

# Impact of Growing Metropolis on Surrounding Villages : An Indian Case Study

## Introduction

THE impact of a city on its surrounding villages is reflected in many ways and this influence gradually leads to the transformation of the population living in the rural

"the influence of an urban centre on surrounding territory is manifested in a gradient, which appears in the tendency of the characteristics of rural population to resemble those of the urban population in a direct ratio to the proximity of the two populations."<sup>1</sup> A large amount of literature appeared during the period from the mid-1940s to the beginning of the 1960s, which was concerned with the physical delimitation and the defining features of the rural urban fringe,<sup>2</sup> These studies of hinterlands in western countries were based on a wide range of data on the demographic and economic characteristics of the population.<sup>3</sup> However, such comprehensive data are not available in India at micro level, more

1. Jack P. Gibbs (ed.), *Urban Research Methods*, D. Van Nostrand, Princeton, N.J., 1961, p. 547.

2. of. Harold C. Carter, *The Study of Urban Geography*, (Sec. ed.) Edward Arnold, London, 1975, p. 305.

3. Richard A. Ellefsen, "City-Hinterland Relationships in India" in Roy Turner (ed.) *India's Urban Future*, University of California Press, Berkeley, 1962, pp. 95-96.

specifically for the villages and therefore such studies in the Indian context are of a limited and also of preliminary nature.

### **Objective and Scope**

In the light of the interrelated processes of rapid population growth and changes in the economic and spatial structure of the large metropolises in India, we propose to study here the impact of one of the growing metropolises viz., Ahmedabad, on its villages situated within a distance of 20 kms from the city. We focus attention on the following attributes, which are supposed to be influenced by the proximity of city :

1. *Civic Amenities*: Such as—educational, medical, communication network and source of drinking water supply etc.
2. *Socio-cultural Characteristics*—Literacy rate, female literacy rate, dependency (economic) ratio, female labour force participation rate, proportion of scheduled castes and tribes population in the total population, and average household size.
3. *Economic Characteristics*—Male labour force participation rate, proportion of male workers in the agricultural and allied activities in the total workers, proportion of male workers in the manufacturing (both household and non-household) and construction activities. Proportion of male workers in the trade and commerce activities in total workers, proportion of workers in transport and communication in total workers and proportion of workers in the other services in total workers.
4. *Demographic Characteristics*—Percent population change during 1961-71, sex-ratio and density.

### **Rationale for the Study**

It has been amply demonstrated that the rural population living in the vicinity of the large cities differs considerably in terms of socio-economic and demographic characteristics from the rural population living in the villages which are situated at a relatively larger distance from such cities. on the basis of observation reported put forth by Duncan in one of her studies.

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4. Otis Dudley Duncan, "Note on farm Tenancy and Urbanization", in Jack P. Gibbs (ed.), *Urban Research Methods, op. cit.* pp. 556-560.

1. Rural areas near cities undergo "sub-urbanization"\* of "fringe development". . . a segment of the population which is nominally rural by residence . . . remains city oriented in terms of primary economic activity and social relations, and
2. With improvements in communication and transportation and a rising level of living, and the social and economic opportunities of the cities become more accessible to rural residents . . . Thus there ensues a "sub-urbanization" of rural population.

Thus the main logic for studying the influence of the city, on its surrounding villages\* population is to test the aforesaid hypotheses in the Indian context.

The selection of Ahmedabad city, as a growing metropolis, for this purpose is based on the following considerations :

- (a) out of the three metropolises (i.e. cities/urban agglomerations with one million or above population) of the western region, the decennial rate of population change during 1961-71 was relatively higher for Ahmedabad than for the remaining two, viz., Greater Bombay and Poona. Similarly, among 9 metropolises of India, this growth rate was higher as compared to other metropolises excepting Madras and Delhi during the same period;<sup>5</sup>
- (b) Ahmedabad is the foremost city in Gujarat. It has been well-known for its cotton textile industry from the very beginning of the modern era; it has even been called "Manchester of India". A large number of ancillary industries catering to the needs of textile industry such as mill gin stores, colour and chemical industries, bobbin manufacturing etc. operate in and around the city;
- (c) Lastly, for the last two decades there has been a continuous expansion in the industrial field and thus quite a large number of industries have developed in the surrounding agglomerated as well as non-agglomerated towns and villages.<sup>6</sup>

5. Census of India, 1971, *General Population Tables*, Series 1, India, Part-II-A(i), R.G.'s. Office, Delhi, pp. 239-250.

6. Census of India, 1971, *District Census Handbook for Ahmedabad District*, Series 5, Gujarat, Director of Census Operations, Gujarat, Ahmedabad, Part-X-A, p. 15.

## Sources and Nature of Data

The data utilized here are obtained from the Town and Village Directory as well as Primary Census Abstracts of the *District Census Handbooks*' of the five districts where the villages under study are located. Information regarding the distance of villages from the city and about civic amenities was obtained from the Village Directories for the Talukas of each district. Lastly, the data pertaining to the socio-economic and demographic characteristics of the population living in these villages were obtained from the Primary Census Abstracts. These data collected are of very elementary nature and they provide information mostly about the existing civic and other amenities as well as highly general information about the socio-economic and demographic characteristics of such population. Information on volume of trade and commerce receipts from different sectors of economy and expenditure on different items on one side and the population characteristics such as educational attainment, fertility, migration status etc., on the other are not available upto the village level. Hence, the present study deals only with the locally available data on civic amenities and on the primary data pertaining to the population characteristics.

## Analysis of Data

In all 114 villages are situated within a distance of 20 km from the Ahmedabad city. The distribution of the number of villages and the percent population living in them according to the different distance categories at the time of 1971 Census are given in Table 1.

It is notable that only a few villages, with a small proportion of total population of all the villages under reference, are located within a periphery of 5 km from the city, whereas two-thirds of all villages are located at a distance of 10-20 km from the city. They account for more than 66 percent of the total population of all villages.

*I. Variations in the Distribution of Villages and their Population and the Rate of Population Change :* It will be seen from Table 2 that more than 60 percent of villages in the State as a whole, accounting for a little less than 30 percent of the total rural population fall in the lower population size-classes of less

7. Census of India, 1971, *District Census Handbooks* (of Ahmedabad, Gandhinagar, Mahesana and Kheda), Series 5, Gujarat, Director of Census Operations, Gujarat, Ahmedabad, 1972, Put-X-A and B.

**TABLE 1—DISTRIBUTION OF VILLAGES AND THE POPULATION LIVING IN THEM ACCORDING TO THEIR RESPECTIVE DISTANCES FROM AHMEDABAD CITY, 1971**

<i>Distance of the villages from Ahmedabad (in km)</i>	<i>Number of villages</i>	<i>Population</i>	<i>Percent of population</i>
< 1	4	9,194	4.2
2-3	3	4,980	2.3
4-5	3	3,106	1.4
6-10	29	56,199	25.8
11-15	28	69,673	31.9
16-20	42	75,125	34.4
Total	109	218,277	100.0

**SOURCE :** Census of India, 1971, *District Census Handbooks* (of Ahmedabad, Kheda, Gandhinagar and Mahesana), Series 5, Gujarat, Director of Census Operations, Gujarat, Ahmedabad, 1972, Parts X-A and B.

than 1,000 population. As compared to this, of a total of 109 villages located within a 20 km periphery of city, as many as 74 villages with nearly 90 percent of their total population were placed in the size-class categories of more than 1,000 population viz., 1,000-1,999, 2,000-4,999 and 5,000-9,999. Thus, villages situated in the vicinity of the city are concentrated in the larger size categories and they account for the bulk of the rural population around the city.

The decennial rate of population growth also sets the villages in the vicinity of the city quite apart from other villages in the State. The rate of their population change during 1961-71 is nearly twice of that observed for the rural population of the State (See Table 3). Referring to different size-classes of villages in this regard it will be seen that the first three lower size classes show a faster decline in population for the villages adjacent to Ahmedabad as compared to all the villages of the State. Population growth rates for larger size categories are positive both for the state and the villages in the neighbourhood of Ahmedabad. However, in all categories of villages except that of with a population of 1,000 to 1,999, the rate is considerably higher for villages around

**Ahmedabad.** This too points to the growing concentration of population in villages surrounding Ahmedabad, specially in those of them falling in the larger population size categories.

**TABLE 2—DISTRIBUTION OF VILLAGES AND POPULATION LIVING IN THEM ACCORDING TO SIZE-CLASS FOR GUJARAT AND FOR THE VILLAGES LOCATED UPTO A DISTANCE OF 20 km FROM AHMEDABAD CITY**

	<i>All Villages of Gujarat</i>		<i>Villages upto a distance of 20 km from Ahmedabad</i>	
	<i>Number of villages</i>	<i>Percentage of population</i>	<i>No. of villages</i>	<i>Percent of population</i>
Less than 200	2,054	1.2	1	0.1
200-499	4,352	7.9	9	1.5
500-999	5,241	19.8	25	8.4
1,000-1,999	4,398	31.7	31	20.0
2,000-4,999	1,965	29.9	37	48.7
5,000-9,999	248	8.4	6	21.3
10,000 and above	17	1.0	—	—
<b>Total</b>	<b>18,275</b>	<b>100.0</b>	<b>109</b>	<b>100.0</b>

SOURCE : A. Census of India 1971, *General Population Tables*, Series 5, Gujarat, Director of Census of Census Operations, Gujarat, Ahmedabad, 1972, Part II-A.

B. Same as Table 1.

// *Differentials in the Availability of Civic Amenities* : The influence of a city on its hinterland may also affect the availability of basic amenities in the surrounding villages. The villages which are situated in the vicinity of a city are quite likely to have a relatively larger number of educational, medical and other institutional facilities as compared to the more remote villages. The same phenomenon is, by and large, observed from Table 4 with respect to the differentials in the availability of civic and other amenities in the villages surrounding Ahmedabad as compared to all the villages of Gujarat. A comparatively large proportion of villages close to Ahmedabad have better educational, medical and other facilities such as communication, post and telegraph network, provision of drink-

**TABLE 3—DECADAL PERCENT POPULATION CHANGES IN THE VILLAGES CLASSIFIED BY SIZE-CLASSES FOR GUJARAT AND FOR THE VILLAGES SITUATED UPTO A DISTANCE OF 20 km FROM AHMEDABAD, 1961-71**

Size-Class	All villages of Gujarat	Villages situated upto a distance of 20 km from Ahmedabad*
Less than 200	-34.8	-73.7
200-499	-16.7	-46.9
500-999	- 0.1	-18.8
1,000-1,999	34.9	1.4
2,000-4,999	49.4	67.6
5,000-9,999	80.8	289.4
10,000 and above	144.3	—
Total	25.4	47.6

\*This category is exclusive of the villages which were existing in 1961 but declassified in 1971 as well as 5 villages which were transferred to urban area in 1971.

SOURCE : A. Census of India, 1961, *General Population Tables*, Vol. 5, Gujarat, Superintendent of Census Operations, Gujarat, Ahmedabad, 1963, Part II-A and same as Table 2A.

B. Census of India, 1961, *District Census Handbooks* (of Mahesana, Ahmedabad and Kaira), Superintendent of Census Operations, Gujarat, Ahmedabad, 1964, Nos. 10, 11, 12 and same as Table 1.

ing water and power supply as compared to all the villages of the state. For example, 97 percent of the 109 villages situated near to Ahmedabad have primary schools (with 1-7 standards), 15 percent have higher secondary schools (with 8 to 11 standards) and more than 25 percent have other educational facilities including colleges. As against this, in the State as a whole, 85 percent have primary schools and only about 7 percent, higher secondary schools and other educational institutions.

With respect to medical facilities, while the proportion of villages with dispensaries was comparatively much larger for those situated close to Ahmedabad, there were only marginal differences in the availability of hospitals, maternity homes and child welfare centres. Further, a relatively larger proportion of

TABLE 4—DIFFERENTIALS IN THE AVAILABILITY OF CIVIC AMENITIES IN ALL THE VILLAGES OF GUJARAT AND THE VILLAGES SITUATED AT A DISTANCE OF  $\leq$  20 km FROM AHMEDABAD CITY IN 1971

<i>Amenities</i>	<i>All villages of Gujarat</i>		<i>Villages <math>\leq</math> 20 km from Ahmedabad</i>	
	<i>Number</i>	<i>Percentage</i>	<i>Number</i>	<i>Percentage</i>
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
<b>I Educational</b>				
a. Primary School*	15,612	85.4	106	97.3
b. Higher Secondary School**	1,241	6.8	17	15.6
c. Colleges	22	0.1	1	0.3*
d. Others	1,193	6.5	28	25.7
<b>II Medical</b>				
e. Dispensary	1,629	8.9	20	18.4
f. Hospital	107	0.6	1	0.9
g. Maternity Home	355	1.9	2	1.8
h. Child Welfare Centre	160	0.9	2	1.8
i. Health Centre	714	3.9	2	1.8
j. Family Planning Centre	842	4.6	3	2.8
<b>III Communication</b>				
k. Pucca Road	9,496	52.0	57	52.3
l. Kachha Road	14,512	79.4	86	78.9
m. Bus Facility—Whole year	4,862	26.6	44	40.4
n. Bus facility—fair season	6,687	36.6	13	11.9
o. Train	1,520	8.3	21	19.3
<b>IV Post &amp; Telegraph</b>				
p. Post Office	6,257	34.2	57	52.3
q. Telegraph office	6	0.0	—	—
r. P & T	329	1.8	6	5.5
s. Telephone	733	4.0	12	11.0

Table 4 (contd. on page 269)

Table 4 (contd. from page 268)

1	2	3	4	5
<b>V Drinking water</b>				
t. Tap	2,284	12.5	58	53.2
u. Well	16,827	92.1	100	91.7
v. Tank	5,737	31.4	54	49.5
w. Tubewell	328	1.8	10	9.2
x. River	5,503	30.1	30	27.5
y. Fountain	—	—	—	—
z. Canals	69	0.4	—	—
r-1. Others	2,035	11.1	7	6.4
<b>VI Power supply</b>				
r-2. Available	3,695	20.2	76	69.7
r-3. Not Available	14,580	79.8	33	30.3

\*1 to 7 standards \*\*8 to 11 standards

SOURCE : A. Census of India, 1971 *District Census Handbooks* (of all districts of Gujarat), Series 5, Gujarat, Director of Census Operations, Gujarat, Ahmedabad, 1972, Parts X-A & B.

B. Same as Table 1.

villages in the state had health centres and family planning centres as compared to those situated in the vicinity of Ahmedabad. This may be due to proximity of these villages to the city.

In the field of *communication network*, nearly an equal proportion of villages in both of the groups were connected by Pucca and Kachha roads. But, with respect to the availability of bus facilities throughout the year and accessibility to train facility, the proportion of villages situated close to Ahmedabad was higher than that of all villages of the state.

The availability of *Post Offices and Telegraph Offices* was relatively greater in the villages surrounding Ahmedabad than in the villages of the state as a whole. Similarly, they are better served with the *protected water supply* as well as *power supply* than the villages of the state as a whole.

*III. Impact of City Proximity on Population Characteristics.* The influence of Ahmedabad city on the socio-economic and demographic characteristics of its surrounding 109 villages may be clearly visualized from Table 5. Considering first the *socio-cultural* characteristics of the population, it is observed

TABLE 5—SOCIO-CULTURAL, ECONOMIC AND DEMOGRAPHIC CHARACTERISTICS OF RURAL POPULATION OF (a) ALL VILLAGES IN GUJARAT, AND (b) VILLAGES SITUATED AT A DISTANCE  $\leq 20$  km FROM AHMEDABAD CITY, 1971

<i>Population Characteristics</i>	<i>All villages of Gujarat</i>	<i>Villages <math>\leq 20</math> km from Ahmedabad</i>
<b>I. Socio-Cultural</b>		
a. Literacy Ratio	28.3	39.1
b. Female Literacy Ratio	17.2	26.8
c. Dependency (Economic) Ratio	203.0	224.0
d. Female labour force participation rate	12.1	6.7
e. Ratio of Scheduled Caste and Tribe Popn.	25.2	8.2
f. Average Household size (per household)	5.8	4.9
<b>II. Economic</b>		
g. Male labour force participation rate	52.8	52.5
h. Percentage of Male Workers in Agriculture and Allied Activities	84.6	60.6
i. Percentage of Male Workers in Manufacturing (both household and non-household) and construction activities	6.7	21.6
j. Percentage of Male Workers in Trade, Commerce and Transport	4.4	10.3
k. Percentage of Male Workers in other services	4.3	7.5
<b>III. Demographic</b>		
l. Percent Population change during 1961-71	25.4	47.6
m. Sex Ratio	105.2	111.7
n. Population Density (Per sq. km)*	695.0	3,465.0

\*The density is calculated on the basis of actual area under inhabitation in these villages (i.e. it excludes the area under cultivation and fallow land from the total area of the village.

SOURCE : A. Same as Table 2A.

B. Same as Table 1.

that both the total and female literacy rates were higher (39 and 27 percent; respectively) in the city-proximate villages than the rates of entire rural population (28 and 17 percent, respectively) of the state.

The dependency ratio (measured in terms of the ratio of non-workers to per 100 workers) and the female labour force participation rates were both lower in proximate villages than the corresponding rates for the rural population of the state. This is related to the fact that in the proximate villages, the extent of child labour as well as female labour force participation in the agricultural sector is quite low, which in turn may be related to spread of education and a relatively larger proportion of employment in the organized sector. Lastly, the ratio of scheduled caste and tribes population and the average household size were also lower in these villages as compared to all villages of the state.

Regarding *economic* characteristics, the male participation rates were more or less around 52-53 per cent for both the groups of villages. However, a considerable amount of variation in the sectoral patterns of employment is observed between the two groups. For example, the proportion of workers in the agriculture and allied activities such as cultivation, livestock, forestry, mining etc., is around 61 percent in the villages close to the city as against the corresponding figure of around 85 per cent for the rural population of the state. The proportion of workers in the manufacturing and allied activities in the villages around Ahmedabad, is almost thrice the corresponding proportion for all villages of the state. Lastly, the proportions of workers engaged in trade, commerce, transport and other services are also higher in the villages nearer to Ahmedabad as against all the villages of the state.

The villages adjacent to Ahmedabad also confirm the hypothesized demographic trends and characteristics, as revealed by the last portion of Table 5. For example, the percent population change in these villages is nearly double the one observed for the villages of whole state. Similarly, number of males per hundred females was around 112 in the former category as against 105 in the case of the latter. The man/land ratio, worked out on the basis of land used only for the habitation purposes (i.e., excluding the land under cultivation and fallow land from the total area of the village) is as much as five times as high in these villages as the ratio for all the villages of the state.

#### *IV. Impact of the Communication and Transport Facilities on the Population.*

*Characteristics of the Villages adjacent to Ahmedabad City.* The socio-economic and demographic characteristics of the rural population do not vary according to their proximity or isolation from the larger cities alone, but also according to the nature of roads and transport network. This is because the geographical distance between two places is rather a relative concept and the time spent for travelling between the two points is positively associated with the nature of roads and of the mode of transport. In an earlier study it was shown by Jain<sup>8</sup> that "the literacy levels of the large village of Gujarat State varied considerably according to the types of road connecting such villages as well as according to the respective distance of such villages from the nearest town". Accordingly, attention is drawn here to variation in the population characteristics of the villages adjacent to Ahmedabad according to the nature of roads connecting them as well as according to their accessibility to train and bus facilities. This is shown in Table 6.

This table shows that almost all the social, economic and demographic characteristics have some association with the nature of road connecting to such villages; for example, in the villages which were connected by pucca roads, the literacy (including female literacy) rates, male and female labour force participation rates, proportion of workers engaged in the secondary and tertiary occupations (i.e., manufacturing, trade, transport and services etc.), percent population change during the last decade, ratio of males to females and the density of population are higher as compared to the villages connected by only kachha roads. The dependency ratio, average household size, per cent of male workers in the agriculture and allied occupations are, on the other hand, lower in the villages with pucca roads as compared to those with only kachha roads. Thus, it would appear that the process of sub-urbanization is relatively faster in those of the surrounding villages which are connected by the pucca roads as against in those which are connected by the kachha roads.

Similarly, the classification of these villages according to the nature of bus facilities demonstrates the fact that those villages having bus facilities throughout the year have relatively higher literacy rates (both for total as well as female population), higher percentage of workers in manufacturing, trade, transport

8. M. K. Jain, "Communication links and their impact on literacy levels of the larger size villages in Gujarat, 1971", paper presented to the all India Seminar on *Accelerating Rural Development*, organized as a part of the 3rd Annual Conference of Indian Academy of Social Sciences at Kanpur, Feb. 5-8, 1978.

TABLE 6—VARIATION IN THE SOCIO-CULTURAL ECONOMIC AND DEMOGRAPHIC CHARACTERISTICS OF THE POPULATION LIVING IN THE VILLAGES SITUATED UP TO A DISTANCE OF  $\leq 20$  km FROM AHMEDABAD ACCORDING TO THE TYPE OF ROAD, NATURE OF BUS FACILITY AND THEIR ACCESSIBILITY TO TRAIN FACILITY, 1971

Population Characteristics	Nature of road connecting the villages		Village having bus facilities		Villages having train facilities
	Pucca Road	Kachha Road	Whole Year	Fair Season	
1	2	3	4	5	6
<b>I. Socio-cultural</b>					
a. Literacy Ratio	44.2	34.3	38.9	29.8	43.4
b. Female Literacy Ratio	37.9	21.3	25.6	17.2	31.4
c. Dependency (Economic) Ratio	202	231	224	221	220
d. Female labour force participation rate	10.8	5.1	6.6	8.1	7.0
e. Ratio of Scheduled Caste and Tribe Population	12.1	9.8	7.3	5.8	8.8
f. Average Household Size (Per household)	4.9	5.0	4.8	5.0	4.8
<b>II. Economic</b>					
g. Male labour force participation rate	53.2	53.1	52.1	52.8	52.0
h. Percentage of male workers in agriculture and allied activities	69.8	72.9	57.1	85.9	49.4
i. Percentage of male workers in manufacturing (both household and non-household) and construction activities	18.4	16.1	23.8	6.9	17.9

Table 6 (contd. on page 274)

<i>I</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>
<i>J.</i> Percentage of male workers in Trade, Commerce and Transport etc.	5.8	5.6	9.0	3.0	26.1
<i>k.</i> Percentage of male workers in other services	6.0	5.4	10.1	4.2	6.6
<b>III. Demographic</b>					
<i>l.</i> Percent population change during 1961-71	32.1	28.6	50.7	23.5	54.8
<i>m.</i> Sex Ratio (Males per 100 female population)	111.3	109.4	113.3	106.3	115.5
<i>n.</i> Population Density (per sq. km)*	3614	2423	2578	3172	8300

\*The density is calculated on the basis of actual area under inhabitation in these villages (i.e., it excludes the area under cultivation and fallow land from the total area of the village.

Source : Same as Table 1.

and services, and have recorded a more rapid population growth during the last decade as compared to the villages where bus facilities are available only during the fair seasons. The average household size, the proportion of workers in the agriculture and allied occupations were lower in the former villages as compared to the latter group of villages.

The impact of accessibility to the train facilities on the population characteristics of these surrounding villages may also be observed from the same table. It is evident that, excepting social characteristics i.e., literacy, dependency, average household size etc., all population characteristics were greatly influenced by their access to train facilities; for example, the percentage of male workers engaged in the non-agricultural sector was highest (around 50 percent only), the percent population change during the last decade was the most rapid and sex ratio and population density were significantly higher in the villages with railway connections as compared to the other villages in the vicinity of Ahmedabad.

## **Summary and Conclusion**

The foregoing analysis of the impact of growing metropolis on the surrounding villages was attempted by comparing the extent of availability of basic civic and other amenities as well as by studying the variations in the socio-economic and demographic characteristics of the villages which were located within a distance of  $\leq 20$  km from Ahmedabad city on the one hand and the entire villages of the state on the other hand. In group of villages, situated in the peripheral region of Ahmedabad, the tendency of population concentration was relatively higher than the entire villages of the state; with respect to the availability of the basic civic and other amenities, the former villages were comparatively better-off. However, in regard to the availability of certain advanced medical facilities such, as health centres and family planning centres, their position was as good as that of the rest of the State's rural population. While the proportion of villages connected by pucca roads is almost equal for the two groups of villages, the availability of bus, train, post and telegraph facilities, and power supply is better in the villages adjacent to the city.

Socio-cultural and demographic characteristics of these villages carry a greater influence of the proximity of the city than their economic characteristics. Of the economic characteristics, the male labour force participation rate is virtually the same for both groups of villages. However, the proportion of workers engaged in the agricultural, mining, fisheries activities etc., is considerably

lower, and that of those in the manufacturing, trade, commerce, transport and other services is consistently higher for villages close to the city.

Among the villages close to the city, those connected by pucca roads, those enjoying bus facility throughout the year and having access to train facilities have a higher socio-economic status, and the changes in their demographic characteristics are more rapid than the corresponding changes for villages which are connected only by kachha roads, which have bus facilities only during fair season and have no access to the train facilities.

Thus, it may be concluded that, the villages situated within a periphery of < 20 km from the Ahmedabad city are significantly influenced by the proximate presence of a growing metropolis. Further, the process of sub-urbanization is much faster in case of those of these villages, which have access to train facilities. Similarly, villages connected by pucca roads and having bus facilities throughout the year are also better-off in respect of socio-economic attributes and they are experiencing a faster pace of population growth.