



EMERGING TRENDS, PATTERNS AND CONCERNS OF URBANISATION IN PUNJAB

Kunal Jha, Kapil Kumar Gavsker *

Department of Geography, Institute of Science, Banaras Hindu University, Varanasi

Email: kunaljha326@gmail.com

Department of Geography, Institute of Science, Banaras Hindu University, Varanasi

*Corresponding Author Email: kkgavsker@bhu.ac.in

Abstract

Punjab from largely an agriculture-based rural economy, now, has emerged as one of the most urbanised states of India. The state has been undergoing an unprecedented economic and social transformation including urbanisation over the past few decades. Urbanisation reflects growing economic development in the state. Overcoming a period of socio-political disturbances, the state has managed to sustain the pace of economic development and consequently higher urbanisation level. However, the level of urbanisation is variable across districts of the state. Data shows that the larger share of the urban population is confined to a handful of large urban agglomerations located in a few districts of the state. Cities of such districts have their shadows over medium and small urban centres. The role of in-migration in urbanisation has played a crucial part in the state. Thus, studying the nature and status of urbanisation in Punjab is relevant in contemporary times. The present study aims to analyse and explain the nature of urbanisation and its spatial patterns in the state, the role of industrialisation in the development and transformation of the regional economy, the impact of in-migration, and the emerging concerns. The study is largely based on secondary data and a mixed-method approach is applied.

Keywords: Cities, Economic Development, In-migration, Urban Agglomeration, Urbanisation, Urban Growth

Introduction

Urbanisation as a geographical process indicates the shift of population from rural to urban areas, the growth and the increase of urban settlements. Different measures are applied to understand the nature of urbanisation and provide an overview of such phenomenon in a country or region. Punjab is located in the north-western part of India. The state has witnessed various changes over the past few decades, which are influencing the process of urbanisation therein. The geological advantage of being situated in the fertile plain of rivers Sutlej and Beas has made it a natural region for rich agricultural practices. The green revolution promoted agricultural growth, economic development and made the state the 'Granary of India'. The process of industrialisation in the state started in a few important urban centres during the late 19th century. The establishment of industries

especially the machine tools industries, hosiery industries, etc. had promoted the industrial growth in the state. During the post-independence period, the state's economy grew further and the share of the secondary and tertiary sectors increased significantly. The state now emerged as the eighth most urbanised state of India as per the Census of India 2011. Contemporary Punjab was formed after the separation of Haryana from the state in 1966. After the separation, the state witnessed many events which have huge impacts on the economic development and urbanisation of the state. However, the insurgency times adversely affected the process of development. The state re-emerged from insurgency and terrorism during post-economic reforms and gained momentum again in urbanisation and industrialisation. However, there are significant spatial variations in the level of urbanisation and degree of accretion of urbanisation. Much of urban growth is driven by agricultural produce which gets places in the urban market. Thus, most of the urban centres of the state perform as service centres. Only a few large cities dominate at the higher level in the urban landscape of the state. The paper addresses the following objectives: 1) to study trends, patterns and growth of urbanisation in the state of Punjab, 2) to discuss the nature of spatial variations in urbanisation across districts and the underlying drivers and 3) to explore emerging challenges of urbanisation and urban growth in Punjab.

Background of the Study

The United Nations (UN) data shows that “Between 1950 and 2018, the urban population of the world grew more than four-fold, from an estimated 0.8 billion to an estimated 4.2 billion” (World Urbanisation Prospects, 2019). Urbanisation may be seen as a function of natural increase in urban population, (de)classification of towns and rural-to-urban migration. The spatial process of urbanisation varies from one cluster to another. Singh and Singh (2014) noted that in the developed countries of the modern days, urbanisation is very much related to industrialisation. This trend is also followed differently in developing countries. The establishment of industries created a multiplier effect leading to the concentration of many small industrial units. It established a strong pull factor that attracted people from rural areas, where an agrarian crisis prevailed. Urbanisation in any region now is known as leading to better living conditions for the people since it offers better access to basic amenities and infrastructure. It creates ways of newer employment which helps in poverty reduction. However, the “contemporary urban development practices are largely detached from the historical urban growth pattern” (Gavsker, 2023).

India as urbanising will be the new epicentre of urbanisation in the coming decades. India has a definite criterion for identifying places as urban. In India in 2011, the percentage of urban population was reported 31.20 percent. This has increased to 27.80 percent in 2001 from 25.7 percent in 1991 as reported by the Census of India. India's urban population recorded an annual growth rate of 2.76 percent during 2001-11, which is higher than that of the previous decade of 2.73 percent only in the second decimal point. Studies show that “the accelerated rate of urbanisation in the last decade, compared to the 1990s when the growth rate of Gross domestic product (GDP) rose to over 7 percent per annum, is widely applauded as a positive sign of development” (Chakraborty, 2017). This also

signifies that higher economic growth is associated with an increasing level of urbanisation and the same can be examined in the context of any region and district.

Urbanisation in India may be broadly divided into two distinct phases. The first phase of India's urbanisation (1951-1991) has largely been propelled by an increasing share of rural-to-urban migration and (de)classification of towns apart from natural increase. The second phase (1991-till now) has witnessed the development of small towns and large cities leading to uneven urban structure. Rural-urban migration has begun to decline over the decades due to various reasons. Large cities are growing faster and at the same time the rise of small towns, i.e. Census Towns has changed the conventional process of urbanisation in the country. Bhagat's (2018) study elucidated that most parts of central, eastern and north-eastern India have a very low level of urbanisation. All southern states along with states in northern and western India such as Punjab (37.4 percent), Haryana (34.7 percent), Gujarat (42.5 percent), and Maharashtra (45.2 percent) have a higher level of urbanisation than the national average (31.1 percent). The way urban growth of large cities is taking place, this also shows growing squalor and various urban challenges.

The state of Punjab is traditionally known as an agricultural state. The fact is there are few districts of the state which are highly industrialised and attract people from many other neighbouring states for work and employment. For long, a few urban centres of the state remained known as industrial centres. Despite being a landlocked state, the growth of primary and secondary sectors of the economy has occurred simultaneously in modern Punjab. This process gave the state a unique identity that separates it from other states of the country in terms of a higher level of economic growth and urbanisation. Since the state's formation, the state of Punjab has made strides towards commerce, manufacturing, transport and industrial expansion. A few cities significantly controlled urban landscape in the state. Over time, and with sectoral changes in the economy, a greater number of urban centres emerged. Still, there are two metro-cities- Ludhiana and Amritsar- which dominate the urban space of the state. Apart from these cities, several cities and towns are spread across the state. At present, Punjab is the fifth most urbanised state in India. Understanding the trend and pattern of growth of urbanisation in Punjab helps in better understanding the nature of the economic development and demographic shift in the state.

Methods and Data

The present study is based on both qualitative and quantitative approaches. The study interprets the role of determinants and processes that drive urbanisation in the region. For quantitative analysis, the data is collected from secondary sources. This includes data that is retrieved from existing studies, the Census of India reports of multiple years, the Economic Survey of Punjab, the National Family Health Survey reports, the Periodic Labour Force Survey, the Population Statistics of Punjab, the Smart Cities Mission, the Atal Mission for Rejuvenation and Urban Transformation, the Swachh Bharat Abhiyan etc. As the latest Census data is not available, an attempt has been made to project the data for the year 2021. The present paper analyses and explains the varied nature of urbanisation and its spatial pattern in the state.

The first section uses multiple statistical methods to measure the trend of growth, level, degree, and tempo of urbanisation in the state of Punjab. District-wise spatial analysis has been carried out to present an in-depth analysis of urbanisation in the state. The study adopts class-size classification which the Census of India has classified towns into various classes as per the population. The main statistical techniques used in this section are as follows:

$$\text{Compound Annual Growth Rate (CAGR)} = \left[\left(\frac{P_f}{P_i} \right)^{\frac{1}{n}} - 1 \right] \times 100$$

Where, P_f = Population of Final Year; P_i = Population of Initial Year; n = Number of Years

$$\text{Level of Urbanisation} = \frac{\text{Urban Population}}{\text{Total Population}} \times 100$$

$$\text{Degree of Urbanisation} = \frac{\text{Urban Population}}{\text{Rural Population}} \times 100$$

$$\text{Tempo of Urbanisation} = \frac{1}{n} (PU^{t+n} - PU^t)$$

Where, PU^{t+n} = Percentage of Urban Population at the year $t+n$

PU^t = Percentage of Urban Population at the year t

n = Number of Years

$$\text{Population projection for 2021 (P2021)} = P_{2011} \left(1 + \frac{K}{100} \right)^n$$

Where P_{2021} is the projected population for 2021, P_{2011} is the population for 2011, n is the number of decades since the last census and $K = \sqrt[4]{K1 \times K2 \times K3 \times K4}$, where $K1$, $K2$, $K3$ and $K4$ are the population growth rate for 1981, 1991, 2001 and 2011 respectively.

$$\text{Projection of population share in each city (T2021)} = T_{2011} + (A_0 \times T_{2011} / 100)$$

Where, T_{2021} is the projection for 2021, T_{2011} is the number of towns/shares of the population in each town in 2011 and A_0 is the average growth rate of towns/population share in towns since 1981

The second section discusses trends of migration. It analyses it in the context of increasing urbanisation. It also attempts to establish the correlation between urbanisation and industrialisation in Punjab. In the third section, an analysis of the causes, impact and associated concerns of urbanisation in the state is discussed.

Results

Urbanisation in Punjab

Historically, urbanisation in Punjab can be traced back to Harrapan Period as many remains of such towns have been found in contemporary Punjab. Urbanisation in modern-day Punjab began with colonial establishments, canalization, agricultural and commercial developments. Much of urban phenomenon become a reality with the establishment of

transport routes, i.e., railway lines and *mandi* towns in the state. It gave a boost to the urban spread in the state. The establishment of administrative bodies in districts also helped in the concentration of the Population in the state. Colonial Punjab had four distinct urban centres: (a) indigenous towns; (b) the Civil Lines, (c) the colony towns in the canal-irrigated areas, and (d) the hill stations.

The partition of the country did contribute to an increasing concentration of the majority of refugees in urban settlements in the state of Punjab. The share of the refugee population was significant, if not prominent in the overall composition of the urban population in India. Bose (1994) has estimated that the refugee migration accounted for 6.2 % points of the 41 percent increase in urban population during the 1941-1951 decade. A large number of refugees coming from West Pakistan settled in urban centres of partitioned eastern Punjab. The spatial pattern of urbanisation changed a lot in the state as driven by the increasing proportion of the refugee population in and around newly settled urban areas.

Punjab has witnessed rapid urbanisation in the past decades. Table 1 provides insight into trends and growth of urban and rural populations in the state. As per the Census of India 1971, the total population of Punjab was 13.55 million, of which 3.22 million were urban and 10.33 million were rural population. In the census year 1981, the total population of the state increased to 16.79 million. In the same year, the urban population increased to 4.65 million and the rural increased to 12.14 million. In 1991, the total population of Punjab grew to 20.28 million with 5.99 million urban and 14.29 million rural population. The decade of 1991-2001 witnessed a drastic population growth as the total population of the state grew to 24.36 million with 8.26 million urban and 16.10 million rural population. In the Census of 2011, the urban population grew to 10.33 million and the rural population grew to 17.32 million with a total population of 27.70 million in Punjab. However, the population projections made by *National Commission on Population* indicated that Punjab state had 30.33 million population in 2011. The population projection calculation suggests this figure to be at 29.55 million with 12.04 million urban and 17.51 million of the rural population by 2021.

Over these decades, the state of Punjab witnessed a differential trend of growth in urban and rural populations. The overall Compound Annual Growth Rate (CAGR) of Punjab showed a declining trend since 1971. During the decade 1971-1981, the CAGR of the population of Punjab was 2.17 percent, which declined to 1.91 percent and 1.85 percent during the decade 1981-1991 and 1991-2001 respectively. It further slumped to 1.29 percent during the decade 2001-2011. Comparatively, the CAGR of the rural population was very low and the CAGR of the urban population was high with respect to the total CAGR of the state. The CAGR of the rural population during the decade 1971-1981 was 1.63 percent, which remained almost static and just increased to 1.64 percent in the next decade 1981-1991. Further, it declined to 1.38 percent in the decade 1991-2001 and 0.73 percent in the decade 2001-2011. In contrast to this, the CAGR of the urban population witnessed a fluctuating trend. During the decade 1971-1981, the urban CAGR was 3.67

percent, which declined to 2.56 percent in the next decade of 1981-1991. This again jumped to 3.26 percent during the decade 1991-2001 and further declined to 2.23 percent in the decade 2001-2011. The trend is expected to further continue. The population projection indicates that the CAGR for urban will further decline to 1.54% in the decade 2011-2021.

Table 1: Total Population and Compound Annual Growth Rate of Population of Punjab

Year	Urban Population (in Million)	Urban CAGR (%)	Rural Population (in Million)	Rural CAGR (%)	Total Population (in Million)	Total CAGR (%)
1971	3.22	-	10.33	-	13.55	-
1981	4.65	3.67	12.14	1.63	16.79	2.17
1991	5.99	2.56	14.29	1.64	20.28	1.91
2001	8.26	3.26	16.10	1.38	24.36	1.85
2011	10.33	2.23	17.32	0.73	27.70	1.29
2021*	12.04	1.54	17.52	0.11	29.55	0.72

Source: Based on Census of India Reports (1971-2011) General Population Tables, Punjab Series 4 & Population Statistics of Punjab (1971-2011) *Projected Data

However, the net urban population of Punjab has been growing over the decades. The level of urbanisation in the state as shown in Figure 1, which is the percentage of urban population to the total population, was recorded at 23.76 percent in 1971. It increased to 27.69 percent in 1981. This further grew to 29.53 percent in 1991 and 33.90 percent in 2001. It ultimately grew to 37.18 percent in 2011. The level of urbanisation in the state is higher than the national average of 31.16 percent according to the Census of India 2011. The state recorded a jump of 56.48 percent in the urban population in the last five decades from 1971 to 2011. This growth rate has not remained uniform throughout these decades. The decade of 1971-1981 recorded the highest growth rate of the urban population in Punjab, which was 30.75 percent. It declined to 22.37 percent in the next decade. It further slightly increased to 27.48 percent in 2001. It again declined to 19.80 percent in 2011. The decade of 2001-2011 witnessed the lowest growth rate of the urban population in the state as reported in the last five decades.

Not just the temporal, there is also spatial variation of urbanisation in the state. Some districts of the state are highly urbanised, whereas the level of urbanisation in many districts is low. The urban to total population percentage is calculated to determine the level of urbanisation (Bose, 1973). Table 2 shows the district-wise level of urbanisation in Punjab since 1981. Ludhiana, Sahibzada Ajit Singh Nagar, Amritsar and Jalandhar have the highest level of urbanisation. These districts have more than 50 percent level of urbanisation. Ludhiana has had the highest level of urbanisation since the last three decades. The estimated figure for Ludhiana is 64.27 percent by the year 2021. The Punjab's districts continue to dominate urbanisation since they are more vibrant in the

economic and commercial, communications and technology sectors in Punjab. Most of these top districts are home to the Special Economic Zones (SEZs) in Punjab. Other various activities such as production, processing and infrastructure and logistics are heavily located in these districts. Share of agriculture and food processing sector in manufacturing is 21 percent against India’s 8.8 percent. Among the rest of the districts, most of them had more than a 25 percent level of urbanisation level in the last three decades. However, districts such as Moga, Gurdaspur, Mansa, Hoshiarpur, SBS Nagar and Tarn Taran have a very low level of urbanisation, i.e., less than 25 percent. This reflects that there is a gradual increase in the level of urbanisation in all the districts of the state. Map 1 and Map 2 show the spatial pattern of level of urbanisation in 2011 and 2021 in Punjab.

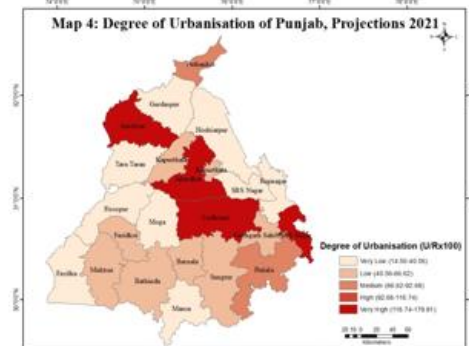
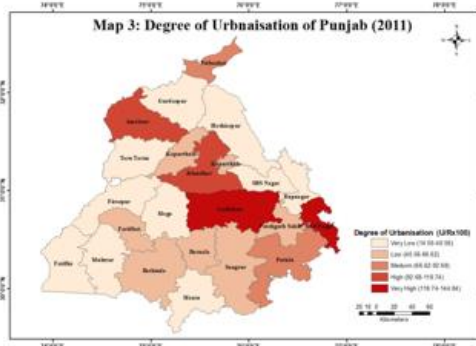
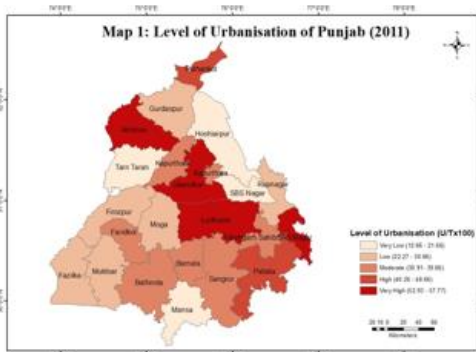
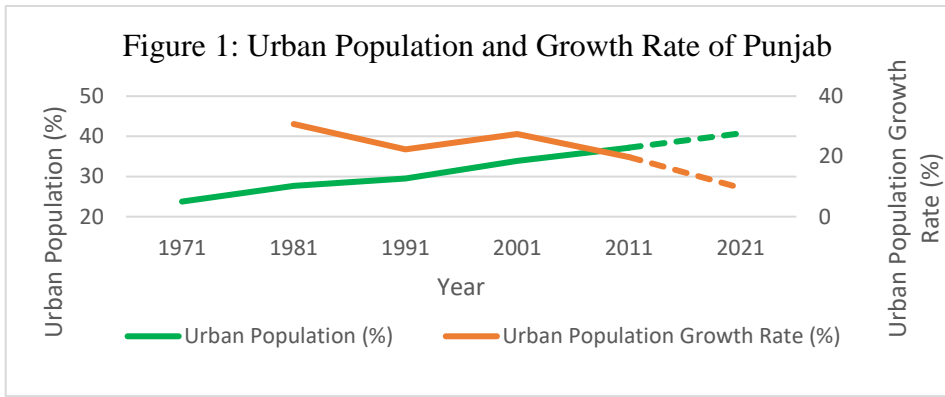


Table 2: District-wise Level and Degree of Urbanisation of Punjab

District	Level of Urbanisation (U/T*100)					Degree of Urbanisation (U/R*100)				
	1981	1991	2001	2011	2021*	1981	1991	2001	2011	2021*
Ludhiana	42.01	51.22	55.84	59.16	64.27	72.5	105	126.47	144.83	179.91
SAS Nagar	-	-	38.85	54.76	54.76	-	-	63.52	121.02	169.94
Amritsar	32.97	34.08	51.5	53.58	62.95	49.2	51.71	106.17	115.45	121.03
Jalandhar	35.32	40.65	47.48	52.93	58.16	54.6	68.48	90.42	112.47	139.02
Pathankot	-	-	-	44.07	44.07	-	-	-	78.79	78.79
Patiala	29.59	30.64	36.39	40.26	40.9	42	44.17	57.22	67.4	69.22
Bathinda	22.68	26.98	29.73	35.95	33.32	29.3	36.94	42.3	56.14	49.96
Faridkot	23.92	33.21	35.14	35.15	34.59	31.4	49.72	54.17	54.2	52.89
Kapurthala	29.97	25.76	32.67	34.65	35.08	42.8	34.71	48.53	53.02	54.04
Barnala	-	-	30.47	32.02	32.02	-	-	43.83	47.1	47.1
Sangrur	22.81	24.8	28.8	31.17	36.51	29.6	32.98	40.44	45.29	57.51
Fatehgarh Sahib	-	21.86	28.08	30.91	35.8	-	27.97	39.05	44.73	55.75
Firozpur	22.79	23.95	25.81	28.46	26.3	29.5	31.5	34.79	39.79	35.68
Shri Muktsar Sahib	-	23.4	25.54	27.96	30.45	-	30.54	34.3	38.82	43.78
Fazilka	-	-	-	26.03	26.03	-	-	-	35.18	35.18
Rupnagar	21.58	25.75	22.46	25.97	20.18	27.5	34.68	28.96	35.08	25.28
Moga	-	21.84	19.96	22.82	24.35	-	27.95	24.94	29.57	32.18
Gurdaspur	21.69	21.98	25.44	22.27	19.78	27.7	28.18	34.12	28.65	24.65
Mansa	-	14.85	20.68	21.25	24.18	-	17.44	26.07	26.99	31.9
Hoshiarpur	14.44	17.11	19.72	21.11	23.93	16.9	20.64	24.57	26.76	31.46
SBS Nagar	-	11	13.8	20.48	20.48	-	12.36	16.01	25.76	25.76
Tarn Taran	-	-	11.98	12.66	12.66	-	-	13.61	14.5	14.5
Punjab	26.64	26.41	30.07	33.34	34.58	37.8	38.52	47.47	56.43	62.52

Source: Based on Census of India Reports (1971-2011) General Population Tables, Punjab Series 4 & Population Statistics of Punjab (1971-2011)

Note: Dash (-) indicates that data is not available as district was not formed during the census year.

*Projected Data

For a better understanding nature of urbanisation across districts in Punjab, the degree of urban accretion or degree of urbanisation is another useful technique. Conventionally, the percentage of urban population to the total population is often considered a better way to measure the level of urbanisation of region and place. Kundu assessed that Bose (1973 & 1994) did not find this method appropriate for the Indian scenario as *it fails to indicate the intensity of urban problems as it does not reveal the rapid growth of big cities and simultaneous stagnation of small towns* (Kundu, 1980). Therefore, Kundu (1980) introduced the percentage of urban to rural (U/R) index as a measure of the degree of urban accretion as it shows higher disparity over space since a higher incidence of urban accretion would be indicated in regions with a higher percentage of urban to total population. However, the higher degree of urbanisation is correlated with the higher level of urbanisation as well. Table 2 also shows degree of urbanisation in across districts of Punjab. Ludhiana has recorded the highest degree of urbanisation among all districts of Punjab. It was 72.45 percent in 1981, which increased to 105.00 percent in 1991 and further to 126.47 percent in 2001. District of Ludhiana had degree of urbanisation of 144.83 percent in 2011 and it is estimated to be 179.91 percent in 2021. The degree of urbanisation in Amritsar was 49.20 percent in 1981 which increased to 51.71 percent in 1991. It was recorded at 106.17 percent in 2001 which again increased to 115.45 percent

and it is estimated to be 121.03 percent. The degree of urbanisation of SAS Nagar was 63.52 percent in 2001 which increased to 121.02 percent in 2011. It is estimated to be 169.94 percent in 2021 in Sahibzada Ajit Singh Nagar. The district of Jalandhar had degree of urbanisation of 54.60 percent in 1981, which increased to 68.48 percent in 1991. It was recorded at 90.47 percent in 2001 and increased to 112.47 percent in 2011. Its projection for 2021 is 139.02 percent in Jalandhar. These four districts have more than 100% degree of urbanisation, which means the urban population of these districts has surpassed the rural population. The remaining districts of Pathankot, Patiala, Bathinda, Faridkot and Kapurthala have had more than 50 percent degree of urbanisation during the last decade. The rest of the districts have less than 50 percent degree of urbanisation in the state. Tarn Taran ranked lowest with 14.50 degrees of urbanisation. Above Map 3 and 4 presents the spatial variation of the degree of urbanisation in 2011 and 2021 in the state.

The tempo of urbanisation is an important technique to measure the process of urbanisation in a region. This enables us to sense the change in the level of urbanisation during the period. This is about the annual change of percentage points in urbanisation. When the level of urbanisation is measured in terms of percentage, the tempo can be measured either as the absolute change in percentage points or as the rate of change in the percent of urban population between two points. The tempo of urbanisation during 2001 and 2011 in India was 0.34 percent. Therefore, the trend of the tempo of urbanisation has been calculated to understand what has been the pace of change of urbanisation in the last several districts across the districts of Punjab. Table 3 presents the district-wise tempo of urbanisation in the last five decades. There is considerable variation in the tempo of urbanisation throughout all the districts. The overall tempo of the state of Punjab as recorded shows a fluctuating and declining trend. The tempo of urbanisation for the state was 0.43 percent in 1981, which dropped to 0.33 percent in 1991. It further increased to 0.42 percent in 2001 and declined to 0.26 percent in 2011. It is projected that the tempo of urbanisation in Punjab is 0.19 percent in 2021.

The tempo of urbanisation has been recorded as very high in Sahibzada Ajit Singh Nagar in 2011. Most of the districts of the state have shown a declining or erratic trend in the tempo of urbanisation. However, a higher tempo of urbanisation was recorded in Ludhiana at 0.72 percent in 1981, which increased to 0.92 percent in 1991. It declined to 0.46 percent in 2001 and further to 0.33 percent in 2011. The projection for 2021 in the tempo of urbanisation in Ludhiana is 0.51 percent which will be one of the highest values recorded in certain districts. The district of Kapurthala recorded 0.68 percent which was a high tempo of urbanisation in 1981. However, it declined to negative -0.42 percent in 1991 but a sudden jump was recorded in 2001 reaching 0.69 percent. However, it declined in 2011 coming down to 0.20 percent and the projection for 2021 is 0.001 percent for Kapurthala. Rupnagar district recorded a tempo of urbanisation at 0.65 percent in 1981 which declined to 0.42 percent in 1991. It further declined in negative coming down to -0.33 percent in 2001. With a sudden jump, it reached 0.35 percent in 2011 in Rupnagar, and the projection for 2021 is -0.58 percent. Bathinda had 0.49 percent of tempo of urbanisation in 1981 which came down to 0.43 percent in 1991. It further declined to 0.28 percent in 2001.

A sudden jump was recorded in 2011 and it reached at 0.62 percent. The projection for 2021 in Bathinda is -0.26 percent tempo of urbanisation. Jalandhar reported 0.52 percent of the tempo of urbanisation in 1981 and it slightly increased to 0.53 percent in 1991. It further enhanced to 0.68 percent in 2001 in Jalandhar. It recorded a decline in 2011 being at 0.54 percent in Jalandhar and the projection for 2021 is 0.52 percent. Faridkot recorded a 0.42 percent tempo of urbanisation in 1981 and it soared to 0.93 percent in 1991. It declined and came down to 0.19 percent in 2001 and further to 0.001 percent. The projection for 2021 in Faridkot is -0.06 percent tempo of urbanisation. Amritsar had 0.38 percent tempo of urbanisation in 1981. It declined to 0.11 in 1991. An unprecedented jump in the tempo of urbanisation in Amritsar was recorded in the next decade having reached at 1.74 percent in 2001. However, it declined to a historically low of 0.21 percent in 2011 in Amritsar. The projection for 2021 in Amritsar is a 0.94 percent tempo of urbanization.

Table 3: District-wise Tempo of Urbanisation of Punjab (1981-2021)

District	1981	1991	2001	2011	2021*
SAS Nagar	-	-	-	1.59	-
SBS Nagar	-	1.1	0.28	0.67	0.001
Bathinda	0.49	0.43	0.28	0.62	-0.26
Jalandhar	0.52	0.53	0.68	0.54	0.52
Patiala	0.35	0.10	0.58	0.39	0.06
Rupnagar	0.65	0.42	-0.33	0.35	-0.58
Ludhiana	0.72	0.92	0.46	0.33	0.51
Moga	-	-	-0.19	0.29	0.15
Fatehgarh Sahib	-	-	0.62	0.28	0.49
Firozpur	0.06	0.12	0.19	0.27	-0.22
Muktsar	-	-	0.21	0.24	0.25
Sangrur	0.25	0.20	0.40	0.24	0.53
Amritsar	0.38	0.11	1.74	0.21	0.94
Kapurthala	0.68	-0.42	0.69	0.20	0.001
Barnala	-	-	-	0.15	-
Hoshiarpur	0.23	0.27	0.26	0.14	0.28
Tarn Taran	-	-	-	0.07	-
Mansa	-	-	0.58	0.06	0.29
Faridkot	0.42	0.93	0.19	0.001	-0.06
Pathankot	-	-	-	-	-
Fazilka	-	-	-	-	-
Punjab	0.43	0.33	0.42	0.26	0.19

Source: Based on Census of India Reports (1971-2011) *General Population Tables, Punjab Series 4* & Population Statistics of Punjab (1971-2011)

Note: Dash (-) indicates that sufficient data was not available for calculation as district was not formed.

*Based on projected data

Urban Size-Class Pattern

The Census of India has classified cities and towns based on population criterion into six size classes. The towns with a population of 1,00,000 and above have been

classified as Class I cities. Class II cities have a population of 50,000-99,999, Class III has 20,000 to 49,999, Class IV has 10,000 to 19,999, Class V has 5,000 to 9,999 and Class VI has less than 5,000 population. Punjab has 217 cities/towns as per the Census of India, 2011. It had increased significantly to 108 in 1971, 134 cities/towns in 1981, 120 cities/towns in 1991 and 157 cities/towns in 2001 in Punjab. Table 4 depicts the growth of the number of cities/towns in the state. The number of Class I cities in Punjab was 4 in the year 1971, which increased to 7 in 1981, 10 in 1991, 14 in 2001 and 16 in 2011. The projection of towns reflects that the state has 23 Class I towns/cities, 32 Class II, 59 Class III, 69 Class IV, 68 Class V and 24 Class VI towns/cities, with the total number surging to 275.

Table 4: Numbers of Towns/Cities in Different Classes of Punjab

Year	Number of class I Towns/Cities	Number of class II Towns/Cities	Number of class III Towns/Cities	Number of class IV Towns	Number of class V Towns	Number of class VI Towns	Total Towns
1971	4	8	22	32	30	12	108
1981	7	10	27	36	40	14	134
1991	10	18	25	46	14	7	120
2001	14	18	36	54	29	6	157
2011	16	24	49	61	49	18	217
2021*	23	32	59	69	68	24	275

Source: Based on Census of India Reports (1971-2011) *General Population Tables, Punjab Series 4* & Population Statistics of Punjab (1971-2011)

*Projected figures

The urban population share in all class-size of towns/cities is highly variable. In 1971, the highest population was concentrated in Class I cities with 40.52 percent of the total urban population of the state. It was followed by Class III cities with a share of 22.53 percent population. In the same year, 15.83 percent of the urban population lived in Class II, followed by Class IV, Class V and VI with 13.32 percent, 6.53 percent and 1.28 percent respectively. In 1981, the trend remained somewhat constant with 46.38 percent in Class I, 20.46 percent in Class III, 14.39 percent in Class II, 11.06 percent in IV, 6.50 percent in Class V and 1.21 percent in Class VI towns. In 1991, the concentration of population increased in Class II towns/cities in comparison with Class III towns. In this Census, the Class I cities had a population of 54.16 percent, Class II had 19.91 percent, Class III had 13.12 percent, Class IV had 1.62 percent, Class V had 1.72 percent and Class VI had 0.47 percent of the total urban population. The share of the urban population in Class I town in 2001 was 58.32 percent. It was followed by Class II. Class III, Class IV, Class V and Class VI towns/cities with 15.91 percent, 13.10 percent, 9.81 percent, 2.58 percent and 0.28 percent respectively. The Census of India 2011 reported the concentration of the population in Class I cities in Punjab which was 57.17 percent. It was followed by Class II with a 17.07 percent population, Class III with 13.20, Class IV with 8.48, Class V with 3.35 percent and Class VI with 0.73 percent of the share of the urban population, as shown in Table 5. The

population projection suggests that the percentage share of the urban population is 62.42% in class I towns/cities, 17.11% in Class II, 11.70% in Class III, 7.58% in Class IV, 3.39% in Class V and 0.82% in Class VI towns.

Table 5: Percentage share of Urban Population in different Classes of Towns/Cities of Punjab

Year	Class I	Class II	Class III	Class IV	Class V	Class VI
1971	40.52	15.83	22.52	13.32	6.53	1.28
1981	46.38	14.39	20.46	11.06	6.50	1.21
1991	54.16	19.91	13.12	10.62	1.72	0.47
2001	58.32	15.91	13.10	9.81	2.58	0.28
2011	57.17	17.07	13.20	8.48	3.35	0.73
2021*	62.42	17.11	11.7	7.58	3.39	0.82

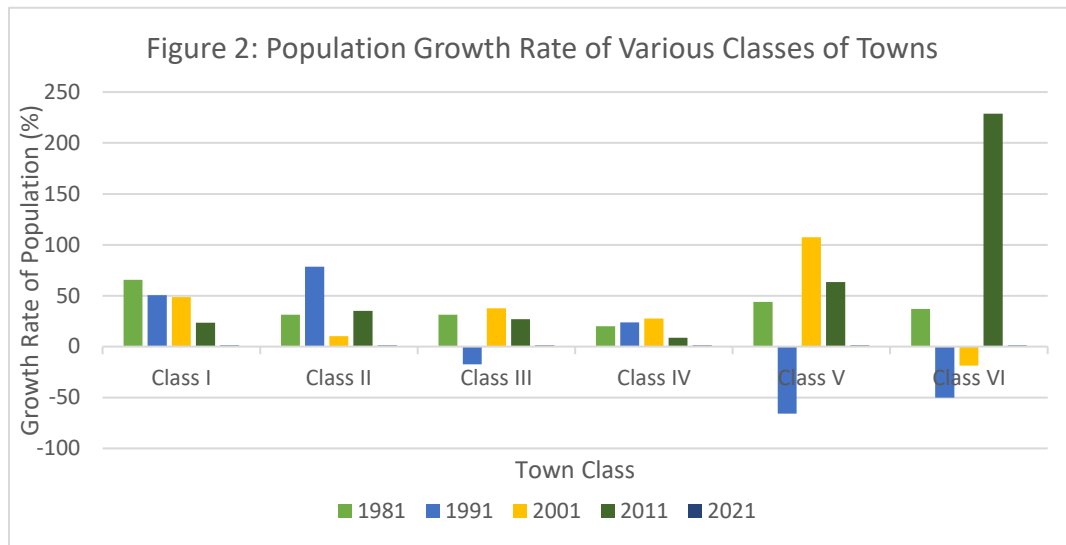
Source: Based on Census of India Reports (1971-2011) *General Population Tables, Punjab Series 4* & Population Statistics of Punjab (1971-2011)

*Projected percentage calculated on the basis of previous data.

Not only the share of the urban population in these classes of towns are changing, but there is also a drastic change in the growth rate of population in these towns/cities. Figure 2 shows the population growth rate in each Class of towns/cities in Punjab since 1981. During 1971-1981, the population growth rate of Class I cities of Punjab was 65.43 percent, which declined to 50.59 percent in 1981-1991, 48.45 percent in 1991-2001 and further to 23.37 percent in 2001-2011. This shows a trend of population saturation in Class I towns of Punjab. In Class II cities, the population growth rate was 31.29 percent during the decade 1971-1981, which increased to 78.41 percent in 1981-1991. It drastically declined further to 10.15 percent in the decade 1991-2001 but surged to 35.10 percent in the next decade of 2001-2011 was seen. The population growth rate in Class III towns was 31.3 percent during the decade 1971-1981. It showed negative growth in the decade 1981-1991 with a growth rate of -17.29 percent. It increased to 37.58 percent in 1991-2001 and declined to 26.83 percent in 2001-2011. In Class IV towns, the concentration of the urban population was 20 percent in 1981, which increased to 23.74 percent and 27.44 percent in 1981-1991 and 1991-2001 respectively. Later it declined to 8.8 percent from 2001-2011. The population growth rate in Class V towns during the decade 1971-1981 was 43.82 percent which slumped to -65.90 percent in the next decade 1981-1991. It again jumped to 107.30 percent during the decade 1991-2001 and again declined to 63.26 percent in the next decade 2001-2011. Class VI towns had 36.95 percent of the population in the decade 1971-1981. It declined to -49.97 percent in 1981-1991 and again dropped to -18.62 percent during the decade 1991-2001.

In the decade 2001-2011, it witnessed a drastic positive change and a growth rate of 228.89 percent was recorded. The projection of population for 2021 indicates a very low growth rate in all classes of towns/cities. Though there is saturation in population in higher classes of towns in the state, the Class VI towns have an increasing population growth rate

as new Class VI towns have emerged in the state in large numbers. Most of these towns are census towns, which do not have any administrative body to regulate their growth and development at par with urban centres.



Growth of Census Towns in Punjab

There were more than two hundred towns in 2011 in Punjab, out of which 163 were statutory towns and 74 census towns. The number of census towns has increased from 18 in 2001 to 74 in 2011. In this transition, as many as 55 census towns were transformed from village settlements to urban. There is a concern that this change is associated with the movement of people (particularly working people) from rural to the *place* they do business in and not to what are called towns. Working and business Punjabi people move to village service centres and engage in various economic activities of secondary and tertiary sectors. The people of Punjab with their movement to such places have created census towns that go unnoticed in the process of urbanisation. During the last decade, twenty lakh additional people from Punjab moved to urban areas, of which, perhaps 8 lakhs of them went to these towns due to economic reasons (see, The Ministry of Statistics and Programme Implementation). Generally, Census Towns are towns that are not statutory towns. i.e. they have not been notified as *urban areas* by the state government. In Punjab, a large number of census towns are located in certain districts such as Pathankot (12), Jalandhar (9), Ludhiana (9), Sahibzada Ajit Singh Nagar (7), Amritsar (7) and Gurdaspur (5). However, the majority of these towns are governed by the Panchayati Raj system and often they lack (a) basic infrastructure, and (b) robust governance structure and administrative capacity to deliver services. An interesting feature about census towns in the state indicates that most of such towns are located away from the large cities but closer to transport routes leading to large urban areas. However, much of the urban growth of cities and towns in Punjab appears like a *rurban* in the character. This refers to geographic landscapes which possess

the economic characteristics and lifestyles of an urban area while retaining its essential rural features around. Rurban communities are the rural socio-geographic spaces, where styles of life and the standard of living have changed so much that they resemble those in urban localities. This phenomenon is perhaps due to either urban expansion or rural migration.

Industrialisation, Migration and Urban Punjab

The state of Punjab has a long tradition of being an agriculture-based economy. The *green revolution* started in the year 1960s promoted agriculture expansion in the state. The growth and prosperity primarily have been the result of Punjab's adoption of new technology in agriculture. The urbanisation in Punjab to a great extent is influenced by commercial activities, service providers and industrial establishments. In Punjab, much of agricultural prosperity has played an important role in shifting the population from rural to an urban economy driven by trade, commerce, service, manufacturing, and industries. The mechanisation of agriculture does lead to an increasing demand for the manufacturing of machine tools. This led to the establishment of machine tools industries meeting the requirement of the farm sector in the state. The demand from the agriculture sector pushed the industrial ecosystem in the state. Studies reveal that agriculture-induced industrialisation remains the main motive force for urbanisation in the state of Punjab (Maini, 2004). Major industries in the state include food processing, tractors and auto components, agro-based parts, bicycles and bicycle parts, sports goods, light engineering goods, metal and alloys, chemical products, textiles, information technology and pharmaceuticals. The contribution of urban areas to the State Gross Domestic Product is over 75 percent. This shows that urban areas are major drivers of the economy and promote the industry and service sectors. This means that the growth and development of the state are closely linked with the productivity, sustainability and operational efficiency of urban centres.

An attempt has been made to establish a correlation, as shown in Table 6, between the concentration of population and the concentration of industries in various districts of Punjab. At present, the most urbanised districts of Punjab are Ludhiana, Jalandhar, and Amritsar, which have the highest concentration of registered factories, firms and industries. A strong correlation between the concentration of the urban population and the concentration of factories has been found in the state. Ludhiana district has the highest share of the urban population which is 23.54 percent of the total urban population in the state. It also has the highest concentration of Industries with 29.78 percent of total registered factories in the state. Similarly, Amritsar has a 13.55 percent share of the urban population of the state and 8.76 percent of registered factories. Jalandhar has 11.65 percent of the urban population of the state and 10.92 percent of registered factories of the state. The Correlation Coefficient (r) between the district-wise share of the urban population and the share of registered factories is 0.945, which proves a very strong correlation between urbanisation and industrialisation.

Table 6: Correlation Between Urbanisation and Industrialization of Punjab

District	Percentage of Urban Population of district to total urban population of state (Projected for 2021)	Percentage of Registered Factories* (2020)
Ludhiana	23.54	29.78
Jalandhar	11.65	10.92
Amritsar	13.55	8.76
Sangrur	4.71	6.94
Patiala	6.76	5.01
Bathinda	3.15	4.81
SAS Nagar	6.01	4.02
Fatehgarh Sahib	2.06	3.90
Hoshiarpur	3.40	3.48
Gurdaspur	2.16	3.38
Firozpur	1.75	3.04
Kapurthala	2.61	2.86
Moga	2.43	2.53
Mansa	1.79	2.01
Faridkot	1.31	1.88
Shri Muktsar Sahib	2.69	1.47
Rupnagar	0.93	1.30
Fazilka	2.57	1.30
Barnala	1.79	0.95
Pathankot	2.67	0.74
SBS Nagar	1.08	0.62
Tarn Taran	1.40	0.30
Correlation Coefficient (R)= 0.945		

Source: Based on Census of India Reports (1971-2011) *General Population Tables, Punjab Series 4* & Population Statistics of Punjab (1971-2011)

*Registered Factories under Section 85 and Section 2m (I and II) of Factories Act, 1948

The commercialisation of agriculture, urbanisation and industrial development played an important role in the rising trend of migration in the state. The migrants for employment purposes of all time have been considered in the Census of India from 1981 to 2011. Table 7 shows the trend of migration for employment within the state and outside the state. In the year 1981, there were 59.10 percent of total migrants moved within the state for the sake of employment. It declined to 57.70 percent in 1991. It drastically declined to 38.90% in 2001. It again increased to 51.36% in 2011. On the other hand, the migrants from outside the state were 40.90 percent in 1981, which increased to 42.29 percent in 1991. It further increased to 61.10 percent for the year 2001, but drastically declined to 48.64 percent in 2011. The projections indicate that the migration within the state is 51.29 and from outside the state is 48.71% in 2021. The projection is carried out on previous migration data and the impact of the COVID-19 pandemic and successive lockdowns on the migration has been partially accessed. It has been indicated that intra-state mobility for

employment has increased, whereas the number of migrants coming from outside the state has declined.

Table 7: Migration for Employment in Punjab

	Nature of Origin	Nature of Destination	Total Migrants for Employment (%)				
			1981	1991	2001	2011	2021*
Within State	Rural	Rural	20.8	18.49	9.57	11.33	11.31
	Urban	Rural	4.01	3.29	1.41	2.48	2.47
	Rural	Urban	20.71	22.05	17.69	18.86	18.84
	Urban	Urban	13.58	13.87	10.23	18.68	18.67
	All		59.10	57.70	38.90	51.36	51.29
Outside State	Rural	Rural	11.32	9.77	14.86	11.15	11.18
	Urban	Rural	3.08	2.87	1.56	1.58	1.57
	Rural	Urban	14.85	15.98	34.44	21.31	21.39
	Urban	Urban	11.65	13.67	10.24	14.61	14.57
	All		40.9	42.29	61.10	48.64	48.71

Source: Based on Census of India Reports (1981-2011) *Migration Tables* & Population Statistics of Punjab (1971-2011)

*Projected Data

Within the state of Punjab, the highest rate of migration for employment was from rural to urban 20.17 percent in 1981 and increased to 22.05 percent in 1991. It declined to 17.69 percent in 2001 but further increased to 18.68 percent in 2011. It is projected to be at 18.67% in 2021. It is projected at 18.84 percent in 2021. Urban to Urban migration within the state was 13.58 percent in 1981, which remained almost the same at 13.87 percent in 1991. Further, it declined to 10.23 percent in 2001 and again increased to 18.68 percent in 2011. In 1981 rural to rural migration within the state was 20.80 percent which declined to 18.49 percent in 1991. Urban to rural migration was 4.01 percent in 1981, which also declined to 3.29 percent in 1991. In the year 2021, it is expected to be witnessing the same pattern and reaching 11.32 percent and 2.47 percent in 2021.

Migration for employment purposes from outside the state has shown a declining trend in Punjab over the past decades. Several reasons emerge as the cause of this concern. Certain schemes of employment as being implemented in the States including the Mahatma Gandhi National Rural Employment Guarantee Act (MNREGA) have played a part in reducing the intensity of out-migration from the conventional states largely located in northern India. With this, the nature of the push factor has drastically changed and caused a weakening pattern of out-migration to Punjab state as well. For instance, in Bihar, 33.79 lakh individuals worked under the MNREGA schemes in 2018-19, which increased to 54.32 lakhs in 2021-22. Similarly, in Uttar Pradesh, this number has increased from 61.51 lakhs in 2018-19 to 95.54 lakhs in 2021-22. The major labour force comes to Punjab from such states. Traditionally, they send agricultural unskilled labours. They were absorbed in employment largely confining agriculture activities. Simultaneously, with increasing advances in mechanisation, the labour required for agriculture sectors also has witnessed a

decline in prosperous states such as Punjab. All this has adversely influenced the migration flow to the state. According to the Economic Survey of Punjab (2020-21), the employment share of Agriculture and allied activities was 25.75% in Punjab as compared to 79.51% in 1971 and 64.11% in 1991. This was remarkably low as compared to national figures for employment in agricultural and allied activities which is 45.56% in India. It is evident that agriculture employment has declined. The unemployment rate in Punjab has also been increasing. According to the Centre for Monitoring Indian Economy, the unemployment rate in Punjab increased to 10.00 percent in 2019-20, which was 6.07% in 2016-17 (Vasdev, 2023). The perception of employment in the youth of Punjab is also poor. According to the Indian Youth: Aspiration and Vision for the Future survey by Centre for Study of Developing Societies, 78% of the respondent of the age group 18-24 felt that employment opportunity in Punjab is bad. Due to these reasons, there is a declining trend in the pull factor of Punjab. A further study can be done to understand the detailed cause of this decline. Migration from rural areas outside the state to the urban areas of Punjab was 14.85 percent in 1981, which increased to 15.98 percent in 1991. It reached its highest of 34.44 percent in 2001 but further declined to 21.31 percent in 2011. It is projected to be at 21.39 percent in 2021. The migration from rural areas outside the state towards the rural areas in the state was 11.32 percent in 1981. It reached 9.77 percent in 1981 but increased to 14.86 percent in 2001. During the next decade, it declined to 11.15 percent and is projected to further increase in 2021 to 11.8 percent. The urban-to-urban migration from outside the state was 11.65 percent in 1981 which increased to 13.67% in 1991. It declined to 10.24 percent in 2001 but again increased to 14.61 percent in 2011. Urban-to-rural migration from outside the state was 3.08 percent in 1981 and 2.87 in 1991. It declined to 1.56 percent in 2001 and 1.58 percent in 2011. It is expected to slightly decline in 2021 to 11.5 percent. Most of the migrants moving for employment were absorbed in the urban areas of Punjab.

Urban Development and Challenges in Punjab

Urbanisation in the state is associated with the development of urban areas and an improvement in access to basic amenities and infrastructure. Accessibility to potable water, electricity, sanitation facility, better housing, sewage, and roads is considered a major indication of the improved development status. The state of Punjab has relatively performed better in providing basic amenities to the urban population. According to the Economic Survey of Punjab 2020-21, 98.9 percent of households in the state had access to drinking water in the year 2011, which became 100 percent in 2018. During the year 2008-09, the households with electricity were 99.30 percent, which jumped to 100 percent in 2018. The urban population of Punjab also had witnessed good access to housing facilities. The Census of India classifies houses into three categories Good, Livable, and Dilapidated based on their living condition. In the state, around 57 percent of houses in urban Punjab are in "Good" condition. There was 37 percent of houses categorised as "Livable" and 5 percent were categorised as "Dilapidated" which lacked proper infrastructure as per the Census of India 2011. The percentage of dilapidated houses at the national level remained at 6.59 percent. As per Census of India 2011, in Punjab, 14.2 percent of urban households

were living in slums. This means that out of about 143 towns, 71 had reportedly slums in 18 districts in Punjab.

According to the Economic Survey of Punjab, the percentage of slum dwellers is 5.3 percent of Punjab's total population (2021-22). Increasing slum population pressure in the urban area has created problems of unavailability of proper housing. The shortage of good living units is one of the major concerns in the urban centres of Punjab. According to National Building Organisation Report (2015), there are 1.46 million people in the state, which accounts for 14.01 percent of urban population of the state and 2.23 percent of the total slum population of India. Though various steps have been taken to counter this problem in the form of various schemes such as Pradhan Mantri Awas Yojna (Urban), Punjab Shehri Awas Yojana (PSAY), etc. An increasing population in urban centres and a higher absorption in the informal sector mostly have marked an increase in the need for many new dwelling spaces. The spatial pattern of inequality in terms of poverty is highly variable in Punjab. The urban poverty rate in Punjab is higher than its rural poverty rate (Chakraborty & Bhandari, 2015). The highest urbanised district of the state is Ludhiana which has almost double of urban poverty rate than the rural poverty rate. The unemployment rate among the youths in Punjab is also challenging. According to the Periodic Labour Force Survey (2020-21), the youth unemployment rate in Punjab remained at 19 percent, which is 12.9 percent at the national level in the same year. Thus, the high incidence of urban poverty and unemployment in urban Punjab is one of the major development concerns.

The National Family Health Survey (NFHS) indicates challenging characteristics of urban development in the state. Table 8 shows the status of access to basic amenities in urban areas of Punjab. The population living in households with an improved drinking water source was 95.5 percent in 1998-99 (NFHS, 1999), which increased to 100 percent in 2005-06 (NFHS, 2006). It fluctuated due to urban growth characterised by residential land use. Thus, the pressure of population and construction of new dwelling spaces led to its decline to 99.3 percent during NFHS round 4 (2015-16), which increased to 99.4 percent urban areas of Punjab in the fifth round of the National Family Health Survey (2019-21). However, the over-utilisation of groundwater has led to depletion in the condition of the water. Groundwater blocks of major urbanised districts such as Ludhiana, Amritsar, Jalandhar, etc. have been over-utilised (Ground Water Year Book, 2015). The study conducted by Chopra and Krishna discovered that 43% of Punjab's groundwater is unfit for use (2014). In urban Punjab, 82.7 percent of households had improved sanitation facilities in 2015-16 (NFHS, 2016), which improved to 87.8 percent in 2019-21 (NFHS, 2021) urban areas of Punjab. This has witnessed a drastic improvement from 51.4 percent in 1998-99 (NFHS, 1999) and 61.4 percent in 2005-06 (NFHS, 2006). It was higher than the national level of 81.5 percent in the same round of NFHS. The population living in households with electricity was 99.6 percent in urban Punjab in 2015-16 (NFHS, 2016), which improved to 99.8 percent in 2019-21 (NFHS, 2021). The composite level of urban development in the state is in much better condition compared to the national averages and many states of the country. However, the district-level and city-level variations in Punjab are the cause of

concern and pose major challenges. The districts and the major cities of Amritsar and Ludhiana in Punjab demand efficient water supply and sanitation services. The much of population in these cities use groundwater from bore wells which are leading to water loss and wastage. This has health consequences as well since Amritsar district's groundwater is contaminated with arsenic and Ludhiana's groundwater with nitrates and other heavy metals (The World Bank, 2021).

Table 8: Access to Basic Amenities in Urban Punjab

	Improved Drinking Water	Improved Toilet/Sanitation	Electricity Facility
1998-1999*	95.5	51.4	95.5
2005-2006	100.0	61.4	98.2
2015-2016	99.3	85.0	99.6
2019-2021	99.4	87.8	99.8

Source: National Family and Health Survey Round 2 (1998-1999), Round 3 (2005-2006), Round 4 (2015-16) and Round 5 (2019-21)

*Indicates total figures for whole state

The Ease of Living Index is an attempt to assess the quality of life and the outcome of urban development policies and schemes implemented in the cities. The Ministry of Housing and Urban Affairs of the Government of India had come with reports about select cities in the recent past. The major factors taken into measurement include economic ability, sustainability, education, healthcare, culture, environment and infrastructure. Three cities of the state found a place in the Top Fifty Cities in the "Ease of Living Index, 2020". Ludhiana was ranked Fourteenth and Amritsar was ranked forty-fifth in the category of Million Plus cities in the "Ease of Living Index 2020", whereas Jalandhar was ranked 32nd most livable city under less than a million category cities. This reflects that large cities of Punjab provide better living conditions to their dwellers. However, the majority of the urban population living in small and medium towns and non-metro cities face challenges in terms of unauthorised and unplanned development; mushrooming of unauthorised colonies; growth of slums; lack of financial, technical and human resources with urban local bodies; and growth of the informal sector. Gupta reiterated that "Urban governance in Punjab is at crossroads. In the wake of growing urbanization, it has been facing serious challenges to meet the requirements of urban infrastructure, municipal services, environmental conservation, and urban poverty alleviation" (2006). Under the *Smart Cities Mission*, three cities are selected in Punjab- Ludhiana, Jalandhar and Amritsar through a nationwide selection process. These cities have been forerunners in the project design, selection and implementation process. Thus, 11 projects worth Rs 3385 crore in Amritsar, 19 projects worth Rs 1899 crore in Jalandhar and 19 projects worth Rs 1898 crore are at the Detailed Project Reports stage. Under *Atal Mission for Rejuvenation and Urban Transformation* (AMRUT), the State is focusing on universal coverage of water in the urban areas and proposes to provide 4.6 lakh new house connections. It has already provided 1.45 lakhs tap connections, 36% of the approved Action Plan is directed toward Water supply and 61% towards Sewerage. Under *Swachh Bharat Mission* in Punjab, so far only 61 urban local bodies (ULBs) out of 164 have been declared as Open Defecation Free.

Discussions

This study unfolds that the state of Punjab has moved forward from being an agriculture-based economy to a trio of commerce, industry and service-based economy. During the post-independence and particularly after the formation of a separate state, Punjab has seen an unprecedented increase in urban population. Earlier the *green revolution* played a major role in enhancing agri-production in the state and strengthened the economy. Its evaluative perspective shows that “The Green Revolution in the 1960s gave a boost to agro-processing activities in Punjab, resulting in modernization and commercialization of the agricultural sector. This led to a growth in the demand for agricultural implements and the consequent establishment of several engineering units” (Sivaramakrishnan, et. al., 2007). This gave a major push for the economic development of the state. It meant a boost to many industries specifically the machine tools industries. However, the post-partition and post-green revolution decades saw a major boost to urbanisation as well. It resulted from the demand for labour and the agglomeration of people in the major urban centres of the state. The decade of 1971-81 witnessed a high growth rate of the urban population and the tempo of urbanization also recorded higher in a few districts which have been the backbone of the state’s economy. The studies revealed that “Market towns for agricultural products were developed in Punjab along the railway lines as mandi for purchasing agricultural produce and exporting outside the state” (Shekhar 2019). This decade can be termed the ‘Decade of New Rise’ for the state. The process of urbanisation along with industrial development marked an important distinction in the state’s development journey.

The decade of 1981-1991 is termed a ‘Decade of Disturbance’ for the state. This decade witnessed lots of socio-political disturbances with the rise of insurgency in the state. During these years the economy started declining, and industrial expansion too came to a halt in the state. Instead, there was a financial drain from Punjab and the state’s economic development was derailed for years to come. Maini’s study revealed that there was a burden on the state government to restore law and order and to maintain the expenses of the Central Forces (Maini, 2004). This affected the process of urbanisation in the state by interrupting industrialisation, infrastructure, social security and welfare. This resulted in the decline of the urban growth rate in the state. It declined from 30.75 percent in the previous decade to 22.37 percent in this decade. The tempo of urbanisation also fluctuated in most of the districts of the state. It seems that this disturbance mainly impacted the small urban centres as the growth rate of population in Class V and Class VI towns declined and turned negative. This appeared as a result of the de-notification of Notified Area Committees by the state government in Punjab which led to a more prominent increase in large urban centres. This means that the areas of the state which were fast developing and fulfilled the conditions of municipality or municipal corporation were declassified from *notified areas* to Municipality or Municipal Corporation. This led to a decline in number of small towns and the addition to large urban centers.

People seemed to have moved towards major urban centres of the state. This decade is also termed as the “*Decade of missed opportunities for Punjab*” (Sivaramakrishnan, et. al., 2007). In the 1990s, the economy of the state came to revive with the introduction of a *new economic policy* in India and it gave new hope economy and urbanisation in the state of Punjab. The 1990s witnessed a major change in the economy with its restructuring and an increase in urban population in Punjab. The slumped growth rate again started rising and almost touched the pre-disturbances period. However, the major urban centres slowed the deceleration of urbanisation despite the tempo of urbanisation remained low in large urban districts. The tempo in less urbanised districts remained very high during the decade. This growth was accompanied by *Post-Reforms Growth* in Punjab.

With the dawn of the twenty-first century, the growth of urbanisation has again slowed down in Punjab. This is related to urban growth rate of the state which was 19.80 percent. The absolute increase in the urban population remained high as compared to the rural population in four districts: Ludhiana, Sahibzada Ajit Singh Naga, Amritsar and Jalandhar. During the last decade, the growth rate of urban population in Class I cities had declined. However, their peripheral areas or fringe areas are still growing. The share and number of Class VI towns drastically increased. It indicates that many new small urban centres, i.e., Census Towns have emerged. The core of the large cities and their population tend to move towards saturation and small centres are now added to the urban population.

The trend of migration for employment towards the state also declined during this decade. It shows that the state of Punjab is grappling with agricultural expansion and rising commercial and industrial growth simultaneously. A few cities still dominate urban landscape of Punjab and have been for a long time, a dispersed pattern of small and medium towns is new reality of the state. However, the city of Ludhiana is well known for its hosiery, cycle and machine tools industries. Jalandhar is known for sports goods and Kapurthala for a rail coach factory. Bathinda is popular for its chemical and fabric industries and Amritsar for the tourism and textile industries. Central Punjab’s urban concentration is in and around these big cities. The forward and backward linkages of these industrial towns gave rise to a strong industrial ecosystem, a *corridor*, which creates a major pull and attracted working population from outside and within the state. All this gives rise to *economies of urban agglomeration*. The urban-ward movement in the state indicates that urban Punjab is most preferred by people coming from the surrounding highly dense state and they move and settle here in search of business, employment, livelihood opportunities and living standard. The spill-over impact of these large towns and rural population growth has also caused an increase in small urban centres developed along the route to big states in the state. However, many small towns are more independent and autonomous and located away from big cities, which reflects a silent process of *subaltern urbanization* in the state. A strong correlation between the level of urbanisation and industrialisation exists in the state. A higher concentration of urban population in a few districts of Punjab is associated with the economic system as driven by key cities and towns.

Thus, Shekhar's study noted that "the major reasons for the faster reason for growth of these towns are the concentration of manufacturing and industrial units within these districts" (Shekhar, 2019). However, the study finds urban growth has been largely unplanned and organic growth of small and medium towns is not an uncommon phenomenon in Punjab. The informal sector of urban Punjab has been largely absorbing in-migrants.

The projection of population for 2021 for the state indicates that the state's urban stock is largely contributed by already highly urbanized districts, i.e. *central zone*. The middle-order districts, the level of urbanization, of the state will also register the higher level of and tempo of urbanization in Punjab. Many small and medium towns will come up in these districts in the coming times. Though the share of Class I and Class II in the total urban population of Punjab will maintain its usual importance, the share of Class V and Class VI has also registered unprecedented growth. Despite registering an overall slow growth of population in 2021, the growth of population will be recorded higher in small and medium urban centres. Migration for employment from outside and from within will slightly go up in the state. The slowing down of the tempo of urbanisation indicates that the cities are overburdened and growing very slowly. Other small centres are now providing new avenues for industrial growth and urbanisation. The urbanisation of Punjab can be understood as a result of three major factors: green revolution, industrial concentration and a well-developed transport network. The establishment of small industrial units after independence gave people employment opportunities. The green revolution boosted the industrial sector by giving an impetus to the machine tool industry. The development of the transport network in the state established a strong network with the nation's capital and other major economic centres of the country. Sivaramakrishnan et. al. noted that "the major factor behind the growth process is the emergence of urban industrial corridor along Ludhiana, Jalandhar and Amritsar Highway" (2007). These phenomena contributed to the process of urbanisation in the state of Punjab.

However, new schemes and policies such as the *Industrial and Business Policy of Punjab*, Atal Mission for Rejuvenation and Urban Transformation- *Amrut* (16 cities including Abohar, Barnala, Batala, Bathinda, Hoshiarpur, Khanna, Malerkotla and others), *Smart Cities Mission* (SCM-Ludhiana, Amritsar, Jalandhar), etc. are meant to contribute significantly to economic development and growth of urban centres in the state. The objective of SCM was to promote cities that provide core infrastructure and give a decent quality of life to its citizens. As the projection has been calculated on the previous decade's Census data, the impact of the COVID-19 pandemic on the population has not been accessed. The pandemic occurred in the last year of the decade, and its impact on the population can only be analysed by the actual census data. Therefore, the projection made is a reflection of trends based on the previous data and an actual Census is required for correct visualisation of the situation.

Conclusion

The urban population and level of urbanisation in Punjab have been growing rapidly over the last few decades. The State is now one of the most highly urbanised states in the country. The degree of urbanisation is spatially variable across the districts and it is highly confined to the central zone of the Punjab, where districts located have higher urban concentration. Apart from a few districts in the central zone, the rest of the districts are less urbanised than the state average. A higher concentration of population is found in Class I and Class II cities and towns of the state which altogether contribute significantly to the total urban population. The share of the population in small towns such as Class V and Class VI has been low over the past decades, however, their share now tends to increase to a new level. At present, there has been an unprecedented increase in the number of Census Towns which largely fall under the Class VI category. Large cities may depict that a declining pace of urbanisation also has an impact on the fluctuating trend of in-migration in Punjab. Though in-migration from other states for work and employment reasons has been higher in the past decades, it has shown signs of decline during the last decade or so. The study recognizes that new industrial units being developed in less urbanised districts will effectively diverge urban concentration and reduce the pressure of population on the existing large urban centres of the state. However, new schemes, for urban development and rejuvenation, are being implemented in cities of Punjab under the AMRUT and the SMART CITIES MISSION that are too early to comment on.

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