

Structure and Pattern of Urbanisation in Punjab: A Macro Level Analysis

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Unprecedented growth of urban population presents a major challenge for sustainable economic growth. The State of Punjab which was known for its agricultural performance and dynamic rural economy upto 1990s is now emerging as a service economy dominated by urban sector. The State of Punjab has emerged as the sixth major urbanised State in India. According to the 2011 census 37.49 per cent of the State's population is living in urban areas and contributing nearly 60 per cent to State's GDP. The majority of the growing urban population was absorbed by the big urban centers which are likely to cause multiple problems such as lack of basic amenities and infrastructural deficiencies in these cities. Although the movement of population from lower order towns towards high order towns and cities and outgrowth of urban areas kept urban density almost stagnant, the area under urban units has progressed more than three times from 1971 to 2001. The net rural-urban migration has been increasing since 1971, which leads to the problem of slum growth and urban poverty in Punjab.

Introduction

On the basis of geographical area, Punjab has 16th rank in India having an area of 50362 square Km comprising small share of 1.6 per cent of the country's total geographical area. Punjab is located in the north-western part of India. It lies between latitude 29° 30' to 32° 32' north latitude and from 73° 55' to 76° 50' east latitude. During the last century, the State's geographical boundaries have shifted twice- the violent participation of India in 1947 and the administrative division of Punjab in 1966 into present day Punjab and the States of Haryana and Himachal Pradesh. In the recent past, the State faced a militant problem. Yet, in spite of these disturbances, the State of Punjab occupies an extremely important place in India. Punjab has achieved remarkable growth since independence and emerged as the richest State in India. This growth and prosperity are primarily the result of Punjab's adaptation of new technology in agriculture. After the onset of Green Revolution in 1966-67, significant change has occurred in the economic structure of Punjab. It has emerged as the largest grain producer State in the country. Punjab's economy is mainly agricultural and enjoys an enviable position among the States in regard to area under HYV seeds, yield per hectare, irrigation intensity, consumption of chemical fertilizers and electric power (Singh, 2011). But the situation of Punjab economy has taken a serious

turn with the introduction of liberalisation and globalisation policies during the early 1990s. The growth rate of Punjab economy remained consistently (except 1996-97) lower than of India as a whole. In terms of growth rate of gross state domestic product, out of 28 states of Indian Union, Punjab was at the 27th position during the 10th five year plan, whereas during the 11th plan, the situation became worse and Punjab has recorded the lowest growth rate in India. This has happened due to the lower growth of agriculture sector (Singh, 2011; Planning Commission, 2007).

Urbanisation and agricultural development are closely linked in Punjab. Agricultural prosperity has caused the shift of population from rural areas to the urban economy. Punjab has a long urban history from the Harappa civilization. During the colonial rule, the urbanisation process in Punjab was mainly driven according to the interest of Colonial ruler. With the establishment of British rule and introduction of the railway the physical organization of towns and cities in Punjab recorded remarkable transition. The expansion of railway network caused the spatial outgrowth of existing towns/cities towards the railway station (Grewal, 1997; Grewal and Grewal, 2005). In Punjab, during the British rule, there was development of *Mandi* towns near the railway stations to export the raw material through rail network towards the major Indian ports and from these ports to the British Empire. So the urban structure of Punjab, inherited from the colonial period, was nevertheless relatively balanced as compared to other Indian States.

The agriculturally prosperous State of Punjab showed a marked increase in its urban population since independence. The population of urban areas in Punjab increased very sharply after 1970s. At the dawn of the twentieth century, only 12.46 per cent of the total population of the then pre-partition Punjab was urban. At the beginning of the twenty-first century, the urban population of Punjab has increased to 33.95 per cent, against 27.78 per cent for the country as a whole. According to the 2011 census, 37.49 per cent of the State's population is living in urban areas and contributing nearly 60 per cent to State's GDP but urban development got only 2 to 3 per cent of total outlays of plans. It is evident that the growth rate of urban population has been fairly high in Punjab. In fact, the State has always been among the high urbanised States in India. Punjab is now the sixth major urbanised State in India after Kerala, Tamil Nadu, Maharashtra, Gujarat and Karnataka.

The present work is an attempt to analyse the spatial as well as temporal patterns of urbanisation in Punjab. It is based on the analysis of urbanisation and other related aspects from 1971 to 2001. However, the provisional data of rural-urban distribution of population for the 2011 census are now also available. The analysis also covers the changes which have happened during recent times. The logic behind the selection of above time period was mainly for three reasons as below:

1. The period from 1971 to 1981 presents the major change in Punjab agriculture known as Green Revolution which gave a boost to agro-processing activities in particular and industrial development in general. So it becomes

essential to analyse the pace and pattern of urbanisation during this period and its relation with agricultural and industrial development.

2. During 1981 to 1991 Punjab faced socio-political disturbances. During this period, terrorism has affected the rural as well as urban areas of Punjab. It is quite important to look into changes in population distribution during this period.

3. The period from 1991 onwards is referred as the period of globalisation and liberalisation. Due to the shift in economic policies, many significant socio-economic changes have occurred. The western vision of life has made an effect on the psychology of *Punjabies*. This period is referred to as the period of modernisation in the sense that the development of communication as well as transportation facilities has aided a pace to the urbanisation process.

Degree of Urbanisation

Urbanisation has often been regarded as a positive manifestation of economic development. It is being argued that without urbanisation economic and social development may be slow. From the last century and a half there has been a massive growth in urban population. The process started in Europe and was taken up in other parts of northern hemisphere; nowadays, the most impressive urbanisation process is taking place in developing countries (Berg et. al., 1982). By the end of 18th century, people who lived in the towns and cities were estimated to be about 3 per cent of the world population, but in 2008 the proportion of the population living in urban areas reached to 50 per cent (Bhattacharya, 2002). In the developed countries of the modern days, urbanisation is very much related to industrialisation. The case is not the same for developing countries. In most of the developing countries, it is not the industrial pull which attracts the population towards urban centers. In case of developing countries rural overpopulation is the major push factor compelling the urbanisation process. In these countries, the rate of industrialisation and modernisation has failed to keep pace with urbanisation. The higher proportion of population of underdeveloped world suddenly moves towards cities beyond the capacity of latter. The consequences of this may be urban poverty, rather than industrialisation and modernisation (Smiles, 1975). As far as India is concerned, due to two centuries of colonial rule, the urban structure of India has not been following the pattern of urbanisation which is based on the agricultural development and strong urban industrial base as experienced by most of the developed countries during their urban transition. Indian urbanisation model is basically a colonial urban model. The imperialist has developed the cities and towns to facilitate the transportation of raw material and surpluses from the Indian periphery to developed imperialist centers and import the finished products through the same route to sell in the market of rural hinterland of periphery.

In Punjab, the process of urbanisation has been a steady process for a long time, but during the last few decades it has gained extra momentum. This was the period of accelerated agricultural growth, followed by industrialisation of

the State. During the last 50 years, urban population in the State has increased four times whereas the population of the State has increased only two and half times. With the advent of the green revolution and labour saving technology in the agriculture, the population in rural localities of Punjab is continuously decreasing.

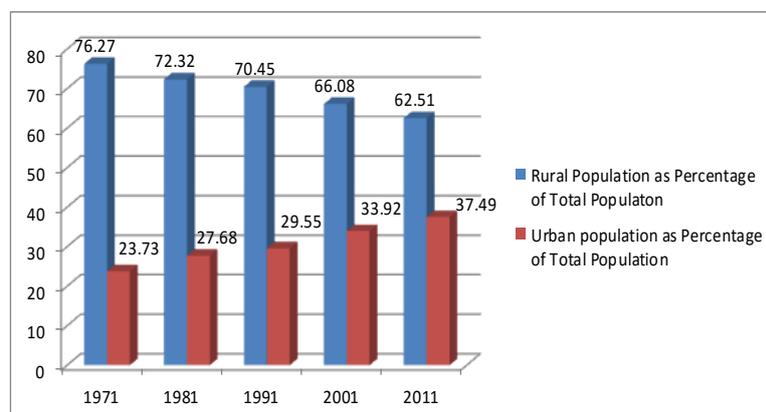
During 1971, out of the total population 76.27 per cent was living in the rural areas and since then the proportion of rural population was decreased and it has reached to 62.51 per cent in 2011. On the other hand, the urban population in Punjab is showing an upward movement. The urban population in Punjab was 3.22 million (23.73 per cent of the total population) in 1971 and it has increased to 37.49 per cent in 2011 (Vide Table and Figure 1).

Table 1: Rural and Urban Population in Punjab

Year	Rural Population (in million)	Urban Population (in million)	Total Population (in million)	Rural Population as Percentage of Total Population	Urban Population as Percentage of Total Population
1971	10.33	3.22	13.55	76.27	23.73
1981	12.14	4.65	16.79	72.32	27.68
1991	14.29	5.99	20.28	70.45	29.55
2001	16.10	8.26	24.36	66.08	33.92
2011	17.32	10.3	27.70	62.51	37.49

Source: Census of India, 1971 to 2001, Punjab, Series-4, Final Population Totals and Provisional Population Totals, 2011 Census.

Figure 1: Distribution of Rural and Urban Population in Punjab



Source: As in Table 1

Table 2: Decadal and Compound Annual Growth Rate of Urban Population in Punjab

	Percentage Decadal Variation			Urban-Rural Growth Differential	Annual Compound Growth of Urban Population
	Total Population	Urban Population	Rural Population		
1971-81	23.89	44.51	17.48	27.03	3.7
1981-91	20.81	29.11	17.69	11.42	2.6
1991-01	20.10	37.86	12.65	25.21	3.2
2001-11	13.73	25.76	7.58	18.20	2.3

Source: Census of India, Punjab, 1971 to 2001, Series 2, Provisional Population Total of 2011.

The decadal and annual compound growth of population is highlighted in Table 2 above. The decadal growth of the total and the rural population has decreased during the period from 1971 to 2011. The urban population showed a very impressive decadal growth during 1971-81. It has 44.51 per cent which was significantly higher in comparison to the growth rate of total and rural population during this period. There have mainly three reasons which were responsible for this impressive growth. Firstly, due to the advent of green revolution the income of farming households increased and they moved towards the urban localities for better facilities and opportunities. During the period from 1970-71 to 1980-81, Punjab has recorded historical increase in per capita income. During 1970-71 the per capita income at constant prices in Punjab was Rs. 1070 whereas the per capita income at the national level was recorded only Rs. 633. After the period of ten years (during 1980-81) the per capita income of Punjab has reached to Rs. 1354, which was near about double as compare to per capita income at national level (Government of Punjab, 1985). This was primarily occurs due to the agricultural revolution in Punjab. Secondly, a large number of people moved due to the push factor as the mechanisation of agriculture reduced the requirement of labour for agriculture. Thirdly, the development of the industrial corridor along the Ludhiana, Jalandhar and Amritsar highways led to the movement of population from the surrounding areas to the towns. The decadal growth rate of urban

population has decreased from 44.51 per cent to 29.11 per cent in the next decade but it was still higher than the growth of rural and total population.

The decade of 1981-91 has been described as the lost decade or a decade of missed opportunities for Punjab (Shivramakrishnana, et. al., 2005). During this period, to a large extent, Punjab suffered due to the disturbed socio-political conditions and widespread terrorism. In the next decade (1991-2001), which was also known as the period of globalisation, the decadal growth of urban population again accelerated in Punjab and it has reached to 37.86 per cent. It was near about three times higher than the growth of population in rural Punjab. It was the time when people started looking for better employment and education opportunities and better possibilities for investment. The higher income group of rural localities moved towards urban areas for better education and better investment opportunities. The lower income group from rural areas moved in the hope of finding better employment opportunities to raise their standard of living. During this decade, the growth of the service sector in Punjab is higher in comparison to the secondary and primary sector. It is also known as the period of tertiarisation of Punjab economy (Singh, 2010).

The provisional population results of the 2011 census reveal that the decadal growth of total, urban and rural, population has recorded a decline as compared to the previous decade. During this period, the growth of urban population has reached 25.76 per cent which is nearly twice that of the overall population growth rate (13.73 per cent) and more than three times that of the rural population (7.58 percent) growth rate. The annual compound growth of urban population was highest (3.7 per cent) during 1971 to 1981. In the next decade, the per annum compound growth of urban population decreased to 2.6 per cent but in 1991-2001, the growth of urban population again accelerated and reached 3.2 per cent per annum. The recent data reveal that the annual compound growth of urban population is 2.3 per cent from 2001 to 2011 which is lowest as compared to all the previous decades.

Generally to examine the urbanisation process in a particular region the researchers are concerned only with the percentage of urban population to the total population ($U/ U+R$) (Bose, 1973). There is a problem of underestimation in this measure because a segment of urban population, that consists of largely of the refugees from the rural areas who have not been integrated with the urban economy would figure in the denominator (Kundu, 1980).

Table 3: Degree of Urbanisation in Punjab

Year	Urban Population as Percentage of Rural Population (U/R)
1971	31.12
1981	38.22
1991	41.94

2001	51.33
2011	59.47

Source: Census of India, Punjab, 1971 to 2001, Series-4, Final population Totals and Provisional Population Totals 2011.

For the correct estimation of the degree of urbanisation in a region and to remove the defects of the underestimation, Kundu's Method the percentage of urban population of the rural population (U/R) has been chosen in the present analysis. During 1971, the percentage of urban population to the rural population was recorded 31.12 per cent. Since then it has continuously progressed and reached to 59.47 per cent in 2011. It means that the percentage of urban population was more than the half of the rural population in Punjab.

Number of Urban Units

One of the most persistent generalisations concerning the urban transformation in the developed countries is the assertion that it rested upon a series of technological as well as productive changes which led to growth of industrial and agricultural production. These changes led to a change in occupational composition of the population of these countries from agriculture to non-agricultural activities and increasing concentration of people in urban places (Mc Gee., 1983). The increase in the number of urban units is a sign of modernisation and commercialisation of economic activities. As long as the numbers of urban units increase it is a sign of development because people are moving towards better inhabitant and better socio-economic environment.

Table 4: Class-wise Distribution of Towns and Change in Number of Towns

Category of Towns	Number of Towns				Change in Number of Towns		
	1971	1981	1991	2001	1971-81	1981-91	1991-2001
Class I	4	7	10	14	3	3	4
Class II	8	10	18	18	2	8	0
Class III	22	27	25	36	5	-2	11
Class IV	33	36	46	54	3	10	8
Class V	30	40	14	29	10	-26	15
Class VI	11	14	7	6	4	-7	-1

Source: Census of India, 2001, Punjab, Series-4, General Population Tables.

Note: Class I Towns (100,000 and above), Class II (50,000 to 99,999), Class III (20,000 to 49,999), Class IV (10,000 to 19,999), Class V (5,000 to 9,999), Class VI (Less than 5000)

Table 4 provides the information about class-wise distribution of towns and change in the number of towns over the period of time. The number of towns in each category has increased during 1971-81. During this decade, the market towns for agricultural produce were developed in Punjab. In addition to market towns, certain types of small production towns based on agricultural inputs have also developed during this period. The number of towns has declined during the next decade and it has remained 120 in 1991. The number of Class V and Class VI towns has decreased from 40 to 14 and 14 to 7 respectively during this decade. It was primarily due to the de-notification of Notified Area Committees by the State government (Census of India, 2001). The next decade again showed the pace of urbanisation process and the urban units reached 157 in 2001, out of which 139 were statutory towns¹ while the remaining 18 called census towns or non-statutory towns² (Vide Table 4). The provisional results of 2011 census highlights that the number of towns in Punjab have increased to 217 (an addition of 60 towns as compared to previous decades) out of which 143 are statutory towns and 74 are non-statutory (census towns).

Distribution of Urban Population in Various Classes of Towns

For the healthy growth of a country and regions it is necessary that the process of growth should be balanced. The same is true for modernisation and urbanisation. Economic development is facilitated by the emergence of an integrated settlement system of different size towns and cities serving both their own residence and the residence of surrounding rural areas (Renkow, 2008). The urban growth should be balanced or it should be started from the development of low level towns which are known as the *Mandi* towns or small towns. Small towns are playing an important role in the regional development. The functioning of these towns is helpful for the growth of rural hinterlands. Small towns serve number of marketing functions such as collection, processing, assembly and distribution of various commodities. Goods produced in the surrounding rural hinterlands are transported into these towns. They are also playing certain types of production functions such as agricultural processing, manufacturing, services and commercial activities. The firms located in these towns are an important source of certain consumption goods for rural areas. Small towns also offer a range of services and facilities which are available in the rural hinterland. These include health services, postal services, school, colleges, banks and communication facilities.

Table 5 shows the classification of towns according to population ranges. The proportion of towns and population in various categories showed that in 1971 Class VI towns constituted 10.81 per cent of the total urban area where 1.29 per cent of the total urban population lived. Since then the share of Class VI towns, both in terms of area and population, is decreasing and reached 5.03

percent of the total urban area with only 0.34 per cent of the total urban population in 2001.

Table 5: Towns Classified by According to Population Ranges

Population Range	1971		1981	
	No. of Towns	Population	No. of Towns	Population
Class I	4 (3.70)	1283274 (40.52)	7 (5.22)	2155714 (46.38)
Class II	8 (7.41)	504341 (15.68)	10 (7.46)	668780 (14.39)
Class III	22 (20.37)	699336 (21.74)	27 (20.15)	940482 (20.23)
Class IV	33 (30.55)	463107 (14.40)	36 (26.87)	524505 (11.29)
Class V	30 (27.78)	224959 (6.99)	40 (29.85)	301905 (6.50)
Class VI	11 (10.81)	41162 (1.29)	14 (10.45)	56371 (1.21)
<i>Gini concentration</i>	0.604		0.634	

Source: Census of India, 1971 to 2001, Punjab, Series-4, General Population Tables.

Note: Class I Towns (100,000 and above), Class II (50,000 to 99,999), Class III (20,000 to 49,999), Class IV (10,000 to 19,999), Class V (5,000 to 9,999), Class VI (Less than 5000)

The Class II towns show little variation in the percentage of urban area and population during 1971 and 1981. The urban area has increased in this category of towns in 1991 to 15.00 per cent with 19.91 per cent of total urban population. In the next decade, there was a decrease in the percentage of urban area as well as urban population. It has recorded 11.32 and 15.91 per cent respectively. The Class III towns have not shown much variation in urban area during 1971 to 2001, but the percentage of urban population in these towns has decreased from 21.74 per cent to 13.10 per cent during this period. The Class IV towns also have shown little variation in terms of area but there was decrease in percentage of urban population from 14.40 per cent in 1971 to 9.81 per cent in 2001. The Class V towns constitute 27.78 per cent of the total urban area with 6.99 per cent of urban population in 1971. The share of these towns increased in terms of area but the percentage of population in these towns decreased to 6.50 per cent in 1981. In 1991, these towns show deceleration both in terms of percentage of urban area and population. In 2001, there was an increase in percentage of area (18.24 per cent of the total urban area) and

percentage of urban population (2.58 per cent of total urban population) over the previous decade.

The lower order towns (Class III, Class IV and Class V) in Punjab have one common tendency that percentage of population in all these towns has decreased whereas the urban area under these units remained constant. This is a universal tendency throughout India where the level of opportunities are relatively higher in big urban centers, which further causes the concentration of population in these centers and small towns shows declining importance³. The same is true in case of Punjab's urban transformation. The Class I towns showed a much higher growth rate both in terms of percentage area and population. The urban population in Class I towns increased from 40.52 per cent in 1971 to 58.27 per cent in 2001. The percentage of urban area under these towns was 3.70 per cent in 1971 and it increased to 8.81 per cent in 2001.

On the other hand, the lower order towns showed signs of stagnation and negative growth under the shadow of these high order towns. Out of these six categories of towns, the Class I towns alone constitute more than half of the total urban population in Punjab. The numbers of these towns had been just 14 out of 157 towns in 2001. To examine the extent of concentration of urban population in big urban centers Gini concentration index is calculated. The higher value of Gini concentration index implying that few big urban centres has disproportionately large share in total urban population and large number of small urban centers accounted for only an insignificant proportion of total population. During 1971, the value of Gini concentration was 0.604 and it has increased to 0.652 in 2001.

Table 6: Towns Classified by According to Population Ranges

Population Range	1991		2001	
	No. of Towns	Population	No. of Towns	Population
Class I	10 (8.33)	3246224 (54.16)	14 (8.81)	4819089 (58.32)
Class II	18 (15.00)	1193171 (19.91)	18 (11.32)	1314224 (15.91)
Class III	25 (20.84)	774453 (12.92)	36 (22.64)	1082085 (13.10)
Class IV	46 (38.33)	643230 (10.82)	54 (33.96)	810753 (9.81)
Class V	14 (11.67)	102945 (1.72)	28 (18.24)	207960 (2.58)
Class VI	7 (5.83)	28202 (0.47)	7 (5.03)	22950 (0.34)
<i>Gini concentration</i>	0.629		0.652	

Source: Census of India, 1971 to 2001, Punjab, Series-4, General Population Tables.

Note: Class I Towns (100,000 and above), Class II (50,000 to 99,999), Class III (20,000 to 49,999), Class IV (10,000 to 19,999), Class V (5,000 to 9,999), Class VI (Less than 5000).

It means that the concentration of population in big centers was higher in 2001 in comparison to previous decades. Such a large value of the Gini concentration indicates the extent of distortion in the urban settlements of Punjab. A fast growth of few high order towns (Ludhiana, Jalandhar and Amritsar) creates the problem of regional inequality as the larger cities are becoming relatively larger. The analysis showed that the population in lower order towns decreased over the period of time. It is the sign of lopsided movement of population in Punjab because big cities (Class I cities only) accounted for near about 60 per cent of State's total urban population and majority of these cities (Ludhiana, Jalandhar, Amritsar and Patiala) has relatively higher level of industrial concentration.

With the advent of modern methods of cultivation and industrialisation during 1970s onwards the Class VI towns showed the positive decadal and annual compound growth of 26.98 per cent and 3.2 per cent respectively. New Mandi Towns were set up in selected villages which eventually emerged as small market towns. But in the latter decade small towns were not able to continue their growth momentum and showed negative decadal growth of 49.97 per cent during 1981-91. The performance of other towns improved marginally during 1991-01 but the growth of these towns still remained negative to a level of 18.62 per cent per decade (Vide Table 7). The same was true in the case of Class V towns during the first two periods but in 1991-2001, these towns showed impressive improvement in their decadal growth and annual growth. The decadal growth of Class V towns was recorded 102.01 per cent during 1991-2001 in comparison to the negative growth of 65.90 per cent during the previous decade. This growth was mainly due to the increase in the number of towns in this category from 14 in 1991 to 28 in 2001 (Vide Table 6).

Table 7: Decadal and Annual Compound Growth Rate of Urban Population by Size Class of Towns

Population Range	Percentage Decadal Variation			Annual Compound Growth Rate		
	1971-81	1981-91	1991-01	1971-81	1981-91	1991-01
Class I	67.99	50.59	48.45	6.9	2.4	4.0
Class II	32.60	78.41	10.15	2.9	6.0	0.9
Class III	34.45	-17.65	39.72	3.0	-2.1	3.4
Class IV	13.25	22.64	26.04	1.5	2.3	2.5
Class V	34.20	-65.90	102.01	3.0	-11.4	7.6
Class VI	26.98	-49.97	-18.62	3.2	-7.2	-2.1

Source: Census of India, 1971 to 2001, Punjab, Series-4, General Population Tables.

The Class III towns showed negative decadal and annual compound growth of 17.65 and 2.1 per cent respectively during 1981-91 and in the next period these towns showed improvement both in decadal and annual compound growth rate and it became positive to the level of 39.72 per cent and 3.4 per cent respectively. The Class I cities showed an impressive growth in all the time periods. The average decadal growth of Class I cities during the period from 1971 to 2001 was over 50 per cent.

Such a huge growth in Class I cities is not a healthy sign for the State's urbanisation. The growth of such towns may emerge quite often at the cost of lower order towns. The annual compound growth of Class I cities was 6.9 per cent during 1971-81. It decreased to 2.4 per cent in 1981-91 and again accelerated to 4.0 per cent in the next decade. The growth rate both decadal and annual was lower during 1981-91. It was the period when there was a decrease in the number of towns due to the de-notification of some notified area. It was also the period of social, economic and political disturbances in Punjab. The annual growth of these towns has accelerated again in the next decade and reached to 4.0 per cent.

During 1970 to 1980, the growth of small towns (Class V and Class VI) was impressive but in later decades Punjab was not able to continue this momentum. The numbers of big urban centers were increasing and the numbers of low order towns had been just stagnant or decreasing. The 2011 census has highlighted that more than 50 per cent of the urban population of Punjab was concentrating in five highly urbanised districts (Ludhiana, Amritsar, Jalandhar, Patiala, and S.A.S. Nagar) and among these districts all district headquarters have Class I cities which accounted for majority of urban population among the district. The major reason behind the rise of big urban centers in Punjab is concentration of manufacturing and industrial units in these districts. For example, Ludhiana alone constitutes the 30.61 per cent of the total registered manufacturing units. So there is polarisation of urban population in Punjab which causes the overcrowding in big cities (Singh, 2013).

Urban Density

Urban density has also been used as an index of the degree of spatial concentration of urban population. Such density is calculated by dividing the total urban population by the total urban area. It is an important measure to examine the overcrowding in towns. The growing concentration of population in a few urban centers having a dysfunctional character. As a result, it becomes difficult to provide proper housing amenities, education and medical attention and above all, an acceptable urban environment (Kundu, 1980).

Table 8 highlights the urban density in Punjab. The urban density in Punjab has not varied much since 1971. It was 4117 persons per square km in 1971

and decreased to 3877 persons in 1981. In the next decade, the urban density was increased to 4160 and again it has decreased to 3941 persons per square km in 2001.

Table 8: Urban Density and Urban Area in Punjab, Square km

Year	Urban Density (Persons per square km)	Urban area (In square km)	Urban Density in Class I Cities (Persons per square km)	Urban area in Class I Cities (In square km)
1971	4117	691.66	7464	174.57
1981	3877	1198.80	4810	448.16
1991	4160	1440.80	5834	556.46
2001	3941	2096.62	6315	763.12

Source: (i) Census of India, 1971 to 2001, Punjab, Series-4, General Population Tables.

(ii) Primary Census Abstracts 1991 and 2001, Part II A and Part B

The least variation in urban density is mainly due to two reasons. Firstly, the movement of population from low order towns towards high order towns leads to increase the space in low order towns which keeps the overall urban density stagnant. Secondly, as the population was growing in urban localities, the area was also increasing under urban units. This outgrowth of big cities and towns emerged as a major reason behind the low growth of urban density in Punjab. The Table also provides the information that the area under urban units was 691.66 sq km in 1971 and it has progressed to more than three times during the period of four decades and recorded 2096.62 sq km in 2001. The area under Class I cities has been recorded more than four times increase during 1971 to 2001. Whereas small towns, as referred in previous section, has recorded decline in their population but the area under these units remained constant. It has also emerged as one of the reason behind the low growth of urban density.

Migration and Urbanisation

There are mainly two forces which are responsible for the migration of population from rural areas towards urban centers. Friedrich Engels favoured pull factor as the explanation because he thought that Manchester's booming growth in the early 19th century attracted labour from the surrounding hinterlands. It is the economic forces which are pulling migration into the cities. On the other hand, the Malthusian analysis states that agricultural land scarcity is the major push factor behind the migration towards cities. An

unusually rapid rate of population growth pressing on limited farm acreage, pushing landless labour in the cities (Williamson, 1988). In case of developing regions, most of the demographers and economists favour the Malthusian hypothesis. In the present analysis only male migrants have been considered as we all know female migration is attributed largely to marriages, joining the family and other social factors. The male migration is likely to be responding directly to the changing economic scenario.

Table 9: Percentage of Internal Male Migration in Punjab, All Durations

Streams	1971-81	1981-91	1991-01
Rural-Rural	695405 (44.80)	715640 (41.77)	200260 (32.94)
Urban-Urban	340654 (21.99)	411587 (24.02)	165911 (27.29)
Rural-Urban	397262 (25.64)	474226 (27.68)	215337 (35.42)
Urban-Rural	115795 (7.48)	111916 (6.53)	26446 (4.35)
<i>Net Urban ward Migration</i>	<i>18.16</i>	<i>21.15</i>	<i>31.07</i>

Source: Census of India, 1971 to 2001, Punjab, Migration Tables.

The above Table provides the information about the different streams of migrations in Punjab from 1971 to 2001. During 1971-81, the percentage of urban-rural migration was 7.48 per cent. The migration from rural area to urban area has recorded 25.64 per cent. The net migration was positive of 18.16 per cent during this period. It was the period of agricultural development in Punjab that's why the net urban ward migration remained under check.

During 1981-91, the rural-urban migration had increased to 27.68 per cent. The urban-rural migration has been decreased (6.53 per cent) during this decade. The net rural-urban migration had recorded 21.15 per cent during this period. The increase in net migration was mainly due to two reasons. Firstly, in the mid 80s the socio-political disturbances made the rural areas less safe in comparison to the urban localities. Secondly, the higher use of labour saving technology (machinery and related equipment) in agriculture acts as a major push factor for the net out-migration of male workers from rural areas.

During 1991-2001, the rural-urban migration was highest (35.42 per cent) and the urban-rural migration was least (4.34 per cent). The net migration towards urban localities had reached to 31.07 per cent. There were mainly two reasons that seemed to be responsible for the higher net rural-urban migration. Firstly, due to the introduction of new economic policy in 1991, the western way of life made a large impact on the psychology of the Punjabi people in rural areas and they have started moving towards the urban centres for better facilities. Secondly, the better infrastructural and education facilities of urban areas attract the higher income group from the rural areas and the lower income group of rural population also moved toward urban centers in the hope of better employment opportunities during this period.

The migration from the other states' to Punjab is one of the important contributing factor in Punjab's population. After the introduction of new methods of cultivation, Punjab has emerged as one of the favorite destination for the migratory workers particularly from less developed states (Bihar and Uttar Pradesh) of India union. The table below provides the information regarding the immigration in Punjab from the other States.

Table 10: Percentage of Internal Migration in Punjab from Other States, All Durations

Streams	1971-1981	1981-1991	1991-2001
Rural-Rural	107878 (26.92)	106916 (23.48)	183509 (23.79)
Urban-Urban	129486 (32.32)	161026 (35.37)	176630 (22.90)
Rural-Urban	122591(30.60)	146632 (32.21)	379730 (49.23)
Urban-Rural	40712 (10.16)	40680 (8.94)	31497 (4.08)
Total	400667 (100)	455254 (100)	771366 (100)
<i>Net Urban ward Migration (U-U+ R-U)</i>	<i>170198 (42.48)</i>	<i>307658(67.58)</i>	<i>556360 (72.12)</i>

Source: Census of India, 1971 to 2001, Migration Tables.

The data shows that the movement of population from other states to Punjab showed a consistent rise from 400667 in 1971-81 to 771366 in 1991-2001. The important change during the given decades was the rise in proportion of immigrants towards the urban centers. The net urban ward migration (U-U+R-U) has increased from 42.48 per cent in 1971-81 to 72.12 per cent in 1991-2001. The major reason behind this shift of migratory workers was the declining importance of agriculture sector to provide the employment opportunities due to the intensive use of labour saving technology. The other reason is decline of area under cultivation due to the outgrowth of urban centers and conversion of land from agricultural to non-agricultural uses.

Urban Poverty

The unplanned migration from rural areas leads to the growth of slums, unemployment and poverty in urban localities. The data on slum population was collected for the first time in 2001. In Punjab, the data on slum population is available for 27 towns. Out of the total urban population of these towns, 20.38 per cent is living in slum areas. These slum areas are existing on the peripheries of big cities which lead to the problem of overcrowding and urban poverty.

Urban poverty has been usually and correctly thought of as being affected strongly by employment and income trends in rural areas. The complete landless poor in rural areas have always been footloose migrants, with a large component migrating seasonally to other rural areas and another stream migrating to urban areas in search of work. The decrease in the growth rate of agriculture and absence of diversification of rural economy leads to the movement of population toward urban localities. The majority of the rural poor of today become the urban poor of tomorrow due to the lack of any skill (Patnaik, 2010).

The planning commission estimates the incidence of poverty on the basis of household consumption expenditure conducted by National Sample Survey at the interval of five years. The poverty line had been originally defined precisely as that particular observed monthly per capita expenditure on food and non-food items, whose food spending part allowed the consumer to obtain the nutrition norms in terms of calories per day. The official estimates are based on the calories norms of 2100 calories per capita for urban areas⁴. The following Table presents the official estimates (indirect estimates) of urban poverty in Punjab.

The Table shows that in 1973-74, out of the total urban population 27.96 per cent was living below the poverty line. Since then the percentage of urban population below the poverty line has been decreasing and it has been recorded 7.10 per cent in 2004-05. In terms of absolute numbers, however, the urban population below the poverty line has decreased from 10.02 lakhs in 1973-74 to 6.50 lakh in 2004-05. But the estimates of Planning Commission for the year 2011-12 showed the increase in percentage of urban population below the poverty line to 9.24 per cent and the absolute figure has increased to 9.82 lakh in Punjab (Planning Commission, 2013).

Table 11: Proportion of Urban Population below Poverty Line, Head Count Ratio

Years	Urban Population Below poverty Line (In lakhs)
1973-74	10.02 (27.96)
1983-84	11.83 (23.79)
1993-94	7.35 (11.35)
2004-05	6.50 (7.10)
2011-12	9.24 (9.82)

Source: Planning commission 1997, 2007, 2013.

The above estimates are based on the consumer price index for industrial workers. These estimates have limitations that these are underestimating the poverty. These estimates are based on the fixed base for urban basket on 1973-74 prices. However, the cost of minimum nutrition level is higher than the price indices based on consumer price indices for industrial workers. This measure is no longer able to allowing the minimum nutrition norms to be accessed. There is need to develop the direct measure based on the calories

intake for the true measure of poverty (Patnaik, 2010). The following Table highlights the data of official as well as direct measures of poverty in Punjab during pre and post reform period.

Table 12 shows that in 1993-94 the official poverty line based on the consumer price index for industrial workers was Rs. 253.85. It means if a person is not able to spend Rs. 8.46 per day for consumption, he would be considered below the poverty line in Punjab. According to this estimate 11.35 per cent of the urban population was living below the poverty line in Punjab. But the nutrition norms state that Rs. 253.85 was only able to access 1605 calories whereas the standard calories intake is 2100 calories for urban areas, it means with Rs. 253.85, the urban population has consuming deficit of 495 calories. So there is an underestimation of urban poverty in Punjab. According to direct estimates based on the calories intake, out of the total urban population 51.5 per cent was living the below poverty line in Punjab during 1993-94.

Table 12: Direct Poverty Estimates of Urban Population in Punjab

Descriptions	1993-94	2004-05
Official Poverty Line (OPL) (in Rs.)	253.85	466.2
Population below Poverty According to OPL	11.35	7.1
Calories Intake	1605	1435
Calories Required	2100	2100
Deficit of Calories	-495	-665
Population Below Poverty Line According to Direct Estimates	51.5	68.8

Source: (i) Planning Commission 1997 and 2007

(ii) Patnaik, U, (2010), Trends in Urban Poverty under Economic Reforms: 1993-94 to 2004-05, *Economic and Political Weekly*, Vol. 65, No. 4, p. 43.

The next decade (2004-05), official estimates of poverty states that in urban Punjab only 7.1 per cent persons were living below the poverty line. During this decade, according to official estimates if a person is able to spend Rs. 466.2 per month or Rs. 16 per day for consumption purpose not considered as poor. But the direct estimates stats that Rs. 466.2 was only able to access 1435 calories, a deficit of 665 calories than the standard measure. In order to reach the nutrition norms of 2100 calories Rs. 1280 monthly expenditure on consumption was required, nearly three times the official poverty line. In Punjab, 68.8 per cent of the urban population would not be able to reach this level. The direct estimates present the real picture of urban Punjab. According to the direct estimates more than half of the urban population is living below the poverty line. It also highlights the fact that the poverty in urban Punjab has not decreased after the economic reforms rather it has increased from 51.5 per cent in 1993-94 to 68.8 per cent in 2004-05 (Vide Table 12).

Concluding Remarks

From the above analysis it is clear that the urban growth in Punjab has balanced in the early decades of Green Revolution. The growth of agriculture leads to the development of the urban industrial sector. But in the later decades, Punjab has not able to continue the growth of balanced urbanisation due to socio-political disturbance and widespread terrorism. Punjab is basically an agrarian economy but recent analysis reveals that urban sector is emerging as a major driver of States' GDP growth. The 2011 census reveals that state of Punjab has emerged as a one of the major urbanised state in India. The distribution of urban population in different size towns was relatively balanced during 1970s but it has not remained balanced any longer and the population concentration in big urban centers showed an increasing trend after 1970s. The decadal and annual growth of class I cities was also higher in comparison to the low order towns. This uncontrolled and haphazard growth of big cities gave birth to the problem of a shortage of houses, growth of slum areas and unhealthy environment in these cities. The urban density has not increased much due to the decrease in population in lower order towns on the one hand and outgrowth of big cities on the other. The development of labour saving technology in agriculture and lack of subsidiary employment opportunities in rural areas has pushed the rural population towards urban area to seek employment. The net rural-urban migration has increased due to the western vision of life and the better infrastructural and educational facilities. The unplanned migration of unskilled workers from rural localities for search of better livelihood leads to the growth of slum population and urban poverty in Punjab. The direct estimates of poverty reveal that the incidence of urban poverty after the introduction of economic reforms has increased in Punjab.

The recent results of 2011 census raises a large number of questions on the sustainable development of urban areas in Punjab. The distribution of urban population (both among the different districts and different Classes of towns) in Punjab was highly unequal. The census shows that 15 districts in Punjab accounted less than 50 per cent of State's total urban population whereas remaining 5 districts accounted of more than 50 per cent of the State's population. The higher concentration of urban population among selected districts in general and in headquarters of these districts in particular has put an immense pressure on existing infrastructure. There is an urgent need to put some checks on urban population growth particularly in big urban centers on the one hand and development of infrastructural facilities and improvement in outdated infrastructure for the growing urban areas on the other hand. The recent analysis revealed that the urban sector is getting only 3 to 4 per cent of the share of development expenditure. So there is an urgent need to devote sufficient resources for urban development. Efforts are also required to raise the revenue capacity of urban local bodies by devoting more resources to them. Energies are also required to control the unplanned migration toward big urban centers. It can only be possible if the government makes conscious efforts to

generate the productive employment opportunities in rural areas by initiating the development oriented programme and industrial progress based on the resource base of rural Punjab.

Notes

¹ The settlements with municipal corporation, corporation, notified the town area committee or Nagar Panchayat etc.

² The Settlement does not have an urban civic status, but satisfies demographic and economic criteria, like a population of more than 5000, a density of 400 persons per square kilometer and 75 per cent male workers in the non-agricultural sector, it can be declared urban.

³ For detail, See, Kundu A. 1983. 'Urbanisation and an Alternative Policy Perspective'. *Economic and Political Weekly*, Vol. 8, No. 26.

⁴ For detail, See, Deaton, A. and V. Kozel, 2005. *The Great Indian Poverty Debate*, Macmillan, India.

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