ABSTRACT

West Bengal has been characterised by a distinctive pattern of urbanisation during the present century. A primary objective of this study is to expose the different facets of the urban scene in the state through a quantitative approach based mainly on statistical analysis and mapping of census data. Keeping this object in view the entire work has been organised into ten chapters.

Chapter 1 (Introduction) provides a preview of the salient features of urbanisation in West Bengal and discusses the need for a study of urbanisation in the state using a quantitative approach, in the light of existing research work in this field. It states clearly the objectives of the present work and gives a broad framework of the research methodology adopted.

Chapter 2 (Levels of Urbanisation) attempts to regionalise West Bengal on the basis of the degree of urbanisation in the districts. Levels of urbanisation have been identified on the basis of parameters like percentage of urban population to total population in each district, urban population in the districts as percentages of total urban population in the state and percentage of urban population in each district living in urban centres with a population of 20,000 and over. Finally all these attributes have been combined to obtain a composite index of the level of urbanisation in the districts. Analysis of the composite index of urbanisation during 1901-81 shows a disproportionately high level of urbanisation in Calcutta. Twentyfour Parganas shows a high level during the last two decades prior to which a moderate level may be seen in this district. A moderate level of urbanisation is seen in Haora and Hugli districts throughout 1901-81. Barddhaman falls within this category since 1961. The remaining districts usually show low level of urbanisation.

In Chapter 3 (Urban Processes) an attempt has been made to find out how far urban population growth in West Bengal during 1961-81 is a function of the processes of migration, industrialisation and commercialisation. Urban growth considered in terms of districtwise percentage
Decadal variation of urban population (dependent variable) for the decades 1961-71 and 1971-81 has been correlated with various independent variables—percentage decadal variation in (i) migration to urban areas (ii) employment in industry and (iii) employment in commerce. Where the correlation coefficient thus obtained for each set of paired variables was found to be statistically significant, the spatial correspondence between the variables in question was shown by means of a residual map. On analysis it was found that the processes of migration and commercialisation were definitely important urbanising influences. Industrialisation, however, influenced urban growth in the state to a lesser extent.

Chapter 4 (Urban Diffusion) studies the spatial diffusion of urban centres in West Bengal during 1901-81. The analysis includes different aspects like the pattern of spatial growth of urban centres, district-wise variation in the proportion of urban centres in the state, shifts in the centre of gravity of urban population, spacing of urban population, spacing of urban centres and size-spacing relationship of urban centres. On analysis it was found that urbanisation in the state has been confined primarily to the banks of the river Hugli in the neighbourhood of Calcutta. Outside the Hugli Belt, spread of urbanisation to other parts of the state has been quite slow even during the post-independence period. An exception to this trend is seen in the Durgapur-Asansol region in the western part of Barddhaman district where a zone of urban concentration has been emerging in the recent decades. Spacing of urban centres in West Bengal shows a significant tendency towards a random pattern especially in the recent decades. Finally, analysis has also revealed a negative relationship between population size and spacing of urban centres.

Chapter 5 (Urban Growth) studies urban growth in West Bengal during 1901-81 in terms of increase in the number of urban centres as well as urban population in the state as a whole and in the different size classes or urban centres. District level analysis provides a broad view of these two components of urban growth during the period under review and a detailed picture of regional variations has been obtained through a study of the growth of individual urban centres. Analysis
shows that there are remarkable variations in the pattern of growth of urban population as well as urban centres over the state with most marked growth occurring during the later part of the 20th century and most of the growth being confined to certain zones of the state, such as the banks of the River Hugli and northwestern parts of Barddhaman district. As far as the different size categories are concerned it is found that in the earlier decades both population and number or urban centres were increasing faster in the larger size classes, while the smaller size classes were either stagnating or declining. However during the last decade, the smaller size classes show considerable growth in both respects.

Chapter 6 (Urban Hierarchy) examines in details the urban rank-size relationship in West Bengal during 1901-81 from the viewpoints of the rank-size rule and primacy. Analysis shows that the size-relationship of urban centres in the state comes closest to a primate distribution. The overwhelming importance of Calcutta is the major cause behind this since Calcutta is not only the premier city of the state but is also the premier city of entire eastern India.

Chapter 7 (Urban Functions) analyses urban functions in West Bengal from different angles like functional classification, size-function relationship and functional zoning of urban centres. Analysis of the results of the different schemes of classification adopted shows that tertiary functions are most frequently dominant in the urban centres of the state. Secondary (mostly industrial) function-dominant towns are confined to the Hugli Industrial Belt and the Asansol-Durgapur region. There is also a clear distinction between the nature of urban functions in these two zones. While industrial functions are dominant in both, in the Hugli Industrial Belt other important functions consist of service and commerce and in the Asansol-Durgapur region mining and transport are other important functions. The former also contains a large number of diversified towns while the latter contains only one such town. Correlation analysis of population size and one of the functional indices (relative entropy values obtained from a broad threefold classification of the working population into primary, secondary and tertiary categories) reveals an inverse size-function relationship in the urban
centres of the state. However, results obtained in respect of the other functional index (diversification index based on a more detailed breakup of industrial categories) leads to the conclusion that there is no statistically significant relationship between population size and functions in the urban centres of the state. Functional zoning of urban centres has been based on case studies of Asansol and Chandannagar.

Chapter 8 (Urban Demography) makes a detailed study of some selected aspects of urban demography in the state and includes an analysis of urban age-structure, urban sex ratio and urban literacy. Case studies on population density gradients in selected Class I cities have also been included. Analysis of age-structure of urban population in the districts shows that urban age-structure in West Bengal is inversely related to the level of urbanisation, with highly urbanised districts showing older age structures and vice versa. West Bengal is also characterised by an exceptionally low urban sex ratio and areal variations of sex ratio indicates the influence of variations in population size and the industrial component of working population or urban centres rather than their rate of growth. Urban literacy has been improving rapidly in the recent decades. However, high percentages of urban literacy are usually confined to the Calcutta Urban Agglomeration. Analysis of population density gradients shows that with one exception, distribution of population in the cities considered here, conform to Clark's generalisation that density shows a negative exponential decline with increasing distance.

Chapter 9 (Urban Sphere of Influence) attempts to delineate the metropolitan region or the sphere of influence of Calcutta, with respect to the other million-plus cities of India. The study makes use of the gravity model and analysis shows that the zone of influence of Calcutta extends far beyond the boundaries of West Bengal and covers a large part of eastern India.

Finally, Chapter 10 (Conclusion) embodies the concluding remarks for the entire work.