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# Changes in Spatial Patterns of Urbanization in Punjab: 1971-2011

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#### Abstract:

The state of Punjab has been witnessing rapid urbanization since independence. It has consistently maintained a higher level of urbanization than the national level. The level of urbanization as measured by the proportion of urban population to total population has increased from 23.73 per cent to 37.48 per cent. There were, however, vast regional variations in the urbanization level in different parts of the state. In 1971, high level of urbanization coincided with the more industrialized tahsils. Vast areas of the state displayed low and moderate level of urbanization with very few pockets having a high level of urbanization. However, by 2011, the extent of highly urbanized areas increased. The areas close to the state capital experienced rapid urban transformation. The locational factors, government policy and infrastructural and industrial development played a significant role.

**Keywords:** industrial activity, transformation, economic diversification.

#### 1. Introduction

At the dawn of the twentieth century, merely 12.39 per cent of Punjab's population was urbanized. The level of urbanization did not witness much appreciation during the early decades of the last century. In the post-independence period, the uprooting and resettlement of people involved in the wake of partition changed the demographic scenario of the state. By 1951, the proportion of urban population to total population reached 21.72 per cent. In the late 1960s, green revolution, not only affected the rural agrarian masses but also left an imprint on the direction and pace of urbanization in the state. Moreover, with the creation of regulated mandis, an element of functional dynamism was added to the urban areas of Punjab. Thus the process of urbanization in Punjab had a marked imprint of its agricultural economy. Further, agro-industrialization and policy decisions made by the government contributed to the emerging urbanization pattern across the state of Punjab.

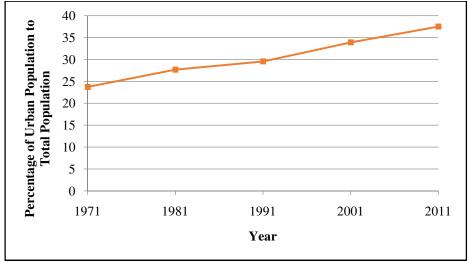


Figure 1: Punjab: Trends of Urbanization, 1971-2011 Source: Computed from Primary Census Abstract, 1971-2011

The present paper seeks to discern the spatial patterns of urbanization in Punjab. The areas with high, medium and low levels of urbanization would be identified. Further, the paper intends to make a comparative analysis and uncover the major changes in the spatial patterns of urbanization in Punjab between 1971 and 2011. For accomplishing these objectives, secondary data was used. Data was obtained from The Primary Census Abstract (Part II-B) for the years 1971, 1981, 1991, 2001 and 2011. The level of urbanization

was measured as urban population as per cent to total population. Tahsil was adopted as unit of study. However, the number of tahsils in 1971 and 2011 were not the same. There were forty-two tahsils in 1971 while its number increased to seventy-seven in 2011. Comparative study at the tahsil level necessitated the need for recasting of census data of the year 1971 in accordance with the tahsils of year 2011. Thus the analysis pertaining to the census years 1971 and 2011 show Punjab with the same number of tahsils, that is, seventy-seven. Choropleth maps showing the tahsil-wise level of urbanization were prepared using the ArcGIS software.

Year	<b>Total Population</b>	<b>Urban Population</b>	Urban Population as per cent to Total Population
1971	1,35,51,060	32,16,179	23.73
1981	1,67,88,915	46,47,757	27.68
1991	2,02,81,969	59,93,225	29.55
2001	2,43,58,999	82,62,511	33.92
2011	2,77,43,338	1,03,99,146	37.48

Table 1: Punjab: Progress of Urbanization, 1971-2011 Source: Computed from Primary Census Abstract, 1971-2011

In 1971, Punjab's population stood at 1,35,51,060 persons out of which 32,16,179 persons (23.73 per cent) had urban residence. The urban population in the state reached 46,47,757 persons in 1981 and 59,93,225 in 1991. The share of urban population in Punjab's total population also increased from 27.68 per cent in 1981 to 29.55 per cent in 1991. At the beginning of the twenty first century, there were 82,62,511 persons residing in urban areas in Punjab. Thus one in every three persons was urban by residence in 2001. There was further progress in urban population by 2011. The urban residents rose to 1,03,99,146 persons and their share in total population also increased to 37.48 per cent. However, within the state, wide regional variations existed among different parts of the state. Thus to comprehend the urbanization scenario in the state, a study of spatial patterns becomes imperative.

#### 2. Spatial Patterns of Urbanization in Punjab, 1971

In 1971, 23.73 per cent of the state's population had urban residence. The highest proportion of urban population was recorded in the Amritsar district (40.07 per cent), followed by the districts of Ludhiana (35.68 per cent), Jalandhar (34.13 per cent) and Patiala (30.25 per cent), respectively. At the other end of the scale was Tarn Taran (8.12 per cent). The districts of Sahibzada Ajit Singh Nagar (8.85 per cent) and Shaheed Bhagat Singh Nagar (9.42 per cent) also reported very low values of urbanization. However due to vast variations, the spatial patterns of urbanization (Figure 1), based on the proportion of urban population to total population, are studied at tahsil level by dividing the tahsils into the following categories:

#### 2.1. Areas with High Degree of Urbanization

The tahsils in which the proportion of urban population to total population was more than 36 per cent were categorized as areas with a high degree of urbanization. It included seven tahsils, namely Ludhiana-East (71.85 per cent), Amritsar-II (71.61 per cent), Jalandhar-I (67.83 per cent), Patiala (45.70 per cent), Phagwara (41.07 per cent), Nangal (38.99 per cent) and Firozpur (36.46 per cent). The urban areas of these seven tahsils together accounted for almost half (48.22 per cent) of the state's urban population in 1971.

These tahsils were marked by the presence of large-sized urban centres. In 1971, there were only four Class-I towns in Punjab viz. Amritsar, Ludhiana, Jalandhar and Patiala, which were located in the four most urbanized tahsils, bearing the same names as mentioned above. Secondly, the industry and trade, flourishing in the urban areas of the tahsils with a high degree of urbanization, not only provided a sound economic base but also attracted migrants from within and outside the state. The most urbanized tahsil of Ludhiana East accommodated its entire urban population only in a single urban agglomeration of Ludhiana, comprising of Ludhiana MC and its four outgrowths. Ludhiana was known as the 'Small Scale Industrial Capital of India' due to its premier position in manufactures, engineering goods and cycle industry (District Census Handbook, Ludhiana, 1971, p. 4). Likewise, the entire urban population in the tahsil of Amritsar-II was accommodated by the urban agglomeration of Amritsar, comprising of Amritsar MC, Chheharta MC, Amritsar Cantonment and 22 outgrowths. It excelled in the manufacture of textiles, engineering goods and electrical appliances (District Census Handbook, Amritsar, 1971, p. 4). The urban population of Jalandhar-I tahsil was accommodated by Jalandhar MC and Jalandhar Cantonment. Besides, it was famous for its sports goods industry and manufacture of surgical instruments, rubber goods, etc. Patiala specialized in household industry, while, Phagwara had sugar and textile mills, in addition to a large number of machine tools industry. High level of urbanization in Nangal tahsil was attributable to the Bhakra-Nangal Project and Nangal fertilizer factory. In Firozpur tahsil, urbanization was aided by the small and medium sized agro-industrial units, presence of Firozpur Cantonment and a large railway junction. Thus, almost all the tahsils with a high degree of urbanization owed much to the flourishing industrial activity.

#### 2.2. Areas with Moderate Degree of Urbanization

The areas with moderate degree of urbanization included all those tahsils where the proportion of urban population to total population was between 24 per cent and 36 per cent. It included ten tahsils, viz., Pathankotand Batala in the north; Khanna, Sangrur, Malerkotla and Samana in the south east; and Faridkot, Abohar, Bathinda and Muktsar in the south west. All these tahsils displayed a moderate to high level of industrialization. Besides, considerable industrial activity was witnessed in the towns of Batala, Khanna and Bathinda. Most of the urban centres in the tahsils with moderate degree of urbanization served as mandi towns. The increased marketable surplus in the wake of green revolution provided a boost to the trading activity in these areas. Since trade towns had limited potential

to grow as they served their immediate hinterlands (D'Souza, 1976, p. 364), the tahsils accommodating these mandi towns displayed a moderate level of urbanization.

#### 2.3. Areas with Low Degree of Urbanization

All those tahsils where the proportion of urban population to total population was less than 24 per cent were categorized as areas with low level of urbanization. As many as 47 tahsils out of a total of 77 tahsils displayed a low level of urbanization. The tahsils may further be divided into two categories:

# 2.3.1. Areas with Very Low Level of Urbanization

This category included all those areas where the proportion of urban population to total population was less than 12 per cent. It comprised 18 tahsils. Out of these, 6 tahsils, namely, Gurdaspur, Dera Baba Nanak, Ajnala, Tarn Taran, Patti and Jalalabad, were located in the western part of the state along the international border with Pakistan. The remaining 12 tahsils were located in the central and eastern part of Punjab, close to the highly urbanized tahsils of Ludhiana-East, Jalandhar-II, Phagwara and Nangal. This indicated the exercise of shadow effect of big urban centres and highly urbanized areas on the development potential of urban areas in close proximity.

#### 2.3.2. Areas with Moderately Low Level of Urbanization

This category comprised of all the tahsils where the proportion of urban population to total population was between 12 per cent and 24 per cent. It included 29 tahsils, 22 of which were spread in southern part of the state, across the entire Malwa region. Out of the remaining seven tahsils only one was found in the Majha region and six in Doaba region. Most of the urban centres in these tahsils were small in population size and weak in terms of their economic base. As a result, they could not contribute much to the level of urbanization.

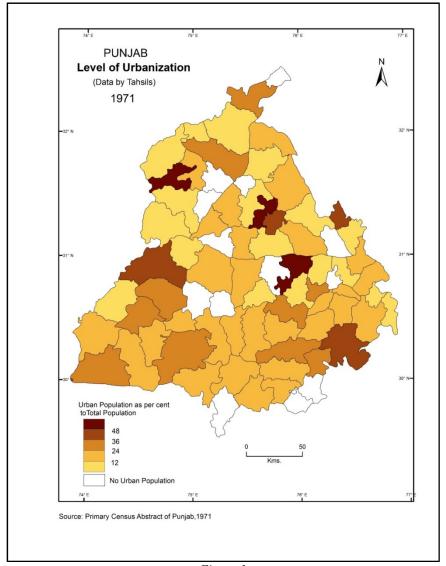


Figure 1

#### 2.4. Areas with no Urban Population

There were thirteen tahsils which were entirely rural and reported no urban population. These included the tahsils of Dhar Kalan, Bhulath, Shahkot, Balachaur, Khamano, Ludhiana West, Nihal Singh Wala, Baghapurana, Sardulgarh, Patran, Baba Bakala, Khadur Sahib and Moonak. These tahsils did not possess even a single urban centre. A vast majority of their population was still dependent upon agricultural activities. The absence of urban centres may be explained in terms of lack of any impetus for a transformation from rural to urban societal order for the want of developmental activity in the areas. These tahsils were characterized by dominance of agricultural activity and general backwardness.

# 3. Spatial Patterns of Urbanization in Punjab, 2011

Urban population constituted 37.48 per cent of the state's total population in 2011. The pattern of urbanization displayed significant spatial variations. The proportion of urban population to the total population was the highest in Ludhiana district (59.16 per cent), followed by the districts of Sahibzada Ajit Singh Nagar (54.76 per cent) and Amritsar (53.58 per cent). The lowest share of urban population was found in the district of Tarn Taran (12.66 per cent). The districts of Shahid Bhagat Singh Nagar (20.48 per cent) and Hoshiarpur (21.11 per cent) also displayed low levels of urbanization. At the tahsil level, the proportion of urban population to total population varied between 85.54 per cent in Ludhiana–East to 3.98 per cent in Nihal Singhwala. The spatial patterns of urbanization (Figure 2) have been studied by grouping the tahsils into the following categories:

#### 3.1. Areas with High Degree of Urbanization

All those tahsils where the proportion of urban population to total population exceeded 36 per cent were categorized as areas with high degree of urbanization. It included nineteen tahsils. The tahsils of Ludhiana-East, Jalandhar-I, Amritsar-II, Phagwara, Khanna and Amloh displayed a higher level of urbanization because of greater level of industrial and commercial development, facilitated by their location along the Grand Trunk Road. The tahsils of Patiala, Sangrur, Barnala and Malerkotla, located in the south-eastern part of the state, formed another cluster exhibiting high degree of urbanization. These tahsils made progress in the industrial sector due to government incentives after the declaration of district Sangrur, as industrially backward.

High degree of urbanization was recorded by the tahsils of Sahibzada Ajit Singh Nagar, Dera Bassi and Kharar, located along the eastern border of the state. Not only did the existing urban centres experience rapid population growth, but a number of new ones such as Sahibzada Ajit Singh Nagar, Sohana, Balongi, Naya Gaon, Mullanpur Garibdass, Zirakpur, Daper and Lalru emerged during the period 1971-2011. The major factor responsible for a high level of urbanization in these tahsils was their contiguity to the state capital, Chandigarh. As Chandigarh reached near saturation in residential and industrial space, its peripheral areas which were largely rural, got urbanized.

High level of urbanization in the tahsils of Bathinda, Faridkot and Muktsar, located in south western Punjab, seemed to be associated with a high level of commercialization of agriculture and the resultant growth of its towns. The urban centres also flourished due to agro-industrialization. On the other hand, the tahsil of Pathankot, located in the northern part of the state, recorded a higher degree of urbanization. Its functional significance lies in it being an important transit area for trading goods as well as for movement of people from the Punjab plains to the hills in Himachal Pradesh and Jammu and Kashmir.

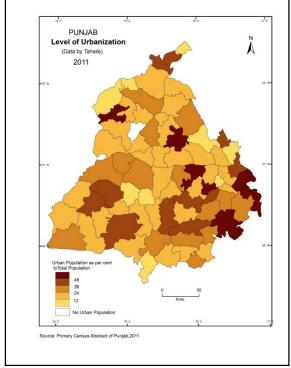


Figure 2

#### 3.2. Areas with Moderate degree of Urbanization

All those tahsils where 24 per cent to 36 per cent of the population resided in urban areas were included in areas with moderate level of urbanization. Out of 77 tahsils, only fifteen tahsils recorded an urbanization level of less than 36 per cent and more than 24 per cent. Most of these tahsils, as many as twelve were located in the southern part of the state, in the Malwa region, while only two were located in the Doaba region and only one in Majha region. The tahsils with a moderate level of urbanization accommodated forty-two towns in all. Out of these, a number of towns were either census towns (twelve) or Nagar Panchayats (eleven), and were, thus, deficient in terms of urban governance and urban amenities. These towns had small size and weak functional base. They were more or less overgrown villages, though few had regulated mandis, but largely remained untouched by the town-forming processes involving the movement of labour and capital into the town. The only important towns in this group of tahsils were the district and tahsil headquarters which performed administrative functions. On the other hand, the tahsils of Kapurthala and Hoshiarpur, though had district headquarters and a reasonable level of industrial development but maintained a moderate level of urbanization because they remained under the urban shadow of Jalandhar city.

#### 3.3. Areas with Low Degree of Urbanization

All the tahsils where the proportion of urban population to total population was less than 24 per cent were categorized as areas with low degree of urbanization. There were forty-two such tahsils. The areas of low level of urbanization were spread throughout the state except the relatively more urbanized south eastern part of Punjab. The areas with a low degree of urbanization were found in (i) border areas along Pakistan, (ii) Sub-montanous and kandi belt, (iii) parts of Doaba region, (iv) parts of western Malwa region, (v) certain pockets in north eastern Malwa region, and (vi) contiguous belt in southern Malwa region.

A lower proportion of urban population was found in the tahsils located in border areas. These included the tahsils of Gurdaspur, Dera Baba Nanak, Ajnala, Tarn Taran, Patti, Jalalabad and Fazilka. Most of the towns in these tahsils were small in size, i.e., with a population of less than 20,000 persons. Moreover, the urban areas in the border tahsils were characterized by a low rate of population growth, lack of economic diversification and a low level of industrial and infrastructural development, resulting in a low level of urbanization.

The sub-montanous tract in the tahsil of Dhar Kalan and the choe-affected tahsils of Mukerian, Dasua, Garhshankar, Balachaur, Anandpur Sahib and Chamkaur Sahib also displayed a low level of urbanization. These areas suffered from soil erosion, gully erosion, destruction of farm land and fall in water table, affecting mobility of men and materials due to hindrance in year- round road transport (Gosal, 2004, p.25). Thus the urban areas in this zone present a picture of stagnation due to a long period of overall industrial and agricultural backwardness and consequent neglect.

The tahsils of Amritsar-I, Baba Bakala, Bhulath, Sultanpur Lodhi, Jalandhar-II, Shahkot, Nakodar, Phillaur and Nawanshahr which displayed low level of urbanization were characterized by absence of any large sized urban centre and lack of economic diversity due to paucity of industrial infrastructure. These tahsils were dominated by Nagar Panchayats and Census Towns. Both the Nagar Panchayats and Village Panchayats were inferior to the Municipal Committees/Corporations in terms of administrative and financial powers. This adversely affected their growth prospects.

As many as 22 tahsils located in the western, central, north eastern and southern parts of Malwa region, had a low level of urbanization. Most of the towns in these tahsils were small market towns and had limited growth prospects due to lack of industrialization and economic diversification. Besides, most of these tahsils were located adjacent to highly urbanized tahsils (Ludhiana, Khanna, Bathinda, Malerkotla, Barnala, Sangrur, Faridkot and Muktsar), indicating the shadow effect of large industrial urban centres on their adjoining tahsils.

### 3.4. Areas with no urban Population

There was only one tahsil, namely Khadur Sahib, which did not have any urban population. Located in the border district of Tarn Taran, it was characterized by an over dependence on agricultural and allied activities. Moreover, it lacked in terms of infrastructural and industrial investments, which aid in bringing about rural transformation.

#### 4. Conclusion

The above discussion revealed that there has been an increase in the proportion of urban population to total population in the state from 23.73 per cent in 1971 to 37.48 per cent in 2011. High level of urbanization was displayed by only seven tahsils in 1971, which increased to nineteen tahsils in 2011. The tahsil of Firozpur, on the other hand, showed a decline in the level of urbanization between 1971 and 2011. This was on account of the higher rate of growth of rural population than the urban population in the three decades of 1971-81, 1981-91 and 1991-2001. Between 1971 and 2011, thirteen tahsils upgraded from low and moderate levels of urbanization to attain level of high urbanization. The impact of proximity to the state capital, Chandigarh and infrastructural and industrial developmental activities were visible in the urban transformation of these tahsils.

The number of tahsils witnessing a moderate level of urbanization increased from ten to fifteen between 1971 and 2011. By 2011, most of the tahsils which were moderately urbanized in 1971, upgraded to the higher level. Likewise, the tahsils either with low level of urbanization or no urban population in 1971, displayed a moderate level of urbanization in 2011. A majority of these tahsils were located in eastern and south eastern part of Malwa region, adjacent to the highly urbanized areas. Thus the south eastern part of the state emerges to be the most receptive in bringing about urban transition.

Low level of urbanization which was recorded by forty-seven tahsils in 1971 got reduced to forty-two tahsils in 2011. Though there was an overall increase in the proportion of urban population to total population in these tahsils, yet they continued to maintain a low

level of urbanization. These tahsils were slow to demonstrate major changes because of a number of reasons, such as, border location, lack of infrastructural and industrial development, greater dependence on agriculture and allied activities and presence of small and economically dormant towns. As regards the tahsils with no urban population, there was a decline in their number from thirteen to one between 1971 and 2011. These tahsils were characterized by the emergence of new towns. This was indicative of the demographic, economic and functional transformation witnessed by these tahsils. Thus during 1971-2011, Punjab witnessed a great deal of progress in urbanization. The spatial patterns, however, continued to exhibit variations depending on various locational factors and developmental impulses.

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