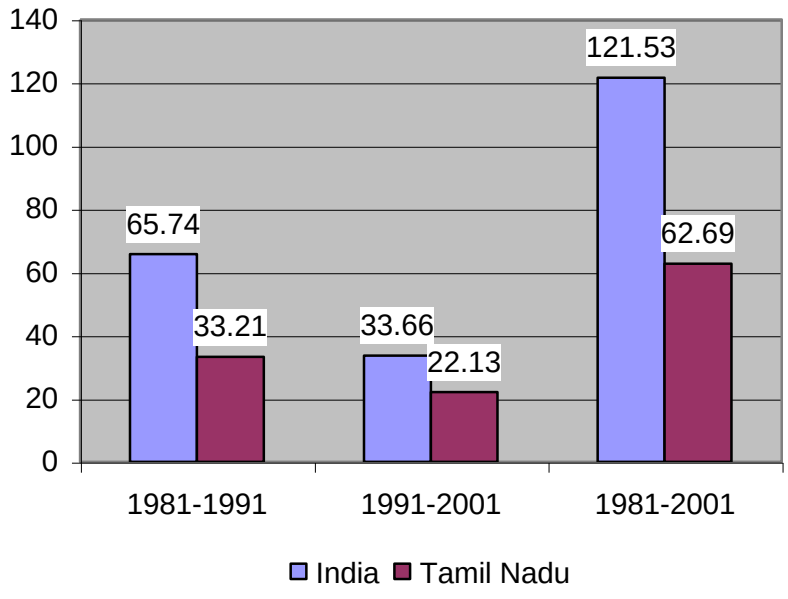
Table 5.2 Growth Rate of Urban Slum Population in India and Tamil Nadu During 1981-2001.

No.	Years	India	Tamil Nadu
1.	1981-1991	65.74	33.21
2.	1991-2001	33.66	22.13
3.	1981-2001	121.53	62.69

Source: Compendium of Environment Statistics, 2001.

The growth rate of urban slum population in India and Tamil Nadu during the last three decades is depicted in Figure 5.2

Figure 5.2 Growth Rate of Slum Population in Urban India and Tamil Nadu 1981-2001.



The higher growth rate of slum population in urban India as compared with Tamil Nadu may be due to the high rate of natural population in other metropolitan cities, the higher level of development in industrial and other service sectors in other parts of India as compared with Tamil Nadu, which was the main cause of providing higher level of employment opportunities especially the increasing level of migrated population including skilled, semi-skilled and unskilled workers. Once a migrant reaches in urban area then after some time his family and his family members as well as friends move from their native places mainly in remote areas and other semi urban areas to urban areas mainly searching for employment opportunities. Various other reasons are also found in the movement of people from their native places to the urban areas mainly for social causes like marriages and other social ties, etc,. Census of India classified cities in to three main categories namely class I, II and others respectively. The class I cities having population more than one lakh, Class II cities having population in between 50000 and one lakh and other cities having less than 50000 population. The information regarding the class-wise classification of cities in Tamil Nadu and slum population regarding the above-mentioned classified cities is available for the year 1991. The slum population of the Tamil Nadu on the basis of the class-wise classification of cities during the year 1991 is presented in Table 5.3.

Table 5.3 Slum population of Tamil Nadu in 1991 (Class-wise)

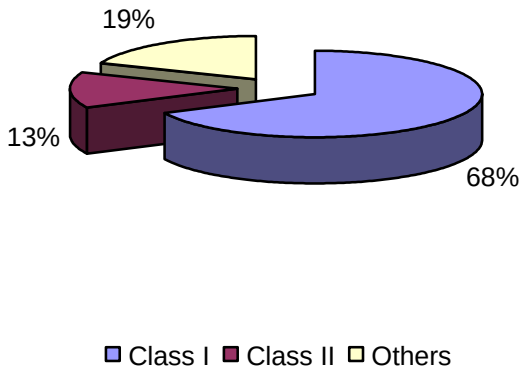
No	Classification of Cities	Percentage Distribution
1	Class I	67.8
2	Class II	13.2
3	Others	19.0
	Total	100.0

Source: Compendium of Environment Statistics, 2001

As the general notion is that more number of the cities on the basis of above-mentioned classification is on the first group namely class I cities, the slum population is also higher in class I cities. It may be inferred from Table 5.3 that more than two third of the slum population in Tamil Nadu during the year 1991 was in the first category of cities Viz. Class I. The contribution of slum population of class II cities is least among categories covered under the study at 13.2 per cent. While the other category contributes slightly higher than second category of cities at 5.8 per cent. This table clearly indicated the fact that the higher level of participation of slum population is present in class I category, there is a vast scope of employment especially in the informal sector which will not provide employment opportunities as like main workers as classified on the basis of Census of India i.e. one worker got employment opportunities more than 180 days in an year. The information regarding the slum population in Tamil Nadu during the

year 1991 on the basis of class-wise classification of cities is depicted in the Figure 5.3.

Figure 5.3 Slum Population in TN by Class-wise Cities in 1991.



The role of elected municipal governments for providing adequate basic amenities to their citizens is one of the main duties that were clearly envisaged in the 74th Amendment of 1992. The other important duties of the local municipal governments are improvement of slums, upgradation of the existing slums, reduction of poverty, providing training facilities for attaining employment opportunities to the young generation etc. All these can be best handled by municipal level authorities through requiring local knowledge active participation of local communities, the functions

redistribute in natural need support from the union and state governments. As far as slum improvement programmes, as well as upgradation of the existing slums are concerned the role of central government is very limited. During the fifth plan, the central government has introduced central sponsored schemes, later it transferred it to state list. The experience of the state governments show the fact that majority of the state governments have not been able to provide sufficient fund for the development of slums. The introduction of the 74th Amendment and considering the deep deteriorative condition of the slums, the slum population had increased in most of the states, it is considered appropriate that government may introduce some new policies for the development of slums.

The main factors behind the high rate of growth of slums in cities are low wage level, poverty, unplanned city growth and its planning, lack of all basic facilities, lack of maintenance of existing facilities at the appropriate time, misuse of existing facilities by a limited group of persons etc. These in turn will create number of problems such as environmental problems, especially pollution in air and water, various social disorders, unhygienic living conditions etc. The latest crime report in India shows the fact that majority of the crimes in urban areas are either directly or indirectly linked with slum population. Majority of the male population in slums have a habit of smoking, drinking, snatching, gambling, lazy for working etc. leading to anti-social elements in the system. Actually, female

members of the family manage the household functions of the house. They are mainly involved in household activities of neighbouring and high-income groups. Children in these slums are compelled to rag-picking some items for maintaining their own house. The information regarding slum population in Tamil Nadu and Chennai during the last two decades is presented in Table 5.4.

Table 5.4 Estimated Population & Slum Population in Tamil Nadu and Chennai During 1981-2001.

No.	Year	Population (Lakh)					
		Total			Slum		
		T.N.	Chennai U.A.	%	T.N.	Chennai U.A.	%
1.	1981	159.5	42.9	26.90	26.8	13.8	51.49
2.	1991	190.8	54.2	28.41	35.7	15.3	42.86
3.	2001	233.1	69.8	29.94	43.6	19.6	44.95

Source: Compendium of Environment Statistics, 2001

It may be observed from Table 5.4 that near about 30 per cent of the urban population of Tamil Nadu was staying in Chennai UA during the year 2001. The percentage of Chennai U.A. population to Tamil Nadu population has increased steadily from 26.9 in 1981 to 29.9 in 2001. The other interesting fact is that more than one half of the Tamil Nadu's slum population was living in Chennai UA alone during the year 1981, reduced to 45 per cent during the year 2001. The main reason behind the high rate of concentration of slum population as well as urban population in Chennai UA may be due to the concentration of various small,

medium and large scale industries, expansion of tertiary sector, informal sector activities, etc. During the last two decades some industrial activities also started in some other cities in Tamil Nadu like Coimbatore, Salem, Madurai etc. More over, people have the feeling that cost of living in Chennai is high and they can not afford to stick on there with their limited resources. The growth rate of slum population in Tamil Nadu and Chennai UA during the last two decades is presented in Table 5.5.

Table 5.5 Growth Rates of Urban Slum Population in Tamil Nadu and Chennai UA During 1981-2001.

(Per cent)

No.	Years	Tamil Nadu	Chennai UA
1.	1981-91	33.21	10.87
2.	1991-2001	22.13	28.10
3.	1981-2001	62.69	42.03

Source: Compendium of Environment Statistics, 2001.

It may be inferred from Table 5.5 that the growth rate of slum population in Chennai UA was lesser than Tamil Nadu during the last two decades covered under the study, which was observed at 1.03 per cent. The higher rates of slum population in Tamil Nadu during the last two decades may be due to the concentration of people in other metros especially in Coimbatore, Salem, Erode, Trichy and Madurai. In these cities, the higher concentration of industrial activities especially in textile, software and IT industries and informal sector activities invited migration of people from rural

areas to urban centers for employment opportunities. This in turn will lead to extend slum population in these cities. While in Chennai UA the opportunity for employment during the last two decades was limited, the higher cost of living compelled poor people from Chennai to other developing cities in Tamil Nadu. The slum population in Chennai UA during the last two decades and growth rates of slum population in urban Tamil Nadu and Chennai UA are depicted in Figure 5.4 and Figure 5.5 respectively.

Figure 5.4 Slum Population in Chennai UA : 1981 – 2001.

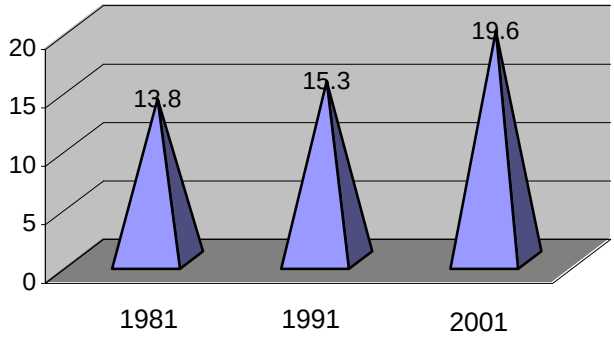
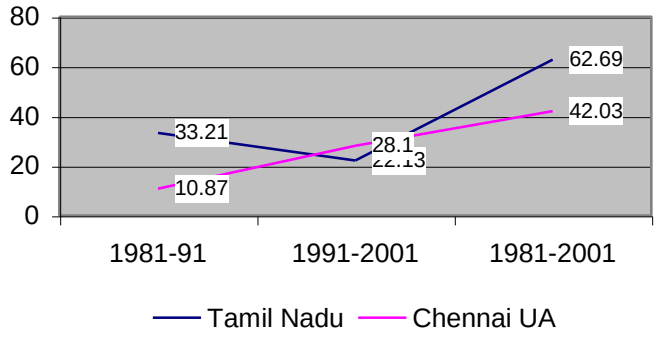


Figure 5.5 Growth Rates of Slum Population in Tamil Nadu and Chennai UA : 1981-2001.



In 1993, National Sample Survey Organization under the Ministry of Statistics and Programme Implementation conducted a survey regarding the basic services in urban slums in India. The following table clearly narrates the distribution of urban slums on the basis of basic services in Tamil Nadu and India during 1993.

Table 5.6 Distribution of Urban Slums by Basic Services in Tamil Nadu and India – 1993.

(Per cent)

No.	Basic Facilities	Tamil Nadu	India
1.	Safe Drinking Water	73.0	91.5
2.	Electricity	31.9	26.1
3.	Toilet	16.9	45.2

Sources: 1. Compendium of Environment Statistics, 2001.
2. Report No. 147, NSSO, 49th Round, 1993.

It may be observed from the Table 5.6 that Tamil Nadu has less safe drinking water than the nation, at 18.5 per cent. Only in the case of electricity covered under the basic facilities in the study Tamil Nadu is better than the nation, constituting a higher of nearly 6 per cent. In the case of toilet facility Tamil Nadu has worse condition as compared to the India. It was lesser than the national level by more than 28 per cent. This clearly indicates the fact that Tamil Nadu has need to improve the facilities of potable water and toilet facilities because the state is lacking these facilities as compared with other developing states in the southern region in India. The low level of basic infrastructure in Tamil Nadu may be due to various reasons like slow process of implementing various programmes of both central and state governments, absence or

less level of assistance as compared with other municipal towns in southern states in India, absence of trained personnel for handling the programme implementation, monitoring and evaluation, lesser level of required infrastructure facilities etc. The information regarding households living in slums and their proportion living in kutcha houses in urban India, Tamil Nadu and Chennai is presented in Table 5.7.

Table 5.7 Households in Slums and Their Proportion in Living Kutcha Houses in Urban India, Tamil Nadu and Chennai UA.

No.	Details	Per cent		
		India	Tamil Nadu	Chennai
1.	Households Living in Slums	26.34	9.23	15.28
2.	Slum Dwellers Living in Kutcha Houses	88.07	5.43	10.18

***Source: Handbook of Housing Statistics, NBO, 1996*.**

It may be inferred from Table 5.7 that Tamil Nadu and Chennai had less households living in slums than in urban India. In comparison with Tamil Nadu, Chennai had more households living in slums and it was calculated at more than 6 per cent. The reason behind this high composition of households living in slums in Chennai may be due to the earlier development especially in peripheral areas and in the employment opportunities in informal sector. In urban India near about 90 per cent of the slum households were living in kutcha houses while in Tamil Nadu it was very less at 5.43 per cent and in Chennai at 10.2 per cent

respectively. Majority of the slum households in Tamil Nadu as well as Chennai were living in kutcha houses as per the classification given by the Census of India. The percentage distribution of urban slum households in Tamil Nadu and Chennai by type of structure is presented in Table 5.8.

Table 5.8 Distribution of Urban Slum Households in T.N. and Chennai by Type of Structure.

No.	Structure of House	Per cent	
		Tamil Nadu	**Chennai**
1.	Pucca Houses	2.03	3.70
2.	Semi-Pucca Houses	1.77	1.40
3.	Kutcha Houses	5.43	10.18
	Total	**9.23**	**15.28**

***Source: Handbook of Housing Statistics, NBO, 1996*.**

It may be observed from Table 5.8 that a good composition of slum households in Tamil Nadu and Chennai are staying in kutcha type of houses, constituting 5.43 per cent and 10.18 per cent respectively. Of this majority of the structure of kutcha houses need newly built houses because these are very dangerous for living as per the living conditions of the concerned area. Compared with urban Tamil Nadu, Chennai had more pucca and kutcha houses in slum areas and it was worked out at 1.67 per cent and 4.75 per cent respectively. While the case of semi pucca house Chennai and Urban Tamil Nadu had more or less same proportion.

The information regarding urban slum and non-slum households in Chennai on the basis of drainage system is presented in Table 5.9.

Table 5.9 Distribution of Slum & Non-Slum Households in Chennai on the Basis of Drainage System

No.	Drainage System	Per cent		
		Slum	Non-Slum	Total
1.	No Drainage	12.18	14.57	26.75
2.	Open Kutcha / Pucca Drainage	1.43	13.12	14.55
3.	Covered / Underground	1.67	57.03	58.70
	Total	**15.28**	**84.72**	**100.00**

***Source: Handbook of Housing Statistics, NBO, 1996*.**

It may be observed from Table that 27 per cent of the households in Chennai had no drainage system. Majority of the households in Chennai had covered / underground drainage system and it was calculated at near about three fifth of the total households while it was constituted only 1.67 per cent of household in slum areas. Open kutcha / pucca drainage was constituted at 1.43 per cent and 13.12 per cent of households in slum and non-slum area of Chennai respectively and totalled to 14.55 per cent.

Tamil Nadu is one of the fast growing urbanized states in the Indian union. The concentration of economic activities especially in service sector attract the people from different parts of the nation to the urbanized areas for employment, livelihood etc. Tamil Nadu Slum Clearance Board was earmarked for the development of slums and its activities primarily confined to earlier Madras city

only. Now it has been extended to all corporations and census towns in Tamil Nadu in a phased manner. The main policies regarding the development of slums as prescribed by TNSCB is presented below:

Policy on Slums

1. The slums located in congested unhygienic areas of the urban areas wherein equitable distribution of space is not feasible shall be cleared and tenement schemes put up.
2. Wherever in-situ development is feasible, such slums be identified and taken up for in-situ improvement for the provision of basic facilities to make the areas habitable.
3. Wherever neither tenement scheme nor in-situ development is feasible, rehabilitation & resettlement in tenements in nearby locations be followed.

Since the inception of Slum Clearance Board, upto 31st March 2004 it constructed 69126 storeyed tenements at the cost of Rs. 264.09 crore. The information regarding the number of tenements constructed in Tamil Nadu and Chennai is presented in Table 5.10.

Table 5.10 Tenements Constructed by T.N. Slum Clearance Board.

No.	Area	Number
1.	Chennai	61396
2.	Others	7730
3.	Tamil Nadu	69126

Source: Tamil Nadu Slum Clearance Board, Programmes for 2004-05

It may be observed from Table 5.10 that near about 90 per cent of the number of tenements constructed for slum households in Tamil Nadu since the inception of Tamil Nadu Slum Clearance Board (TNSCB) was in Chennai only. TNSCB has availed special problem grant during the 11th Finance Commission of Government of India for relocation of Slum Families living in objectionable areas in Tamil Nadu including Chennai. The status of progress of the special problem grants for relocation of slum families in Tamil Nadu – Chennai is presented in Table 5.11.

Table 5.11 Status of Special Problem Grants for Resettlement of Slums in Tamil Nadu & Chennai

No	Area	No. of Tenements/Houses			Outlay (Rs.Crore)	Expenditure (Rs.Crore)
		Total	Completed	Progress		
1	Chennai	3252	3054	198	35.25	34.200
2	Others	1832	1530	302	13.75	11.075
	Total	**5084**	**4584**	**500**	**49.00**	**45.275**

Source: Tamil Nadu Slum Clearance Board, Programmes for 2004-05.

It may be observed from Table 5.11 that a good per cent (66.6 per cent) of the completed tenements in Tamil Nadu was in Chennai only. Likewise, good percentage of the total outlay targeted and the expense for resettlement of slums in Tamil Nadu was in Chennai constituting 72 per cent and 76 per cent respectively.

TNSCB and Public Works Department have jointly identified 33313 families living on river margins and 8164 families squatting on the river margins in Chennai to be shifted to facilitate the immediate desilting operation by PWD under flood alleviation programme. It is proposed to resettle these slum families in multi storeyed tenements in nearby places. In order to settle the other slum families on the river margins and posing hindrance to the immediate desilting operation, TNSCB has been constructing tenements at a total cost of Rs. 67.13 crore.

Basic poverty, which demonstrates itself in low income, inadequate nutrition, and all other basic amenities, infrastructure limited or no education, low skills and inadequate income for maintaining the decent standard of living. Environmental poverty manifesting itself through inadequate services and housing, overcrowding, pollution, exposure of various diseases, low productivity, low income, inability to pay for basic services housing etc. These factors reflect insecurity, stress, depression, defiant social behaviour, no imagination, aspiration, low confidence, lack of opportunity to demonstrate one's efficiency and gained low income and consequently inability to insure the security of the family.

The urban poor has become an inevitable concommitant of the development path of many countries including India, have chosen or have been forced to choose. The poor in urban areas not only prop up the economy, but they also help the city

governments make services economical because the poor offer their labour at a very nominal rate. Imagine the city without the poor malnourished loader, the scavenger and the conservancy labour. Economically speaking, the urban poor makes the city living affordable and less costly than it would be. But seldom do the not so poor care to help them to make their living affordable. In order to be more meaningful, objectives and goals must be translated into day-to-day practice in conjunction with the people facing problems. That requires both dedication and sacrifice on the part of city government and its staff and of the non-governmental organizations, self help groups and volunteers and whose support is so essential in any effort to reach the un-reached.

Conclusion

In slum clusters huge number of squatters deal in collecting and trading of inflammable items, which may cause a fire hazard thus affecting the safety of the inhabitants and neighborhood population especially during summer period.

The area is prone to mishap during the monsoon season when the storm water mixed with over flow of sewer may cause spread of epidemic, pollution of water and spread of disease keeping in view the slums squatters in question. It is quite apparent that the in situ up gradation is not feasible at the existing sites due to their high density and locational hazards. The only course left to

the land owning agency is to relocate them to safer areas with adequate physical and social infrastructure.

The dominant discourse portrayed the slum population mainly as a problem and not as a resource for environmental management and city development. The concerns of the slum dwellers, their poverty and livelihood problems were excluded from the center stages of the discourse, except in political rhetoric. Few government efforts reached the slum dwellers in a positive manner. Strategies for slum development were made to correspond to a generalized image of the slums and their role in the city development, while aspects of the slums, which did not correspond to this stereotype image or other sub discourse, were suppressed. The diversity and dynamics of the evolving slum societies were underplayed and neglected.

If accepted that the stereotype and dominant image of slum dwellers characterized in this chapter reflected the real nature of local dynamics nor captured well the causes and effects of urban environmental degradation, more empirical research would be needed to understand who the slum dwellers really are, what diversity of interests and capacity they possess, and how they could become engaged in formulating alternative urban strategies. Through recent public consultations organized by some research institutions, NGOs in collaboration with the government bodies, new empirical findings have been brought to the attention of a variety of

stakeholders, finding that provide a more diverse, realistic and positive image of the slum dwellers.

Such changes in images are today increasingly reflected in more positive attitude to slum rehabilitation. By the local government accepting to take responsibility for slum upgrading, more positive attitude are likely to emerge since the aim would now be to build on whatever capacity the slum dwellers have and what the local resources are available. The new agenda for urban politics, as promoted by civil society groups and critical researchers, it is precisely to move issue of poverty empowerment of slum dwellers and partnerships between city government and the people to the center stage of urban politics – and thereby create a new dominant discourse.

Public debate is essential for effective transformation of the slums discourse and adoption of alternatives and more fruitful perspective by the parties concerned. A combination of research, advocacy and public reform might be needed to promote greater pluralism in the discourse. Empirical research and along these lines would require more than a simple analysis of the discourse – understood as an analysis of the confrontation between constructed ideas and images. It would require an understanding of the variety of social and institutional stakeholders concerned, their views, interest and influence, and specific outcome of their interaction with each other and the government. It would require a focus on

historical events and processes, open public debate – informed by empirical research - is a necessary condition for the emergence of good government policies and practice based, less on ideology constructed myths and more on empirical realities.

Trends in Land Prices in Chennai 6

Population and economic growth do not take place in thin air; they require land and lots of it. Cities in developing countries are facing serious challenges as they attempt to cope with the population growth. In most cases, public policies have been launched to relive the symptoms of poor urban land and housing market performance. Public Housing Authorities have been set up and multi-national agencies have invested heavily in new programmes as a part of national economic development planning. Nevertheless, urban development is overwhelming the capacity of local institutions, both private and public and joint venture, to respond adequately to development pressure. As a result, the policy makers of the entire world are asking questions such as; will there be enough land to support urban development? If not, how can the government mobilize the resources to finance the concession of various infrastructures? Is the land market operating efficiently? Will the prevailing patterns of population and housing density continue into the future or there are alternatives to urban development that require less land? How can agricultural land surrounding the cities be preserved without driving the price of land beyond the reach of low – and middle-income peoples? Should the government attempt to aggressively control land development?

Against the backdrop of rapid economic growth and questions mentioned above, policy makers are beginning to recognize that efficient land market operation is essential to maximize the potential delivery of affordable housing for all sections of the society. There are two impediments to this. One is the absence of a workable model with which to understand the land market. The other is the lack of accurate and up-to-date information about the growth of the city. No one exactly knows the price of land across the city, how far infrastructure or regularization of tenure change land prices, or how much revenue of the government could be raised from more efficient land taxation system. In the absence of such knowledge the assumed existence of a land price – spiral in many developing nations is based on perceived price changes often informed by the reports in the transactions at the urban periphery or in the city entire.

Dowall, D.E. in his article entitled “Land Market Assessment, a New Tool for Urban Management” in 1991 mentioned, the Land Market Assessment technique (LMA). This is a technique structured survey and analytical protocol that collects, organizes and analyses the information about the local land market operations. It incorporates surveys over time of land use and urban development patterns, land prices and housing developments. It assumes that the land market is fundamentally a competitive mechanism for distributing land. Competition among users sets prices and determines the use of land. The market operates to

allocate land on the basis of price; the potential user capable of paying the highest price will occupy it. Collecting and disseminating the information about the land market will make the market more efficient bringing faster market operation, reducing risk to developers and balancing the profits.

The main benefits of LMA are, to provide an accurate and up-to-date data base on the operation of urban land market in terms of prices, supply of serviced land and present and projected projects, it can lastly improve the quality of land development planning and policy making by providing public officials with the basic assessments of the state of the land market, it also be used to provide baseline estimates of future urban land requirements, used to evaluate the economic and fiscal impacts of government policies and actions, etc.

Research on urban land prices changes in developing nations involves heterogeneous data sources. Over all, there is a lack of uniformity in data, time series data sources that has contributed to lack of comparatively between studies. As it is frequently the case that the availability of data sources has informed the methodology applied in land price research, one must examine more closely than hitherto the relative utility of major data sources available in the country. Such an exploratory analysis and diagnosis of each data source would give us an opportunity to rule out or accept certain data points in urban land price research.

Without this, one takes a common platform where one can globally compare the findings of one study with another. This leads to assertions and wide scale generalizations such as that “land prices are increasing rapidly “or “sky rocketing”, or anecdotal assertions based on isolated, highly selective cases that may not be corroborated once analyzed empirically.

A thoughtful analysis of the land registration data source is urgently required, especially when the economy opens for globalization or international agencies such as UNDP, World Bank, UNCHS showing a considerable concern to expand the tools for land and housing market management in developing nations of the world. There is already considerable concern that the new conventional wisdom emanating from, above all, the World bank stresses the desirability of the Third World governments considering land prices as surrogates for land prices in order that governments can then recoup service provision costs by clawing back a proportion of land price change. Here, Indian data questions the applicability of associating registered land prices with some notion of land price.

The advantage in collecting these data is that they provide information about land price changes that occur at the citywide level rather than simply explaining prices for very recent divisions or subdivisions at the periphery. As land registration data are available throughout cities in developing nations of the world, one is dealing

with an important potential data source. However, no study completed on the national level, covering most of the metropolitan cities in India so far has been attempted to explore its potential.

The United Nations Global Strategy for Shelter in the year 2000 mentions that the greatest failure of developing countries in the housing sector has been their inability to stimulate an adequate supply of affordable and serviced land in most of the developing nations in the world. This and similar argument form part of a considerable debate that centers on whether the urban poor have less access to land today than in the past. This clearly showed the fact that the price of land considerably increased.

Information for Public, Private and Joint Sector Investment & Development Decisions

Unlike stock, bond and commodity markets around the globe, land markets are disorganized. There is no central clearing house for information about the land prices, land conversion, transaction and the demand for land. Most of the private sector land developers must take substantial economic risk when launching their projects. Unfortunately the lack of information about land and property markets in most of the cities in the developing nations has thwarted attempts by private sector developers, bankers, joint ventures, multinational and consultants to prepare feasibility studies of potential projects.

The level of housing or property demanded in the markets can be determined by the rate of sales of housing units or commercial units over the past year. This level of absorption will suggest that so many housing units or square meters of office or commercial space can be sold in the marketplace over the next year. If the current level of units available for sale in the market exceeds a full year's amount of absorption, then the market may be oversupplied.

Land Market Assessment can play a critical role in helping to inform private investment decision-making. For instance by illustrating the effective demand for low and moderate cost housing, land market assessment can help to stimulate the production of such units by the private or joint venture. On the other hand, it can identify when the production of certain urban uses far exceeds effective demand, thus helping to bring about faster land market corrections. In the long run, with the improved information about the market, the risk associated with the development is reduced and developers may be able to operate with lower rate of profits.

Surveys of residential and commercial property development projects can be used by developers to gauge the current level of supply by geographic area. If detailed project level information is gathered on the types of housing or product types currently for sale and tabulated by price and location, private as well as public

developers can compare the current level of supply with the demand to determine whether an additional project is feasible.

Land Management

Land management is the process where the resources of land are effectively utilized. The term of land is defined in various ways. For the geographer it is a landscape, the product of geomorphologic and geological process. For economists, it is a resource, which along with capital and labour is to be exploited and conserved in order to achieve the maximum possible development. For lawyers, land is a volume of space stretching notionally from the center of the earth to the infinite in the sky and associated with it are a variety of rights what may be done with it. For a common man it is simply a space for human activity as reflected in many different forms of land use. It includes all the materials, biological and chemical factors which surround human kind and which constitute in the complex ecological system called biosphere. It is thus," the air we breath, water we drink, and use for recreation; the land we cultivate, mine and build on; cities we flock on to in the growing numbers; and the wilderness we seek to enjoy today and preserve for future generation."

The land management entails the decision-making and implementation of decision about land. The land resources are fixed in character and carefully managed if waste is to be completely avoided. It covers the land resources allocated over a

space and time according to the demands, thinking habits of the people, aspirations, desire of man within the framework of technological inventiveness, political and social institutions and legal and administrative set up. It mainly covers the following matters such as:

a. Property conveyancing including decisions on mortgages and investment.
b. Property assessment and valuation.
c. The development and management of utility and services.
d. The management of land resources, such as soils, forests, agricultural land etc;
e. The information and implementation of land use policies.
f. Environmental impact assessment and
g. The monitoring of all land based activities in so far as they affect the best use of land.

Factors Determining Land Prices

The following factors determine the land price of urban area of any country. They are:

1. **Locational Advantage:** Whether the particular land is adjacent to the main road or other important roads, near to the public utility places constructed by the urban local bodies,/ development authorities / municipal corporations at the government cost of the public exchequer.

2. **Land Use:** The value of land significantly increases as the land use assigned to a parcel of land in the plan changes from low importance to a higher importance like from public street or park and open space to a institutional or commercial or official etc. The land owners thus benefit or suffer from the somewhat artificially determined and externally imposed factors by which they are bound even without there will.
3. **Amenities:** The cost of the land changes from the provision of infrastructural facilities by the urban local bodies / urban developmental authorities or other service providing agencies in terms of facilities like road, transport, communication, water supply, sanitation, electricity, power etc.
4. **Inherent Value:** It is related to the build ability of building potential of the land in an urban area.
5. **Floor Area Ratio (FAR):** It is an important factor determining the market value of any land. For example, if the planning authority increases the FAR, the market value of the land almost doubles; if it is increased three times, the market value also trebles and so on. The owners of the land have no contribution, whatsoever, that would justify there appropriating all the benefits arising from the enhancement of FAR for themselves.
6. **Speculation:** Generally it is called scarcity value. Whenever the demand is higher than the supply,

speculation arises. The fast rate of growth of population and the development in urban areas leads to a migratory movement of people from rural areas to cities, the demand for serviced land perpetually out strips its supply leading to ever rising price of land. Whenever there is a scarcity, there is a speculation and therefore, it would not be incorrect to conclude that urban land prices include high degrees of speculative factor.

7. **Black Market:** There is no secret that black market value of any piece of urban land is far more than its value in the legal market, mainly for exemption of stamp duty, income, wealth and other taxes. There is thus, a significant black market component attached to the market value of urban land, as specified in the documents in the records of sale transaction.
8. **Changes in Interest Rate:** Decline in the interest rate in the formal banking system is also another important factor for changes the price of land. It is an inverse relation, that is, decline in the interest rate in the banking system leads to enhancement of investment in real estates and which in turn increases the price of land and vice-versa.
9. **Recent Development of Service Sector:** The rapid growth of Information Technology (IT), Information Technology Enabled Services (ITES), Business Process Outsourcing (BPO), Foreign Direct Investment and other service industries handled by the multinational companies

requiring lot of space in the urban area. These companies are purchasing the land at a higher rate than the market forces of demand and supply of land. This in turn leads to increase in the price of land.

Thus number of factors influences the price of urban land. In order to understand the causes as well as providing urban residential land or residence especially to the weaker sections of the society, the policy makers as well as social scientists need to know the average land prices of any area. In this condition, Industrial and Economic Planning Division of the Town and Country Planning Organisation under the Ministry of Urban Development, Government of India has undertaken a study based on random sample survey, with the series of discussions and interactions with the officials at the center, state and local governments, researchers, academicians, non-governmental organisations, self help groups, consultants, property developers, real estate agents, etc. The available information mentioned in this report exhibits both minimum and maximum dealt with prevailing market trend. The maximum and minimum land prices have been culled out on the basis of the locational advantage or disadvantage of any particular locality. But the land value in the particular locality was within the price-range. The market value of land in Chennai was collected from the renowned real estate agents and property developers with the active co-operation of state government officials. The whole area of Chennai was categorized in to four zones, namely central,

north, south and west. The information for the study of urban residential land has been collected from 69 localities spread over the whole city. It covers both minimum and maximum land prices, residential land for the last six years from 1999 to 2004. The zone-wise distribution sample localities in Chennai is presented in Table 6.1.

Table 6.1: Zone-wise Distribution Sample Localities in Chennai

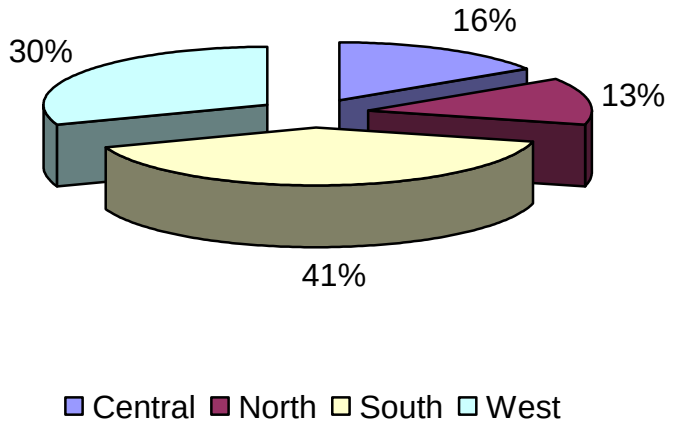
No	Zones	No. of Localities	Per cent
1.	Central	11	15.94
2.	North	9	13.04
3.	South	28	40.58
4.	West	21	30.44
Total		**69**	**100.00**

Source :- Primary Survey, 2005.

As is evident from Table 6.1 the highest number of localities in the sample was found in the southern zone of Chennai and it constituted more than two fifth of the total sample. The second highest number of localities in the sample study was found in the western zone of Chennai constituting 30.4 per cent of the total sample. The lowest number of localities in the sample was found in the northern zone of Chennai and its percentage was only 13 per cent. As general notion is that most of the urban areas of the developing nations the central area is mostly covered with business, office and other commercial activities. Very few residential areas are available in the central zone. Chennai is also having the same trend. In this study we collected the residential

land price of 11 localities in the central zone of Chennai. The zone-wise distribution of sample localities in Chennai is depicted in Figure 6.1.

Figure 6.1 Zone-wise Sample Localities in Chennai.



The information regarding urban residential land price in Chennai was derived in units of Rupees per square feet. The average residential land price of Chennai during the last six years, 1999 – 2004 and its growth is presented in Table 6.2.

Table 6.2: Market Value of Residential Land and its Growth in Chennai: 1999-2004

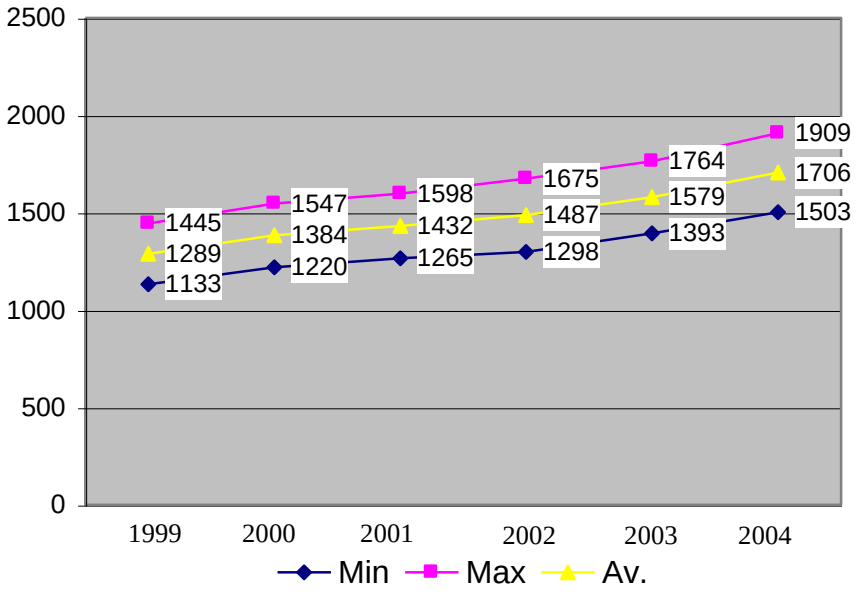
No	Years	Land Value (Rs/Sq.ft)			Growth (%)		
		Min	Max	Av.	Min	Max	Av.
1	1999	1133	1445	1289	-	-	-
2	2000	1220	1547	1384	7.68	7.06	7.37
3	2001	1265	1598	1432	3.69	3.30	3.47
4	2002	1298	1675	1487	2.61	4.82	3.84
5.	2003	1393	1764	1579	7.32	5.31	6.19
6.	2004	1503	1909	1706	7.90	8.22	8.04
					*32.66	*32.11	*32.35

Source:- Primary Survey, 2005.
**** means percentage change 1999-2004.***

As is evident from Table 6.2 that the average market value of urban residential land during the year 2004 was observed at Rs. 1706 per sq.ft and this was in the range, minimum of Rs. 1503 per sq.ft and maximum at Rs.1909 per sq.ft. The same during the initial period covered under the study was Rs. 1289 per sq.ft as average, Rs. 1133 per sq.ft and Rs. 1445 per sq.ft minimum and maximum price respectively. The average market value of urban residential land in Chennai during the last six years increased at annual rate of 5.39 per cent. The percentage growth of the minimum value outweighs the maximum and the difference was observed at a very less, 0.09 per cent per annum. The minimum price of land is always increasing as compared with the maximum land price, is a general phenomenon found in all the developing cities on the globe. The highest growth of the average market price

of land was observed during the last year covered under the study ie. 2003-04 at 8.04 per cent the second and third highest growth of the average market value of land was observed during 1999-2000 and 2002-03 at 7.37 per cent and 6.19 per cent respectively. In all the periods covered under the study, market price of urban residential land showed positive trend. Comparatively lesser growth of market value of urban residential land was observed during the middle period. The graphical representation of market value of urban residential land both minimum and maximum in Chennai during 1999-2004 is depicted in Figure 6.2.

Figure 6.2: Market Value of urban Residential Land in Chennai: 1999-2004.



Information regarding the land price is a vital and basic resource. Like any other resources, the information on land price, some people are in possession of it or have access to it and others need it but do not have it. Those who have it can use it, waste it, market it, or else give it away. But it is consumable and hence it remains however much it is used; yet it cannot be destroyed or corrupted. It can be transformed, yet it remains with the transfer. It is indivisible, yet it can be accumulated. It has tremendous value both from social and cultural point of view but, on its own, it has very material use- its value is tangible only when the information on land values in the particular city is used for the productive uses like as a module for policy formulation, valuation, implementation, monitoring and evaluation of various policies introduced by the government from time to time or we can say with other tangible products. The policy planners, town planners, social scientists, academicians and researchers dealt with the land price information on day-to-day basis. There the information regarding the land is major information in the information category. Spatial data may relate to specific sites or points in detail or may be generalized and have wide spread implication. There is a wide hierarchy of needs for such information on land from sovereignty, defence, public safety, protecting the welfare of all sections of the society.

As mentioned earlier the entire Chennai is divided in to four major zones namely; central, north, south and western zones

respectively. The information regarding the land price of these zones during 1999-2004 is presented in Table 6.3.

Table 6.3: Zone-wise Urban Residential Land Price in Chennai-1999-2004

(Rs. per Sq.ft)

No	Years	Central	North	South	West	Total
1.	1999					
	a. Minimum	1609	1017	1159	898	1133
	b. Maximum	1927	1322	1514	1152	1445
	c. Average	1768	1170	1337	1025	1289
	2000					
	a. Minimum	1773	1072	1246	960	1220
	b. Maximum	2155	1331	1602	1248	1547
	c. Average	1964	1202	1424	1104	1384
	2001					
	a. Minimum	1873	1083	1275	1010	1265
	b. Maximum	2255	1433	1621	1293	1598
	c. Average	2064	1258	1448	1152	1432
	2002					
	a. Minimum	1909	1156	1291	1048	1298
	b. Maximum	2332	1544	1688	1371	1675
	c. Average	2121	1350	1490	1210	1487
	2003					
	a. Minimum	2018	1244	1398	1121	1393
	b. Maximum	2595	1622	1739	1421	1764
	c. Average	2307	1433	1569	1271	1579
	2004					
	a. Minimum	2218	1378	1496	1191	1503
	b. Maximum	2827	1811	1870	1523	1909
	c. Average	2523	1595	1683	1357	1706

Source: - Primary Survey, 2005.

As a general notion that central part of any city have all type of access, therefore, the price of urban residential land in the central part is always higher than the other zone or regions of the city. It may be inferred from Table 6.3 that the market value of urban residential land in the central zone of Chennai was always higher than the other zones in the city. The main reasons behind the higher value in the central zone of the city may be due to the concentration of various public offices, educational, training, medical and other institutions. The average market value of central zone of Chennai increased from Rs. 1768 per sq. ft. in 1999 to Rs. 2523 per sq. ft. in 2004. The average market value of central zone of the city increased 7.12 per cent per annum during the period covered under the study. The lowest market value of urban residential land in Chennai city was observed in the western zone. The average market value of residential land in western zone of Chennai during 1999 was observed at Rs. 1025 per sq.ft. It had enhanced to Rs. 1357 per sq.ft. in 2004. Another important noticeable fact observed in the above-mentioned table is that all the zones of the city showed a positive trend during the period covered under the study. Due to the fixed availability of land in the developed area is also another important factor for increase in the value, people searched for alternatives like constructing houses in outskirts of the city. After a certain period the price of land in the outskirts of the city is also increasing upwards, real estate agents and property developers invest money in this area for attaining a huge profit within a limited time span. The information regarding

the zone – wise growth rate of urban residential land in Chennai is presented in Table 6.4.

Table 6.4: Zone-wise Growth Rates of Urban Residential Land Price in Chennai-1999-2004

(Per cent)

No	Years	Central	North	South	West	Total
1.	1999-2000					
	a. Minimum	10.19	5.41	7.51	6.90	7.68
	b. Maximum	11.83	0.68	5.81	8.33	7.06
	c. Average	11.09	2.74	6.51	7.70	7.37
2.	2000-01					
	a. Minimum	10.19	1.03	2.33	5.21	3.69
	b. Maximum	4.64	7.66	1.19	3.61	3.30
	c. Average	5.09	4.66	1.69	4.35	3.47
3.	2001-02					
	a. Minimum	1.92	6.74	1.25	3.76	2.61
	b. Maximum	3.41	7.75	4.13	6.03	4.82
	c. Average	2.76	7.32	2.90	5.03	3.84
4.	2002-03					
	a. Minimum	5.71	7.61	8.29	6.97	7.32
	b. Maximum	11.28	5.05	3.02	3.65	5.31
	c. Average	8.77	6.15	5.30	5.04	6.19
5.	2003-04					
	a. Minimum	9.91	10.77	7.01	6.24	7.90
	b. Maximum	8.94	11.65	7.53	7.18	8.22
	c. Average	9.36	11.30	7.27	6.77	8.04
6	1999-2004					
	a. Minimum	37.85	35.50	29.08	32.63	32.66
	b. Maximum	46.70	36.99	23.51	32.20	32.11
	c. Average	42.70	36.32	25.88	32.39	32.35

Source: - Primary Survey, 2005.

It may be observed from Table 6.3 that the highest growth rate of land price was observed in the central zone of Chennai city. The central zone showed the growth rate of average market urban residential land price at 7.12 per cent per annum during the period covered under the study. The growth rate of minimum market price of urban residential land in the central zone of Chennai city was lesser than the growth rate of maximum urban residential land in central zone. The difference was observed at 1.47 per cent per annum during the period covered under the study. The highest percentage of growth of Chennai city was observed in the first year covered under the study, 1999-2000. The last two years covered under the study showed the fact that the growth rate of land price was comparatively higher.

The second highest per cent of growth rate of urban residential land was apparent in the northern zone of Chennai city. The highest growth rate of average market value of urban residential land in the northern zone of Chennai city was observed in 2003-04 at 11.3 per cent. On an average, the market value of urban residential land in the northern zone of Chennai city was observed at 6.05 per cent per annum. The southern zone of Chennai city showed the lowest growth rate of market value of urban residential land in Chennai city. The growth rate of market value of urban residential land in the southern zone of Chennai city had increased at 4.31 per cent per annum. Overall picture showed the fact that the market price of urban residential land in Chennai

had continuously increased during the period covered under the study.

The highest market value of urban residential land Both in minimum and maximum price in Chennai during the year 2004 was observed in the Central zone of Chennai, Poes Garden, one of the posh localities in Chennai at Rs. 3800 per sq.ft and Rs.3200 per sq. ft respectively. The lowest minimum value of Rs. 700 sq. ft was found in four localities, two each in south and western zone of the city. The two localities in the southern zone of the city are Selaiyur and Ullagraam and two in the western zone are Thiruniravur and Mandipakkam respectively. During the year 2004 the lowest maximum market price of urban residential land in the central zone of Chennai was found in Kodampakkam locality at Rs. 2200 per sq.ft. The same in the case of minimum market price of urban residential land was found at Rs. 1800 per sq. ft in two localities namely Gopalapuram and Kodampakkam respectively.

In northern zone of the highest maximum and minimum market price of urban residential land was at Rs.3000 per sq. ft and Rs. 2200 per sq. ft found in Kilpauk. The lowest maximum market price of urban residential land in the northern zone was observed in Madhavaram High Road at Rs. 1300 per sq.ft. The same in the case of minimum land price in the northern zone showed in two localities, Madhavaram High Road and Kolathur at Rs. 900 per sq. ft each.

In southern zone the highest maximum and minimum market price of urban residential land during the year 2004 was at Rs. 3500 per sq. ft and Rs. 3000 per sq. ft in Boat Club Road. The lowest of the minimum land price in the same zone was at Rs. 700 per sq. ft found in two localities namely Selaiyur and Ullagraam. The two localities also showed the lowest maximum urban residential land price during the year 2004 in the northern zone. In the western zone of Chennai city the highest maximum and minimum market price of residential land was found in single locality, Anna Nagar East at Rs. 2300 sq. ft and Rs. 1800 sq. ft respectively. The lowest of maximum market price of urban residential land in the western zone showed in two localities namely Madhuravayal and Thiruninravur at Rs. 900 per sq. ft. The lowest of minimum market price of urban residential land in the western zone of Chennai city during the year 2004 was at Rs. 700 per sq. ft found in two localities, Thiruninravur and Mandipakkam respectively.

The information regarding the market price of urban residential land both zone wise and locality-wise covering minimum and maximum values in Chennai city during the year 1999- 2004 is presented in Annexure – 1. In order to understand more details of urban land prices in Chennai during the above-mentioned period, the information can be summarized in to price- range wise. The information regarding range-wise market price of urban residential land in Chennai during the year 2004 is presented in Table 6.5.

Table 6.5: Price Range-wise Distribution of Localities in Chennai During 2004.

No	Price Range (Rs. per sq.ft)	Localities	
		Minimum	**Maximum**
1.	Up to 1000	20 (20.9)	6 (8.6)
2.	1001-1500	20 (20.9)	22(31.9)
3.	1501-2000	13 (18.8)	13 (18.8)
4.	2001-2500	13 (18.8)	16 (23.2)
5.	2501+	3 (4.3)	12 (17.5)
6.	**Total**	**69 (100.0)**	**69 (100.0)**

Source: - Primary Survey, 2005.
Note:- Figures in parenthesis relates to percentage to total.

It may be observed from Table 6.5 that in more than two fifth of the localities minimum land price was up to Rs. 1500 per sq.ft. While the remaining three categories, two classes had equal distribution of localities and the highest price range had only three localities and the percentage of this was constituted at only 4.3 per cent of the total. In the category of maximum the highest percentage of localities land price was in the range of Rs. 1001-1500 per sq.ft and it constituted near about 32 per cent of the total localities. As compared with the minimum land price the maximum land price had more number of localities in the highest price category of Rs. 2501+ and it constituted near about 18 per cent of the total localities. Like-wise the lowest price range category had less number of localities in maximum land price and this constituted only 8.6 per cent of the total localities covered under the study. The

information regarding the land price range –wise distribution localities in Chennai during 1999-2004 is presented in Table 6.6.

Table 6.6: Price Range-wise Distribution of Localities in Chennai During 1999-2004.

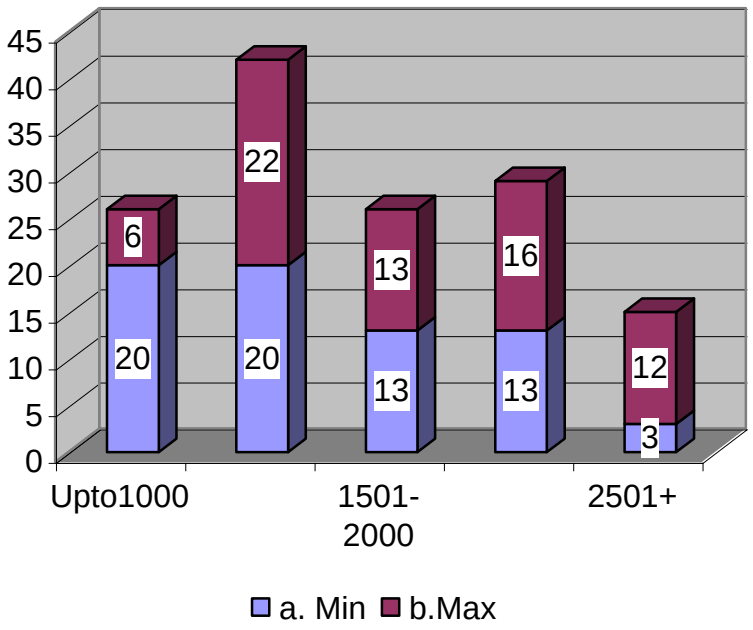
No	Years	No. of Localities / Land Price Range (Rs. per Sq.ft)					
		Upto1000	**1001-1500**	**1501-2000**	**2001-2500**	**2501+**	**Total**
1	1999						
	a. Min	37 (53.6)	16(23.2)	14(20.2)	1(1.5)	1(1.5)	69(100.0)
	b.Max	22 (31.9)	22(31.9)	17(24.6)	6 (8.6)	2(3.0)	69 (100.0)
2	2000						
	a. Min	32 (46.2)	14(20.2)	21(30.6)	1 (1.5)	1(1.5)	69(100.0)
	b.Max	17(24.6)	21(30.6)	16(23.1)	12(17.4)	3(4.3)	69(100.0)
3	2001						
	a. Min	30(43.4)	15(21.7)	22(31.9)	-	2(3.0)	69(100.0)
	b.Max	16 (23.2)	21(30.6)	14(20.2)	15(21.7)	3(4.3)	69(100.0)
4	2002						
	a. Min	27(39.1)	19(27.4)	20(29.0)	1(1.5)	2(3.0)	69(100.0)
	b.Max	13(18.9)	22(31.8)	17(24.6)	14(20.2)	3(4.3)	69(100.0)
5	2003						
	a. Min	21(30.4)	22(31.9)	21(30.4)	3(4.3)	2(3.0)	69(100.0)
	b.Max	11((16.2)	22(31.9)	12(17.4)	17(24.6)	7(10.1)	69(100.0)
6	2004						
	a. Min	20(29.0)	20(29.0)	13(18.8)	13(18.8)	3(4.3)	69(100.0)
	b.Max	6(8.6)	22(31.9)	13(18.8)	16(23.2)	12(17.5)	69(100.0)

Source: - Primary Survey, 2005.
Note:- Figures in parenthesis relates to percentage to total.

It may be inferred from Table 6.6 that during the initial period covered under the study the highest number of localities where

price was in the lowest categories namely up to Rs. 1000 per sq.ft and Rs. 1001-1500 per sq.ft and it constitutes more than three fifth of the total localities. As a general tendency, as time passed the price of land increased due to various factors as mentioned earlier, the category that in initial period lies had shifted to the higher land price category. The information regarding price range-wise distribution of localities in Chennai during 2004 is depicted in Figure 6.3.

Figure 6.3 Price Range-wise Distribution of Localities in Chennai-2004



The highest percentage growth of maximum market price of urban residential land during 1999-2004 was observed at 14.23 per cent per annum in two localities; one in northern zone of Madhabaram High Road and other in southern zone of Chitlapakkam respectively. The highest percentage of the minimum land price in Chennai during the same period was observed at 16.7 per cent per annum in Kasthurba Nagar in the northern zone of the city. In the central zone the highest percentage of growth of maximum land price was at 11.1 per cent per annum in Chetpat area. The lowest percentage growth of maximum land price in central zone of Chennai was observed in Poes Garden at 3.13 per cent per annum. The lowest percentage of the maximum land price in the central zone of Chennai city was comparatively less because of less number of purchasers, the value itself is a high one, very limited persons had the purchasing power etc. In central zone the highest minimum percentage growth during 1999-2004 was observed at 13.3 per cent per annum in Kodambakkam. On the contrary, the lowest percentage of growth of minimum land price in the central zone of Chennai was observed in two localities namely, Alwarpet and Royapetteh respectively at 3.7 per cent per annum. During the initial period covered under the study the price both maximum and minimum had declined slightly in some localities, but overall it showed a positive trend.

In the northern zone of Chennai the highest percentage growth of minimum land price was observed at 16.7 per cent per

annum in Kasthurba Nagar, which was also the highest in the localities covered under the study. The lowest percentage growth of minimum land price in the northern zone was observed at 1.39 per cent per annum in Velachery. The highest percentage growth of maximum land price in this zone was also the highest among localities covered under the study, mentioned earlier at Madhavaram High Road at 14.3 per cent per annum. The lowest percentage growth in maximum land price in northern zone was observed at 4.17 per cent per annum in Kolathur.

In southern zone of Chennai the highest percentage growth of minimum land price was observed in Tiruvanmiyur at 15 per cent per annum. The lowest of minimum land price in this zone was observed at 0.88 per cent per annum in Besant Nagar. All the localities showed a positive growth of minimum land price during the period covered under the study, 1999-2004. On the other side, the highest percentage of growth of maximum price during 1999-2004 was in Chitlapakkam, one among the highest growth in the localities covered under the study at 14.3 per cent per annum. The lowest percentage growth of maximum land price was observed in Guindy locality at 1.19 per cent per annum.

In western zone of Chennai city the highest percentage growth in maximum land price was observed in Villivakkam area at 10.79 per cent per annum during the period covered under the study. The lowest percentage growth in the maximum land price

was observed at 0.67 per cent per annum in Nesapakkam area. On the other side the highest percentage growth in minimum land price was observed at Saidapet at 11.11 per cent per annum during 1999-2004. Like-wise the lowest percentage growth in minimum land price was observed at Nesapakkam at 1.85 per cent per annum during the same period. All the localities showed a positive growth during the period 199-2004. While year-wise growth showed a negative one but in totality it showed a positive growth. The percentage growth showed the fact that the land prices in Chennai both minimum and maximum had increased slowly and not in a high-speed. This showed the fact that the economy is moving in a positive manner, encouraging the growth with equity, indicating that overall the development is going on in Chennai.

The information regarding the percentage growth of market price of residential land in Chennai both minimum and maximum and zone-wise during 1999 – 2004 and year-wise is presented in Annexure - 2. In order to understand the growth pattern of urban residential land in Chennai both minimum and maximum price, an attempt has been made to analyze its growth during 1999 –2004. The information regarding the same is divided in five categories namely, up to 10, 11-20, 21-30, 31-40 and 41+ respectively. This analysis will help the policy makers to understand the growth pattern of land price of Chennai during the period 1999 -2004 and they can implement easy solutions for correcting the same. The information regarding the growth of urban residential land price in

Chennai during 1999 – 2004 both minimum and maximum is presented in Table 6.7.

Table 6.7: Growth Rate Wise Distribution of Localities in Chennai During 1999-2004.

No	Growth Rate (Per cent)	Localities	
		Minimum	**Maximum**
1.	Up to 10	2 (3.0)	5 (7.4)
2.	11-20	13 (18.8)	14 (20.0)
3.	21-30	20 (29.0)	19 (27.5)
4.	31-40	14 (20.2)	10 (14.5)
5.	41+	20 (29.0)	21 (30.6)
6.	**Total**	**69 (100.0)**	**69 (100.0)**

Source: - Primary Survey, 2005.
Note:- Figures in parenthesis relates to percentage to total.

It may be observed from Table 6.7 that higher number of localities both in the minimum and maximum land price during the period covered under the study showed higher percentage of growth more than 41 per cent, which was almost equal annual growth rate of 7 per cent. Very few localities in Chennai had a growth rate in the range of up to 10 per cent. As compared with minimum land price, maximum land price showed higher participation in the range of up to 10 per cent. In all categories, the participation in both minimum and maximum land prices in Chennai showed more or less same. To know more details about the growth pattern of land prices in Chennai both minimum and maximum in all the zones covered under the study is very important. The

information regarding zone-wise growth rate of urban residential land prices both minimum and maximum during 1999-2004 is presented in Table 6.8.

Table 6.8: Growth Rate-wise& Zone-wise Distribution of Localities in Chennai During 1999-2004.

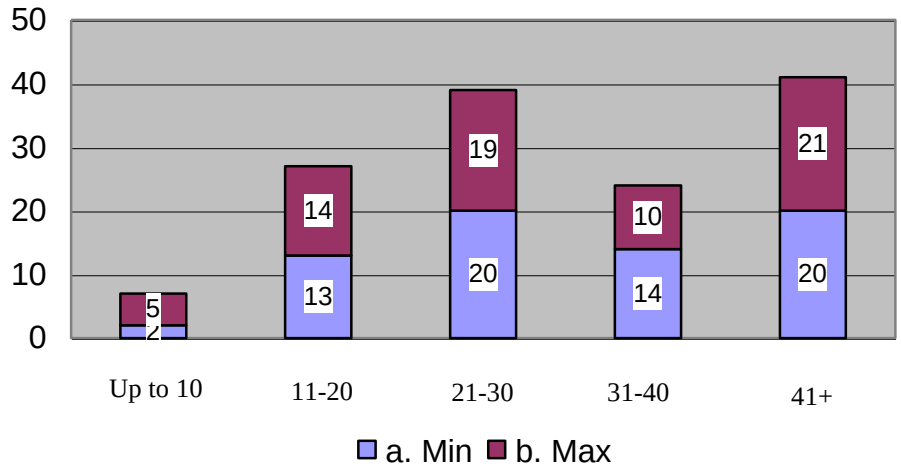
No	Zones	Growth Rate (Per cent)/ Localities					
		Up to 10	**11-20**	**21-30**	**31-40**	**41+**	**Total**
1.	**Central**						
	a. Min	-	1(9.1)	4(36.4)	2(18.1)	4(36.4)	11(100.0)
	b. Max	-	1(9.1)	-	3(27.3)	7(63.6)	11(100.0)
2.	**North**						
	a. Min	1(11.1)	-	5(55.6)	-	3(33.3)	9(100.0)
	b. Max	-	-	5(55.6)	1(11.1)	3(33.3)	9(100.0)
3.	**South**						
	a. Min	1(3.6)	8(28.6)	4(14.2)	8(28.6)	7(25.0)	28(100.0)
	b. Max	3(10.7)	10(35.7)	7(25.0)	3(10.7)	5(17.9)	28(100.0)
4.	**West**						
	a. Min	-	4(19.0)	7(33.3)	4(19.0)	6(28.7)	21(100.0)
	b. Max	2(9.4)	3(14.3)	7(33.3)	3(14.3)	6(28.7)	21(100.0)
5.	**Total**						
	a. Min	2 (3.0)	13(18.8)	20(29.0)	14(20.2)	20(29.0)	69(100.0)
	b. Max	5(7.3)	14(20.2)	19(27.4)	10(14.5)	21(30.6)	69(100.0)

Source: - ***Primary Survey, 2005.***
Note:- ***Figures in parenthesis relates to percentage to total.***

It may be observed from Table 6.8 that the central zone of Chennai showed that the percentage growth of residential land price both minimum and maximum was nil in the category of up to 10 percentage growth during the period 1999 – 2004. In the

category of growth rate of 11 – 20 per cent it was very less in the central zone of Chennai, one locality each in minimum and maximum land price. Majority of land prices in the central zone of Chennai showed the fact that the percentage growth was more than 31 per cent during the period covered under the study in both maximum and minimum land price. In north zone of Chennai only one locality showed the growth rate of up to 10 per cent category. More than one third of the locality in northern zone showed that the percentage growth was higher than 41 + category. In southern zone the localities were found in all the categories. Up to 10 per cent of growth category, the maximum land prices observed three localities, which constituted more than 10 per cent of the total localities in the zone. The information regarding growth rate-wise distribution of localities in Chennai during 1999 – 2004 is depicted in Figure 6.4.

Figure 6.4: Growth Rate-wise Distribution of Localities in Chennai During 1999 - 2004



Assuming the market value of urban residential land during the year 2000 as 100, called index of land prices, the residential land price index of both minimum and maximum of market price of urban residential land in Chennai during 1999 – 2004 is presented in Table 6.9.

Table 6.9: Residential Land Price Index of Chennai During 2000-04.

(Base Year 1999= 100)

No	Price Index	2000	2001	2002	2003	2004
1.	Minimum	108.92	104.41	103.71	107.77	108.04
2.	Maximum	106.89	103.68	105.44	105.21	108.83
3.	Average	107.91	104.05	104.58	106.49	108.44

Source: - Primary Survey, 2005.

It may be observed from Table 6.9 that minimum land price indices were higher than the maximum land price indices during the period covered under the study except in 2002 and 2004. During the year, 2002 the difference was at 1.73 and in 2004 it is negligibly less at 0.79. The land price indices of Chennai shows that the growth rate in the initial year was comparatively higher, then the next two years, it increased but at a slower pace, in the later period it once again increased and reached more or less same rate of growth of the initial period covered under the study. Thus, the study clearly showed the fact that the land price in Chennai had increased at a slower rate, is a good indication for investors investing their money in real estate business and property. The information regarding zone-wise residential land price indices of Chennai during 1999 – 2004 is presented in Table 6.10.

Table 6.10: Zone-wise Residential Land Price Index of Chennai During 2000-04.

(Base Year 1999= 100)

No	Price Index / Zones	2000	2001	2002	2003	2004
1.	Central					
	a. Minimum	110.37	108.40	102.21	105.95	110.29
	b. Maximum	112.33	105.04	104.00	112.17	109.19
	c. Average	111.35	106.72	103.11	109.06	109.74
2.	North					
	a. Minimum	107.31	100.35	108.08	108.76	110.29
	b. Maximum	95.73	105.91	107.77	105.61	111.21
	c. Average	101.52	103.13	108.29	107.19	110.75
3.	South					
	a. Minimum	109.80	103.25	102.24	108.34	107.38
	b. Maximum	107.27	101.94	104.45	103.43	108.45
	c. Average	108.54	102.60	103.35	105.89	107.92
4.	West					
	a. Minimum	107.69	105.61	104.28	107.52	106.76
	b. Maximum	108.32	104.35	106.53	103.75	108.12
	c. Average	108.01	104.98	105.41	105.64	107.44
5.	Total					
	a. Minimum	108.92	104.41	103.71	107.77	108.04
	b. Maximum	106.89	103.68	105.44	105.21	108.83
	c. Average	107.91	104.05	104.58	106.49	108.44

Source: - Primary Survey, 2005.

It may be observed from Table 6.10 that the land price indices of Chennai north zone during the year 2004 was higher than the land price indices of all the periods covered under the study. The north zone of Chennai showed the fact that the land

price indices increased every year as compared with the previous year except during the year 2003. All other zones in Chennai city showed that the last year indices were less than the initial period indices. The high land price indices during the year 2004 was observed in northern zone of Chennai city at 110.75 and lowest was found in the western zone of Chennai at 107.44. The land price index of southern as well as western zone of Chennai was more or less same with only a little difference. The information regarding the land price index of all localities covered under the study (zone-wise) is presented in Annexure-3.

One of the main sources of revenue of the state government is through fixing the land price for the purpose of stamp duties. In order to discourage the tax evasion it is imperative that the price of the land for levy of stamp duty purposes is arrived at considering all factors mainly locational advantages, infrastructure accessibility by the concerned officials like village office officials, officials of the Sub Registrar offices, patwaris, etc,. A general thinking is that the market price of the land was always higher than that of the actual recorded or officially recorded price. But this is not correct in all localities especially in the case of maximum land price. In order to find out the difference between the market price as well as government fixed price of land, officials of the " Industrial and Economic Planning Division" of Town and Country Planning Organisation have collected the information regarding the government fixed price of land in Chennai from the office of the

Inspector General Registrar, Chennai, during their visit. In this connection an attempt has been made to compare the market price of land and the government fixed price of land. In view of this, officials of the Industrial and Economic Planning Division of town and Country Planning Organisation collected the information of government fixed price of land in 26 selected localities. The information regarding the comparative picture of market and government fixed price of land in 26 selected localities in Chennai is presented in Table 6.11.

Table 6.11: Comparative Picture Market and Government Fixed Price of Land in Chennai.

(Rs. Per Sq. ft)

No	Land Price	Year
1.	Market Price	2004
	a. Minimum	1296.15
	b. Maximum	1632.69
	c. Average	1464.42
2.	Government Fixed Price	2003-04
	a. Minimum	262.46
	b. Maximum	2408
	c. Average	1335.23
3.	Comparison Between Market and Government Fixed Price	
	a. Minimum	1033.69
	b. Maximum	-775.31
	c. Average	129.19

Sources:-
1. Primary Survey, 2005.
2. Office of the Inspector General, Registration, Government of Tamil Nadu, Chennai, 28.

It may be observed from Table 6.11 that the minimum market price was higher than the government fixed price of land in Chennai during the period covered under the study in the selected localities. The market price was higher than the fixed price by the government in the selected localities covered under the study observed at an average of 79.8 per cent. On the contrary, the maximum land price fixed by the government in the selected localities was higher than the maximum market price during the period covered under the study and on an average it was higher than 7.75 times. But in actual practice, the transactions commonly done in the minimum level in all the localities, it is only an indicative nod for maximum price. So generally, the maximum price fixed by the government had not been receiving any importance. The information regarding the market price of urban residential land in selected localities in Chennai both minimum and maximum price and the price fixed by the government for earning income through stamp duties in the above mentioned selected localities both minimum and maximum and the comparative picture between both market price and government fixed price is mentioned in Annexure – 4.

Commercial Land Prices

In order to understand the realistic picture of urban land in any area, the price of commercial land plays an important role for assessing the land price in the city. Generally, commercial areas are located in the central business area of the particular city, which

in turn leads to an exorbitant price of commercial land. These commercial areas have all types of accessibilities like infrastructure facilities and others. In order to know the commercial land prices in Chennai city, officials of the Industrial and Economic Planning Division of Town and Country Planning Organisation, collected the information regarding commercial land prices in 19 selected localities during their visit. The information regarding commercial land prices in Chennai during 1999 – 2004 is presented in Table 6.12.

Table 6.12: Market Price of Commercial Land in Chennai During 1999 – 2004.

(Rs. Per Sq. ft)

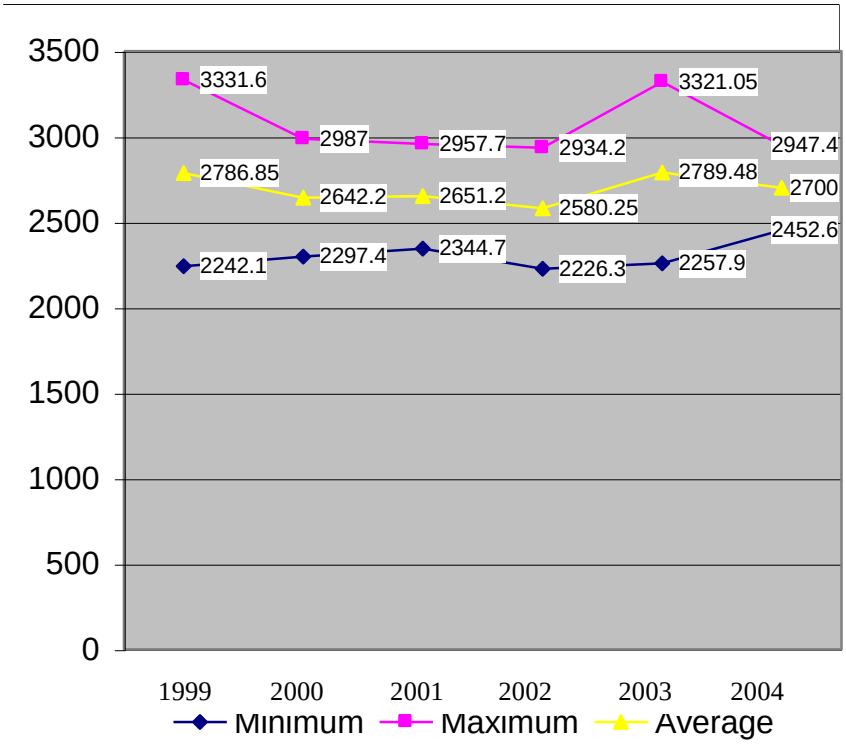
No.	Years	Minimum	Maximum	Average
1.	1999	2242.10	3331.60	2786.85
2.	2000	2297.40	2987.00	2642.20
3.	2001	2344.70	2957.70	2651.20
4.	2002	2226.30	2934.20	2580.25
5.	2003	2257.90	3321.05	2789.48
6.	2004	2452.60	2947.40	2700.00

Source: Primary Survey,

It may be inferred from the above Table that the average price of commercial land in Chennai declined from Rs. 2786.85 sq. ft. in 1999 to Rs. 2700 sq. ft. in 2004, showing an average decline rate of 0.52 per cent per annum during the period covered under the study. The rate of decline of maximum commercial price was higher than the rate of increase in minimum commercial land price during the period covered under the study and its difference was

arrived at 0.36 per cent per annum. The movement of commercial land prices in Chennai during 1999 – 2004 is depicted in Figure 6.5.

Figure 6.5: Commercial Land Prices in Chennai: 1999 – 2004.



The information regarding the growth rate of market price of commercial land in Chennai during 1999 – 2004 is presented in Table 6.13.

Table 6.13: Growth Rate of Market Price of Commercial Land in Chennai During 1999 – 2004.

(Per cent)

No.	Years	Minimum	Maximum	Average
1.	1999-2000	2.47	- 10.34	- 5.19
2.	2000-2001	2.06	- 0.98	0.34
3	2001-2002	- 5.05	- 0.79	- 2.68
4	2002-2003	1.42	13.18	8.11
5	2003-2004	8.62	- 11.25	- 3.21
6.	1999-2004	9.39	- 11.53	- 3.12

Source: Primary Survey,

It may be observed from Table 6.13 that the growth rate of average market price of commercial land in Chennai had declined at an average rate of 0.52 per cent per annum during the period covered under the study. The annual percentage growth of average market price of commercial land in Chennai showed more number of years as decline than increase; three years showed the decline while two years and overall growth showed the downward position. In the case of minimum market value of commercial land in Chennai revealed the fact that only one year covered under the study had a decline and in all other years overall percentage growth was positive. On an average, the minimum market price of commercial land in Chennai had increased at 1.57 per cent per annum during the period covered under the study. On the other side the maximum price of commercial land in Chennai had declined during the period covered under the study and it was observed at 1.92 per cent per annum during 1999-2004.

During the year 2004 the highest maximum and minimum commercial land price was observed in Annai Salai at Rs. 3800 per sq.ft and Rs. 3400 per sq.ft respectively. The lowest minimum and maximum commercial land price was observed in single locality namely Ashok Nagar at Rs. 1800 per sq.ft and Rs. 2000 per sq.ft respectively. The highest difference between the maximum and minimum commercial land prices during the year 2004 in the selected localities in Chennai was observed at 1200 in Cathedral Road and the lowest at 200 observed in three localities namely Purasawalkam Kilpauk, Dr. Radhakrishanan Salai and Ashok Nagar respectively. The information regarding the minimum and maximum commercial land values in the selected localities in Chennai during 1999- 2004 is presented in Annexure – 5.

The highest percentage growth of minimum commercial land in the selected localities in Chennai during 1999-2004 was observed at 120 per cent during the year 1999-2004 in Nangambakkam and lowest growth was observed in Anna Salai at 3.03 per cent during the period covered under the study. During the same period some localities showed the negative growth and the highest among them was observed in Purasawalkam Kilpauk at 36.84 per cent and the lowest in Poonamalle High Road at 8.33 percent. The highest percentage growth of maximum commercial land price in the selected localities in Chennai during 1999-2004 was observed at 6.82 per cent per annum in TTK Road and lowest at 0.54 per cent per annum in Alwarpet. As same like the minimum

commercial land prices in the selected localities in Chennai, maximum commercial land prices in some localities showed the negative growth during 1999-2004. The highest negative growth was observed at 8.93 per cent per annum in Purasawalkam Kilpauk and lowest in Cathedral Road at 1.81 per cent per annum during the period covered under the study. The information regarding the percentage growth of commercial land prices both minimum and maximum in the selected localities during 1999-2004 is mentioned in Annexure - 6. Assuming the market price of commercial land during the year 1999 as 100, called index of commercial land prices. The commercial land price index of minimum and maximum market price of Chennai from 2000-04 is mentioned in Table 6.14.

Table 6.14: Commercial Land Price Index of Chennai During 2000-04.

(Base Year 1999= 100)

No	Price Index	2000	2001	2002	2003	2004
1.	Minimum	102.47	104.58	99.30	100.70	109.39
2.	Maximum	89.66	88.78	88.07	99.68	88.47
3.	Average	94.81	95.13	92.59	100.09	96.88

Source: - Primary Survey, 2005.

It may be observed from table 6.14 that minimum commercial land prices indices in Chennai showed the growth in more or less same proportion. While on the other hand, maximum price indices of Chennai showed the negative growth in all the periods covered under the study. Due to this the average

commercial land price indices showed the same negative one except during the year 2003. The information regarding commercial land price indices of Chennai both minimum and maximum price during the years 2000- 04 in the selected localities of Chennai is presented in Annexure – 7.

Rental Scenario in Chennai

Rental prices in cities are one of the main factors for influencing the urban land prices in urban areas of the world. There is a direct relationship between the rental prices and residential land prices. Due to the development of industries, mainly small, medium and large, urbanisation, fast development in tertiary sector, especially in information technology, various policies introduced by the government from time to time like special economic zones, export promotion industrial parks, industrial growth center schemes etc, in Chennai leads to expansion of income in multiplied effects which created a profit hunting rental business among the landlords. Thus, landlords having land at core activities area in cities constructed houses and rented them at maximum rate and it became a steady positive growth business. The main reason behind the demand for rental housing was the large inflow of educated middle income and salaried people and also technically educated job seekers from rural and other small towns, who are not having enough money to pay the exorbitant rent rates in the posh areas and bungalows and cannot afford to live in slums so as to maintain standard of living which compelled them to take rental

accommodation within the city. In order to know the rental position in Chennai city, officials of the Industrial and Economic Planning Division of Town and Country Planning Organisation, collected the information regarding commercial land prices in 21 selected localities during their visit.

The information regarding the rental structure is mainly divided in to two main classes namely residential and commercial. The commercial section is again divided in to two called office and retailing. The information regarding the rent rates in the selected localities in Chennai during the year 2003 is presented in Table 6.15.

Table 6.15: Rent Rates in Chennai During 2003

(Rs. per sq.ft)

No	Details	Minimum	Maximum	Average
1.	Residential	7.14	10.71	8.93
2.	Commercial			
	a. Office	17.14	26.33	21.74
	b. Retailing	22.86	36.43	29.65

Source: - Primary Survey, 2005.

It may be observed from Table 6.15 that the rent rate of commercial land was higher than the residential land. On an average the rent rate of residential area in Chennai was Rs. 8.93 per sq. ft during 2003. The average rent rates in Chennai was in

the range of Rs. 7.14 per sq. ft to Rs. 10.71 per sq. ft. The highest minimum residential rent rate in Chennai was observed in Nungambakkam at Rs. 12 per sq. ft and lowest of Rs. 4 per sq. ft was observed in two localities namely, K.K. Nagar and Velachery respectively. On the other side, the highest maximum residential rent rate was observed in Nungambakkam at Rs. 16 per sq. ft. during 2003. The lowest of the maximum rent rate was observed in K.K. Nagar at Rs. 5 per sq. ft. The highest difference between the maximum and minimum rent rate was observed in Kotturpuram.

As mentioned earlier the commercial rent is mainly divided in two groups namely, office and retailing. The rent rate of retailing was higher than the office. On an average the rent rate of office in selected localities in Chennai was at Rs. 21.74 per sq. ft. during 2003. It was in the average range of Rs. 17.14 per sq. ft to Rs. 26.33 per sq. ft. The highest minimum rent in office area of selected localities in Chennai was observed at Rs. 25 per sq. ft in five localities namely, Adyar, Anna Nagar, East Mylapore, Nungambakkam and Dr. Radhakrishnan Road respectively. On the other hand, the lowest minimum rent rate in office area in Chennai city was observed in Velachery at Rs. 8 per sq. ft. during 2003. The highest maximum rent rate in selected localities in Chennai was observed in Nungambakkam at Rs. 45 per sq. ft. The highest difference between maximum and minimum commercial rent rate, from office area was found in Nungambakkam and the lowest was observed in Velachery.

The highest rent rate in the commercial area was found in retailing places. This is a general phenomenon for all the urban areas of developing as well as developed nations. On an average, the rent rate of retailing areas in selected localities of Chennai was at Rs. 29.65 per sq. ft.: ranging from Rs. 22.86 per sq. ft to Rs. 36.43 per sq. ft. The highest maximum and minimum rent from retailing areas in selected localities of Chennai was observed in Nungambakkam at Rs. 75 per sq. ft. and Rs. 40 per sq. ft. respectively. The lowest maximum and minimum rent rate from retailing areas in Chennai was at Rs. 20 per sq. ft. and Rs. 15 per sq. ft. in K.K. Nagar during the year 2003. The highest difference between maximum and minimum rent of commercial area, from retailing area was observed in Nungambakkam at 40 and the lowest was mentioned at 5 in two localities namely, Anna Nagar West and K.K. Nagar respectively. The information regarding the rental status of selected localities in Chennai during 2003 covering residential, commercial - office and retailing areas, both minimum and maximum is presented in Annexure – 8.

Sum Up & Next Step 7

The Indian economy, seeking stronger integration with the global system, has shown many interesting features in its structure of urbanisation and process of urban growth during the last few decades of the last century. Although the basic structure inherited from the colonial regime has dominated and dictated the process and growth pattern since our independence, planned interventions by the central and state government policies have led to some significant departures from the trends witnessed in the past. Interventions have tried to modify or moderate plans. These sought to impose constraints on the pattern of urbanisation by market forces and bring out regional balance. Although the success of these policies can at best be described as limited, the nation did see a number of growth nuclei and corridors along with the emergence of number of new towns. Understandably, further opening up of the economy since the early 1990s has had additional impact on the pattern and process of urban growth. As the nation aspires for a new development regime in the coming decades, it is important to take stock of the pattern and process of urbanisation and its implications for present and future economic growth in the nation.

It is relevant to indicate the major issues that Indian urbanisation is concerned with. Lopsided urbanisation, that means,

the concentration of urban population in larger towns and cities. However, the level of urbanisation varies and for some states like Tamil Nadu, Gujarat, Maharashtra, it is very important. Some of the small states are half urban or more. The 2001 census has witnessed further changes in the growth pattern and level of urbanisation across the states. Despite the dominance of large towns in the Class I state capital towns and million plus cities, the growth pattern of smaller towns also reflects some interesting features. Various socio-demographic characteristics of urban structure like level of urbanisation, sex ratio, literacy, migration have been continuously influencing the process of development in the urban areas of India. Other economic modules like the growth of employment, income, reduction in the level of poverty and urban working environment will also influenced the development pattern in this area.

Economic reforms commonly called LPG that is liberalization, privatization and globalization in the first part of the 1990s were expected to boost urbanization. The proponents of the reform especially the present Prime Minister often argued that linking India with the global economy would lead to massive inflow of capital from out side the country as also rise in indigenous investment. This, in turn, would provide an impetus to the process of urbanisation and development since much of the investment and consequent increase in employment would be either within or

around the existing urban areas. Even if the industrial units are located in rural areas, in a few years, they would be urbanized.

Urbanisation trend in Tamil Nadu is higher at 1.63 per cent per annum than the national average of 2.78 per cent per annum between 1991-2001. The pace of economic development in Tamil Nadu and its accelerated trend for the future has indicated the fact that there is fast level of development in Tamil Nadu as compared with other states of Indian Union especially in the development of tertiary sector through Information Technology (IT). Chennai city has already achieved the fast development in service sector and secondary sector due to the development of industrial activities and film production centers in the earlier periods and the recent development of opening of offices of various multi national and corporate sectors. The other cities in Tamil Nadu mainly Coimbatore, Salem, Madurai, Thirunalveli, Tirupur, Erode, etc have showed the fast development of the economy. Most of these cities concentrated specialized activities like the production of clothes, machines and the like. Chennai has also witnessed unprecedented growth of population due to the development of information technology, business process outsourcing, computer related activities in addition to the already existing roles like location of the head of the government, concentration of various service activities, successive implementation of various government policies for the development of small and medium industries, informal activities, development of entrepreneurial activities, etc,. The challenge is a

big one and it has translated in to opportunities by ensuring a balanced overall development through people oriented programmes, responsive, transparent, co-ordinate approach by all the sections of economy covering governmental agencies from center to local, research and development institutions, intellectual persons from the concerned area, etc,.

With the fast rate of growth of population mainly through natural and migration along with the fast development activities in urban areas, the demand for built up spaces for shops, commercial activities, public offices, factories, hotels and restaurants, recreational activity centers, play grounds, etc, increases. In addition to the above mentioned, the concentration of people in the developed areas or so called center points of the economy especially the production and distribution adds new dimension to the problem of equitable distribution of existing facilities and it adversely affects the price of the land in the existing system. This leads to enhance the gap between the demand and supply of land supported by the speculative nature in the land market, leading to sky rocketing increase in the price of land. Moreover the high returns from most of the residential areas of the city gradually get converted in to commercial places. It has both merits as well as demerits. Generally the demerits outweighed and indulgence in the speculation in the land market on a wider spectrum has resulted in stiff competition for posh areas of the towns and shifting away the lower and middle income segments of the society. Actually the

speculation factor is the main factor responsible for increase in the land prices in the city. Besides this, among other factors, has also influenced much due to the large variations in different parts of the city.

The increase in the price of urban land is influenced by various other factors. As compared with the overall development of the economy some increase in the land prices is essential and should be an acceptable one. The main factors influencing increase in the land prices in urban areas are, overall increase in the level of inflation, scarcity of developed land, location and inherent value, black money, existing tax structure of the economy, legal problems, developments in service sector in recent times which in turn leads to the employment avenues for the new educated and skilled generations, building bye-laws, geographical aspects, etc,

Sum Up

Majority of metropolitan cities in India witnessed increase in the land prices during the last decade of last century. The trend in urban land prices in Chennai has shown a positive increase. The study covers the period from 1999 to 2004, six years and land prices obtaining at mid point of the year have been reported. The study covers 69 localities in Chennai city, 11 in central zone, 9 in north zone, 28 in south zone and the remaining 21 in western zone of the city respectively.

The average market price of urban residential land has increased from Rs.1289 per sq.ft in 1999 to Rs. 1706 per sq.ft in 2004 showing an increase of 5.39 per cent per annum during the periods covered under the study. The average market price of urban residential land in Chennai has always been showing an increasing trend during all periods covered under the study. Based on the market price of urban residential land of 69 localities in Chennai, it is apparent that the market price of urban residential land tends to move upward.

The average market price of commercial land in Chennai (19 localities) during 1999-2004 showing the market price of the same is not moving upward but decreased 0.52 per cent per annum during the periods covered under the study. The highest maximum and minimum market price of commercial land in Chennai during the year 2004 was observed in Anna Salai at Rs.3800 per sq.ft and Rs. 3400 sq.ft respectively. The lowest minimum and maximum market price of commercial land in Chennai during the year 2004 was shown in Ashok Nagar at Rs. 1800 per sq.ft and Rs. 2000 per sq.ft respectively.

In finding the market price of urban areas in Chennai city the availability of social, economic and physical infrastructure plays a crucial role. It is noted that the speculative mechanism in market price of urban land finds favour with localities having better all types of basic as well as other infrastructure accessibilities. In the case

of Chennai city, the central zone of the city followed by south zone commands higher market prices of urban residential land. The west zone of the city is placed at lowest category of market price of urban residential land.

The highest percentage of growth of the average market price of urban residential land in Chennai was observed in central zone at 7.12 per cent per annum during the periods covered under the study and the lowest was observed at 4.31 per cent per annum in southern zone of the city.

The general notion is that the fixed value of urban land by the governmental agencies for fixing stamp duty mainly in transaction of land is lesser than the actual market price of land. On practice governmental agencies fixing the price of land is based on the survey conducted by the concerned agencies and periodically revised keeping in view the market price. In the process of fixing the price of land by the government agencies, they include various factors like accessibility of all types of infrastructure, locational advantage, etc,. The status of comparison between the market price and government fixed price in 26 selected localities in Chennai showed that the fixed minimum price by the governmental agencies was very less and maximum price was higher than the actual market minimum and maximum price. Generally most of the land transactions are being made in the minimum price, that way

the government is losing a huge lump sum through the stamp duties.

Shelter is a basic need of man after food and clothing. With the development of knowledge and advance of the civilization, people became more aware of sanitation, environment, privacy, location of the houses especially adjacent to basic infrastructure accessibilities, etc,. As per the 2001 census information showed the gap between the number of households and number of residential houses increased considerably both in nation as well as in Tamil Nadu. During 2001 it was 126.88 lakh in India, 5.71 lakh in Tamil Nadu constituting 4.5 per cent. The housing shortage of Chennai as per the estimates published by National Institute of urban Affairs was nearly 224000.

Rapid urbanization has led to an alarming deterioration in the quality of city dwellers in India. Our cities suffer from various infrastructural deficiencies, poor sanitation and solid waste disposal, water shortage, polluted natural water resources, water logging in rainy seasons, frequent epidemics, inadequate health care, depletion of green areas, reducing the ground water level, proliferation of slums and lack of support for social and economic development of the socially and economically weaker sections of the society. The ultimate result is emergence of slums in cities. As per the information provided by the Town Country Planning Organisation in Compendium of Urban Slums the estimated slum

population in urban Tamil Nadu during 2001 was 43.6 lakh. Slum population in Chennai UA constitutes nearly 45 per cent of the slum population in urban Tamil Nadu.

Next Step

The development of real estate in India is constrained by two major issues. First, the total land area for urban use relative to that in rural area is low, given the needs of the economy. Second, allocation of the given urban land for commercial use relative to that for residential purposes is low, given the needs of the economy. Economic development tends to be correlated with urbanisation. This implies that land availability for urban use needs to keep pace with economic development. In India, it has not happened. It is true that land for urban use has increased but the growth has been slow relative to the needs of the economy. This reflected in two forms. First, the price of the land is very high in urban area as compared to the rural. Second, the price of land is very high as compared to the cost of construction. These characteristics may be proof of many of the other developing countries too. However, the ratio here seems to be substantially higher than in other developed countries.

Many people reconcile themselves to modest accommodation in urban areas in India. One reason given is that India is a poor country – poverty and low incomes get reflected in many ways, including in the small size of accommodation for the

most. This argument has some merit but it is not entirely correct for the reason that India is not poor in terms of land availability. It is true that land cost is only one part of the cost – there is also the cost of construction. However, the later is not the major obstacle, the way the price of the space is in many part of urban India. Low incomes, then, need not imply severe shortage of housing and congestion. What then is the reason for congestion? The reason is that total land availability for urban use is low and the solution is to increase that. It is true that any shift in land use to urban areas from rural can affect availability of land for agriculture and it can reduce the agricultural production. But this is a small opportunity cost. In any case, the loss of agricultural output can be made up by imports. One more concern with a shift of land use is that loss of livelihood of rural people. This phobia seems base less, given the history of real estate development and new job opportunities in India.

Planners decide on allocation of the given total land for different uses, residence, commerce, education, health, entertainment, and so on. In many cities in India, here emphasis has been on housing. Space availability for housing is very large relative to that for other uses like commerce. This may have been the appropriate policy in the past. There is however, need for a change now. The current policy is responsible for the high price of space for commercial purpose relative to the price of space for housing. In view of the substantial price difference and the fact that

bribes are relatively low, we have the result of some residential space being diverted for commercial purposes. This is illegal and needs to be checked. However, the underlying economics cannot be ignored in any future revision of policy.

Planning for urbanisation, therefore, needs to change two parameters. One is the current policy of low total availability of land for urban use and the other is the policy of low allocation of land for commercial use with the total land made available for urban use. Changing the first will reduce the price of space in urban areas in general and correcting the second will reduce the price of commercial area in particular. The latter is important for a common man, because he not only consumes housing services but also consumes other services and goods, which are available through shops, offices and so on. A reduction in the price of commercial land will make these other goods and services cheaper to some extent. A revised policy can therefore go a long way in improving the quality of urban life.

As the economy opened up and Liberalization Privatization and Globalization (LPG) gained momentum in post 1990 era, the capital city of Tamil Nadu, due to positive factors suitable to investors, became the destination of multinationals. More over the flow of educated and skilled persons from the rural area or other states or abroad has once again pushed the momentum. This

quickened the pace of urbanisation that was not experienced before.

Proliferation of slums and its ever-increasing number in the big megapolitan cities have a tendency to multiply in spite of the concerted efforts to remove the curse of slums through the upgradation of slum schemes. The study focussed that as the prices of land/ houses allotted to the weaker sections of the society go up, they get tempted to earn more money through disposal of their properties and revert back to their old abode ie slums. In this economically weaker section earmarked houses are gradually being occupied by the middle-income group people, which call for some concrete preventive action.

Land remains the most crucial factor in the development of housing activities. The increase in the supply of land for housing purposes would bring down the prices to a realistic level. There are substantial vacant lands in the possession of government departments, educational institutes, charitable institutions and corporate organisations. There is need to evaluate the requirement of such bodies and bring the surplus land in to the land market to augment the supply of land.

Land is a scarce factor of production and has, therefore, to be used wisely. Considering the ever-increasing population growth and the consequent increasing the pressure on land there has to be

optimal use of land. This calls for giving greater importance to vertical expansion in our cities. This will go a long way in limiting the growth in price of land. In addition, vertical expansion will help to have more open spaces in cities.

There is an urgent need to check the economic concentration of activities in mega cities like Delhi, Mumbai, Kolkata and Chennai. This can be done by decentralizing the concentration of economic activities including governmental functionaries from the cities. The land prices in the megapolitan cities are skyrocketing due to the large-scale immigration of because of huge investment as well as concentration of all activities in the megapolitan cities. At the same time the development of small and medium towns on a massive scale definitely will reduce migratory nature of population from rural to megapolitan cities.

Urban poverty is the area which needs focussed attention, significant and widening disparities in income and wealth distribution have pushed the urban poor out of the land market. Capacity building and improving the access to poor to economic and income generation activities is now the major issue to be tackled on the priority basis. Some regulatory mechanism is required to be adopted by the states to neutralize the onslaught of market forces on the availability of affordable shelter to poorer segment of the urban areas.

Generally speaking the main cause of lack of basic amenities in cities due to the weak performance of the local government charged with providing the necessary basic amenities, misuse of available funds, excessive interventions, weak monitoring and evaluation mechanism, corruption in all levels of public institutions etc,. This has resulted in dramatic reduction of actual investment in the urban sector. Therefore policy reforms or good urban development schemes are less likely to succeed when governance and public institutions are weak. In this condition an effective and ground level policy is needed for the development of urban area through a detailed monitoring and evaluation mechanism.

The master Plan approach adopted for urban planning lays emphasis more on land use and it is not integrated with planning for other services. The urban planning should cover all services keeping in view the carrying capacity of existing infrastructure and level of upgradation/ additions required periodically.

The nodal point of all economic activities is cities. As per the public perception the role of municipal bodies is very important for providing all required basic amenities and treated as a service provider. The 74th Constitution Amendment is the landmark in legislation, which emphasizes the importance of people (Local Representatives) involvement in the effective planning programme. The need of the hour is to price the civic amenities rationally

according to their economies of their operation. To maintain the quality, efficiency and reduction in cost, it is imperative that an element of competitiveness is slowly brought in to achieve the targeted results. In addition to all the state government and other public institutions and other investing institutions there are social obligation towards the economically, socially, educationally, politically weaker sections of the society in their own areas and it is their prime duty to provide necessary basic amenities to them at affordable rates.

Presently the infrastructure facilities in all localities of Chennai are not equal as in the case of other speedy megapolitan cities of India. The result of this is segregation of localities in two groups like rich and poor. This is the main reason for changes in land prices in different zones of the city and different localities within the same zone. Some localities of central zone of Chennai as compared with other zones command higher prices for a simple reason that in public perception the availability of basic amenities are decidedly better to lure the affluent class indulging in speculative activities or their willingness to pay higher values. In this condition the high price in such localities could be brought down if some parity and semblance in the availability of such services through out the width and breadth of the city is maintained.

The study assumes significance for those who plan to purchase land for residential purpose and commercial purpose in Chennai and surrounding areas with limited available resources, multinationals, innovative and dynamic entrepreneurs, etc,. It is also useful for researchers, academicians and policy makers while making laws pertaining to land. It will create a land price data bank in the city both minimum and maximum in all uses of land particularly residential and commercial purpose. In addition to the above mentioned it would also help to provide land at very reasonable rate to economically weaker sections of the society and develop the required infrastructural facilities step by step. It will also bring out employment potentials within the city.

Market Value of Urban Residential Land in Chennai (Rs. in per Sq.ft.) Annexure-1

Sl. No.	Zone/ Localities	1999		2000		2001		2002		2003		2004	
	Central Zone	**Min.**	**Max.**	**Min.**	**Max.**	**Min.**	**Max.**	**Min.**	**Max.**	**Min.**	**Max.**	**Min.**	**Max.**
1	Alwarpet	1800	2000	2000	2500	1800	2600	1900	2650	2100	3000	2200	3300
2	Chetpat	1500	1800	1600	2000	1600	1900	1800	2200	2000	2600	2100	3000
3	Egmore	1400	1700	2000	2200	1800	2200	1800	2200	2000	2500	2300	2800
4	Gopalapuram	1500	1800	1600	2000	1600	2500	1700	2400	1700	2400	1800	2500
5	Kadambakkam	1000	1500	1100	1700	1400	1600	1400	1800	1500	1900	1800	2200
6	Mahalingapuram	1200	1500	1200	1600	1900	1800	1900	2000	1900	2200	2000	2500
7	Nungambakkam	1800	2000	2000	2200	2000	2400	1900	2500	2200	2750	2300	2700
8	Poes Garden	2500	3200	2800	3300	2900	3400	2900	3500	3000	3500	3200	3800
9	Royapetteh	1800	2000	1700	2000	1800	2200	1900	2000	2000	2500	2200	2800
10	Sheney Nagar	1500	1700	1700	1800	1800	2000	1700	1900	1800	2400	2000	2500
11	T.Nagar	1700	2000	1800	2400	2000	2200	2100	2500	2000	2800	2500	3000
	Northern Zone												
1	Ayanavaram	1000	1400	1100	1500	1100	1400	1100	1500	1200	1500	1300	1800
2	Kasthurba Nagar	800	1500	1000	1600	1100	1800	1200	2000	1500	2000	1600	2200
3	Kilpauk	1800	2200	1700	2400	1800	2200	1800	2400	1700	2500	2200	3000
4	Kolathur	700	800	750	900	700	800	800	900	800	1000	900	1000
5	Madhavaram High Road	550	700	600	80	550	1000	700	1000	800	1100	900	1300
6	Perambur	1100	1400	1000	1500	1100	1400	1200	1500	1300	1700	1400	1800
7	Purasawalkam	1200	1500	1300	1400	1200	1600	1300	1700	1400	1800	1500	1900
8	Royapuram	800	1000	900	1000	900	1200	1000	1400	1200	1300	1300	1500
9	Velachery	1200	1400	1300	1600	1300	1500	1300	1500	1300	1700	1300	1800
	Southern Zone												
1	Adambakkam	700	1000	800	1100	900	1200	800	1100	900	1200	1000	1300
2	Adayar	1500	2200	1600	2200	1700	2200	1600	2300	1700	2400	2100	2500
3	Besant Nagar	1900	2000	1900	2100	2000	2200	1900	2400	2000	2200	2000	2300
4	Boat Club Road	2700	3000	2700	3100	2800	3200	2800	3400	3000	3400	3000	3500
5	Chitlapakkam	500	700	550	800	550	1000	600	1100	700	1200	800	1300
6	Chrompet	500	800	600	900	700	950	750	1000	800	950	800	1000
7	Gandhi Nagar	1600	2000	1800	2000	1700	1900	1700	2000	2100	2400	2200	2500
8	Greenways Road	1800	2500	1850	2300	1900	2300	1850	2400	1900	2500	2000	2800
9	Guindy	1100	1400	1300	1500	1200	1400	1200	1400	1200	1400	1300	1500
10	Indira Nagar	1600	2000	1700	2000	1600	2100	1700	2300	1800	2200	2100	2300
11	Kottivakkam	800	900	850	1000	900	1100	850	1200	900	1200	900	1400
12	Kotturpuram	800	1200	950	1400	1000	1650	1000	1600	1200	1500	1000	1900
13	Mandavili	1600	2200	1600	2300	1700	2200	1750	2200	1900	2300	2000	2400
14	Medavakkam	500	1000	600	1150	700	1200	800	1250	750	1200	800	1250

15	Mylapore	1650	2400	1800	2600	1700	2500	1700	2500	1800	2650	2300	2700
16	Nanganllur	800	900	900	1000	800	900	800	950	900	1000	1000	1200
17	Palli Karanai	900	1200	1000	1250	900	1200	1000	1200	1100	1200	1100	1300
18	Perungudi	1000	1250	1100	1300	1000	1250	1100	1300	1200	1350	1200	1400
19	Raja Annamalaipuram	1800	2100	1800	2200	1800	2500	2000	2600	2000	2500	2100	2700
20	Santhom High Road	1700	2000	1750	2100	1800	2200	1900	2300	1950	2400	2000	2400
21	Selaiyur	500	600	550	700	600	750	650	800	600	900	700	1000
22	Shastri Nagar	1600	1800	1700	1850	1700	1900	1650	1900	1900	2200	2100	2400
23	Tambaram	600	750	700	800	700	800	800	1000	800	1000	1000	1200
24	Taramani	800	1000	900	1050	1000	1100	1000	1100	1100	1200	1100	1200
25	Thoraipakkam	500	1400	600	1500	550	1500	600	1500	700	1500	800	1600
26	Tiruvanmiyur	1000	1700	1050	2000	1500	1600	1500	1800	1850	1950	1900	2100
27	Ullagaram	600	800	650	850	700	800	650	850	700	900	700	1000
28	Valmiki Nagar	1400	1600	1600	1800	1600	1800	1500	1800	1700	1900	1900	2200
	Western Zone												
1	Alandur	700	800	700	800	750	900	800	900	800	1000	900	1200
2	Anisjikarai	1000	1200	1000	1300	900	1400	1100	1500	1200	1550	1300	1600
3	Anna Nagar (East)	1500	1800	1600	2000	1600	2100	1700	2200	1800	2250	1800	2300
4	Anna Nagar (West)	1300	1500	1400	1700	1500	1800	1500	1700	1600	1800	1600	1900
5	Arumbakkam	1000	1200	1200	1300	1400	1400	1500	1800	1400	1700	1500	1800
6	Ashok Nagar	1200	1600	1300	1800	1400	1900	1400	1900	1500	2000	1600	2200
7	Chinaya Nagar	1000	1100	1000	1200	1200	1300	1200	1400	1300	1400	1300	1500
8	Choolaimedu	1200	1500	1250	1500	1300	1600	1300	1700	1350	1750	1400	1800
9	K.K.Nagar	1000	1200	1100	1400	1100	1400	1200	1500	1250	1600	1200	1500
10	Keyambedu	800	1400	900	1400	1000	1300	1100	1400	1200	1400	1200	1500
11	Mandipakkam	500	700	700	900	800	1000	750	950	700	900	700	1200
13	Maduravayal	600	800	650	850	600	900	700	950	750	1000	800	900
13	Mogappaiyar (East)	900	1000	900	1200	800	1000	1000	1200	1200	1400	1300	1500
14	Nesapakkam	900	1250	900	1400	850	1300	900	1300	1000	1400	1000	1300
15	Padi	650	850	650	900	700	900	750	1000	800	1000	800	1100
16	Saidapet	900	1400	900	1400	1000	1500	1100	1500	1100	1800	1500	2000
17	Saligramam	800	1000	900	1100	1000	1200	950	1300	1000	1100	1000	1200
18	Thiruninravur	500	700	550	700	600	750	550	800	600	800	700	900
19	Vadapalani	1200	1500	1250	1600	1200	1500	1000	1600	1300	1700	1500	1900
20	Valasaravakkam	500	850	550	900	600	1000	600	1200	700	1100	800	1300
21	Villivakkam	700	850	750	850	900	1000	900	1000	1000	1200	1100	1400

Percentage Growth of Market value of Urban Residential Land in Chennai **Annexure-2**

Sl. No.	Zone/ Localities	1999-2000		2000-2001		2001-2002		2002-2003		2003-2004		1999-2004	
	Central Zone	**Min.**	**Max.**	**Min.**	**Max.**	**Min.**	**Max.**	**Min.**	**Max.**	**Min.**	**Max.**	**Min.**	**Max.**
1	Alwarpet	11.11	25.00	-10.00	4.00	5.56	1.92	10.53	13.21	4.76	10.00	22.22	65.00
2	Chetpat	6.67	11.11	0.00	-5.00	12.50	15.79	11.11	18.18	5.00	15.38	40.00	66.67
3	Egmore	42.86	29.41	-10.00	0.00	0.00	0.00	11.11	13.64	15.00	12.00	64.29	64.71
4	Gopalapuram	6.67	11.11	0.00	25.00	6.25	-4.00	0.00	0.00	5.88	4.17	20.00	38.89
5	Kadambakkam	10.00	13.33	27.27	-5.88	0.00	12.50	7.14	5.56	20.00	15.79	80.00	46.67
6	Mahalingapuram	0.00	6.67	58.33	12.50	0.00	11.11	0.00	10.00	5.26	13.64	66.67	66.67
7	Nungambakkam	11.11	10.00	0.00	9.09	-5.00	4.17	15.79	10.00	4.55	-1.82	27.78	35.00
8	Poes Garden	12.00	3.13	3.57	3.03	0.00	2.94	3.45	0.00	6.67	8.57	28.00	18.75
9	Royapetteh	-5.56	0.00	5.88	10.00	5.56	-9.09	5.26	25.00	10.00	12.00	22.22	40.00
10	Sheney Nagar	13.33	5.88	5.88	11.11	-5.56	-5.00	5.88	26.32	11.11	4.17	33.33	47.06
11	T.Nagar	5.88	20.00	11.11	-8.33	5.00	13.64	-4.76	12.00	25.00	7.14	47.06	50.00
	Northern Zone												
1	Ayanavaram	10.00	7.14	0.00	-6.67	0.00	7.14	9.09	0.00	8.33	20.00	30.00	28.57
2	Kasthurba Nagar	25.00	6.67	10.00	12.50	9.09	11.11	25.00	0.00	6.67	10.00	100.00	46.67
3	Kilpauk	-5.56	9.09	5.88	-8.33	0.00	9.09	-5.56	4.17	29.41	20.00	22.22	36.36
4	Kolathur	7.14	12.50	-6.67	-11.11	14.29	12.50	0.00	11.11	12.50	0.00	28.57	25.00
5	Madhavaram High Road	9.09	-88.57	-8.33	1150.00	27.27	0.00	14.29	10.00	12.50	18.18	63.64	85.71
6	Perambur	-9.09	7.14	10.00	-6.67	9.09	7.14	8.33	13.33	7.69	5.88	27.27	28.57
7	Purasawalkam	8.33	-6.67	-7.69	14.29	8.33	6.25	7.69	5.88	7.14	5.56	25.00	26.67
8	Royapuram	12.50	0.00	0.00	20.00	11.11	16.67	20.00	-7.14	8.33	15.38	62.50	50.00
9	Velachery	8.33	14.29	0.00	-6.25	0.00	0.00	0.00	13.33	0.00	5.88	8.33	28.57
	Southern Zone												
1	Adambakkam	14.29	10.00	12.50	9.09	-11.11	-8.33	12.50	9.09	11.11	8.33	42.86	30.00
2	Adayar	6.67	0.00	6.25	0.00	-5.88	4.55	6.25	4.35	23.53	4.17	40.00	13.64
3	Besant Nagar	0.00	5.00	5.26	4.76	-5.00	9.09	5.26	-8.33	0.00	4.55	5.26	15.00
4	Boat Club Road	0.00	3.33	3.70	3.23	0.00	6.25	7.14	0.00	0.00	2.94	11.11	16.67
5	Chitlapakkam	10.00	14.29	0.00	25.00	9.09	10.00	16.67	9.09	14.29	8.33	60.00	85.71
6	Chrompet	20.00	12.50	16.67	5.56	7.14	5.26	6.67	-5.00	0.00	5.26	60.00	25.00
7	Gandhi Nagar	12.50	0.00	-5.56	-5.00	0.00	5.26	23.53	20.00	4.76	4.17	37.50	25.00
8	Greenways Road	2.78	-8.00	2.70	0.00	-2.63	4.35	2.70	4.17	5.26	12.00	11.11	12.00
9	Guindy	18.18	7.14	-7.69	-6.67	0.00	0.00	0.00	0.00	8.33	7.14	18.18	7.14
10	Indira Nagar	6.25	0.00	-5.88	5.00	6.25	9.52	5.88	-4.35	16.67	4.55	31.25	15.00
11	Kottivakkam	6.25	11.11	5.88	10.00	-5.56	9.09	5.88	0.00	0.00	16.67	12.50	55.56
12	Kotturpuram	18.75	16.67	5.26	17.86	0.00	-3.03	20.00	-6.25	-16.67	26.67	25.00	58.33
13	Mandavili	0.00	4.55	6.25	-4.35	2.94	0.00	8.57	4.55	5.26	4.35	25.00	9.09
14	Medavakkam	20.00	15.00	16.67	4.35	14.29	4.17	-6.25	-4.00	6.67	4.17	60.00	25.00

15	Mylapore	9.09	8.33	-5.56	-3.85	0.00	0.00	5.88	6.00	27.78	1.89	39.39	12.50
16	Nanganllur	12.50	11.11	-11.11	-10.00	0.00	5.56	12.50	5.26	11.11	20.00	25.00	33.33
17	Palli Karanai	11.11	4.17	-10.00	-4.00	11.11	0.00	10.00	0.00	0.00	8.33	22.22	8.33
18	Perungudi	10.00	4.00	-9.09	-3.85	10.00	4.00	9.09	3.85	0.00	3.70	20.00	12.00
19	Raja Annamalaipuram	0.00	4.76	0.00	13.64	11.11	4.00	0.00	-3.85	5.00	8.00	16.67	28.57
20	Santhom High Road	2.94	5.00	2.86	4.76	5.56	4.55	2.63	4.35	2.56	0.00	17.65	20.00
21	Selaiyur	10.00	16.67	9.09	7.14	8.33	6.67	-7.69	12.50	16.67	11.11	40.00	66.67
22	Shastri Nagar	6.25	2.78	0.00	2.70	-2.94	0.00	15.15	15.79	10.53	9.09	31.25	33.33
23	Tambaram	16.67	6.67	0.00	0.00	14.29	25.00	0.00	0.00	25.00	20.00	66.67	60.00
24	Taramani	12.50	5.00	11.11	4.76	0.00	0.00	10.00	9.09	0.00	0.00	37.50	20.00
25	Thoraipakkam	20.00	7.14	-8.33	0.00	9.09	0.00	16.67	0.00	14.29	6.67	60.00	14.29
26	Tiruvanmiyur	5.00	17.65	42.86	-20.00	0.00	12.50	23.33	8.33	2.70	7.69	90.00	23.53
27	Ullagaram	8.33	6.25	7.69	-5.88	-7.14	6.25	7.69	5.88	0.00	11.11	16.67	25.00
28	Valmiki Nagar	14.29	12.50	0.00	0.00	-6.25	0.00	13.33	5.56	11.76	15.79	35.71	37.50
	Western Zone												
1	Alandur	0.00	0.00	7.14	12.50	6.67	0.00	0.00	11.11	12.50	20.00	28.57	50.00
2	Anisjikarai	0.00	8.33	-10.00	7.69	22.22	7.14	9.09	3.33	8.33	3.23	30.00	33.33
3	Anna Nagar (East)	6.67	11.11	0.00	5.00	6.25	4.76	5.88	2.27	0.00	2.22	20.00	27.78
4	Anna Nagar (West)	7.69	13.33	7.14	5.88	0.00	-5.56	6.67	5.88	0.00	5.56	23.08	26.67
5	Arumbakkam	20.00	8.33	16.67	7.69	7.14	28.57	-6.67	-5.56	7.14	5.88	50.00	50.00
6	Ashok Nagar	8.33	12.50	7.69	5.56	0.00	0.00	7.14	5.26	6.67	10.00	33.33	37.50
7	Chinaya Nagar	0.00	9.09	20.00	8.33	0.00	7.69	8.33	0.00	0.00	7.14	30.00	36.36
8	Choolaimedu	4.17	0.00	4.00	6.67	0.00	6.25	3.85	2.94	3.70	2.86	16.67	20.00
9	K.K.Nagar	10.00	16.67	0.00	0.00	9.09	7.14	4.17	6.67	-4.00	-6.25	20.00	25.00
10	Keyambedu	12.50	0.00	11.11	-7.14	10.00	7.69	9.09	0.00	0.00	7.14	50.00	7.14
11	Mandipakkam	40.00	28.57	14.29	11.11	-6.25	-5.00	-6.67	-5.26	0.00	33.33	40.00	71.43
13	Maduravayal	8.33	6.25	-7.69	5.88	16.67	5.56	7.14	5.26	6.67	-10.00	33.33	12.50
13	Mogappaiyar (East)	0.00	20.00	-11.11	-16.67	25.00	20.00	20.00	16.67	8.33	7.14	44.44	50.00
14	Nesapakkam	0.00	12.00	-5.56	-7.14	5.88	0.00	11.11	7.69	0.00	-7.14	11.11	4.00
15	Padi	0.00	5.88	7.69	0.00	7.14	11.11	6.67	0.00	0.00	10.00	23.08	29.41
16	Saidapet	0.00	0.00	11.11	7.14	10.00	0.00	0.00	20.00	36.36	11.11	66.67	42.86
17	Saligramam	12.50	10.00	11.11	9.09	-5.00	8.33	5.26	-15.38	0.00	9.09	25.00	20.00
18	Thiruninravur	10.00	0.00	9.09	7.14	-8.33	6.67	9.09	0.00	16.67	12.50	40.00	28.57
19	Vadapalani	4.17	6.67	-4.00	-6.25	-16.67	6.67	30.00	6.25	15.38	11.76	25.00	26.67
20	Valasaravakkam	10.00	5.88	9.09	11.11	0.00	20.00	16.67	-8.33	14.29	18.18	60.00	52.94
21	Villivakkam	7.14	0.00	20.00	17.65	0.00	0.00	11.11	20.00	10.00	16.67	57.14	64.71

Index of Market value of Urban Residential Land in Chennai (Base 2000=100) **Annexure-3**

Sl. No.	Zone/ Localities	2000		2001		2002		2003		2004	
	Central Zone	**Min.**	**Max.**	**Min.**	**Max.**	**Min.**	**Max.**	**Min.**	**Max.**	**Mini.**	**Max.**
1	Alwarpet	111.11	125.00	90.00	104.00	105.56	101.92	110.53	113.21	104.76	110.00
2	Chetpat	106.67	111.11	100.00	95.00	112.50	115.79	111.11	118.18	105.00	115.38
3	Egmore	142.86	129.41	90.00	100.00	100.00	100.00	111.11	113.64	115.00	112.00
4	Gopalapuram	106.67	111.11	100.00	125.00	106.25	96.00	100.00	100.00	105.88	104.17
5	Kadambakkam	110.00	113.33	127.27	94.12	100.00	112.50	107.14	105.56	120.00	115.79
6	Mahalingapuram	100.00	106.67	158.33	112.50	100.00	111.11	100.00	110.00	105.26	113.64
7	Nungambakkam	111.11	110.00	100.00	109.09	95.00	104.17	115.79	110.00	104.55	98.18
8	Poes Garden	112.00	103.13	103.57	103.03	100.00	102.94	103.45	100.00	106.67	108.57
9	Royapetteh	94.44	100.00	105.88	110.00	105.56	90.91	105.26	125.00	110.00	112.00
10	Sheney Nagar	113.33	105.88	105.88	111.11	94.44	95.00	105.88	126.32	111.11	104.17
11	T.Nagar	105.88	120.00	111.11	91.67	105.00	113.64	95.24	112.00	125.00	107.14
	Northern Zone										
1	Ayanavaram	110.00	107.14	100.00	93.33	100.00	107.14	109.09	100.00	108.33	120.00
2	Kasthurba Nagar	125.00	106.67	110.00	112.50	109.09	111.11	125.00	100.00	106.67	110.00
3	Kilpauk	94.44	109.09	105.88	91.67	100.00	109.09	94.44	104.17	129.41	120.00
4	Kolathur	107.14	112.50	93.33	88.89	114.29	112.50	100.00	111.11	112.50	100.00
5	Madhavaram High Road	109.09	11.43	91.67	1250.00	127.27	100.00	114.29	110.00	112.50	118.18
6	Perambur	90.91	107.14	110.00	93.33	109.09	107.14	108.33	113.33	107.69	105.88
7	Purasawalkam	108.33	93.33	92.31	114.29	108.33	106.25	107.69	105.88	107.14	105.56
8	Royapuram	112.50	100.00	100.00	120.00	111.11	116.67	120.00	92.86	108.33	115.38
9	Velachery	108.33	114.29	100.00	93.75	100.00	100.00	100.00	113.33	100.00	105.88
	Southern Zone										
1	Adambakkam	114.29	110.00	112.50	109.09	88.89	91.67	112.50	109.09	111.11	108.33
2	Adayar	106.67	100.00	106.25	100.00	94.12	104.55	106.25	104.35	123.53	104.17
3	Besant Nagar	100.00	105.00	105.26	104.76	95.00	109.09	105.26	91.67	100.00	104.55
4	Boat Club Road	100.00	103.33	103.70	103.23	100.00	106.25	107.14	100.00	100.00	102.94
5	Chitlapakkam	110.00	114.29	100.00	125.00	109.09	110.00	116.67	109.09	114.29	108.33
6	Chrompet	120.00	112.50	116.67	105.56	107.14	105.26	106.67	95.00	100.00	105.26
7	Gandhi Nagar	112.50	100.00	94.44	95.00	100.00	105.26	123.53	120.00	104.76	104.17
8	Greenways Road	102.78	92.00	102.70	100.00	97.37	104.35	102.70	104.17	105.26	112.00
9	Guindy	118.18	107.14	92.31	93.33	100.00	100.00	100.00	100.00	108.33	107.14
10	Indira Nagar	106.25	100.00	94.12	105.00	106.25	109.52	105.88	95.65	116.67	104.55
11	Kottivakkam	106.25	111.11	105.88	110.00	94.44	109.09	105.88	100.00	100.00	116.67
12	Kotturpuram	118.75	116.67	105.26	117.86	100.00	96.97	120.00	93.75	83.33	126.67
13	Mandavili	100.00	104.55	106.25	95.65	102.94	100.00	108.57	104.55	105.26	104.35
14	Medavakkam	120.00	115.00	116.67	104.35	114.29	104.17	93.75	96.00	106.67	104.17

15	Mylapore	109.09	108.33	94.44	96.15	100.00	100.00	105.88	106.00	127.78	101.89
16	Nanganllur	112.50	111.11	88.89	90.00	100.00	105.56	112.50	105.26	111.11	120.00
17	Palli Karanai	111.11	104.17	90.00	96.00	111.11	100.00	110.00	100.00	100.00	108.33
18	Perungudi	110.00	104.00	90.91	96.15	110.00	104.00	109.09	103.85	100.00	103.70
19	Raja Annamalaipuram	100.00	104.76	100.00	113.64	111.11	104.00	100.00	96.15	105.00	108.00
20	Santhom High Road	102.94	105.00	102.86	104.76	105.56	104.55	102.63	104.35	102.56	100.00
21	Selaiyur	110.00	116.67	109.09	107.14	108.33	106.67	92.31	112.50	116.67	111.11
22	Shastri Nagar	106.25	102.78	100.00	102.70	97.06	100.00	115.15	115.79	110.53	109.09
23	Tambaram	116.67	106.67	100.00	100.00	114.29	125.00	100.00	100.00	125.00	120.00
24	Taramani	112.50	105.00	111.11	104.76	100.00	100.00	110.00	109.09	100.00	100.00
25	Thoraipakkam	120.00	107.14	91.67	100.00	109.09	100.00	116.67	100.00	114.29	106.67
26	Tiruvanmiyur	105.00	117.65	142.86	80.00	100.00	112.50	123.33	108.33	102.70	107.69
27	Ullagaram	108.33	106.25	107.69	94.12	92.86	106.25	107.69	105.88	100.00	111.11
28	Valmiki Nagar	114.29	112.50	100.00	100.00	93.75	100.00	113.33	105.56	111.76	115.79
	Western Zone										
1	Alandur	100.00	100.00	107.14	112.50	106.67	100.00	100.00	111.11	112.50	120.00
2	Anisjikarai	100.00	108.33	90.00	107.69	122.22	107.14	109.09	103.33	108.33	103.23
3	Anna Nagar (East)	106.67	111.11	100.00	105.00	106.25	104.76	105.88	102.27	100.00	102.22
4	Anna Nagar (West)	107.69	113.33	107.14	105.88	100.00	94.44	106.67	105.88	100.00	105.56
5	Arumbakkam	120.00	108.33	116.67	107.69	107.14	128.57	93.33	94.44	107.14	105.88
6	Ashok Nagar	108.33	112.50	107.69	105.56	100.00	100.00	107.14	105.26	106.67	110.00
7	Chinaya Nagar	100.00	109.09	120.00	108.33	100.00	107.69	108.33	100.00	100.00	107.14
8	Choolaimedu	104.17	100.00	104.00	106.67	100.00	106.25	103.85	102.94	103.70	102.86
9	K.K.Nagar	110.00	116.67	100.00	100.00	109.09	107.14	104.17	106.67	96.00	93.75
10	Keyambedu	112.50	100.00	111.11	92.86	110.00	107.69	109.09	100.00	100.00	107.14
11	Mandipakkam	140.00	128.57	114.29	111.11	93.75	95.00	93.33	94.74	100.00	133.33
13	Maduravayal	108.33	106.25	92.31	105.88	116.67	105.56	107.14	105.26	106.67	90.00
13	Mogappaiyar (East)	100.00	120.00	88.89	83.33	125.00	120.00	120.00	116.67	108.33	107.14
14	Nesapakkam	100.00	112.00	94.44	92.86	105.88	100.00	111.11	107.69	100.00	92.86
15	Padi	100.00	105.88	107.69	100.00	107.14	111.11	106.67	100.00	100.00	110.00
16	Saidapet	100.00	100.00	111.11	107.14	110.00	100.00	100.00	120.00	136.36	111.11
17	Saligramam	112.50	110.00	111.11	109.09	95.00	108.33	105.26	84.62	100.00	109.09
18	Thiruninravur	110.00	100.00	109.09	107.14	91.67	106.67	109.09	100.00	116.67	112.50
19	Vadapalani	104.17	106.67	96.00	93.75	83.33	106.67	130.00	106.25	115.38	111.76
20	Valasaravakkam	110.00	105.88	109.09	111.11	100.00	120.00	116.67	91.67	114.29	118.18
21	Villivakkam	107.14	100.00	120.00	117.65	100.00	100.00	111.11	120.00	110.00	116.67

Comparison Between the Government and Market Value of Land in Chennai (Rs Per Sq.Feet) Annexure-4

No	Locality	Market Value(MV) in 2004			Government Value(GV) in 2003-04			Comparison Between MV &GV		
		Min.	Max.	Av.	Min.	Max.	Av.	Min.	Max.	Av.
1	Ashok Nagar	1600	2200	1900	384	3170	1777	1216	-970	123
2	Koyampedu	1200	1500	1350	309	2200	1254.5	891	-700	95.5
3	Arumbakkam	1500	1800	1650	366	1925	1145.5	1134	-125	504.5
4	Kodambakkam	1800	2200	2000	469	3295	1882	1331	-1095	118
5	Mylapore	2300	2700	2500	371	6681	3526	1929	-3981	-1026
6	Egmore	2300	2800	2550	391	4409	2400	1909	-1609	150
7	Purasavakkam	1500	1900	1700	367	3636	2001.5	1133	-1736	-301.5
8	Padi	800	1100	950	210	2510	1360	590	-1410	-410
9	Villivakkam	1100	1400	1250	395	2510	1452.5	705	-1110	-202.5
10	Adayar	2100	2500	2300	466	7742	4104	1634	-5242	-1804
11	Tharamani	1100	1200	1150	174	207	190.5	926	993	959.5
12	Adampakkam	1000	1300	1150	160	1043	601.5	840	257	548.5
13	Nanganallur	1000	1200	1100	159	660	409.5	841	540	690.5
14	Ullagaram	700	1000	850	144	647	395.5	556	353	454.5
15	Medavakkam	800	1250	1025	56	277	166.5	744	973	858.5
16	Pallikaranai	1100	1300	1200	69	377	223	1031	923	977
17	Saidapet	1500	2000	1750	439	2491	1465	1061	-491	285
18	Perungudi	1200	1400	1300	85	541	313	1115	859	987
19	Selayur	700	1000	850	55	420	237.5	645	580	612.5
20	Tambaram	1000	1200	1100	117	1002	559.5	883	198	540.5
21	T Nagar	2500	3000	2750	843	11282	6062.5	1657	-8282	-3312.5
22	Velachery	1300	1800	1550	130	1404	767	1170	396	783
23	Maduravayal	800	900	850	81	753	417	719	147	433
24	Nesapakkam	1000	1300	1150	89	550	319.5	911	750	830.5
25	Saligramam	1000	1200	1100	258	2061	1159.5	742	-861	-59.5
26	Valasaravakkam	800	1300	1050	237	815	526	563	485	524