

Population Growth and Characteristics of Dispersion of Urban Areas in Punjab

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I. INTRODUCTION

The origin and evolution of urban centres is associated with the advancement of human civilization. The Paleolithic man engaged in hunting and gathering led a nomadic life. When humans started practicing agriculture, the phenomenon was accompanied by the process of sedentization, i.e., permanent settlement in specific locations. The improvements in technology led to a productive economy which was an essential condition of urban existence. The rise of urban centres, further demanded a social structure, comprising of the political and religious elite, as well as traders and artisans, so as to gain the benefits of surplus agricultural production. In modern times, the urban growth was accompanied by progress in industry, trade, transport and communication (Davis 1963). Thus, the overall urban growth encompassed political, social, economic, cultural and technological currents.

At the beginning of the nineteenth century, about 2 per cent of the world's population resided in urban areas, and after a hundred years, this proportion rose to 4 per cent (Northam 1975). In 1950, that is, within a span of fifty years, the share of urban population to the total population increased to 30 per cent. In 2007, for the first time in the history of urban development, the world's urban population became more than the world's rural population. However by 2014, the urban population reached 54 per cent of the world's total population (United Nations 2015). The level of urbanization, as measured by the proportion of urban population to total population, varies widely in different countries of the world.

According to the 2014 Revision of World Urbanization Prospects, among 233 countries and areas, 147 had majority population residing in urban areas, while there were twenty four countries in which less than 25 per cent of the population was urban. The five most urbanized countries of the world included Singapore (100 per cent), Qatar (99.2 per cent), Guadeloupe (98.4 per cent), Kuwait (98.3 per cent) and Belgium (97.8 per cent). On the other hand, the five least urbanized nations included Trinidad and Tobago (8.6 per cent), Burundi (11.8 per cent), Papua New Guinea (13.0 per cent), Uganda (15.8 per cent) and Malawi (16.1 per cent). The countries which had the largest number of urban inhabitants were China (758 million), India (410 million), USA (263 million), Brazil (172 million), Indonesia (133 million), Japan (118 million) and Russian Federation (105 million).

These seven countries together accounted for more than half of the world's urban population

Thus India is the second largest contributor to world's urban population. In recent decades, the country has witnessed a rapid pace of urbanization. During 1951-2011, 315 million people were added to its urban areas. In the past six decades, the country has witnessed a six-fold increase in its urban population. The percentage of urban population to total population in the country has also increased from 17.29 per cent in 1951 to 31.16 per cent in 2011. However, the different states of India witnessed wide variations in the level of urbanization. The share of urban population to total population in different states presents a vivid picture of the variation in the level of urbanization (Table 1). In 1971, Punjab with 23.73 per cent of its population with urban residence was the sixth most urbanized state. It was placed after Maharashtra (31.17 per cent), Tamil Nadu (30.26 per cent), Gujarat (28.08 per cent), West Bengal (24.75 per cent) and Karnataka (24.31 per cent).

However by 2011, the state of West Bengal was demoted in the rankings, while Kerala's position improved significantly. Moreover, Goa and Mizoram witnessed rapid urban transformation after the grant of statehood in 1987. Thus, Punjab with 37.50 per cent of its populace living in urban areas was relegated to the eighth position in 2011. It was placed after Goa (62.2 per cent), Mizoram (52.1 per cent), Tamil Nadu (48.4 per cent), Kerala (47.7 per cent), Maharashtra (45.2 per cent), Gujarat (42.6 per cent) and Karnataka (38.7 per cent). However, it is important to note that between 1971 and 2011, Punjab consistently maintained a higher proportion of urban population than the national average. As a result it figures amongst the more urbanized states of India. Furthermore, the increasing share of urban population in the state's total population is reflective of the unremitting intensification of the urbanization process.

II. STATEMENT OF THE PROBLEM

Punjab experienced incessant urbanization, though its trajectory was interjected with economic and political phenomena which generated shifting trends and patterns of urbanization. During 1971-2011, the urban population in the state witnessed an increase from 3.21 million to 10.39 million, thereby recording an increment of more than 7 million people in just four decades. Besides, the number of urban centres has more than doubled from 108 in 1971 to 217 in 2011, out of which 60 towns were added during the past ten years. The drivers of urban growth have been natural increase, rural to urban migration, and transformation of rural settlements into urban dwellings. This transformation of rural settlements into urban settlements takes place either due to emergence of new urban centres or due to increase in the territorial jurisdiction of towns which brings rural settlements in extended statutory limits of the towns. Another manifestation of urbanization in the state that has been studied at length in the present study has been the physical expansion of urban areas. An appreciation of the factors and forces which manoeuvre these changes go a long way in increasing our understanding of the processes shaping the urban landscape. Lastly, the role of local population and local factors operating in particular urban areas is also evaluated in the present study which remains undervalued in many studies as these confine themselves to the effect of economic, social, political, administrative and technological changes on the urban landscape. All these issues are addressed in a common framework, in the present study. Punjab provides a firm base for conducting such a comprehensive study on urbanization as it was witness to varied situations with respect to political stability, agricultural production, industrial enterprise and economic vibrancy which provide an ideal ground where the itinerary of urbanization could be charted.

III. SIGNIFICANCE OF STUDY

The present study aims to understand the dynamics of the urbanization process as these unfold in the state of Punjab. The study brings to fore the manner in which the major trends and patterns of urbanization are the result of factors operating at macro as well as micro level. The dynamics of urbanization are derived not only from the published sources of data but also unpublished government records and the narratives of the local population involved. Thus the study highlights that micro-level or local factors play a dominant role in characterizing an urban area each town displays uniqueness. Such a scenario pushes for specific planning efforts, keeping in mind the local needs and aspirations, instead of a universal approach to planning our urban areas. The findings of the study may thus help in deepening our understanding of the processes affecting the construction and transformation of urban landscape in the context of Punjab.

IV. OBJECTIVES

The objectives of the present study are to:

1. Study the relative growth of urban population with respect to the size of towns.
2. Explore the contribution made to the incremental urban population by its various components.
3. Examine the spatial patterns of urbanization in 2011.
4. Study the decade-wise trends of population growth of towns during the study period and the factors affecting them.
5. Examine the pattern of physical expansion of towns and the forces driving them.

V. REVIEW OF LITERATURE

Pacione (2009) visualized four stages of urban development. The first stage, termed as Urbanization involved increase in the size of urban settlements at the cost of adjoining rural areas. The second stage called as Suburbanization or Exurbanization was characterized by the growth of urban ring (commuter belt) at the cost of urban core (physically built up city). It was followed by the stage of Disurbanization or Counterurbanization, in which an overall reduction in the size of urban agglomeration was recorded. The depopulation of urban core far exceeds the population gain of the ring. The last stage called as Reurbanization occurred when either the rate of population loss of the core reduces or the core starts regaining population with the ring still losing population.

Pradhan (2013) revealed that of the 2532 new census towns in 2011 in India, as many as 1812 satisfied the criteria in 2001. The author, thus, ruled out the possibility of inflated urbanization but instead apprehended that it may be underestimated. It was found that a large number of census towns emerged in close proximity to the Class I towns, while a significant number was spread across the countryside, indicating multiple urbanization processes at work. Coelho and Vijayabaskar (2014) revealed through their study that the location of Ambur town (Tamil Nadu) close to the metropolitan city of Chennai acted as source of under development rather than a spur to rapid urbanization. The town's leather industry involving the untidy production work did not move out of the town while the large manufacturing firms colonized the rural hinterlands. Ambur's growth was attributed to subaltern urbanization, that is, factors rooted in town's history, local market drivers and political economies.

Raman (2014) discussed the process of growth of Tiruchengode, a non-metro urban centre in Tamil Nadu. The study revealed that the town grew in response to the practices of local entrepreneurs, landowners and

developers, which involved real estate transactions in the form of land accumulation and land investment. The role of textile production, small firm clusters and educational institutions were noted for bringing about conversion of agricultural lands on the towns' periphery. The author attributed the spatial transformation of the town to the processes internal to it, thereby reinforcing the theory of subaltern urbanization.

VI. RESEARCH METHODOLOGY

1. To study the relative growth of urban population with respect to the size of towns:

The trends of urbanization in different size class of towns were appreciated by taking note of the distribution as well as rate of growth of population in different size categories of towns. Continuous approach was used to calculate the growth rate of towns belonging to different categories. This method involved the calculation of growth rate by taking into account, firstly, the size classification at the terminal year, and secondly, by taking only those towns which were common at the two points of time.

2. To explore the contribution made to the incremental urban population by its various components: The contribution of different components to urban growth was disaggregated into its four components, viz. natural increase, net migration, new towns and territorial expansion of existing towns. The detailed methodology of the same has been discussed in detail in the relevant section.

3. Examine the spatial patterns of urbanization in 2011.

The data for analyzing the spatial patterns of urbanization at tahsil level in 2011 was acquired from the Primary Census Abstract of Punjab, made available by the Census of India. Choropleth maps were prepared at the tahsil level showing the spatial variations in the level of urbanization in the state

4. Study the decade-wise trends of population growth of towns and the factors affecting them.

A decade-wise analysis of population growth of towns was undertaken by considering only the common towns at two consecutive census years. The adjusted growth rates, thus, arrived at were used to categorize the towns into four categories, viz. towns with fast growth, towns with moderate growth, towns with slow growth and towns with negative growth. Maps showing the growth rate of individual towns were prepared, which indicated the size of the towns and their respective growth categories. The factors affecting the rate of growth of towns were derived from the various records of the government, such as the District Census Handbooks (Census of India), Master Plans of various towns (PUDA), newspaper reports and articles.

5. Examine the pattern of physical expansion of towns and the forces driving them.

The physical expansion of towns was studied by taking up the case study of three towns, namely, Hoshiarpur, Batala and Khanna. These three towns were selected, keeping in mind their respective characteristics which were representative of the diverse locational, cultural, economic and urban setting within the state. The built up area of the town was used to measure the physical expansion of towns. Maps showing the growth in built up area were prepared by using various sources such as satellite data (ETM, ETM+, MSS and USGS), topographical maps (Survey of India) and land use maps prepared by the Department of Town and Country Planning. The forces driving the physical expansion of towns were understood by conducting field visits to these towns which involved observation, interviews, focus group discussions and photo documentation.

VII. DISCUSSION AND CONCLUSION

Punjab has a history of urbanization that dates back almost five millennia, experiencing phases of prosperity and decay. In the Harappan period, the urban settlements were characterised by well planned layouts and mature culture. After the decline of Harappan Civilization, there were faint signs of urbanization during the Later Vedic and Mauryan period. The emergence of feudal polity and the consequent decline in monetary trade brought about urban decay and led to the movement of people from the urban centres to the rural areas. In the medieval period, urbanization came to be closely linked with the functions of the state, especially the military and civil activities. During the medieval period, urbanization strengthened due to trade and commercialization of agriculture. Later, during the British period, creation of a vast network of roads, railways, canals, post and telegraph; civic amenities, educational institutions, etc. supported the urbanization process. In the post independence period, urbanization scenario was shaped by settlement of refugee population, green revolution, booming agro-industrialization, terrorism and of late, a declining industrial sector.

The trends of urbanization during 1971-2011 were studied by taking into account the proportion of urban population to total population, number of urban centres, the rural urban ratio and rural population served by urban centres. The share of urban population in total population consistently witnessed an increase from 23.73 per cent to 37.48 per cent. As regards the number of towns, there were 108 towns in 1971, which increased to 134 in 1981. But their number declined in 1991 to 120. Between 1991 and 2001, the number of towns increased to 157 and by 2011, there were 217 towns in the state. Thus between 1971 and 2011, the number of towns has doubled. The rural population served by urban centres, taken as a measure of urbanization revealed an increase in urbanization level between 1971 and 1981 but a decrease between 1981 and 1991 due to a fall in the number of urban centres. But thereafter, it hinted at increasing levels of urbanization. The trends of urbanization, studied by taking into

account the urban-rural ratio, showed consistent increase between 1971 and 2011. Thus the level of urbanization as reflected by these indicators shows a rise from 1971 to 2011. But between 1981 and 1991, level of urbanization as indicated by the number of towns and the rural population served by urban centres, declined.

Though there was a consistent rise in the proportion of urban population to total population, yet the pace of growth of urban population varied in each census decade, depending upon the prevalent socio-economic and political scenario of the state. The highest growth rate of urban population was witnessed during 1971-1981 due to a booming economic scenario in the wake of green revolution and the resultant development of industries and trading activity in market towns. But this urban growth could not be sustained in the 1980s as there was a fall in the growth rate of urban population to 28.95 per cent from 44.51 per cent during 1971-1981. This was because of the turbulent socio-political situation in the state due to terrorism. Industrial sector suffered badly. While, on the one hand, such a scenario adversely affected the working of factories, on the other, it restrained new investment. With liberalization, privatization and globalization in the 1990s, there was tertiarization of the economy. In addition to this, the return of peaceful and normalized socio-political scenario and addition of as many as forty one new towns to the urban fabric brought about an increased pace of urban growth (37.86 per cent). The lowest growth rate was recorded during 2001-2011. During this period, though there was a huge increase in the number of new settlements, but the rate of growth of urban population remained low. The state's Gross Domestic Product growth (6.61 per cent) was lower than the national average (7.95 per cent) between 2002 and 2011. The plateauing of agricultural productivity and dismal industrial scenario in the state has brought about economic slowdown and thus a decline in urban growth.

The study of components of urban growth revealed the relative contribution of its four components, namely natural increase, net migration, increase due to territorial expansion, and increase due to new towns. The share of increase due to net migration and increase due to territorial expansion could not be disaggregated for the decade 2001-2011 due to non-availability of data. However, it may be mentioned that throughout the period from 1971 to 2011, natural growth of population remained the highest contributor to the decadal increase in urban population. The share of migration in the incremental urban population witnessed fluctuating trends and was the second most important contributor to urban growth up to 2001. The contribution of net migration which was 31.38 per cent during 1971-1981, reduced to 18.75 per cent during 1981-1991. It was due mainly to the reduced in-migration from outside the state and a stepped up out-migration from urban areas of the state to outside Punjab. But with the return of normalcy in the 1990s, the contribution of net migration to the urban increment increased to 36.87 per cent. On the other hand, share of territorial expansion of existing towns reduced from 10.70 per cent during 1971-1981 to 5.90 per cent during 1991-2001. But the contribution of new towns to the decadal urban increment has, however, phenomenally increased from 14.72 per cent during 1971-1981 to 30.40 per cent during 2001-2011.

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