CHAPTER-I

INTRODUCTION

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CHAPTER I
INTRODUCTION

1.1 INTRODUCTION

Maharashtra is one of the most urbanized states in India. The proportion of urban population in Maharashtra is 42.42% as per the latest Census of 2001, which has increased from 38.69% in 1991. In absolute terms, the urban population increased from 30.5 million to 41 million and the net addition to state's urban population was 10.5 million during the last decade. The state of Maharashtra is highly urbanized in comparison to the country, as a whole (27.8%), but its urban population is mostly concentrated in a few major cities. For this skewed distribution, the socio-spatial factors are responsible and this imbalanced situation needs to be corrected after investigation.

In the State, the number of urban centres has increased from 266 in 1961 to 378 in 2001. Between 1961 and 1981, the growth of urban centres was 15.41%. During the same period, the proliferation of the urban units was from 266 to 307 between 1981 and 2001. The number of towns increased from 307 to 378 with growth rate of 23.13 per cent. The growth of towns during 1981-91 in the state was less then 10% (9.45%), which was much less than the growth of towns in India as a whole (16.21%). But the share of urban population in the total population of Maharashtra State (42.42%) was much higher than in the entire country (27.8%).

The level of urbanization in the State of Maharashtra ranges from 6.93% in Gadchiroli district to 100% in Mumbai and Mumbai suburbs. Above 60% of the urban population in the state is
concentrated in five districts only and the remaining 40% in 30 districts, which is, much less than the state average.

Of the total urban population in the state, 80% is concentrated in Class-I towns only. It seems that the growth of population in Class-I towns is much faster than in small and medium towns. In fact, the proportion of population in small and medium towns has been declining for the last 50 years.

In the present study, it is intended to look into the functions and the classification of towns in relation to the kind of bearing it has on the development, not only on the urban centres but on their rural hinterlands also. An attempt is also made to appraise the urbanization and industrialization factors. How far these factors are responsible for generating the employment opportunities confined to the major cities but the smaller towns lacking far behind, which are unable to provide adequate services to the potential migrating population to the Class-I towns. This is to be done by considering the elements of socio-spatial justice not only in the urban sector and the people residing there but to the rural masses too. Considering the following specific objectives, the present study on the functional classification of towns and development in Maharashtra has been conducted.

1.2 MAIN OBJECTIVES

1.2.1. To look into the distribution and growth of urban population in the state of Maharashtra between 1981 and 2001.

1.2.2. To assess the spatial pattern, location, proportion and growth of population in towns of Maharashtra.
1.2.3. To determine the functions of small and medium towns, primarily the class-I and their resource base along with the changes in their functions.

1.2.4. To understand the occupational and economic structure of urban centres in the state.

1.2.5. To look into the hierarchy of towns and their morphological structure in the state.

1.2.6. To investigate the systems of urban places and characteristics of central business districts, particularly of Kolhapur city.

1.2.7. To assess the impact of urban centres on their peripheries particularly considering the case of Kolhapur city.

1.2.8. To measure the levels of development, at district level in Maharashtra during 1981-2001.

1.3 RESEARCH QUESTIONS

1.3.1 Is it that the proportion and growth of population is declining in small and medium towns, on the one hand, and the large towns growing disproportionately, on the other hand?

1.3.2. How far the functions of the towns are changing and contributing to the development of their surrounding?

1.3.3. How for the development is percolating to the hinterlands of the town, especially Kolhapur city?

1.4 DATA BASE AND METHODOLOGY

The present study is mainly based on the secondary data collected from the Census of India 1981 to 2001, Statistical Abstracts of Maharashtra and India, National Sample Survey Organization, Remote Sensing Photographs, Kolhapur Municipal
Corporation, Labour Commissioner Officer Kolhapur, District Census Handbook, Kolhapur, etc.

The primary data has also been generated from Kolhapur city to determine the sphere of influence on its periphery. The Units of study were districts and towns. In order to make comparison, adjustment in the data and district administrative units has been made depending on the circumstances. Some information have also been collected from books, journals, statistical abstracts, socio-economic surveys, field survey, etc. Ashok Mitra (1973) classified the towns and cities into different functions in 1964 by using the census data. For classification purpose, he considered only the industrial workers engaged in different sectors of economy, as per the Census of India. Out of nine categories of workers, as per the census of India, the first two (cultivation and agricultural laborers) have to be excluded as they are non-urban activities. He formulated three groups out of these seven census economic activities (1961). For example, for determining the function of a town, he considered third (forestry, plantation, fishing, mining & quarrying), fourth (household industry), fifth (non-household industry), sixth construction, seventh (trade & Commerce) eighth (transport, storage & communication) and for ninth services i.e. (other services) only of work force. We, for the present investigation, have employed Ashok Mitra's method for the functional classification of cities measuring on 5 indices, rather than 7. For manufacturing group, only the household and non-household activities are considered, which are more prominent in the cities, and have excluded mining and construction activities as these dilute the original function. For the other two groups like trade and transport and services, the same indices are deemed as by Ashok Mitra. It is
because of the fact that the employment in the non-agricultural primary activity in small towns is quite substantial, but in cities, secondary and tertiary activities are prominent.

Cities show a remarkable degree of specialization in one or more specific activities, such as household industry, modern non-household industry, trade, commerce and transportation, public administration (services), etc. (Ramchandran 1989, p.179).

Triangular graph (ternary diagram) is used for the purpose of classification of towns. Three medians of an equilateral triangle graduated 0 to 100 formed axes representing three major groups: Manufacturing, Trade & Transport, and Services.

For any town, the percentage of workers in these three groups could be plotted as a percentage of the total number of workers along the three axes. The centre of this triangle represents the maximum diversification of function in which each function has 33.33% workers. As one moves from this central part towards the axes, the magnitude of specialization increases. These concentric circles are drawn now from the centre with the radius equal to $6\frac{2}{3}, 11\frac{2}{3}$ and $16\frac{2}{3}$ units (Mitra, 1967, pp.35-81). These intersect the axes at 40%, 45% and 50% marks, respectively, and on higher sides. The workers in the three major groups of trade & transport, and services are totaled. Out of this total, the proportion of each group is computed and the total percentages of workers in all these three groups should be 100%. These percentage figures have to be plotted in a ternary diagram, so as to identify their functions. A city, which falls within the first circle, is having a highly balanced with a highly diversified function with no category having more than 40% of the total workers. Cities that are marked on triangular graph between the first and the second circles have moderate
functions with 40% to 45% of workers in each category. Cities which fall between the second and the third circles have one dominant function with 45% to 50% of the total workers. The cities marked outside the third circle will show highly dominant functions with more than 50% considered as a very specialized town in terms of its function.

The Rank size rule is applied to understand the hierarchy of towns and simple growth index has been applied to measure the growth of towns, urban population, etc.

To measure the levels of development at district level in the state of Maharashtra, composite indexes have been computed for the years 1981, 1991 and 2001 by considering the socio-economic indices by applying Prof. Kundu’s index (1980). For the construction of composite index at district level, the values of different indicators, if added, directly may affect the overall development index, therefore, before aggregating such values the biasness or scale affect has been removed by applying the method of normalization. Though there are several techniques of normalization, the technique of division by mean, suggested by Kundu (1980) has been used for this purpose. The observations of each indicators have been divided by their corresponding mean values without affecting the relative position of the district. This transformation does not disturb the dispersion of the variables since the coefficient of variation (CV) of the original series is retained as the standard deviation or CV of the transformed series. Thus the obtained normalized values for the component indicators have been added together to give rise to component scores of development for each district. After putting the composite index values in descending order, the districts have been grouped into
Fig. 1.2

<table>
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<th>Height in Metres</th>
<th>Colour</th>
</tr>
</thead>
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<td>&gt; 1350</td>
<td>Dark Brown</td>
</tr>
<tr>
<td>1350</td>
<td>Brown</td>
</tr>
<tr>
<td>900</td>
<td>Red</td>
</tr>
<tr>
<td>600</td>
<td>Orange</td>
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<tr>
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<td>Light Orange</td>
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<td>Yellow</td>
</tr>
<tr>
<td>0</td>
<td>Green</td>
</tr>
</tbody>
</table>

Source: Based on Census of India, 1981, Census Atlas Series XII Part XII, Map.3
MAHARASHTRA
MAJOR RIVERS AND THEIR TRIBUTARIES

Source: Atlas India Map Services, Jodhpur P. 4, Water and Irrigation Commission Report, June 1999, Vol. 8, Govt. of Maharashtra

Fig. 1.3
different levels of development categories. (See Ramotra, 2008, p. 16).

Coefficient of Correlation among the different indicators have also been worked to see the urban impact on various social and economic indices of development. Coefficient of variation has also been calculated to see whether the variation in the level of development has augmented or declined.

Apart from the statistical techniques, various cartography techniques have been employed to construct the maps, bar graphs and diagrams to understand the spatial patterns and processes in the distribution and location of towns.

1.5 STUDY AREA

Geographically the state of Maharashtra extends from 15° 45'N to 22° 01' North latitude and 72° 45' E to 80° 45' East longitude. With an expansion of about 800 km from the east to west and 700 km from north to south, it has an area of 3,07,713 sq km, which is about one tenth of that of India. It ranks third in size, and second in population among the states of India. Maharashtra has a 720 km long coastline of the Arabian Sea on its west, the state of Gujarat to its north-west, Madhya Pradesh to its north and east, Andhra Pradesh, Karnataka and Goa its south. The state occupies a near-central location in the peninsular India and in many respects, marks the geographical and cultural transition from the north to the south.

The administrative structure of the state consists of Mumbai as the state capital, with Nagpur a seasonal venue for the state legislature. There are six administrative divisions-Mumbai, Pune, Nashik, Aurangabad, Amravati and Nagpur; 35 districts and 357
talukas or tehsils. Each tehsil is sub-divided into development blocks, Panchayat Samitis and Gram Panchayat. There are 378 towns and 40,412 villages in Maharashtra, Greater Mumbai is the smallest district (603 sq. km.) and Gadchiroli (15,433 sq.km) is the largest district in terms of area in the state.

The physical structure of Maharashtra is simply vast plateau sloping east-ward and bounded by hills and mountains to the west and north and a narrow coastal lowland to the west, physically, the state comprises there natural divisions- the Konkan, the Sahyadris and the Deccan plateau.

Geologically, the area of the state nearly coincides with the limits of the Deccan trap formations. The major part of Maharashtra in underlined by the routs of volcanic origin the lava. The main geological event that most influenced the physical make-up of Maharashtra was the one, which threw up lava on a wide regional scale. The end of the Gondwana period was followed by intense volcanic activity. Over five lakh sq km of land surface was flooded by quit outflows of basic lava from fissures, layer by layer. Eventually a lava plateau was formed. The characteristic trap topography covers the whole of the Maharashtra plateau. The development of laterite in Ratnagiri district took place in the Tertiary period. During the Pleistocene period, vast alluvial infillings had taken place in the Tapi-Purna rift valleys. The state occupies a near-central location in the peninsular India and in many respects, marks the geographical and cultural transition from the north to the south.

The Western Ghats run southwards along the western edge of the Deccan plateau from near the Tapi mouth and extends beyond the southern limits of the state. It is the main water-divide
separating the drainage of the Godavari and Krishna rivers from that of the Konkan rivers. A few gaps or ghats in the range have served as routes linking the coast with the interior. Form the Bhor ghats, access of Mumbai city with the hinterland is established by rail and road routes.

The climate of the region is Mansoon-type, consisting of an average rainfall of 1450 mm per annum and an average temperature of 30° C. Causally the first week of June is the time for the onset of the south-west monsoon. Rains spread out from the south-western and western sites all over Maharashtra. The major part of the rain is received during the four months from June to September.

Maharashtra has been one of the leading states of the union of India where the co-operative movement had taken early roots and the mostly industrialized state in India. The industries in Maharashtra contribute a great deal to the national wealth and overall development of the state. However, the industrial development is concentrated in a few districts like Mumbai, Pune, Thane, Nashik, Kolhapur, Aurangabad, Nagpur, Raigarh and Chandrapur, etc.

Maharashtra is one of the most urbanized (42.42%) state and Ranks second after Tamil Nadu (43.90%) among the major states of India. Both the industrialization and urbanization are confined to a very few districts, giving rise to an imbalance in the economic structure in the state, which needs to be balanced. Therefore, it further reminds us to look into the urban economic structure by considering the functional status of the towns and cities and their influence on the surrounding area.
1.6 REVIEW OF LITERATURE

Urban Geography is one of the well developed branches of Geography, in which we come across various concepts, law, paradigms and theories. Various scholars in India, and abroad as well, have contributed towards the expansion and dissemination of knowledge of urban geography especially pertaining to the functional classification of towns.

Gist and Halbert (1933) classified the towns of the United States of America on, more or less, the same line followed by Aurousseau (1924) but he added one more type, that is, diversified towns.

Robert B. Haul (1934) classified the cities of Japan under four heads: I-Capital towns, II-Castle towns, III-Temple and Shrine towns and IV-Commercial towns.

Weimer and Hoyt (1948) classified towns on the basis of sources of employment in a particular function on this basis; the towns have been classified into Commercial, Political, Industrial and Health Resort centres.

Mayer (1951), in his book “Readings in Urban Geography”, has discussed the various aspects of urban problems and development in the U.S.A.

Rosir classified the residential or resort, towns, mainly manufacturing, consumption and production, wholesale trade, river and seaport, and Freeport towns, finance and credit, working (main and artisans), military cities, thermal bath cities, cities with conducive climatic condition cities, museum cities and University cities.

In India, V.L.S. Prakash Rao (1964) classified towns of Mysore state on the basis of regression method. In this method, he
correlated population size with the percentage of people in a particular function.

The other Indian geographers who classified the Indian cities, are Singh and Amritlal (1959). They classified the towns of Uttar Pradesh on the basis of Standard Deviation method and Amrit Lal classified the cities of India based on the method applied by the British P.E.P. Janki (1962) classified the towns of Kerala mostly on the basis of their growth. She did not apply, however, only the statistical technique. She classified the towns of Kerala state under five sub-heads I-Administrative, II-Commercial, III-Agriculture collection and distribution centres, IV-Temples towns, and V-Plantation towns.

Mitra (1967) grouped all the districts of India into four categories on the basis of their relative levels of development. Using 63 indicators relating to general ecology, agricultural infrastructure, participation rate in traditional sector, potential of human resources and distributive trade, manufacturing and infrastructure for the purpose.

Sengupta and Sadasyuk (1968) have presented a typology of population resource regions in terms of dynamic regions, prospective regions and problem regions in India.

Friedman (1971) defined 'growth' as an expansion of the system in one or more dimensions without a change in its structure, and 'development' as an innovative process leading to the structural transformation of social systems.

Misra (1974) discussed the regional planning in India, developmental policies patterns and imbalances therein together with the theoretical foundation. He has also discussed the planning
for tribal, agricultural and industrial regions and the implications of new strategy for development planning.

Carter's (1975) scholarly book on urban geography is essential for every student of geography for understanding the concepts in urban studies. It talks about the theories and concepts in this particular branch at length.

Northam (1975) has pointed out the kind of research and development going on in the west, and has explained the various concepts and indices of urban development with a fruitful discussion.

Moonis Raza (1978) has analyzed the regional disparities in the levels of development in India in the context of political economy of the country and explained the persistence of a spatial structure of development and underdevelopment, which was carved out during the colonial period when metropolises had exploitative relations with their hinterlands.

Ghosal and Krishan (1984) has analyzed the regional disparities in agricultural, industrial, social and demographic development in Punjab.

Johnston (1984) has discussed the problems of the city and society in the West by considering various typical examples.

Prof. R. Ramchandran (1989) has worked on urbanization and urban systems in India, in which he has discussed the history of urbanization, processes, problem of urban settlements, classification of towns and other parameters of urban development by basing his study on 1981 census data.

Ghosh (1998) has discussed the urban settlements, their distribution, location, theories and structures of urban settlements in her book "Introduction to Settlements Geography".
Mandal (2000) has discussed the various concepts, theories, and pinpointed urban problems in a very lucid language with particular examples of urban centres in northern India.

Phadke and Mukharji (2003) have written a joint paper on the urbanization and development in Maharashtra by considering 1961 and 1991 data. Their discussion is mainly about how urbanization and development in the state are reciprocal.

Various research works, conducted in the Shivaji University, Kolhapur related to urban geography have also been looked into to ascertain the kind of work done in the form of Ph.D. theses.

The foremost study done by Mulik (1982) was the urbanization trends in south Maharashtra plateau. This is a study conducted by considering some part of the state in which the changes in urbanization are discussed at length and this thesis is based on the 1971 data.

Kothavale (1987) conducted his research work on the "New Towns of Maharashtra" in which he has focused on the Post-Independence trends of urbanization and growth of new towns, classification and their sphere of influence. This is a study conducted on a few towns, that have come into existence after 1981.

Adsul (1994) has made a contribution to the knowledge of urban geography by doing his Ph.D. on the "Urban Perspective of Class-I Cities in "Maharashtra". This is a unique study as hardly anyone had attempted to focus on the problems of cities in Maharashtra. He has analyzed the urban problems in terms of the spatial distribution of cities, their evolution, occupational structure, zone of influence, land use characteristics together with some case studies.
It is essential to have a unified approach to development, which reflects “a consciousness of the conceptual and empirical inter-relatedness of all aspects of human life”.

S. S. Kalamkar (http://www.inpindia.org), identified wide variations in the productivity of different crops across districts in Maharashtra and analyzed the factors responsible for lower yields.

Burange (http://www.innindia.org), discussed performance of the manufacturing sector in Maharashtra in comparison with other states in terms of poor performance attributed certain industrial disputes, high taxes and high power tariff with shortage of electricity and rising systemic inefficiencies.

Shivarajadhanavel and Sthanumoorthy (http://www.inpindia.org), explained the poverty level in Maharashtra. The state is one of the richest States in India. Even then the incidence of poverty level is close to the national average.

Kamdar and Basake (http://www.inpindia.org), intended to examine the human development scenario in Maharashtra based on the human poverty index (HPI) and concluded that the districts of Mumbai, Thane, Raigarh, Sindhudurg, Pune, Satara, Sangli, Kolhapur and Nagpur were above the state average and the most backward regions identified were Marathwada and Vidharbha.

Swain (http://www.inpindia.org), in his article “Power Crisis in Maharashtra: Socio-economic Implications” stated that Maharashtra has been facing electricity problem for the last one decade and it has become serious.

Pandian (http://www.inpindia.org), highlighted the “Potential for the Bio-technology Industry in Maharashtra” and explained its impact on every sphere of life, such as agriculture,
animal husbandry, health care and environment, which is needed to be further strengthened.

Gaiha and Imai (http://www.inpindia.org), in their article “The Maharashtra Employment Guarantee Scheme” in the State of Maharashtra and discussed its benefits and costs, both as a short-term relief measures and as an intervention with a longer-term development role, which is mainly based on a household survey in Ahmadnagar district.

Dash and Bhole (http://www.inpindia.org), in their article “Poverty and Unemployment in Maharashtra” attempted to critically examine the temporal changes in Maharashtra’s economy, in terms of poverty, unemployment and the basic social and economic factors that have contributed to the growth of the state.

Mulay (http://www.inpindia.org), in her article “Urbanization Challenges in Maharashtra” discussed the growth of urbanization at region, city and town level.

Shaban (http://www.inpindia.org), stated that the state of Maharashtra has been suffering from acute rural-urban disparities.

It is, therefore, found from the previous discussion that the work, which I have under-taken for Ph.D. research work, is hardly attempted by any one. The studies conducted in the University in relation to the state of Maharashtra have mostly focused on the trends of urbanization, that is too, considering only some part of the state but not the entire Maharashtra. some of the studies are on a few new towns and some on Class-I cities, but none is on all the towns (small, medium and large) in the state of Maharashtra. Not any one has attempted to assess the development, its impact on the peripheries in relation to the resource base of the towns with which the functions are decided. For the present study, data has
been collated from the 1981 and 2001 censuses and intensive fieldwork conducted in two towns for primary data. It is, therefore, necessary to look into the status of the small and medium towns along with the major cities, what kind of changes in the growth and functions of the towns are taking place, what kind of influenced is wielded on their peripheries, levels of urban development, urban poverty, functional classification of towns and their impact have analyzed and some case studies have been incorporated in the present research work.

The state selected for the purpose has been the State of Maharashtra, which falls under the 'highly developed' category, where the problem of differentiation in the development was studied by using Kundu's normalization method.

1.6 ORGANIZATION OF THE STUDY

The present study has dealt with the functional classification of towns and development in Maharashtra with a geographical perspective. The present work is organized into seventh chapters. The study covers a period of 20 years to see the changes in the functioning of towns and their impact, between 1981 and 2001.

Chapter first deals with the background, the objectives of the study, research questions, database and methodology, study area, limitations of the study if any, etc. will also been presented.

Chapter second is mainly related to distribution and growth of urban population, characteristics of urban population distribution, urban characteristics, urban density, factors affecting distribution of urban population e.g. physical, socio-economic and demographic. Spatial variation in growth rate and migration of population are also studied.
Chapter three focused on location, site and situation of towns in the state of Maharashtra, spatial pattern and distribution of towns, trends and spatial pattern of urbanization, components of urban growth, natural increase and migration, growth and distribution of urban settlements, and population by size-class of cities, size distribution of class-I cities in Maharashtra.

Fourth chapter deals with hierarchical distribution of towns, with descending order of population size. In this chapter different aspects such as functional base of towns in the state of Maharashtra to determine the dominant function of the towns have been analyzed by applying Ashok Mitra’s method.

Chapter five is mainly related to the urban facilities and services urban life and the development of the state. About 16 indicators have been selected from different sectors of economy and calculated the development.

Chapter six shows that the impact of urban centers on the periphery of Kolhapur city. It deals with location, site and situation, historical background, developmental phases, growth of urban population or demographical change, general land use and proposed land use of the Kolhapur city, occupational structure, functional zones of city, city centre, transport and communication facility, vegetables and milk supply, educational, Municipal Corporation Transportation (KMT), etc. in the state of Maharashtra.

Seventh chapter is mainly on findings and suggestions for further development of urban centres in the state of Maharashtra.
References

