CHAPTER - II

INTER-STATE CHANDIGARH REGION: A REGIONAL SETTING

Soon after the partition of India on communal lines in 1947, the need for a new capital for the truncated Punjab arose (Evenson, 1964, D’souza, 1968, Kalia, 1987). This culminated in the birth of a modern, planned city – Chandigarh, at the foothills of the Siwaliks about 50 years ago. The city was formally inaugurated in 1953 as the new capital of the then undivided Punjab (India). The city was also meant to stimulate the developmental process in the backward region where it was implanted.

The city took very little time to take root and has grown fast in the last four decades. It also transformed its hinterland radically. Taking cognizance of the changing patterns of development around the city, the Government of India realized the future importance of Chandigarh, not as an isolated city but as a significant exercise in regional planning, which would include urban, industrial and rural integration of the region. This led to the delineation of the Inter-State Chandigarh Region (ISCR) in April 1981.

As demarcated by the Coordination Committee on Regional Planning set up by the Govt. of India the ISCR, with Chandigarh as its core, sprawled over a landscape of 2,421.3 sq. kms. with an average radius of about 35 kms. from the core of Chandigarh. The Coordination Committee included only those areas which were under the immediate and actual zone of influence of Chandigarh city. The main objective of the exercise was to obtain a meaningful "Outline Master Plan" for the region. ISCR was defined as follows:
"It is a geographical area identified for balanced physio, socio-economic development so that environment of the urban areas and the immediately adjoining region is ensured to be of a desirable standard and also to make the rural and urban functions in the region complementary to each other. Such a region would be functionally viable and capable of being treated separately for the purpose of implementation and enforcement by the respective governments".

The ISCR was delineated on variables like physiography, administrative boundaries, existing levels of development, future potential and influence zone of the major urban centres. Based on these criteria, Kharar and Kalka tahsils of Rupnagar and Ambala districts in Punjab and Haryana states respectively and the Union Territory of Chandigarh were fully incorporated. In addition, parts of Rupnagar (Rupnagar district) Fatehgarh Sahib, Rajpura and Naraingarh tahsils of Patiala and Ambala districts in Punjab and Haryana state, respectively, also fell in this region. Over the period, redistricting in the region has changed the number and names of districts falling in the Inter-State Chandigarh Region.

On the whole the ISCR now comprises areas, partially or fully, from six districts (Rupnagar, Patiala, Fatehgarh Sahib, Panchkula, Ambala and Chandigarh); and ten subdivisions (Kharar, Rupnagar, Mohali, Bassi Pathana, Rajpura, Dera Bassi, Chandigarh, Nariangarh, Panchkula and Kalka).

Extending from 30°22’N to 30°57’N latitude and 76°25’E to 77°11’E longitude, ISCR sprawls over an area of 2421.3 sq. kms. In the area covering an average radius of about 35 kms from the core of Chandigarh, there are at present 898 rural and 17 urban settlements in this region (Fig. 2.1). The boundaries of the
Inter-State Chandigarh Region
Regional Setting, 2001

PUNJAB

ACHAL

ADESH

FATEHGARH
SAHIB

PUNJAB

Boundary:
• State/U.T.
• District
• Inter-State Chandigarh Region
• Road
• Railway line
• Urban places
• Reserved forest and hill tracts without settlements

Fig. 2.1
region were defined primarily on the basis of a study conducted by Krishan and Aggarwal in 1970 to delimit the umland of Chandigarh city. The seven criteria selected for identifying the Chandigarh umland included foodgrains, milk and vegetable supply, education and hospital services, retail trade and commuting. The umland, thus demarcated, covered an area of about 1000 sq. kms and had 395 rural and seven urban settlements. Obviously, ISCR, which was delineated by taking into account factors such as functional linkages, physiography, level of development, potential of future development and existing administrative boundaries covered a much larger area than the area of the Chandigarh umland defined in the study by Krishan and Aggarwal (1970). It was mainly because of the fact that the ISCR, as an urban-based planning region, was identified in the context of balanced, natural and socio-economic development. Functional complementarity of urban and rural settlements in the region was taken as one of the main objectives to delimit this region. In the following, an attempt has been made to have an understanding of the history, physiography, demography and economy of the region in terms of its impact on the nature of urban-rural relations.

**EVOLUTION OF ISCR: HISTORICAL AND ADMINISTRATIVE PROCESSES**

Prior to 1951 areas now included in ISCR were completely rural, backward and peripheral parts of Ambala district of the then Punjab. The interest in this region began with the rise of Sikh principalities in the 17th and 18th century with the increasing internal rivalry among the Sikh misls. Finally, the region fell into the hands of a few but strong chiefs of Patiala, Nabha, Kharar and Mani Majra who also kept fighting with each other.
In 1808, the entire Punjab region extending from the river Yamuna in the East to river Satluj in the North, came under the sway of Maharaja Ranjit Singh (Census Report, 1961). These small feudal chiefs started paying nazrana, a tribute to Maharaja Ranjit Singh. In return they enjoyed autonomy within their territories. The feudal chiefs were more concerned with their own personal comforts rather than the welfare of their subjects. In 1849, a treaty was signed between the British, who had become by then an all-India power, and Maharaja Ranjit Singh to the effect that the domains of the Maharaja would be restricted upto the Satluj river and the Sikh states in the Satluj-Yamuna Divide would be under British protection.

The district of Ambala had the five tahsils of Ambala, Jagadhari, Naraingarh, Ropar and Kharar for internal administration. In 1911, the tahsils of Kalka, Kurali and Sanawar, belonging to the then Simla district, were merged with the new district, raising the number of tahsils to eight. After Independence, the Pinjore Kanungo Circle and the Nalagarh tahsil were also merged with Ambala district raising the number of tahsils to nine.

With the emergence of Ambala as an independent district, developmental activities picked up in the region. Railway lines were laid at the end of the 19th and the beginning of the 20th century connecting Delhi with Peshawar via Ambala, Rajpura with Bathinda, Sirhind with Ropar and Ambala with Simla via Kalka (Khosla, G.S. 1976). A few metalled roads were also constructed. The western Yamuna canal and Sirhind canal were constructed from the Yamuna and the Satluj rivers respectively to provide irrigation facilities to the territory of Ambala district. This marked the beginning of a new phase in the socio-economic life of the region. Nevertheless, areas now falling in the Inter-State Chandigarh Region remained isolated from this process as irrigation facilities
did not reach there on account of its dissected topography and peripheral location.

The division of Punjab, between India and Pakistan, on communal lines in 1947 and with Lahore, the capital town of the undivided Punjab, remaining in Pakistani Punjab changed the fate and fortunes of this least developed part of the then Punjab. A number of options for a capital were tried before the present site was selected. The present site was considered the most appropriate to locate the newly planned capital city. This induced a new zeal and dynamism in the regional economy and society. Today, the morphology of this part has changed radically with the creation of Chandigarh as a growth centre to the extent that it has stimulated a growth process in this erstwhile backward region. Its socio-economic development was set in motion. The socio-economic transformation of the region was an outcome of the new employment opportunities offered by Chandigarh. Emergence of a lucrative market for milk, vegetables, fruit and poultry and the coming up of a dense network of roads radiating out from the city sensitized this region to respond positively to the diffusion process being emitted from Chandigarh (Vimal, 1994).

In the following pages, an attempt is made to study the physiography of the region in terms of relief, drainage system, climate, vegetation, as well as soils and minerals to understand their impact, individually as well as collectively, on the urban-rural interaction in the region.

**PHYSICAL SETTING**

**Relief:** The most significant part of the physiography of the region is the variety of relief features found at the foothills of the Himalayas. Although, the immediate environs of Chandigarh are made up of an undulating landscape,
there is considerable variation in the relative height, slope, surface material and texture within the ISCR. There are three marked physical zones running from North to South (Fig. 2.2). They are:

1. The hilly zone
2. The dissected undulating plain
3. The upland plain

1. The Hilly Zone: It is made up of the Siwalik hills which form the outermost fringe of the Himalayas. It constitutes one-third of the total area of the region. It is marked by a 400 meter contour above sea level on its western margin. The area includes the submontane part of Kharar Tahsil, Kalka Tahsil and the north-eastern section of Naraingarh Tahsil. This tract runs for a width of 10 to 15 kilometers with the minimum and maximum altitude ranging from 400 to 1353 meters above sea level. It consists of a series of ranges running from the North-East to the South-West direction. Morni hills, at a height of 1169 meters, is prominent in this tract.

Lying between the parallel ridges of the Siwaliks in Kalka Tahsil is an undulating longitudinal valley called the Sirsa Dun². This is an important area for agriculture as its moderate height offers a contrast to the hilly region on its two sides.

The Siwalik ranges have been interspersed by a number of hilly torrents called *Choes*³, which generally flow during the rainy season and impede mobility on account of the steep gradient. They bring down water at a high velocity causing heavy erosion in the upper reaches while depositing it in the plains

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² Dun is a longitudinal mountain valley in India and Pakistan
³ Choe is the local name for seasonal stream
Inter-State Chandigarh Region
Relief

Fig. 2.2

Height in metres above sea level

Kms.
below. Construction as well as maintenance of roads is not only a challenging task but also requires heavy investment. Accessibility being a serious problem in this part, urban-rural interaction is greatly hindered.

2. The Dissected Undulating Plain lies parallel to the hilly region and is bound by a contour 400 meters above sea level in its upper limits and 300 meters in the lower limits. There is a profusion of seasonal streams in this stretch of land. These choes are very close to one another at their upper eastern limit and become farther apart towards the lower western edge where the gradual fall of the gradient unites the tributaries. The development of this part of the region was considerably hampered on account of numerous choes, which pose serious difficulties in building and maintaining means of transport and communication.

3. The Flat Upland Plain: This zone is parallel to the dissected plain, having an elevation ranging between 274 meters to 300 meters in its western and eastern boundaries respectively. It’s most distinguishing feature is the gentle slope with a less dissected topography. Most of the small streams join the bigger ones in this stretch of land subsequently becoming fewer in number and tending to have broader courses.

This is agriculturally the most developed part of the region which plays a positive role in the urban-rural interactions. There is a network of roads with the slope being imperceptible. It has fertile land with adequate irrigation facilities. The analysis in forthcoming chapters on the urban-rural interaction indicates a high level of commodity and service exchange in this part of the ISCR.

In sum, variations in relief combined with other elements of physiography have a considerable influence on the nature and intensity of urban-rural interactions.
An undulating topography and steep slopes pose serious difficulties in the mobility as well as exchange of goods and services. Not only the construction but also the maintenance of social and physical infrastructure requires large financial investment.

Drainage

There are a number of seasonal streams called choes in the region. On account of their abundance, it would not be out of place to call it “The Choe Belt”. The region has no perennial stream as both perennial streams – rivers Satluj and Yamuna – run outside the Northern and South-eastern boundaries of the ISCR. The only river system of importance is that of river Ghaggar and a few other seasonal streams, locally called choes and nedis (Fig. 2.3).

The river Ghaggar rises in Sirmaur district of Himachal Pradesh and after passing through the Morni hills leaves the hilly tract through the Chandigarh gorge. It then skirts the border of Kharar Tahsil for a few kilometers and crosses the district at its narrowest point to enter Patiala district (Punjab). In the central undulating tract, the river is joined by a number of choes, or tributaries such as Chautang, Tangri, Kaushalya, Sukhna, Landran and Patiali nadi. These gradually become sluggish streams while Ghaggar river after passing through Ambala, Patiala and Sirsa districts loses itself in the arid lands of Rajasthan.

Other streams of the region are Budh Ki Nadi, Siswan Nadi, Tangri Nadi and Beghana Nadi. The Markanda flows for four kilometers in the South-eastern section of the region.

All these streams, except Sirsa Nadi, flow from the North-East to the South-West direction. Varying considerably in breadth, ranging from a few meters to
Inter-State Chandigarh Region
Drainage

Fig. 2.3
"Sorry! I fail to break your isolation completely."

- Chandigarh

Seasonal choes in Siwaliks: a great handicap in urban-rural interaction
(A view from village Majra Mehtab falling across the choe)
more than a kilometer, these rivers remain usually dry during the larger part of the year except the rainy season, when, as torrents, they swell the Ghaggar, Markanda, Tangri, Sirsa and Siswan nadies. As flash floods follow, crops and property are damaged and communications are disrupted. Soon after the monsoon they dwindle again. These hilly torrents have also become unmitigated pests because of their unloading large quantities of sand and gravel in the countryside on account of progressive denudation of the Siwalik hills (Singh, 1971, p.88). The choes have been hindering the development of transport in the region because the bridges constructed over these require huge investment. These choes impede mobility, acting as a natural handicap in the way of urban-rural interactions in the region.

Climate

The region is characterised by continental sub-humid climate because of its interior subtropical location and proximity to the hills. The weather remains hostile both in summer and winter seasons in the whole region, except in the sub-mountainous region where it is moderate. The May temperature varies from 35°C to 40°C making the heat wave virtually unbearable. The mean January temperature ranges between 10°C to 15°C with the minimum temperature, at times, touching the freezing point. Frost which is harmful for the winter crops is quite uncommon. There are often cold waves after snowfall in the Himalayas.

The mean annual rainfall varies from 80-100 cms in hilly regions and 65-75 cms in the upland plain with a successive decrease in rainfall as the distance from the hills increases. Three fourths of the annual rainfall, which comes from the South-West monsoon, is concentrated in the three months of July, August and September while the rest of the rainfall is experienced in the months of
December, January and February from the western depressions. Here, agriculture is rainfed as the development of irrigation is hampered by the dissected topography and low water table. Hence, the hilly areas have subsistence economy as compared to the upland plain. The plains, however, have a well developed irrigation system and intensive cultivation to generate marketable surplus, displaying a vital role in strengthening the urban-rural interaction.

Natural Vegetation

The region has dry deciduous type of vegetation. The forests are localized in the Siwalik hills on less than one-twentieth of the total area of the region. The indiscriminate felling of trees and clearing of vegetative cover for cultivation in the Siwalik Hills has resulted in the fast decline of vegetative cover in the region.

Natural vegetation is, thus, limited and highly localized. It is mainly found in areas declared as reserved forests by the government. Such forests are confined mainly to the hilly tract of Morni hills (Naraingarh Tehsil) Kolhan Dun of Kharar and Kalka Tahsils and Bar Godan, Thadugarh, Parwanun, Bir Shikargarh and Naraini of Kalka Tahsil. They have typical species of Chir Pine (*Pinus roxburghii*), Sal (*Shorea robusta*) and Chal (*Conocarpus latifolia*). The Morni hills have an additional species of Dhak (*Butea monosperma*) growing all round. Its flowers yield a yellow dye and a gum which comes from the bark and is collected by the poor. There is a wide scope and need for afforesting the hilly tracts for two reasons; firstly the provision of valuable timber and secondly exercising control over intensity of floods and soil erosion common in this tract.
The plain areas, having rainfall between 60 to 80 cms, contain subtropical evergreen species of which the commonest timber tree is Kikar (*Acacia arabica*). Neem (*Melia azadirachta*), Jamun (*Syzygium jambolana*). Shishum (*Dalbergia sissoo*) and Mango (*Mangifera indica*) trees are also commonly found particularly near the hills. Shishum (*Dalbergia sissoo*), Eucalyptus and Phulai (*Acacia modesta*) have been planted along roads and canal banks.

**Soils**

The soils owe their origin to the subareal weathering and denudation. Due to the sharp change of gradient of the foothills in the plains, the *choes* leave behind coarse sand and gravel. As the distance from the hills increases, the amount of debris and the size of soil particles decreases. Towards the lower sections of the dissected plain, it is fine silt and sand while further below in the upland plain it is mainly silt and clay. In the hilly Eastern and North-eastern region, there is a fine veneer of coarse infertile soils. Fine alluvial soils of considerable thickness can be found in the West and South-West while the undulating plain has clayey loam of varying depth. These soils have several local names. In the hilly section of Naraingarh it is called Dharrar meaning hopelessly cut, deep ravines. The piedmont section of Kharar is called Ghar whereas clay loam is called Seoti and light alluvial soil is named as Dakar. Hence the soils of the region are varied.

**Minerals**

The area is lacking in minerals, even though limestone is found in considerable quantity in the Morni hills along the beds of hill torrents. Stones (Kankars) are plentiful along the Ghaggar river and stone crushers have been set up in quarries. Much of the stone has been used in the building up of the city of Chandigarh.
CULTURAL SETTING

Population and Settlements

People occupy an important place in the mechanisms of urban-rural interaction. They play a vital role in developing an urban-rural nexus by rationally deciding about the flow of goods and commodities and also their own movement.

According to the Census 2001, the ISCR had a population of 28,55,976 persons. Earlier, at the 1951 Census it was only 3,65,713 persons. During 1951-2000 it recorded an increase of 681 per cent. The urban population recorded an enormous increase of 4010 per cent as compared to the rural population (345 per cent) (Table 2.1)

<table>
<thead>
<tr>
<th>Rural / Urban / Total</th>
<th>1951</th>
<th>2001</th>
<th>Percent increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural</td>
<td>3,32,151</td>
<td>14,76,569</td>
<td>345</td>
</tr>
<tr>
<td>Urban</td>
<td>33,562</td>
<td>13,79,407</td>
<td>4010</td>
</tr>
<tr>
<td>Total</td>
<td>3,65,713</td>
<td>28,55,976</td>
<td>681</td>
</tr>
</tbody>
</table>

Evidently, population in this region has increased almost eight times in a span of five decades. The population growth in the region can be attributed to the emergence of Chandigarh and a steep rise in its population thereafter. The population of Chandigarh increased from 99,262 persons in 1961 to 8,08,796 persons in 2001. Besides, the growth of the two satellite towns of SAS Nagar (Mohali) and Panchkula in Punjab and Haryana respectively, has amply
contributed towards this increase. These townships started developing in the 1970s and in 2001 had a population of one lakh.

Almost half the total population of the region resides in urban settlements while the remaining half is distributed in approximately 898 rural settlements of varying sizes. In all, there were 17 towns in 2001 whereas in 1951 there had been only five towns in the region viz. Kharar, Kalka, Banur and Dera Bassi. In a span of five decades there has been a four fold increase in the number of towns. Majority of the towns (15) are located in the upland plains while only two viz. Kalka and Pinjore are at the foothills of the Siwaliks. There are three Class I towns, seven Class III towns, three Class IV towns and four Class V towns (Table 2.2)

<table>
<thead>
<tr>
<th>Class</th>
<th>Population size (persons)</th>
<th>No. of towns</th>
<th>Name of the towns</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>1,00,000 and above</td>
<td>3</td>
<td>Chandigarh, Panchkula, Mohali</td>
</tr>
<tr>
<td>II</td>
<td>50,000 – 99,999</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>III</td>
<td>20,000 – 49,999</td>
<td>7</td>
<td>Pinjore, Kalka, Kharar, Zirakpur, Kurali, Morinda, Karoran</td>
</tr>
<tr>
<td>IV</td>
<td>10,000 – 19,999</td>
<td>3</td>
<td>Naraingarh, Dera Bassi, Banur</td>
</tr>
<tr>
<td>V</td>
<td>5,000 – 9,999</td>
<td>4</td>
<td>Raipur Rani, Bhabbat, Mullanpur-Garibdass, Bhankarpur</td>
</tr>
</tbody>
</table>

Table 2.2
ISCR: Number of towns in each size class, 2001

The size of the villages also varies in the region. The average population size of the village is 931. As per 1991 Census, the biggest village in the region was Palsaura (10,270 persons) and the smallest was Aujla (12 persons). About 38
per cent of the villages have a population less than 500 and hence are small in size. Another 53 per cent have a population between 500-2000 strong. Only 9 per cent villages are larger in size (2000-5000 persons) and they act as rural service centres and help in strengthening the urban-rural nexus. Most of the bigger villages are in the upland plain whereas the smaller sized villages are predominantly located in the foot hills and hilly parts of the region.

In 2001, the region recorded a sex ratio of 826 females per thousand males. Within ISCR, the Haryana part of the ISCR recorded a lower sex ratio (838) as compared to the Punjab part (858). However, Chandigarh UT recorded the lowest sex ratio (773). In ISCR, rural sex ratio (831) is higher than urban sex ratio (320). The rural-urban differential in sex ratio is 11 points. Earlier, in 1951 this difference was 37 points when rural and urban sex ratio were 839 and 802 respectively. The urban-rural gap has narrowed down owing to a faster decline in female mortality. This could be possible due to greater availability of health care facilities and increased social awareness in the villages. Besides, male selective urban migration has decreased in urban areas since developed transport and communication networks enabled people to commute daily to their workplaces.

The literacy rate in the region is 77 per cent which is quite good. There are, however, regional variations within the ISCR. The Punjab part recorded a higher literacy rate (70 per cent) as compared to its Haryana counter part (66 per cent). However, Chandigarh, UT recorded the highest literacy rate of 82 per cent. In 1951, the literacy rate was only 13 per cent. In a span of five decades, it has recorded a six fold increase. This can be attributed to the administrative-cum-educational function of Chandigarh, the city and the general awareness in the minds of the people brought about by the impact of socio-economic development in the region.
ECONOMIC STRUCTURE

Agriculture

The economy of the ISCR is primarily based on agriculture. Nearly 60 per cent of the total population of the region is directly or indirectly engaged in agricultural activities. The percentage of area under cultivation varies in different parts of the region in accordance with its physiography. In the areas of upland plains like the villages in the Rupnagar and Rajpura tahsils which have flat topography, fertile soils and good irrigation facilities, more than 80 per cent of area is under cultivation. Agriculture has attained a high degree of development, especially in the region lying in Punjab, thereby strengthening urban-rural interaction by promoting backward and forward linkages of agriculture. On the contrary, in the hilly sections of Kharar and Kalka tahsils the percentage of land under cultivation is as low as 25 per cent. These areas fall in the North and North-East of the region where the hilly terrain, absence of a large number of choes and insufficient irrigation facilities have kept the agriculture at a subsistence level which in turn failed to generate agricultural surplus vital for promoting urban-rural linkages.

Since the region has an agrarian base, the role of agricultural commercialisation and diversification in promoting functional linkages between urban and rural areas is most important. The Green Revolution has vitalized commercial agriculture in this region and helped in the promotion of commodity exchange in the region. Huge marketable surplus generated particularly of wheat, rice and cash crops like sugarcane, potatoes and chillies promoted flow of commodities between urban and rural areas. Villages located in the upland plain are marked by the extensive availability of large leveled deep alluvium filled plain of Ghaggar river, productive soils and developed means of irrigation encouraging them to go in for vegetable cultivation. A large
number of villages are inhabited by the Saini community who are traditionally vegetable growers. Even the villages inhabited by Sikh Jats, among whom growing vegetables for the market was considered below their dignity, are growing vegetables in response to the demand created by Chandigarh.

Livestock rearing, especially milch cattle, is also very vital in this region. The large demand for milk in Chandigarh has stimulated the activity of raising milch cattle - especially in villages proximate to the city upto Morinda and Barwala. In fact, the people in these villages did not traditionally sell milk before the emergence of Chandigarh. The growth of Chandigarh consequently stimulated the villagers for production of milk. This gave an impetus to the dairy activity in the region.

A number of poultry farms also came up in the villages surrounding the city to meet the increased demand for eggs and meat not only in Chandigarh but also in Delhi. The agricultural economy of the region has thus become fairly diversified. These changes have touched even the traditional Jat Sikhs who are now beginning to sell milk, eggs and vegetables.

Industries

With the upcoming of Chandigarh and its satellite towns and the associated transportation network, there was a great fillip to the industrialization of the region. This was aided by the well developed electric supply network. Besides, the establishment of industrial units in Chandigarh, Mohali and Panchkula towns, industrial units have also developed at Pinjore, Dera Bassi, Lalru, Kharar Rajpura, Sirhind and Ropar. While in 1951 the region had hardly any large or medium industrial unit, by 2002, 151 such units had been set up (Table 2.3).
Table 2.3
ISCR: Large and medium industries, 2002

<table>
<thead>
<tr>
<th>Area</th>
<th>No. of Large and Medium Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Punjab part of ISCR</td>
<td>106</td>
</tr>
<tr>
<td>Haryana part of ISCR</td>
<td>30</td>
</tr>
<tr>
<td>Chandigarh UT</td>
<td>15</td>
</tr>
<tr>
<td>ISCR</td>
<td>151</td>
</tr>
</tbody>
</table>

Source: Compiled from Directory of Large and Medium Units of Punjab, Haryana and Chandigarh UT

Most of these units are located on the main roads radiating from the city. The entrepreneur and head offices of these units are mostly located at Chandigarh. Large scale industries include cement, fertilizers, wrist watches etc. whereas woollen hosiery goods, electric meters, bicycle wheels, rims and medicines are medium units. The small units include floor mills, re-rolling mills, steel fabricates, sanitary wares, cutlery, hardware, household electric appliances, paints, soaps and chemicals. Apart from these, numerous brick kilns have come up in the vicinity of the city and other towns in the region. These provide the bricks for construction work in Chandigarh and adjoining towns thereby promoting urban-rural linkages in the region.

**Sectoral Composition of Workforce**

Primary, tertiary and secondary activities occupied the first, second and third places of order among the work force of the region. Their proportion were 51.53 per cent, 36 per cent and 12.55 per cent respectively. These figures were lower than the state averages of Punjab and Haryana for primary and secondary but higher for the tertiary sector. The proportion of primary,
secondary and tertiary sector for the state of Punjab were 56.08 per cent, 14.84 per cent and 29.08 per cent and for Haryana the percentages were 58.84 per cent, 13.18 per cent and 27.98 per cent respectively. A large proportion of work force in non-farm sector helped strengthen urban-rural linkages since this segment of population has a greater capacity to commute.

Transport and Communication

Transport network is the backbone of economic development in a region. It plays a vital role in the movement of goods, people and flow of ideas and innovations. The region is served by two national highways, namely Chandigarh-Shimla (NH-22) and Chandigarh-Ropar-Manali (NH-21), three state highways viz. Chandigarh–Ludhiana, Chandigarh–Patiala and Chandigarh-Barara–Shahbad. In addition, there are link roads to connect villages with urban centres as well as to inter-connect them within. Almost all the villages are now linked with all-weather metalled roads. However, the situation was quite different at the time of Independence in 1947. In 1951, hardly one of fifty villages was connected by a metalled road. There was just one, the Ropar-Kalka road passing through the region. However, the situation changed after 1966, when Chandigarh emerged as a Union Territory. By 1971, 9 of every 25 villages were linked by metalled roads. In 1991, 19 of every 20 villages were linked by metalled roads. Construction of link roads has played a highly catalytic role in the promotion of urban-rural linkages. Two government departments, Rural Development and Mandi Board, have played an important role in the construction and maintenance of village roads in the region. This has not only facilitated commodity and service exchange but also increased the mobility of commuters to go back and forth to their work places.
Not only there has been a dense network of roadways, the frequency of buses plying on the local, inter-regional and inter-state routes has also increased. There is a bus plying from Chandigarh, almost every minute, in a different direction. The local buses of the Chandigarh Transport Undertaking (CTU) go up to Kharar, Zirakpur, Dera bassi, Mullanpur, Parol, Sohana, Landran, Mohali, and Panchkula. Commuters from as far as Morinda, Banur, Ambala, Kurali and Kalka commute daily to Chandigarh. This daily commuter range is, however, restricted to shorter distances towards the hilly region of the East and the South-East where lack of roads impedes mobility. There are two railway lines serving the region: the Ambala-Kalka Northern Railway line having six stations namely – Dappar, Ghaggar, Chandigarh, Chandimandir, Surajpur and Kalka. The second in the western corner of the region is the Sirhind-Nangal line which has four stations i.e. Nogawan, Morinda, Kurali and Chandigarh. However, railway transport does not play as significant a role as the roads network does in connecting Chandigarh with its hinterland.

Main Highlights

1. Prior to 1951 areas now included in the ISCR were completely rural, backward and peripheral. Emergence of Chandigarh as a newly planned modern city in the post-Independence period rapidly transformed this peripheral and backward part of the then Punjab. It is because of its astronomical growth that within a period of four decades of its establishment, a need was felt to develop it, not as a city but as a city based planning region.
2. Inter-State Chandigarh Region, delineated in 1981 on the basis of functional homogeneity, differs widely in physical and cultural settings.

3. Physiographically, there are three marked physical zones viz. hilly zone, dissected undulating plain and upland plain. Whereas, socio-culturally, Punjab differs considerably from Haryana. Chandigarh U.T., however, supports a more cosmopolitan character.

4. A number of seasonal streams or choes along the Siwalik tracts cause not only enormous damage to life, property and top-soils but also pose a physiographic handicap in the mobility of the people. Construction and maintenance of roads and bridges in the region is not only a challenging task but also requires huge financial investment.

5. Natural vegetation is highly localized. This is mainly found in areas declared as reserve forests in the Siwalik hills, as there had been widespread deforestation in this part in the post-Independence period. Deforestation, soil erosion and depletion of water table go hand-in-hand in this region.

6. Wide variations in soil texture and fertility, level of agricultural production and productivity differ widely. In Western and South-western parts of the region, where alluvial and loamy soils are available, agricultural productivity is relatively high and commercial crops dominate the cropping pattern.

7. Population has been growing fast in the post-Chandigarh phase. During the last four decades between 1951-2001, population grew about seven times to reach 2.85 million in 2001. On one hand, a sharp decline in mortality and morbidity and on the other, in-migration, have been responsible for the phenomenal growth in population.
In-migration in particular has played an important role for strengthening Chandigarh’s linkages with the surrounding areas.

8. The region is an urban majority region where almost half the total population resides in 17 urban settlements and the remaining half is distributed in approximately 900 rural settlements. While the number of urban settlements has gone up by four times since 1951, rural settlements have gone down in number. This is mainly because of upgradation of rural to urban settlements or merger with adjoining towns.

9. The average population size of the village in the region is 931 persons. Majority of the villages in the region are medium sized with population between 500-2000 persons.

10. The region recorded a very low sex ratio of 826 against the national average of 931 females per thousand males in 2001. Within the ISCR, the Haryana part of the ISCR recorded a lower sex ratio (838) as compared to Punjab (858). Sex ratio is lowest in the Chandigarh part of the region mainly because of the male in-migration to Chandigarh and surrounding villages.

11. Despite lowest sex ratio, the Chandigarh part has displayed highest literacy rate (82 per cent) against the regional average of 77 per cent. The Punjab part of ISCR recorded a literacy rate of 70 per cent, against 66 per cent in Haryana part.

12. After the emergence of Chandigarh, industrial development in the region has been quite impressive. In 1951, the region had hardly any large or medium units but by 2002, 151 such units had emerged. Most of these are consumer industries and are located on the main roads radiating from Chandigarh.
The region is served by two national highways, three state highways and two railway lines. However, railway transport does not play as significant a role as the roads network does in connecting Chandigarh with its region.