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Morphology of Urbanisation in India

Some Results from 1981 Census

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The Provisional Population Totals of the 1981 Census reveal a marked acceleration in the pace of urbanisation in India during the decade 1971-81. This paper seeks to place this development in its proper perspective, both in relation to past trends in India as well as in relation to the urbanisation experience of other developing countries. Further understanding of the emerging pattern of urbanisation is sought by the disaggregation of trends upto the state and sub-regional level.

It is evident that there has been a marked acceleration in the rate of urban growth in India according to all conventional measurements but that it is still slow as compared with the rest of the world. It is striking that India exhibits a very stable settlement structure such that much of the urban growth that has occurred has been because of the accretion to existing towns and settlements and only marginally because of the emergence of new towns. As a result, the proportion of urban population residing in towns above a certain population cut-off point continues to increase, but there is little evidence of correlation between city size and rates of population growth.

Examination of regional and state level data are quite illuminating. The relatively poorer states have urbanised faster than the old industrially advanced states like West Bengal, Tamilnadu and Maharashtra. There are diversities within the large poor states such as UP, Bihar and Madhya Pradesh. The sub-regions with heavy industrial investments such as southern Bihar and eastern Madhya Pradesh show very high urban growth rates and correspondingly low rural growth rates. Agriculturally stagnating regions like eastern UP and northern Bihar in the Northern Gangetic Plain also show high rates of urban growth but along with relatively high rural growth rates as well. Agriculturally prosperous regions like Punjab, Haryana and Western UP exhibit marked declines in rural population growth rates along with an acceleration in urban growth. Hence the phenomenon of overall acceleration in urban growth in India has rather diverse causes which have to be understood at the regional level.

I

Problems of Interpretation

THE provisional population totals of the 1981 census reveal a significant acceleration in the speed of urbanisation in the country. This is true whether comparison is made with the historical record since the beginning of this century, or with what was expected as recently as in 1979.¹ The Sixth Five Year Plan projected the level of urban population to be about 148 million in 1981 and the level of urbanisation to be 22.04 per cent. In fact, the 1981 census shows that the level is about 156 million (but this number excludes Jammu and Kashmir and Assam not enumerated at the time of publication of the census results).

This paper attempts to map out the components of this unexpected urban

growth. Has it occurred in certain regions more than in others? Has it occurred in large cities more than in smaller towns? Is it merely because of classification differences? Once the morphology of the growth that has occurred is clear, better attempts may be made at understanding the causes of the emerging pattern.

Table 1 gives the record since 1901.² The facts are essentially familiar. India has had a relatively slow but stable rate of growth in its urban population since about 1921, during which the level of urbanisation has slowly increased from about 11.3 per cent of total population to about 23.7 per cent now. During the same time, however, because of overall increases in population, the population residing in urban areas has increased almost six-fold in absolute numbers. In the last decade, in particular, the increase

has been particularly large: of about 50 million people. The increase itself is larger than the total urban population of most countries³ and the total urban population of India in 1981 is larger than the urban population of all countries except China, the USSR and the USA. Indeed, by 1985, India's urban population is likely to surpass those of both the US and the USSR (each about 170 million people). Hence, even though India's level of urbanisation continues to be low and its rate of growth is also not high by contemporary world standards, it is important to understand the phenomenon of urbanisation in India.

One of the problems in the interpretation of data related to urbanisation is that the growth of the urban population, as revealed in any census, has three distinct components. First, is the natural growth of population

TABLE 1: GROWTH OF URBAN POPULATION IN INDIA¹ 1901-1981

| Census Year | Number of Towns ² | Total Urban Population (in mn) | Population in Towns above 20,000 (in mn) | Level of Urbanisation ³ | Annual Growth Rate of Total Urban Population (per cent per year) | Annual Growth Rate of Rural Population (per cent per year) | URGD ⁴ (Col 6 - Col 7) | Annual Growth Rate of Population in Towns above 20,000 (per cent per year) |
|-------------|------------------------------|--------------------------------|--|------------------------------------|--|--|-----------------------------------|--|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 1901 | 1834 | 25.6 | 13.5 | 11.0 | — | — | — | — |
| 1911 | 1776 | 25.6 | 13.8 | 10.4 | 0.0 | 0.61 | -0.61 | 0.22 |
| 1921 | 1920 | 27.7 | 15.5 | 11.3 | 0.79 | -0.18 | 0.97 | 1.16 |
| 1931 | 2049 | 33.0 | 19.6 | 12.2 | 1.77 | 0.94 | 0.83 | 2.37 |
| 1941 | 2210 | 43.6 | 28.7 | 14.1 | 2.82 | 1.11 | 1.71 | 3.89 |
| 1951 | 2844 | 61.6 | 43.2 | 17.6 | 3.52 | 0.82 | 2.70 | 4.17 |
| 1961 | 2330 | 77.6 | 61.4 | 18.3 | 2.34 | 1.88 | 0.46 | 3.58 |
| 1971 | 2531 | 107.0 | 89.6 | 20.2 | 3.26 | 1.97 | 1.29 | 3.85 |
| 1981 | 3245 | 156.2 | 134.9 | 23.7 | 3.86 | 1.75 | 2.11 | 4.14 |

Source: Census of India 1981-Provisional Population Total Series I-Paper 2 of 1981.

Notes: 1 Excluding Assam and Jammu & Kashmir.

2 Constituent towns of urban agglomerations are not counted as separate units.

3 Proportion of urban to total population.

4 Urban-Rural Growth Differential.

TABLE 2: DISTRIBUTION AND GROWTH OF URBAN POPULATION BY SIZE CLASSES IN INDIA¹

| Town Classification | Per Cent Population in Size Class ² 1961 | Per Cent Population in Size Class ³ 1971 | Per Cent Population in Size Class ³ 1981 | Growth Rate | |
|-------------------------------------|---|---|---|---------------------------|---------------------------|
| | | | | 1961-71 Per Cent Per Year | 1971-81 Per Cent Per Year |
| Class I 1 lakh + | 50.8 (102) | 56.2 (145) | 60.4 (216) | 4.32 | 4.60 |
| Class II (50,000 to 1,00,000) | 11.0 (129) | 11.2 (178) | 11.6 (270) | 3.49 | 4.22 |
| Class III (20,000 to 50,000) | 17.4 (449) | 16.3 (570) | 14.4 (739) | 2.60 | 2.53 |
| Class IV (10,000 to 20,000) | 13.0 (732) | 11.2 (732) | 9.5 (1048) | 1.74 | 2.18 |
| Class V (5,000 to 10,000) | 7.0 (739) | 4.6 (641) | 3.6 (742) | -1.09 | 1.45 |
| Class VI (Less than 5,000) | 0.8 (179) | 0.5 (150) | 0.5 (230) | -2.18 | 4.86 |
| Total | 100.0 (2330) | 100.0 (2531) | 100.0 (3245) | 3.27 | 3.86 |
| Total Urban Population (in million) | 77.6 | 107.0 | 156.2 | | |

Notes: 1 Excluding Assam and Jammu & Kashmir.

2 Constituent towns of urban agglomerations are not counted as separate units.

3 Figures in brackets are the number of towns in each size class.

Source: Census of India 1981, Provisional Population Totals, Series I-Paper 2 of 1981

already residing in urban areas. Second, is the net rural-urban immigration that takes place. Third, is the reclassification as 'urban areas' of settlements hitherto classified as 'rural areas'. This happens in two ways. Large towns and cities extend their boundaries to include villages. Secondly, with population increases, as large villages grow and acquire 'urban characteristics', they get reclassified as towns. It is important to disaggregate these three components in order to understand the process underlying urbanisation, i.e. the rises in the proportion of population classi-

fied as 'urban'. The Indian census now has a relatively strict definition of places classified as urban areas.

The key ideas underlying the concept 'urban' are: (i) high density of population and (ii) dominance of non-agricultural pursuits. The census combines these two ideas, and settlements are classified as urban areas if either:

(a) they have a municipality, corporation, cantonment board, notified town area committee, etc,

or

(b) they have (i) a minimum population of 5,000 and (ii) a den-

sity of at least 400 people per sq km and (iii) at least 75 per cent of their male labour force in non-agriculture.

The arbitrariness arises as a result of definition (a) since that is subject to administrative as well as political vagaries. Definitional problems⁴ only arise at the margin, but it is important to keep them in mind in the interpretation of data — especially at the regional level.

Urbanisation can be measured in a number of different ways. The first is to examine the changes in the level of urbanisation — i.e. changes in the

TABLE 3: ANNUAL GROWTH RATE OF URBAN POPULATION
BY SIZE TOWN, 1971-1981

| Size Class | Number of Towns 1971 | Total Population ⁷ 1971 (in thousands) | Total Population ⁸ 1981 (in thousands) | Growth Rate* 1971-1981 | |
|------------------------------|----------------------|---|---|------------------------|----------------------|
| | | | | Per Cent over Year | Per Cent over Decade |
| Class I (1 lakh and above) | 145 ¹ | 60,122 | 85,801 | 3.62 | 42.7 |
| Class II (50,000 to 100,000) | 178 ² | 12,030 | 16,874 | 3.44 | 40.3 |
| Class III (20,000 to 50,000) | 560 ³ | 17,170 | 23,712 | 3.28 | 38.1 |
| Class IV (10,000 to 28,000) | 818 ⁴ | 11,656 | 16,107 | 3.29 | 38.2 |
| Class V | 594 ⁵ | 4,300 | 6,264 | 3.83 | 45.6 |
| Total | 2295 | 105,278 | 148,758 | 3.52 | 41.3 |

- Notes: 1 Excluding Srinagar Gauhati, Jammu not yet reported (Total 1971 population 0.78 million).
2 Excluding Dibrugarh, Jorhat, Nowgong, Tinsukia and Silchar not yet reported (Total 1971 population 0:32 million).
3 Excluding 22 towns 9 in Assam, 3 in Jammu & Kashmir, 15 in Kerala and 11 in Punjab. (Total 1971 population 0.63 million).
4 Excluding 56 towns, 24 in Assam, 3 in Jammu & Kashmir, 15 in Kerala, 5 in Tamil Nadu, 3 in Karnataka, 3 in Maharashtra and 1 each in Haryana, Bihar and Andhra Pradesh.
5 Excluding 84 towns, 25 in Assam, 14 in Jammu & Kashmir, 7 in Kerala, 6 in Gujarat, 4 in Maharashtra, 3 in West Bengal, 6 in Tamil Nadu, 3 in Madhya Pradesh, 3 in Karnataka, 2 in Uttar Pradesh and 1 each in Andhra Pradesh, Orissa, Punjab and Haryana.
6 The Growth rates are calculated by comparing the total population of towns in each size class according to their classification in the 1971 census, as compared with the total population in the 1981 census. For example the growth rate of 3.62 per cent per year for Class I towns in 1971 refers to the growth between 1971 and 1981 of the 145 towns classified as class I in 1971.
7 Government of India : Census of India General Population Tables 1971—Series I, Part II New Delhi, 1975.
8 Government of India : Census of India, Provisional Population Tables, Paper 2 of 1981, New Delhi, 1981.

proportion of population living in urban areas. A second measure is the 'urban-rural growth differential' (URGD). This is merely the difference between the rates of annual population growth between urban and rural areas. Since urban and rural natural population growth rates are not very different now, this measure gives a good sense of the magnitude of the rural-urban transformation that is taking place. A third measure of urbanisation is the share of net migration in the total growth in urban population. This, of course, is a direct measure of the transfer of population from rural to urban areas. The fourth measure is the growth of urban population itself. This paper utilises the first, second and fourth measures to illuminate the process of urbanisation that is taking place. The third measure could not be computed because those data are not yet available for 1981.

A problem generic in any interpre-

tation of urbanisation trends is that growth rates of urban population are usually computed between two quantities that have somewhat different bases. To illustrate: the urban population of India in 1971 resided in 2,531 towns (see Table 1) while in 1981 it resided in 3,245 towns. Thus the base for 1981 is different from that in 1971. Similarly, when the growth of big cities is computed, it often includes the addition due to extension of boundaries. In this paper, we attempt to distinguish increases in urban population as a result of population increases in already existing towns and that which result from additions of new towns or extensions of boundaries. This is done by computing growth rates excluding towns newly classified as such. Similarly, in computing growth rates of cities, city size is kept constant — either within the earlier boundaries or within the new boundaries. This information is not available yet for 1981, so only some approximations can be made.

II

Urbanisation Record since 1931

It must be recognised that, despite the recent acceleration in the rate of growth of urbanisation in India, it is still one of the slower in the world. Of 124 countries tabulated, the level of urbanisation (23.7 per cent) in India in 1981 is 91st in rank — i.e., only 33 countries have levels of urbanisation lower than ours.⁵ Of these, 27 are countries in the low income group with per capita incomes less than about \$ 400. The urban-rural growth differential in India for 1971-81 was about 2.1 per cent, which places India at about the 97th rank in 124 countries.⁶ In terms of the rate of growth of urban population, India is placed about 70 to 75th in rank. Of the 50 odd countries which have lower rates of urban population growth, about 30 are developed industrialised countries, where the levels of urbanisation are so high and fertility so low that urban and total population growth rates are both very low. Another 15 are what might be termed 'high-middle-income' countries with annual per capita income higher than \$ 1,500. India is one of the 5-10 slowest urbanising countries.

A glance at the different indices given in Table 1 indicates that the pace of urbanisation accelerated regularly from the turn of the century until about 1951. It then decreased in the 1951 to 1961 decade. The latest census shows an acceleration once again. Although the picture revealed by the different measures is broadly similar, there are some differences between the measures that are worthy of note. Because of the large variation in the rate of growth of the rural population between the decades, the URGD measure (column 8) also shows large variations between decades. According to this measure, the pace of urbanisation was higher in the 1941 to 1951 decade than in all the others. The acceleration in urbanisation that has occurred in the past decade is also brought out much more sharply by this measure: 2.11 for 1971-81, as compared with 1.29 in 1961-71, and 0.46 in 1951-1961.

The slowing down of urbanisation during 1951-61 has sometimes been explained in terms of the declassification of about 800 towns in 1961 as a result of a stricter application of the criterion for urban places.⁷ Indeed, it is only since the 1961 census that the definition of urban areas has been systematised and made uniform across

TABLE 4: PATTERN OF GROWTH OF CLASS I CITIES, 1961-1981

| Category | 1961-1971 ¹ | | | 1971- 1981 ² | | | | |
|------------------|------------------------|------------|------------|-------------------------|----------------------|------------|------------|-----------------------|
| | Number of Towns 1961 | Population | | Annual Rate of Growth | Number of Towns 1971 | Population | | Annual Rate of Growth |
| | | 1961 | 1971 (000) | | | 1971 | 1981 (000) | |
| 4 million +1 | 2 ^a | 9,887 | 13,001 | 2.82 | 2 ^a | 13,001 | 17,392 | 2.95 |
| 1-4 million | 5 ⁴ | 7,983 | 12,006 | 4.14 | 7 ^b | 14,417 | 21,318 | 3.99 |
| 1/2-1 million | 5 ⁵ | 3,616 | 4,787 | 2.82 | 10 ⁷ | 6,679 | 8,919 | 2.93 |
| 250,000-500,000 | 21 | 7,378 | 10,256 | 3.35 | 33 | 12,022 | 17,858 | 4.04 |
| 100,000-2,50,000 | 71 | 10,772 | 15,490 | 3.71 | 93 | 14,003 | 20,314 | 3.79 |
| Total | 104 | 39,636 | 55,540 | 3.43 | 145 | 60,122 | 85,801 | 3.62 |

- Notes: 1 Data for individual towns for 1961-71 taken from Ashish Bose (1978) pp 509-511.
 2 Data from Government of India, Census of India 1981—Provisional Population Tables Paper 2 of 1981, Government of India, Census of India, 1971, Series I Part II A (I). General Population Tables, New Delhi, 1975.
 3 Bombay and Calcutta.
 4 Delhi, Madras, Hyderabad, Ahmedabad, Bangalore.
 5 Kanpur, Poona, Nagpur, Lucknow, Agra.
 6 Delhi, Madras, Hyderabad, Ahmedabad, Bangalore, Kanpur, Poona.
 7 Nagpur, Lucknow, Coimbatore, Madurai, Jailpur, Agra, Varanasi, Indore, Jabalpur, Allahabad.

all states. Moreover, as we have already mentioned, the classification itself has an element of arbitrariness and is subject to administrative and political pressures.

This problem would be particularly severe in the classification of towns in the lower end of the scale, since at this level the distinction between village and town would necessarily involve judgment and discretion even in applying the more rigorous definition of urbanisation.⁸ Since the urban character of bigger towns is more easily recognisable, classification problems are not likely to be as important for them. We have, therefore, recomputed the rate of growth of urban population for a more restrictive definition of urban areas as towns over 20,000 population (that is Class I, II and III towns) in column 9 of Table 1. The picture is again broadly similar to that of the usual definition, except that the rates of change are somewhat higher. Two points stand out. First, the deceleration in the 1951-61 decade remains; it was not a purely declassification problem. It appears that there must have been real deceleration in the pace of urbanisation. Second, the rate of change in the 1931 and 1941 period was similar to that in 1961-71 and that in 1941-51 to 1971-81. It is reassuring to observe that the broad pattern of change is not altered drastically by adopting a different definition.

Another feature which stands out from Table 1 is the very stable structure of settlements. While total urban population increased six-fold between 1901 and 1981, the number of settlements increased by only 80 per cent. Thus, most of the growth was because of the enlargement of existing

towns at every level, and not nearly because of the addition of new towns. This implies that the majority of settlements now classified as towns have exhibited urban characteristics for a very long time. Keeping in mind the very large number of villages at the border line it must be remarked that it is only a very small number of them which have 'graduated' into town status.

The majority of regions in India have had settled cultivation for a very long time. The spatial distribution and number of settlements therefore reflects this long history. Furthermore the total population was also quite stable until well into this century. It is only in the last 50 years that the total population of the country has grown at significant rates. Hence, the majority of settlements had remained the same size for long periods of time until recently. The function of most small towns is essentially that of serving the rural surroundings as market and service centres. Thus their number and spatial distribution reflect the magnitude of demand for their services from the surrounding areas. There is then a hierarchy of settlements in each region and sub-region, and it appears that this hierarchy has remained stable for a long time. Urban growth that then takes place is largely by accretion to existing towns rather than by emergence of new towns. In areas where the distribution of existing towns is sparse, a large number of new towns can be expected to appear as income and population growth takes place.

With such a stable structure of the settlement system, it would be expected that, with overall increases in population, towns of all sizes would

continue to grow and move up in size. The entry of new towns being limited, the proportion of the urban population residing in large-size towns above any population cut-off point will then tend to increase continuously. As shown in Table 1, the proportion of total urban population in towns in class III and above has increased steadily from about 53 to 86 per cent between 1901 and 1981. By the same token, the proportion in class I cities has continued to increase. This fact has often been used to indicate the allegedly increasing dysfunctional or lopsided nature of the size distribution of urban areas. In reality, the increasing proportion of the urban population in larger cities is merely a result of progressive accretion to existing settlements of all sizes which are well spread out spatially. There is then less need for the emergence of entirely new settlements.

III

Pattern of Growth of Towns and Cities

SIZE DISTRIBUTION OF TOWNS AND CITIES

There is a widespread erroneous belief that large towns and cities have been growing much faster than smaller cities and towns in India and that the latter have suffered and even declined as a result. This is simply not true. What is true is, as mentioned above, that the proportion of total urban population which lives in cities and towns above any cut-off point continues to increase because of the relatively stable structure of the Indian settlements. Thus most of the urban growth takes place by accretion to existing towns and only a small

TABLE 5: FREQUENCY DISTRIBUTION OF ANNUAL GROWTH RATES OF TOWNS AND CITIES BETWEEN 1971 AND 1981

| Annual Rate of Growth | Class I % | Class II % | Class III % | Class IV % | Class V % | All Classes % |
|---------------------------------------|--------------|---------------|----------------|---------------|--------------|------------------|
| Less than 1% | — | 3 | 7 | 7 | 8 | 6 |
| 1 to 2% | 7 | 15 | 14 | 19 | 21 | 17 |
| 2 to 3% | 30 | 33 | 33 | 32 | 32 | 32 |
| 3 to 4% | 30 | 25 | 23 | 23 | 21 | 23 |
| 4 to 5% | 19 | 16 | 13 | 11 | 7 | 11 |
| 5 to 7% | 11 | 7 | 8 | 5 | 6 | 7 |
| 7% and above | 3 | 2 | 3 | 3 | 5 | 3 |
| Total | 100 | 100 | 100 | 100 | 100 | 100 |
| Total number of towns in size classes | 145 | 178 | 560 | 818 | 594 | 2295 |

- Notes: 1 Class according to 1971 census classification.
 2 For details on towns omitted from the 1971 census list because of non-availability of data in 1981. The number of towns omitted by size classes are: class I-3 cities, class II-3 cities, class II-5 towns, class III-22 towns, class IV-56 towns, class V-84 towns.
 3 Constituent towns of urban agglomerations are not counted as separated units.

proportion by the reclassification of villages into towns in general, although there is naturally a great variety of growth experience between cities and regions. The belief about faster growth of larger cities persists, because tabulations are usually based not on individual cities but on size classes.

Table 2 is an example of the kind of table that is usually used to show that larger cities are growing faster than smaller towns. It may be observed that the number of cities in each size class changes between censuses. Naturally, in the highest size class (class I cities), no cities devolve out of it while many graduate into it. Hence an illusion is created that cities in the highest size class are growing very fast. Thus, in comparing growth rates of any size class of cities across decades we are in effect comparing non-comparable entities. For example, the growth rate computed for class I cities is between the population of 145 cities in 1971 and the population of 216 cities in 1981. It will then naturally be high. For each lower size classes it is true some towns graduate into them and some devolve out into the next higher class. But the new additions to the lower size classes are at the bottom of the population range, and hence add much less to the class than is lost by the graduation of towns to upper size classes. Over a long period of time, there is also the phenomenon that all the fast-growing towns continue to graduate into the higher size classes, while only the slow growing ones remain behind. Thus the use of such tables gives the illusion that larger towns and cities

are growing much faster than the smaller ones.

Table 3 gives the tabulation that should be used in comparing the growth experience of different sized cities and towns. Table 3 takes towns according to their classification in 1971, and computes growth rates by comparing the total population of towns in each class in 1971, with the total population of the same towns in 1981, irrespective of their classification in the 1981 census. (All towns in Assam and Jammu and Kashmir have had to be excluded from these tabulations since they have not been reported yet.)

In the lower size classes, particularly classes, IV and V, there are a number of towns that could not be traced in the 1981-census: 56 in class IV and 84 in class V. Of 56 in class IV, 27 were accounted for by Assam and Jammu and Kashmir and 7 in Kerala. There seems to have been a large-scale reclassification of towns in Kerala so that these missing towns are either declassified or amalgamated into larger units. There are no details available on this at present. Since the total population of the missing class IV towns was about 3 per cent of the ones tabulated and for class V about 7 per cent, their non-inclusion would not alter the results appreciably.

Table 3 gives the results for the 1971-81 experience and it is clear that the picture emerging is quite different from that in Table 2. While the class I cities have grown somewhat faster than the smaller towns, the differences are not very large in general. Moreover, class V towns show the highest rate of growth on average. Hence it is clear that no

general statement can be made on the growth trends of different sized towns and cities. Similar results were found in an earlier study by M K Jain (1977), which showed that there was no appreciable difference between the growth rates of different size cities between 1951 and 1961 and between 1961 and 1971. There has, however, been an acceleration in the overall rate of growth of population in each size class between each census since 1951.

Since about 60 per cent of the total urban population now resides in class I cities, it is useful to disaggregate this class further. Table 4 gives the results for 1961-71 and 1971-81. Once again, there is no striking pattern of growth according to the disaggregated size classes. It cannot be said that the metropolitan cities (million-plus cities) have been growing much faster than the smaller cities, nor *vice versa*. Indeed, between 1971 and 1981, the fastest growth was recorded by the group of 33 cities in the 250,000 to 500,000 population range. It must be concluded that there are no startling differences between the rates of growth between small and large towns and between small cities and metropolitan cities. Moreover, it is of interest that the share of million-plus cities in the total population of class I cities has not increased appreciably since 1951. The proportions have been

| | |
|------|---------------|
| 1951 | 42.7 per cent |
| 1961 | 45.3 per cent |
| 1971 | 45.6 per cent |
| 1981 | 44.6 per cent |

This is despite the fact that the number of million-plus cities has increased progressively from five in 1951 to 12 now. It is, therefore, incorrect to say that the Indian settlement structure is becoming top heavy: in particular that metropolitan cities are growing much faster than others. These results are not very different for the world as a whole. The share of million-plus cities in all cities over 100,000 population was about 51 per cent in 1975 (Renaud, 1979, p 28). The Indian settlement structure is, therefore, better distributed. Preston (1979) tabulated the growth pattern of all 100,000-plus cities for the world as a whole and classified by different regions in the world.⁹ The overall pattern observed was a U-shaped pattern, indicating that cities between 100,000 and 500,000 and those above 4 million grew fast, while those in between grew somewhat more slowly.

TABLE 6: GROWTH OF LARGE CITIES AND THEIR HINTERLAND¹

| City | Population (1000) | | Annual Growth Rates (% Per Year) | | | |
|-----------|-------------------|--------------------|----------------------------------|---------|---------|------------|
| | City ² | Hinterland 1981 | City | | | Hinterland |
| | | | 1951-61 | 1961-71 | 1971-81 | |
| Calcutta | 9165 | 1377 | 2.26 | 2.05 | 2.69 | 3.04 |
| Bombay | 8277 | 1273 | 3.42 | 3.70 | 3.26 | 5.09 |
| Delhi | 5713 | 2073 | 5.08 | 4.45 | 4.59 | 5.83 |
| Madras | 4276 | 972 | 2.33 | 5.01 | 3.04 | 2.93 |
| Bangalore | 2913 | 1127 | 4.42 | 3.27 | 5.82 | 3.40 |
| Hyderabad | 2528 | 642 | 1.03 | 3.71 | 3.42 | 5.08 |

Notes: (1) The hinterland for each city is taken as all towns with 20,000 or more population in 1971 within roughly a 100 km radius of the city measure as straight line distance.

(2) 'City' refers to urban agglomeration.

Source: (1) Census of India 1981 'Provisional Population Totals', Series I-Paper 2, 1981-New Delhi, 1981.

(2) Census of India 1971 'General Population Tables', 1971 Series I Part II A (i)—New Delhi, 1975.

One more method of analysing the differential growth pattern of different sized cities is to observe the frequency distribution of towns and cities according to ranges of growth rate. Table 5 tabulates this frequency distribution. It may be noted that there is a higher proportion of class I cities in the higher growth ranges, but that the distributions of towns in the other size classes are remarkably similar to one another. Although the differences between the distributions of the growth rates of towns in classes II, III, IV and V are not statistically significant, there is a slight tendency for a larger proportion of small towns to be slow-growing. In fact, the variances of the Class IV and Class V, towns are somewhat higher. Thus, although on average there are no significant differences between the growth of large towns and cities, the frequency distributions reveal a slight tendency for larger towns and cities to grow somewhat faster. This is consistent with the idea of a stable settlement structure suggested earlier. The towns which are now large (class I and class II) are essentially those which might be called 'success stories' over the ages. It is those small towns which grew fast over sustained periods of time that are now large towns and cities. Hence it is likely that it is the larger towns which have a comparative advantage in the settlement structure. The sample of towns which are large is in that sense a biased sample of successes among all towns. 'Successes' keep on moving up while it is only 'failures' and new 'successes' which are found in the smaller size classes. At the lowest end, towns are more unstable and occupy a less important place, in the settlement struc-

ture. Thus, the variance of growth rates is much higher at the low end of the settlement scale.

GROWTH EXPERIENCE OF THE SIX LARGEST CITIES

Since particular attention is usually given to the largest metropolitan cities in the urbanisation process, it is of interest to examine the growth experience of the six largest cities (given in Table 6). As with the problems of classification of the urban population as a whole, the analysis of cities also suffers from similar problems. The boundaries of large cities are characteristically extended as they grow. Thus the population in 1981 may be for an area much larger than the area covered in 1971. The correct growth rate would be for the population in the same area for both the years — either 1971 or 1981. These details, however, are available only much later when the final population totals are published. Even then it is not easy to disentangle these definitional problems. The actual error caused is often not much because the newly urbanised area is usually almost uninhabited in the previous census year. Errors are large when boundaries are shifted to include existing towns on the periphery. Thus these growth rates have to be interpreted with caution.

The main feature of Table 6 is that the experience has been a varied one and that no generalisation can be made for these cities taken as a group. It is only Delhi that has grown with a consistently high rate of growth over the three decades. Despite the dislocations caused in Bengal at the time of partition and later in 1971 because of the Bangladesh war, the rate of growth of Calcutta has been consist-

ently low — about at par with the growth rate of the population of the country as a whole, i.e., not very different from the natural population growth rate, specially when definitional adjustments are accounted for. In 1981, in particular, it appears that about 20 towns which were listed independently in 1971 have been included in the urban agglomeration of Calcutta. Their total population was about 400,000 in 1971, and about 500,000 in 1981. Thus with the 1971 definition, the corrected 1981 population for Calcutta would be about 8.6 million. The growth rate would be just over 2 per cent a year — a rate similar to the 1961 to 1971 growth rate. Alternatively, if the 1981 definition is taken, the 1971 population would be about 7.45 million (7.03 million according to 1971 definition) and the growth rate would be about 2.1 per cent per year. In any case, the speed-up in Calcutta's growth in the past decade is illusory, caused by definitional changes. It was not possible to make similar adjustments for the other cities with the data at hand.

Hence, as compared with the previous decade, among the six largest cities in the country, it is only Bangalore which has grown at a rate significantly higher than in the previous decade. The 5.82 per cent a year rate of growth is, indeed, extremely high by any standards, and it appears that boundary changes would explain only a small part of this high rate. On the whole then, it would be wrong to conclude that the largest metropolitan cities are growing atypically fast. Given the national population growth of about 2.2 per cent a year, it is only Delhi and Bangalore which would appear to be growing because of atypically high levels of migration.

One manifestation of the concern with city bigness has been repeated suggestions for greater attention to the small and medium towns in the immediate hinterland of these cities. In Delhi, in particular, a 'National Capital Region' has been identified. The suggestion that is made is that higher public investments on these surrounding towns would help them to attract migrants who would otherwise go to the metropolitan city itself. In order to assess the practicability of these suggestions, Table 6 also shows the growth experiences of the hinterlands of these six cities. The hinterlands of these cities are defined as an area within a roughly 100 km radius of

the city. It is found that it is only in the case of Bangalore that the rate of growth of the urban population in the hinterland was significantly lower than that of the city itself. The rates of growth of the hinterlands of Bombay, Delhi and Hyderabad are very high — all over 5 per cent a year, with Delhi being almost 6 per cent. Any further acceleration of these surrounding towns would probably be difficult.

One other feature of this issue that needs consideration is the difference between the absolute sizes of the population in the hinterland as compared with the city. The ratio varies from about 15 per cent for Calcutta and Bombay to about 40 per cent for Bangalore. It is about 35 per cent for Delhi. Hence, in the case of Delhi, if it is desired to reduce the rate of growth of population from 4.6 per cent to about 3.6 per cent, by diverting migrants to the surrounding towns, their rate of growth would have to increase on average from about 5.8 per cent in a year to an astronomical 8.5 per cent a year. Thus it would be reasonable to conclude that it is unlikely that the growth problems of big cities, such as they are, would be solved by a diversion of interest to their urban hinterlands.

In summary, it should be clear from all the evidence presented above that the record of growth of different size cities has been very stable over the different decades. Towns and cities of all sizes have been growing at similar rates since at least 1951, and there are no startling differences between large and small towns and cities. The main difference between 1971 and 1981 is that there has been a significant acceleration in the growth of all towns and cities. But the overall settlement pattern continues to be stable and well distributed.

IV

Regional Pattern of Urban Growth

STATEWISE PATTERN OF URBAN GROWTH

India being such a large country, with the larger states having populations greater than most countries in the world, it is necessary to disaggregate the trends in urbanisation to at least the state level. It should be said at the outset that the variation in experience among states is surprisingly large and one that is not readily explicable. A good understanding of the process of urbanisation in India

requires a much more systematic study at the regional level. Such a study would relate variables such as changes in agricultural and industrial productivity to the conditions in the urban and rural labour markets and product markets, alongwith a consideration of demographic variables. Only then can a structural understanding of the process be achieved. This paper merely sets out the trends as revealed by the Census, but it does attempt to offer some interpretations which can only be verified by a more systematic study.

As was pointed out earlier, Kerala poses particular problems in the definition of urban areas. Its overall population density was about 550 people per sq km in 1971, the rural density itself being about 480. Further, about 80 per cent of the rural population lived in villages of over 10,000 population and another 15 per cent in villages in the range of 5,000 to 10,000 population. Hence, almost all the settlements would qualify for classification as urban settlements were it not for the additional requirement of 75 per cent of the male labour force being in non-agriculture. With such high overall densities, it is also not easy to decide on the boundaries of settlements. It is presumably because of these problems that there appear to have been major definitional changes in the 1981 census. Many towns in the classes IV, V and VI range from the 1971 census do not appear in this census (for details, see Appendix) and many new towns have been added. Kerala has, therefore, been omitted in this state-wise analysis because of all these definitional problems.

Columns 1-3 of Table 7 present the growth rates of urban population in states from 1951-81. As is evident from column 3, all the relatively poorer states (Andhra, Bihar, Madhya Pradesh, Orissa and Uttar Pradesh) have experienced rapid urban growth during 1971-81, while only Haryana among the richer states has experienced comparable growth. In fact, the old industrially developed states of West Bengal, Tamil Nadu, and Maharashtra, have the lowest rates. Naturally, absolute increases in urban population in these states continue to be large because of higher initial levels.

If we compare the trends in urban growth during the decades 1961-71 and 1971-81, we observe an acceleration in the rate of urban population growth in almost all the states. In

contrast, the rate of growth of rural population has declined in most states during this period. These declines have been significant in many cases (see Appendix Table A-1). Only in Tamil Nadu has there been an appreciable decline in the rate of urbanisation during the period.

In order to have a more complete picture of the urban growth experience of different states over the three decades, from 1951 to 1981, states have been grouped into four categories in Table 8. The variation in the experience of the different groups of states, referred to earlier is, immediately apparent. Thus, even in the richer states, two patterns that are diametrically opposite are revealed. Thus, in the old industrially and commercially developed states of Maharashtra and Gujarat, the urban growth rate increased initially but tapered off thereafter while in the agriculturally progressive developed states of Punjab and Haryana the opposite was experienced. Clearly different forces are at work in these states, and more detailed analysis would be required before further generalisations could be made.

Columns 4-6 of Table 7 give comparable growth rates for urban population including towns in Class I, II and III only. In column 3 of Table 8, the states have been categorised in a similar way but with the new definition. While most of the observations made earlier are also valid with the new definition, there are some changes that appear significant. The changes between decades are much less with this definition — presumably because the definition is more consistent between the states. The acceleration between decades is also less pronounced — although the rate of growth for each state is much higher. This result extends the idea that the Indian settlement structure is of long standing and is also stable at the state level.

Thus, the fact that the urbanisation rate for class III towns and above is higher than for all towns taken together, again points to the fact that most urbanisation is by accretion to existing towns of all sizes and there are only small additions of new towns at the lower end of the range. This now appears to be true at the state level as well. It may, however, be expected that in states such as Orissa, UP (particularly Eastern UP) and Madhya Pradesh (particularly Eastern MP), where initial urbanisation levels were low and towns located sparsely, there would be

TABLE 7: STATEWISE¹ GROWTH OF URBAN POPULATION 1951-1981

| State | (per cent per year) | | | | | |
|--------------------|---------------------|--------------|--------------|--------------------------|--------------|--------------|
| | All Towns | | | Town's above 20,000 Only | | |
| | 1951-61 1 | 1961-71 2 | 1971-81 3 | 1951-61 4 | 1961-71 5 | 1971-81 6 |
| Andhra | 1.5 | 2.9 | 4.0 | 3.5 | 3.9 | 5.0 |
| Bihar | 4.1 | 3.7 | 4.4 | 4.8 | 4.1 | 5.4 |
| Gujarat | 1.8 | 3.5 | 3.5 | 3.5 | 3.6 | 4.2 |
| Haryana | 3.1 | 3.1 | 4.8 | 4.4 | 3.9 | 5.2 |
| Karnataka | 1.7 | 3.1 | 4.2 | 3.5 | 3.8 | 5.3 |
| Madhya Pradesh | 4.0 | 3.9 | 4.6 | 4.6 | 5.0 | 4.8 |
| Maharashtra | 2.0 | 3.5 | 3.4 | 3.6 | 4.0 | 3.8 |
| Orissa | 6.5 | 5.2 | 5.3 | 7.4 | 7.9 | 6.0 |
| Punjab | 2.6 | 2.3 | 3.7 | 3.9 | 2.6 | 4.1 |
| Rajasthan | 1.1 | 3.3 | 4.6 | 2.8 | 4.3 | 5.4 |
| Tamil Nadu | 2.1 | 3.3 | 2.5 | 6.1 | 4.3 | 2.9 |
| Uttar Pradesh | 0.9 | 2.7 | 4.9 | 2.9 | 2.9 | 3.9 |
| West Bengal | 3.1 | 2.5 | 2.8 | 3.3 | 2.7 | 3.1 |
| India ² | 2.33 | 3.26 | 3.85 | 3.59 | 3.85 | 4.18 |

Notes: : (1) Including all states with total population greater than 10 million in 1971 but excluding Kerala and Assam.
(2) Including all States except Assam and Jammu and Kashmir.

greater potential for the emergence of new towns.

It is now generally accepted that disparities among states have widened since independence and especially since the mid-sixties. In particular, disparities in agricultural productivity have become very large since the advent of the green revolution (Mohan, 1974). As a result, the inequality among states in per capita income has also become worse. It is then interesting to find, in this context, that the distribution of population growth rates for rural as well as urban areas has tended to become more uniform between states over the same period. The co-efficient of variation between states of rural population growth rates has declined — from 0.36 for 1951-61 period to 0.12 for 1961-71 and 0.16 for 1971-81. The corresponding co-efficients for urban population growth are 0.31 and 0.20 respectively.¹⁰ Furthermore, the pattern is confirmed if taken back to the 1941-51 decade as well. The co-efficient of variation for rural population growth rates for that decade was about 0.49 and for urban population growth rates about 0.31 again.

What is of great interest is that the variation in urban population growth rates has declined as well in the past decade. It may be somewhat premature to draw strong conclusions from the decline of this one inequality measure — the co-efficient of variation — in one decade after it had been stable for three decades. First, this decline is presumably a result of the lower variation across states in total population growth rates. But it may also be a result of the dispersal of industrialisation

that has taken place among the states — although this is still of small magnitude.

Sekhar (1981) has documented the decline in the index (the Theil Index) of inequality between states in organised industry over the last two decades — whether measured by value-added or employment. It must be emphasised that the changes have been small: as late as in 1976, Maharashtra, West Bengal, Gujarat and Tamil Nadu together accounted for about 55 per cent of all value added and 52 per cent of all employment in the manufacturing (factory) sector. In 1961, by comparison, these four states accounted for as much as 66 per cent of value added and 58 per cent of employment. Given this small change, not much can be made of the decline in the variation in the rate of urbanisation — only that the two results are at least consistent with each other.

Table A-1 on rural population growth rates is of further interest. There have been significant declines in the rate of growth of rural population in the high agricultural productivity states of Haryana and Punjab; but small increases have taken place in the low productivity states of Bihar, Rajasthan and UP (though it must be noted that declines also took place in other states such as Orissa and Madhya Pradesh). Preliminary census results (J N Sinha, 1982) indicate that for the first time since the turn of the century, there may have been a perceptible decline in the proportion of labour force engaged in agriculture — from 69.8 per cent in 1971 to 66.7 per cent in 1981. This is consistent with the decline in the overall rate of rural population growth. In-

creases in agricultural production are now mainly coming from productivity change — only small increases in cropped area can now be recorded. There are, therefore, clear indications that the absorptive capacity of agriculture for continued increases in population and labour force is now declining.

Finally, the level of urbanisation in different states since 1951 according to both definitions in given in Appendix Table A-2. The most industrialised states of Maharashtra, Gujarat and Tamil Nadu are now all over 30 per cent urbanised (according to the usual definition). The industrial stagnation of West Bengal and of Calcutta is reflected in the small increase in the level of urbanisation in that state since 1951. These states then conform more to middle income countries with about \$ 400 per capita income in terms of the level of urbanisation. At the other end of the scale are Orissa (11.8 per cent), Bihar (12.5 per cent), UP (18.0 per cent), Madhya Pradesh (20.3 per cent) and Rajasthan (20.9 per cent). There are only about 10 countries¹¹ in the world at the lowest per capita levels which have levels of urbanisation lower than 12 per cent. Thus, in terms of urbanisation levels, India's regions exhibit patterns spanning the whole range of about 50 countries with annual per capita incomes from about \$ 100 to \$ 400. The variation in levels of urbanisation¹² has, however, declined as measured by the co-efficient of variation, from about 0.45 in 1951, 0.42 in 1961, 0.50 in 1971, to 0.34 in 1981. The acceleration of the least urbanised states along with the deceleration of the most urbanised ones has caused this major change in the last decade.

The problems caused by variation across states in the classification of towns at the low end has already been alluded to a number of times. Table 9 indicates the differences caused by the addition of new towns in the 1981 census. The states which have added a significant number of new towns are essentially Haryana, Madhya Pradesh, Rajasthan, Orissa and UP. Many of these towns in UP should have been classified as such in 1971 (Premi and others /1977). Thus the apparent large acceleration of urbanisation in UP is at least partly illusory — though not entirely so. Taking the same towns as in 1971 (column 5, Table 10), the growth rate did increase from 2.7 per cent in 1961-71 to 3.1 per cent in 1971-81. Similarly, if only towns over 20,000 are considered (columns 5, 6,

TABLE 8: URBAN GROWTH IN STATES DURING 1951-1981

| Category of States 1 | All Towns 2 | Towns of Population above 20,000 Only 3 |
|--|--|---|
| (I) States where the rate of growth of urban population has increased continuously since 1951-61 | Andhra, Karnataka, Rajasthan and Uttar Pradesh | Andhra, Gujarat, Karnataka and Rajasthan |
| (II) States where the rate increased between 1951-61 and 1961-71 but declined or remained constant thereafter | Gujarat, Maharashtra and Tamil Nadu | Madhya Pradesh, Maharashtra and Orissa |
| (III) States where the rate declined or remained constant between 1951-61 and 1961-71 but increased thereafter | Bihar, Haryana, Madhya Pradesh, Orissa, Punjab and West Bengal | Bihar, Haryana, Punjab, Uttar Pradesh and West Bengal |
| (IV) States where the rate of growth of urban population has increased continuously since 1951 | None | Tamil Nadu |

Source: Table 7.

Table 7), the rate increased from 2.9 to 3.9 per cent a year. Similarly, for Haryana, the corrected growth rate of 4.1 per cent is still significantly higher than the 3.1 per cent for 1961-71.

The conclusion on the basis of Table 9, then, is that the definitional problems, of towns in the 1981 census do make a difference to the recorded growth rates of four or five particular states — showing a much larger increase — but do not alter the pattern already discussed from the growth rate of urban population, whether it is according to the usual definition or that for towns above 20,000 population. The population of the added towns, as a proportion of state urban population, was 6 per cent for Haryana, 16 per cent for UP, and 9 per cent for Orissa. At the all-India level, then the difference made by these definitional issues is small. The total population of the towns newly classified as such in only about 5 per cent of the total. For some of these they should have been classified as towns for the first time in this census and to that extent should not be regarded as an error. The 'error' is caused by those towns, mostly in UP which should have been classified as towns in the 1971 census itself.

Table 10 tabulates the urban rural growth differential (URGD) for the states. The speed-up in the urbanisation experience is more evident in this table — since urban population growth rates have increased in general while rural growth rates have declined. Again, it is only Tamil Nadu which shows a decline: There have been significant increases in all other states. The progress over the three decades is quite remarkable. There were as many as five states with negative URGD, i.e. with

rural population growth rates exceeding urban population growth rates, during 1951-61. There were none in 1961-71, but there were four states with URGD, less than 1.0 and only one greater than 2.0. In the past decade, again, there are no states with negative URGD only one with less than 1.0 and as many as 9 with over 2.0. The rural urban transformation in all the states therefore, stands out with much greater clarity by considering URGD.

URBAN GROWTH PATTERN DISAGGREGATED BY GROUPS¹³ OF STATES

All the discussion above has been at the level of individual states. Although an attempt has been made to provide some interpretations of the emerging pattern it is somewhat difficult to do so given the bewildering (though decreasing) variety among states. To probe the pattern more carefully, short of systematic econometric analysis, it is useful to reaggregate the states, but this time into relatively homogenous groups. Thus, the comparatively richer states of Punjab, Haryana, Gujarat and Maharashtra can be grouped together into Group A; Karnataka, Rajasthan, Tamil Nadu and West Bengal as 'middle income' states in Group B and Andhra, Bihar, Madhya Pradesh, Orissa and UP into Group C. Over half (57 per cent) of the country's rural population falls in Group C, but only 38 per cent of the urban population. Table 11 gives the level of urbanisation for the three groups along with their urban and rural population shares. Table 12 gives the annual rates of growth of urban, rural and total population for each group and the URGD as well. From the levels it is once again apparent that

the disparity between the groups has been declining over time: the richer states, however, continue to be more urbanised than the poorer ones by a significant margin. Similarly, the narrowing variation between rural growth rates is also striking from Table 12. What is noticeable is that the overall population growth of the richer states has been higher than that of the others, over all the three decades. The acceleration in the urban population growth of the poor states taken as a group is also more apparent as a feature of the last decade. This is confirmed by the URGD table as well. It appears that urban population growth has been rapid in Group A as well as in Group C.

PATTERN OF URBANISATION BY SUB-REGIONS IN SELECTED STATES

The above analysis indicates that the rate of urbanisation has been most rapid in the poor Group C states. Since most of these states are rather large and with relatively distinct regions, it is useful to disaggregate the pattern by the distinct sub-regions within these states. The National Sample Survey has identified economic sub-regions within states and these have been used by Kundu and Raza (1982) as well in regional analysis. These regions have, therefore, been utilised in this study as well.

The Appendix Tables A-3 and A-4 give the urban and rural populations for these regions, the share of each region in the state, and the levels of urbanisation in 1971 and 1981. Table 13 uses these data to derive growth rates of total population, urban population, rural populations and the URGD. The growth rate for urban

TABLE 9: STATEWISE¹ GROWTH OF URBAN POPULATION EXCLUDING NEW TOWNS² ADDED IN 1981

| State | 1971-1981 | | | | |
|--------------------|----------------------|---------------------------------------|--|---|-----------------------------|
| | Number of Towns 1981 | Number of New Towns ³ 1981 | Total Urban Population Excluding New Towns 1981 ('000) | Annual Growth Rate | |
| | | | | Uncorrec- ted ⁵ (Per Cent Per Year 1971-1981) | Correc- ted ⁶ |
| 1 | 2 | 3 | 4 | 5 | |
| Andhra | 234 | 29(2) | 12,160 | 4.0 | 3.8 |
| Bihar | 179 | 30(4) | 8,374 | 4.4 | 4.1 |
| Gujarat | 220 | 29(2) | 10,389 | 3.5 | 3.4 |
| Haryana | 79 | 17(6) | 2,641 | 4.8 | 4.1 |
| Karnataka | 250 | 34(4) | 10,327 | 4.2 | 3.9 |
| Madhya Pradesh | 303 | 72(6) | 9,956 | 4.6 | 3.9 |
| Maharashtra | 276 | 31(2) | 21,616 | 3.4 | 3.2 |
| Orissa | 103 | 27(9) | 2,836 | 5.3 | 4.4 |
| Punjab | 134 | 28(4) | 4,419 | 3.7 | 3.2 |
| Rajasthan | 195 | 43(7) | 6,612 | 4.6 | 3.8 |
| Tamil Nadu | 245 | 18(1) | 15,774 | 2.5 | 2.5 |
| Uttar Pradesh | 659 | 368(16) | 16,829 | 4.9 | 3.1 |
| West Bengal | 130 | 19(1) | 14,236 | 2.8 | 2.7 |
| India ⁴ | 3007 | 770(5) | 136,169 | 3.81 | 3.35 |

- Notes: 1 All states with 1971 population of 10 million and above.
 2 Number of towns added in 1981, i.e. towns, not classified as such in 1971 (including those classified as towns in an earlier census but not in 1971).
 3 Figures in brackets give the population of new towns as a percentage of total urban population.
 4 Including only the 13 states above.
 5 Rate of growth of total urban population in states.
 6 Rate of growth of urban population in state but excluding new towns in 1981 and excluding 1971 towns not found in 1981 census as detailed in Appendix.

Source: (1) Census of India 1981 Series I, India Paper 2 of 1981.
 (2) Census of India 1971 Series I, India, Part II-A(i) General Population Tables Statement 5, page 185.

TABLE 10: URBAN RURAL GROWTH DIFFERENTIAL (URGD) BY STATES¹ 1951-1981

| State | URGD ² | | |
|--------------------|-------------------|---------|---------|
| | 1951-61 | 1961-71 | 1971-81 |
| Andhra | 0.01 | 1.28 | 2.42 |
| Bihar | 2.43 | 1.93 | 2.55 |
| Gujarat | -0.76 | 1.21 | 1.48 |
| Haryana | 0.12 | 0.31 | 2.80 |
| Karnataka | -0.37 | 1.13 | 2.44 |
| Madhya Pradesh | 2.06 | 1.59 | 2.78 |
| Maharashtra | -0.27 | 1.45 | 1.79 |
| Orissa | 4.87 | 3.19 | 3.91 |
| Punjab | 0.79 | 0.39 | 2.14 |
| Rajasthan | -1.58 | 0.99 | 2.20 |
| Tamil Nadu | 1.25 | 1.79 | 1.28 |
| Uttar Pradesh | -0.70 | 1.03 | 3.08 |
| West Bengal | 0.32 | 0.16 | 0.93 |
| India ³ | 0.48 | 1.29 | 2.11 |

- Notes: 1 Including all states with a population of 10 million or more in 1971 but excluding Kerala and Assam.
 2 Including all states except Assam and Jammu & Kashmir.
 3 Taken as the difference between the growth rate of total urban population (census definition) and rural population growth rates.

Source: Tables 9 and A-1

population excluding the 1981 new towns is also given. These data are utilised to provide interpretation and better understanding of the high rates of urban growth observed in these relatively poor states.

This regional disaggregation is very useful to focus on the regions of

highest urban growth. These are: the Bihar southern region, the Madhya Pradesh eastern region, all the Orissa and the west and south in UP — all with URGD greater than 3.0 of these, southern Bihar (with Ranchi, Dhanbad, Jamshedpur, Bokaro), eastern

Madhya Pradesh (with Durg-Bhilai and Raipur), northern Orissa (with Rourkela, Sambalpur and other new industrial towns), and south-eastern Rajasthan (Kota), are all regions which are receiving very heavy public sector investments in industry and mining. Consequently, the growth rates of rural population are generally very low. Among the others, high urban growth in coastal Orissa is accounted for by the rapid growth of the new capital city of Bhubaneswar and of Cuttack (though slower). Western UP is quite different, in that, it is a region more similar to Punjab and Haryana rather than the rest of UP. It has had low rural population growth (1.60 per cent per year, as has Punjab (1.55 per cent per year), despite quite high overall population growth (2.31 per cent), again similar to Punjab.

Hence, among these fast urbanising regions in these poor states, two distinct phenomena are observed. Rapid urbanisation is taking place either because of major public investments in industry or as a result of agricultural growth. In both cases regional incomes must be rising relatively rapidly, creating demand for urban goods and services. It also seems clear that, given the demand for labour in urban areas, rural urban migration takes place readily in both — prosperous agricultural regions such as western UP, Punjab and Haryana, as well as agriculturally poor regions such as southern Bihar, eastern Madhya Pradesh and northern Orissa. The systematic testing of this conjecture would have to await the availability of the migration data.

In contrast to these relatively dynamic regions, are the particularly poor and generally stagnant regions such as northern and central Bihar and eastern UP, which are geographically contiguous regions accounting for almost 100 million people. The overall rates of population growth as well as those of rural population are quite similar in these regions. The rural population growth rate is quite high — about 2.0 per cent per annum — as compared with the country as a whole. Furthermore, a significant proportion of the urban growth in these regions is because of the reclassification of many villages as towns, as is evident by comparing the data in columns 1 and 2 in Table 13. In eastern UP medium-sized towns (all district headquarters) such as Ballia, Ghazipur, Azamgarh, Deoria, Basti and Sultanpur, have all grown rapidly, whereas the larger

TABLE 11: LEVEL OF URBANISATION BY GROUPS¹ OF STATES

| Group | Level of Urbanisation | | | | Group Share : Urban Population (%) 1981 | Group Share : Rural Population (%) 1981 |
|--|-----------------------|------|------|------|---|---|
| | 1951 | 1961 | 1971 | 1981 | | |
| Group A | 26.3 | 25.8 | 28.0 | 31.7 | 28.0 | 19.0 |
| Group B | 24.7 | 25.2 | 27.2 | 30.3 | 33.7 | 24.4 |
| Group C | 11.7 | 12.3 | 13.9 | 17.5 | 38.3 | 56.7 |
| India ² Population covered (millions) | 18.9 | 19.7 | 21.8 | 25.6 | 100.0 143 | 100.0 455 |

Notes: 1 Group A: Gujarat, Haryana, Punjab, Maharashtra.
Group B: Karnataka, Rajasthan, Tamil Nadu, West Bengal.
Group C: Andhra, Bihar, Madhya Pradesh, Orissa, Uttar Pradesh.
2 Only including above 13 states.

TABLE 12: PATTERN OF URBANISATION BY GROUPS OF STATES, 1951-1981

| Group | Annual Growth Rate of Urban Population(2) | | | Annual Growth Rate of Rural Population | | |
|--------------------|--|---------|---------|---|---------|---------|
| | 1951-61 | 1961-71 | 1971-81 | 1951-61 | 1961-71 | 1971-81 |
| Group A | 2.07 | 3.31 | 3.55 | 2.33 | 2.16 | 1.75 |
| Group B | 2.18 | 3.01 | 3.23 | 1.93 | 1.94 | 1.69 |
| Group C | 2.23 | 3.27 | 4.57 | 1.64 | 1.84 | 1.75 |
| India ³ | 2.33 | 3.26 | 3.85 | 1.89 | 2.00 | 1.75 |
| | URGD | | | Annual Growth Rate of Total Population | | |
| Group A | -0.26 | 1.15 | 1.80 | 2.26 | 2.47 | 2.28 |
| Group B | 0.25 | 1.07 | 1.54 | 1.99 | 2.22 | 2.13 |
| Group C | 0.59 | 1.43 | 2.82 | 1.71 | 2.02 | 2.19 |
| India ³ | 0.48 | 1.29 | 2.11 | 1.93 | 2.20 | 2.23 |

Notes: 1 See note 1 to Table 11.
2 Including population of all towns.
3 Including all States except Assam and Jammu & Kashmir.

cities of Allahabad, Gorakhpur, Varanasi and Faizabad, have all been relatively stagnant. The level of urbanisation is still quite low in these regions: 6 per cent in northern Bihar, 10 per cent in eastern UP, and about 14 per cent in central Bihar (which is dominated by Patna). The relatively high rate of urbanisation in these areas is accompanied by high rates of rural population growth. It seems fairly clear, then, that whatever urbanisation is taking place here is of the 'rural push' variety: the high rural growth also indicates that were opportunities of urban employment available in this region, very high rates of rural urban migration can be expected.

The most significant differences between the 'corrected' and 'uncorrected' urban population growth rates are in UP. The rate of growth of towns excluding new towns is low in all UP regions except the southern region. The largest amount of reclassification of villages into towns took place in the prosperous western UP region.

Among the remaining regions, a few comments need to be made on Rajas-

than. The most striking feature is the very high rate of overall population growth in all the regions. The URGD is low in the west and south: high rates of urban population growth are then mainly due to the high population growth rate rather than the rural urban transformation. The western region has the highest rate of overall population growth of 3.1 per cent. This is very surprising, since this region is probably one of the most inhospitable in the country, and one which is afflicted with repeated droughts. Yet, it shows the highest rate of rural population growth of 2.8 per cent. Part of the explanation lies in the irrigation extended by the Rajasthan canal, but high population growth rates in Rajasthan remain a puzzle and deserve detailed study.

The pattern that has emerged from this regional disaggregation has illuminated further the pattern that was emerging from the state-wise analysis. The next, concluding section, attempts to bring together all these observations in interpreting the urbanisation

experience of the country in the past decade.

V

Urbanisation in India: An Interpretation

The recently published 1981 census results, show a significant acceleration in the rate of growth of urban population in India during the decade 1971-1981, compared to what was observed in the previous two decades. This paper has attempted to describe and document this process of urban growth in some detail. An assessment of past experience has also been made in relation to the most recent trends. Given India's size and diversity, any discussion of urbanisation would be incomplete without a regional perspective. This becomes evident in the discussion of the urbanisation experience of different states and regions. While the paper has emphasised description and documentation of the data, various interpretations have also been offered on the likely determinants of the emerging pattern.

It has sometimes been argued that urbanisation in India has been unusually rapid during the recent years. While the 1981 census does show that the rate of growth of urban population during 1971-81 was significantly higher than that in 1961-71 and earlier, this rate is still slow when compared with the urban growth in most other developing countries. Thus anxieties resulting from a perceived urban explosion are somewhat exaggerated. Yet another fear that has been expressed results from the allegedly increasing dysfunctional or lopsided nature of the size distribution of urban areas. The fact that the proportion of urban population residing in class I cities, has increased continuously is usually cited in support of this contention. One of the important points that emerges from the analysis offered in this paper is that India has had a very stable structure of settlements so that most of the urban growth has been because of the enlargement of existing towns at every level and not so much because of addition of new towns. With such a pattern of growth it would be inevitable for the proportion of urban population in towns above any cut-off point to increase continuously, even if all towns were growing at the same rate.

In other words, the observation that

TABLE 13: PATTERN OF URBANISATION REGIONALLY DISAGGREGATED IN
SELECTED STATES, 1971-81
(Annual Rates of Population Growth per cent per year)

| State and Region ¹ | Urban | | Rural | Total | URGD ⁴ |
|-------------------------------|------------------------|--------------------------|-------|-------|-------------------|
| | Corrected ² | Uncorrected ³ | | | |
| <i>Bihar</i> | | | | | |
| Southern | 4.28 | 4.61 | 1.60 | 2.13 | 3.01 |
| Northern | 3.64 | 4.54 | 2.01 | 2.15 | 2.53 |
| Central | 3.93 | 4.28 | 1.92 | 2.20 | 2.36 |
| <i>Madhya Pradesh</i> | | | | | |
| Eastern | 4.92 | 5.40 | 1.37 | 1.84 | 4.03 |
| Inland Eastern | 3.75 | 4.80 | 1.83 | 2.35 | 3.05 |
| Inland Western | 4.06 | 4.66 | 1.83 | 2.45 | 2.83 |
| Western | 3.20 | 3.64 | 2.19 | 2.53 | 1.45 |
| Northern | 3.61 | 4.82 | 1.92 | 2.45 | 2.90 |
| <i>Orissa</i> | | | | | |
| Coastal | 4.07 | 5.14 | 1.55 | 1.91 | 3.59 |
| Southern | 3.86 | 5.01 | 1.38 | 1.65 | 3.63 |
| Northern | 4.94 | 5.76 | 1.29 | 1.77 | 4.47 |
| <i>Rajasthan</i> | | | | | |
| Western | 3.58 | 4.16 | 2.84 | 3.11 | 1.32 |
| N Eastern | 3.92 | 4.81 | 2.19 | 2.73 | 2.62 |
| Southern | 3.54 | 4.21 | 2.52 | 2.71 | 1.69 |
| S Eastern | 4.00 | 5.39 | 2.20 | 2.76 | 3.19 |
| <i>Uttar Pradesh</i> | | | | | |
| Himalayan | 2.96 | 4.68 | 1.88 | 2.34 | 2.80 |
| Western | 2.58 | 5.05 | 1.60 | 2.31 | 3.45 |
| Central | 3.10 | 4.41 | 1.77 | 2.27 | 2.64 |
| Eastern | 2.97 | 4.94 | 2.01 | 2.28 | 2.83 |
| Southern | 3.52 | 5.57 | 1.89 | 2.40 | 3.68 |

- Notes: 1 See Appendix for details on regions.
2 Annual growth rate calculated for increase in urban population between 1971 & 1981 excluding new towns in 1981.
3 Annual growth rate calculated for increase in urban population between 1971 & 1981 including all towns in 1981.
4 Urban Rural Growth Differential.

an increasing proportion of the urban population is in larger size cities is merely a reflection of a stable settlement structure, where there has been a progressive accretion to existing settlements of all sizes which are well spread out spatially. In such a situation, where the need for new settlements is not evident, fears of the size distribution of urban areas seem misplaced — except, perhaps, in some areas which are indeed lacking in a good distribution of urban settlements.

Much has often been made about the alleged faster growth of big cities as compared with smaller towns. The implicit idea is that such a pattern is undesirable and suggestions have often been made on how this pattern should be checked or reversed. One of the suggestions made in this context is that steps should be taken to encourage urban growth in towns surrounding the big cities: what is usually referred to as the development of counter-magnets to the large cities. This issue has been examined in some detail in this paper.

First, it is simply not true that big cities are growing at rates significantly higher than smaller cities. Different

cities and towns have different rates, but no generalisations seem possible on any relationship between rates of growth and city size. As mentioned above, the proportion of urban population residing in large cities has increased because the number of cities regarded as large has been growing. Secondly, at the level of specific cities, it is also not true, in general, that the largest cities have expanded much faster than the towns in their hinterland (except Bangalore). Indeed, again except for Bangalore, the growth of the largest cities has been about the same or slower than in the previous decade.

The growth of Delhi has continued to be high though comparable to the past. Thus the suggestions for increased investment in towns in the National Capital Region with the purpose of diverting expected migration to Delhi have recently gathered force.

This has been examined in detail here. It is observed that the hinterland of Delhi is already growing at very high rates in terms of urban population so that a further acceleration in population growth rates may well be infeasible. In fact, if it is desired to reduce the rate of growth

of Delhi from 4.6 per cent a year to 3.6 per cent, then the rate of growth of population in surrounding towns would have to be increased, from 5.8 per cent per year to about 8.5 per cent; clearly a tall order. What is more relevant perhaps, is that greater public infrastructure investment should be made in these areas to provide for the high growth that has already taken place. But there should be little illusion that that would have any palpable effect on the growth of the metropolitan city itself.

The analysis of census data at the state and regional level reveals a very wide range of contrasts in urban development. Generally, the relatively poorer states of Andhra Pradesh, Bihar, Orissa, Madhya Pradesh and Uttar Pradesh have experienced faster rates of growth of urban population, whereas the richer states have shown slower growth rates. In fact, the old industrially advanced states of West Bengal, Tamil Nadu and Maharashtra, each dominated by a relatively slow growing metropolitan city, have recorded the lowest urban growth rates.

The poor states were disaggregated into sub-regions to better analyse the high growth rates observed for the states as a whole. It is found that it is possible to identify two distinct patterns in the regions where urban population is growing most rapidly. Very heavy public investment in industry and mining would appear to be the driving force in some of these fast growing regions: in southern Bihar (Ranchi, Dhanbad, Bokaro) and eastern Madhya Pradesh (Durgapur, Bhilai, Raipur) for example. In other fast-growing regions, the important reasons seem to be sustained agricultural development: in western UP for instance. The slower growing regions in the vast northern Gangetic plain stretching from eastern UP through northern Bihar are suffering from low agricultural growth along with little industrial growth as well. Although these regions have slower growth as compared to the other regions in these states, the growth rates are still high as compared with other states.

The analysis of the data examined above suggests a somewhat disturbing scenario emerging over the past decade. As mentioned earlier, there is a general decline in the rate of rural population growth. In the agriculturally advanced states this is probably because of the familiar chain of events from increa-

TABLE A.1: STATEWISE GROWTH OF RURAL POPULATION IN INDIA, 1951-1981

| State ¹ | Annual Rate of Growth of Rural Population (per cent per year) | | |
|--------------------|--|---------|---------|
| | 1951-61 | 1961-71 | 1971-81 |
| Andhra Pradesh | 1.46 | 1.68 | 1.60 |
| Bihar | 1.64 | 1.78 | 1.89 |
| Gujarat | 2.61 | 2.29 | 2.00 |
| Haryana | 2.93 | 2.78 | 1.96 |
| Karnataka | 2.06 | 1.93 | 1.73 |
| Madhya Pradesh | 1.92 | 2.31 | 1.77 |
| Maharashtra | 2.22 | 2.03 | 1.00 |
| Orissa | 1.58 | 2.03 | 1.43 |
| Punjab | 1.79 | 1.89 | 1.55 |
| Rajasthan | 2.63 | 2.32 | 2.42 |
| Tamil Nadu | 0.81 | 1.53 | 1.20 |
| Uttar Pradesh | 1.65 | 1.68 | 1.81 |
| West Bengal | 2.80 | 2.37 | 1.85 |
| India ² | 1.89 | 2.00 | 1.75 |

Notes: 1 Including all states with a population of 10 million or more in 1971 excluding Kerala and Assam.
2 Including all states except Assam and Jammu & Kashmir.

TABLE A.2: LEVEL¹ OF URBANISATION IN STATES² 1951-1981

| State | Population of All Towns as Percentage of Total | | | | Population of Towns above 20,000 only as Percentage of Total. | | | |
|--------------------|---|------|------|------|---|------|------|------|
| | 1951 | 1961 | 1971 | 1981 | 1951 | 1961 | 1971 | 1981 |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Andhra Pradesh | 17.4 | 17.4 | 19.3 | 23.3 | 10.8 | 13.2 | 16.0 | 21.1 |
| Bihar | 6.8 | 8.4 | 10.0 | 12.5 | 4.9 | 6.5 | 8.0 | 10.9 |
| Gujarat | 27.2 | 25.8 | 28.1 | 31.1 | 18.3 | 20.4 | 22.5 | 26.7 |
| Haryana | 17.0 | 17.2 | 17.7 | 22.0 | 10.9 | 12.5 | 13.9 | 18.1 |
| Karnataka | 22.9 | 22.3 | 24.3 | 28.9 | 13.4 | 15.6 | 18.2 | 23.9 |
| Madhya Pradesh | 12.0 | 14.3 | 16.3 | 20.3 | 7.7 | 9.7 | 12.2 | 15.7 |
| Maharashtra | 28.8 | 28.2 | 31.2 | 35.0 | 20.7 | 23.8 | 27.7 | 32.2 |
| Orissa | 4.1 | 6.3 | 8.4 | 11.3 | 2.1 | 3.5 | 6.0 | 9.0 |
| Punjab | 21.7 | 23.1 | 23.7 | 27.7 | 14.5 | 17.4 | 18.5 | 22.4 |
| Rajasthan | 18.5 | 16.3 | 17.6 | 23.9 | 10.3 | 10.8 | 12.9 | 16.5 |
| Tamil Nadu | 24.4 | 26.7 | 30.3 | 33.0 | 13.0 | 21.0 | 26.3 | 29.9 |
| Uttar Pradesh | 13.6 | 12.9 | 14.0 | 18.0 | 9.4 | 10.6 | 11.9 | 13.8 |
| West Bengal | 23.8 | 24.5 | 24.7 | 26.5 | 21.4 | 22.3 | 22.9 | 25.3 |
| India ³ | 17.6 | 18.3 | 20.2 | 23.7 | 12.3 | 14.5 | 16.9 | 20.5 |

Notes: 1 Urban population as proportion of total population.
2 Including all states with total population greater than 10 million in 1971 but excluding Kerala and Assam.
3 Including all states except Assam and Jammu & Kashmir.

ses in agricultural productivity to accelerated urbanisation. An increase in agricultural productivity causes incomes to rise; increases in incomes cause greater demand for non-food goods as well as services which are based characteristically in urban (large or small) area; the latter causes greater demand for labour in urban areas; and hence accelerated urbanisation takes place. Simultaneously, mechanisation makes it easier for this increased urban demand for labour to be satisfied and, moreover, creates considerable demand for repair services and small manufacturing.

This chain of events is the familiar industrialisation — urbanisation phenomenon that has been observed all over the world since the industrial revolution — and is in some sense a

healthy phenomenon. The increases in income can also, in principle, pay for the infrastructure costs of urbanisation. The disturbing part of the pattern is what seems to be taking place in the Group C states. There has been a remarkable decline in the growth of rural population in Madhya Pradesh and Orissa and a marginal decline in Andhra. Bihar and UP record marginal increases in rural growth rates but these two states have had significantly higher total population growth rates as compared to earlier decades. With the exhaustion of land that can be brought into additional cultivation and with low increases in productivity, the agricultural incomes in these states are not rising; nor can additional labour be absorbed as in the past.

Hence the acceleration of urbanisation seems to be the result of a push from rural areas. Because of the low base of existing urban population, a small decline in labour demand in rural areas causes a large proportional change in population in urban areas. Given the large size of these Group C states, the absolute magnitude of urban population is also large — about 55 million people. Hence, unless there is significant productivity change in agriculture in these areas, and one that is labour-using, this trend can be expected to be magnified over the next decade.

The evidence from Punjab and Haryana indicates that technological change might increase the demand for agricultural labour in the first instance, but with the income increases and mechanisation, this might not continue for long. Hence the combination of demand pull in the richer Group A states and the push in Group C states would appear to have caused the noted acceleration in urbanisation in the last decade; the same phenomena could accelerate it further in the coming decade. Serious attention has to be paid, therefore, to the generation of employment in urban areas for the increasing number of people who will tend to be pushed out from the rural areas — either because of immiserisation or because of technological change.

Appendix: Detailed Notes to Tables

Details of Towns Omitted in Table 3, 4, 7:

The populations of Assam and Jammu & Kashmir are not available yet. There seems to have been a major redefinition of towns and cities in Kerala but no details are available: hence many towns could not be traced in the 1981 Census. The remaining towns in other states were either those which have merged with bigger cities or have been declassified in the 1981 Census.

Towns that have been omitted in each class according to 1971 census are:

- (i) Class I: Srinagar (J&K) Gauhati (Assam) and Jammu (J&K) (3 cities).
- (ii) Class II: Dibrugarh, Jorhat, Nowgong, Tinsukia and Silchar (Assam) (5 towns).
- (iii) Class III: Tezpur, Dhubri, Karimganj, Lumding, Sibsagar, Barpeta Bongaigaon, Hojai and

TABLE A.3: URBAN AND RURAL POPULATIONS OF SUB-REGIONS IN SELECTED STATES, 1971-1981

| State/Region ¹ | Rural Population | | Urban Population | | |
|---------------------------|------------------|------|------------------|--------------------------|------------------------|
| | 1971 | 1981 | 1971 | 1971 | |
| | | | | Uncorrected ² | Corrected ³ |
| <i>Bihar</i> | | | | | |
| Southern | 12.0 | 14.0 | 2.28 | 3.56 | 3.46 |
| Northern | 20.7 | 25.3 | 1.10 | 1.71 | 1.58 |
| Central | 18.0 | 21.8 | 2.26 | 3.42 | 3.32 |
| <i>Madhya Pradesh</i> | | | | | |
| Eastern | 11.3 | 13.0 | 1.28 | 2.16 | 2.07 |
| Inland Eastern | 6.3 | 7.5 | 1.10 | 1.77 | 1.59 |
| Inland Western | 5.6 | 6.7 | 1.39 | 2.19 | 2.07 |
| Western | 7.0 | 8.7 | 2.08 | 2.97 | 2.86 |
| Northern | 4.7 | 5.7 | 0.94 | 1.50 | 1.34 |
| <i>Orissa</i> | | | | | |
| Coastal | 9.4 | 11.0 | 0.89 | 1.47 | 1.33 |
| Southern | 3.6 | 4.1 | 0.24 | 0.40 | 0.35 |
| Northern | 7.1 | 8.1 | 0.71 | 1.23 | 1.15 |
| <i>Rajasthan</i> | | | | | |
| Western | 6.0 | 7.9 | 1.47 | 2.21 | 2.09 |
| North Eastern | 9.5 | 11.8 | 2.22 | 3.55 | 3.26 |
| Southern Eastern | 2.7 | 3.3 | 0.50 | 0.84 | 0.74 |
| Southern | 3.1 | 3.9 | 0.36 | 0.55 | 0.51 |
| <i>Uttar Pradesh</i> | | | | | |
| Himalayan | 3.3 | 3.9 | 0.56 | 0.89 | 0.75 |
| Western | 25.6 | 30.0 | 5.72 | 9.36 | 7.38 |
| Central | 13.0 | 15.5 | 2.74 | 4.21 | 3.72 |
| Eastern | 30.4 | 37.1 | 2.74 | 4.43 | 3.67 |
| Southern | 3.7 | 4.4 | 0.63 | 1.08 | 0.89 |

Notes : 1 See Appendix for details on regions.
2 Urban population including all towns.
3 Urban population excluding new towns.

TABLE A-4: LEVEL OF URBANISATION REGIONALLY DISAGGREGATED IN SELECTED STATES, 1971-1981

| State/Region ¹ | Level of Urbanisation | | Share of Region in State's Urban Population 1981 | Share of Region in State's Rural Population 1981 |
|---------------------------|--------------------------|------------------------|--|--|
| | 1971 | 1981 | | |
| | Uncorrected ² | Corrected ³ | | |
| <i>Bihar</i> | 10.0 | 12.5 | 100.0 | 100.0 |
| Southern | 16.0 | 20.3 | 19.7 | 22.9 |
| Northern | 5.0 | 6.3 | 5.8 | 41.4 |
| Central | 11.0 | 13.6 | 13.2 | 39.3 |
| <i>Madhya Pradesh</i> | 16.3 | 20.3 | 100.0 | 100.0 |
| Eastern | 10.1 | 14.2 | 13.7 | 20.4 |
| Inland Eastern | 15.0 | 19.1 | 17.1 | 16.8 |
| Inland Western | 19.9 | 24.6 | 23.3 | 20.7 |
| Western | 23.0 | 25.5 | 24.6 | 28.0 |
| Northern | 16.7 | 20.9 | 18.7 | 14.1 |
| <i>Orissa</i> | 8.4 | 11.8 | 100.0 | 100.0 |
| Coastal | 8.7 | 11.8 | 10.7 | 47.4 |
| Southern | 6.4 | 8.8 | 7.9 | 12.8 |
| Northern | 9.0 | 13.2 | 12.3 | 30.8 |
| <i>Rajasthan</i> | 17.6 | 20.9 | 100.0 | 100.0 |
| Western | 19.7 | 21.8 | 20.7 | 30.9 |
| North Eastern | 18.9 | 23.0 | 21.2 | 49.7 |
| Southern | 10.6 | 12.3 | 11.4 | 7.7 |
| South Eastern | 15.7 | 20.3 | 17.8 | 11.8 |
| <i>Uttar Pradesh</i> | 14.0 | 18.0 | 100.0 | 100.0 |
| Himalayan | 14.7 | 18.4 | 15.6 | 4.4 |
| Western | 18.3 | 22.8 | 18.8 | 46.9 |
| Central | 17.4 | 21.4 | 18.9 | 21.1 |
| Eastern | 8.2 | 10.7 | 8.8 | 22.2 |
| Southern | 14.7 | 19.9 | 16.4 | 5.4 |

Notes : 1 See Appendix for details on regions.
2 Urban population including all towns.
3 Urban population excluding new towns of 1981.

N Lakhimpur (Assam).
Sopore, Anantnag and Baramula (J&K) Kilikooloor, Kanhangad, Haripad, Pantalayani, Payanoor,

Nemmon, Nileshwar, Kannamkulam, Kanjirapally (Kerala).
Rajpura Township (Punjab) (merged with Rajoura) (22

towns).
(iv) Class IV: 24 towns in Assam, 3 in J & K.
Kerala: Njarakkal (Ernakulum District), Balarampuram, Kovalam (Trivandrum Dist.), Ettamanoor, Ponkunnam, Kundakayyam (Kotayam), Kadalundi, Elathur (Kozhikode), Pazhanji (Trichur), Manjeshwar (Cannanore), Nemmara, Mannarghat, Pattambi (Palghat), Pandalam (Alleppey), Kendara (Quilon).
Tamil Nadu: Velur, Sankari (Salem), Vellakoil, Sirumugai (Coimbatore), Manimuthar (Tirunelveli).
Karnataka: Shivalli, Shirwa, Udayavar (all in South Canara District).
Maharashtra: Pipalgaon — Basvant (Nasik), Bhayndar, Shirgaon (Thane).
Ballabgarh (Gurgaon, Haryana), Ramnagar (Champaram, Bihar), Sidugera (Guntur, Andhra Pradesh).
(v) Class V: 25 towns in Assam; 14 in J & K.
Bihar: Mohania (Rohtas), Manoharpur (Singhbhum) Domchanch, Kodarna (Hazaribagh), Barharrwa (Santhal Parganas), Bihta (Patna), and Namkum (Ranchi).
Gujarat: Dhansura (Sabarkantha), Vasad (Kheda), Nakhtrama (Kutch), Junadeesa, Varahi Bhabharnava (Banaskantha).
Maharashtra: Sadashivgad, Patan (Sadashivgad), Vani (Nasik), Radi (Ratnagiri).
West Bengal: Haripal (Hooghly), Kataganj and Gokulpur Government Colony (Nadia) (merged with Gayeshpur), Dakshinjhurdha (Howrah).
Tamil Nadu: Ithalal (Nilgiri), Sirugamani, Iluppur (Tiruchirapalli), Highways (Madurai), Samnikapuram (Ramanathapuram), Punjai Uthukalli (Coimbatore).
Madhya Pradesh: Johilla Colliery (Shandol), Sarseu (Chattarpur), Dungaria Chapparria (Seoni).
Karnataka: Tyamagondle (Bangalore), Pranthya (D. Kannad), Turuvanur (Chitrodurga).
UP: Kaila (Ghaziabad), Rustamnagar (Moradabad).
Kerala: Kazhakut'am, Chirayinkil (Trivandrum), Mokkum (Kozhikode), Perintalmanna (Malappuram), Kumbla (Cannanore), Wadakkancherry (Trichur), Hemabikannagar (Palghat).
A P: Chittivalasa (Vishakhapatm).
Orissa: Gobindpur (Sambalpur).
Punjab: Tankanwale (Ferozepur).

Haryana: Toshaim (Hissar).
(84 towns).

Details of Town Included in the Hinterland of Big Cities — Table 6:

All class I, II and III towns within a radius of about 100 km straight line distance of the metropolitan cities were included in the definition of hinterland. Details by city are:

- (1) Calcutta: Kharagpur, Nabawdip, Habra, Bankura, Ranaghat, Basirhat, Bongaon, Chakdaha, Contai, Ghatal, Baduria, Tamluk, Gobardanga, Baruipura, Taki, Takreshwar, Kalna, Burdwan, Kojpur.
- (2) Bombay: Ulhasnagar, Thane, Vasai, Panvel, Bhiwandi, Khopoli.
- (3) Delhi: Ghaziabad, Modinagar, Meerut, Hapur, Bulundshahar, Khurja, Alkar, Faridabad, Rohtak, Sonapat, Gurgaon, Bahadurgarh.
- (4) Madras: Vellore, Kanchipuram, Arcot, Gudiyatham, Arani, Chengalpattu, Tindivanam, Tirupati, Chittoor, Srikalahasti.
- (5) Bangalore: Kolar G R, Tumkur, Mandya, Kolar, Ramanagran, Channapatra, Chikballapur, Chennanamani, Doddballapur, Kanakapure, Hindupur, Gudiyatham, Ambur, Tirupattur, Krishangiri, Pernambat, Hosur, Jolerpat, Vaniyambadi.
- (6) Hyderabad: Warangal, Mahbubnagar, Nalgonda, Surapet, Tandur, Dhongir, R'Puram, Narayan-Narayanpet.

Details of Regions in Selected States (District):

(A) Uttar Pradesh

Himalayan Region: Pithoragarh, Chamoli, Uttarkashi, Dehradun, Tehri Garhwal, Garhwal, Almora, Nainital.

Western Region: Saharanpur, Muzaffarnagar, Bijnor, Meerut* Moradabad, Bulandshahar, Rampur, Bareilly, Pilibhit, Shahjahanpur, Budaun, Aligarh, Mathura, Etah, Manipuri, Farrukhabad, Etawah, Agra.

Central Region: Kheri, Sitapur, Hardoi, Lucknow, Barabanki, Raebareli, Unnao, Fatehpur, Kanpur.

Eastern Region: Bahraich, Gonda, Basti, Gorakhpur, Deoria, Ballia, Azamgarh, Faizabad, Sultanpur, Jaunpur, Ghaziabad, Varanasi,

Mirzapur, Allahabad, Pratapgarh.
Southern Region: Banda, Hamirpur, Jalaun, Jhansi**.

(B) Rajasthan

Western Region: Jhunjhunu, Sihar, Churu, Bikaner, Jalor, Jaisalmer, Jodhpur, Barmer, Nagaur.

North Eastern Region: Ganganagar, Alwar, Bharatpur, Sawai, Madhopur, Jaipur, Tonk, Bhilwara, Ajmer, Pali.

Southern Region: Banswara, Dungarpur, Udaipur, Sirohi.

SE Region: Jhalwar, Kota, Bundi, Chitorgarh.

(C) Madhya Pradesh

Eastern Region: Surguja, Rajgarh, Bilaspur, Raipur, Durg***, Balaghat, Bastar.

Inland Eastern Region: Sidhi, Rewa, Satna, Panna, Jabalpur, Shahdol, Mandla, Seoni.

Inland Western Region: Damoh, Sagar, Vidhisha, Sehore† Raisen, Narsimhapur, Chindwara, Hoshangabad, Bentul.

Western Region: Mandsaur, Rajgarh, Shajapur, Ujjain, Ratlam, Jhahua, Dhar, Indore, Devas, Khargon (West Nimar), Khandwa (East Nimar).

Northern Region: Chatarpur, Bhind, Tikamgarh, Gwalior, Morena, Shivpuri, Guna, Datia.

(D) Orissa

Coastal Region: Balasore, Cuttack, Puri, Ganjam.

* In the 1981 Census, Ghaziabad district was carved out from Meerut and Bulandshahar.

** Jhansi district was divided into Lalitpur and Jhansi districts after 1971.

Southern Region: Bandh-Khondmal, Kalahandi, Koraput.

Northern Region: Mayurbhani, Keonjhar, Sundargarh, Sambalpur, Dhenkanal, Bolangir.

(E) Bihar

Southern Region: Santhal Parganas, Dhanbad, Hazaribagh, (+ Giridih), Palaman, Ranchi, Singhbhum.

Northern Region: Purnea (+ Khatihar)††, Darbanga (+ Sa-

mastipur + Madhibani††), Muzaffarpur (+ Sitamarshi + Vaisali)††, Champaran, Saran (+ Siwam + Gopalganj)††.

Central Region: Bhagalpur, Monghyr (+ Begusarai)††, Siaharsa, Patna (+ Nalanda)††, Gaya (+ Nanda + Aurangabad)††, Sahabad (+ Bhojpur + Rohtas)††.

*** In 1981 Census, Rajnandgaon was carved out from Durg.

† Bhopal district was separated from Sehore district for the 1981 census.

†† Districts created after the 1971 census and included in the 1981 census have been indicated in the brackets against the districts from which they have been carved.

Notes

[The views expressed in this article are those of the authors, and should not be attributed to the Planning Commission. The authors are grateful to Pradip Ghosh for able research assistance.]

- 1 Census of India 1971. India Series 1, Report of the Expert Committee of Population Projections, Paper 1 of 1979.
- 2 All India figures in this paper will refer to India excluding Jammu and Kashmir and Assam, since the data on states are not available yet.
- 3 Only China, Brazil, Japan, the United States and the Soviet Union have urban populations greater than 50 million people.
- 4 For a good discussion of definitional problems in the classification of settlements as 'town' in the Indian Census, see Bose (1981), chapter 1.
- 5 International data taken from World Bank (1981), Tables 18 and 20.
- 6 URGD International data taken from Renaud (1979).
- 7 But about 500 towns were added at the same time which had not been classified as towns earlier.
- 8 That this could make a significant difference is evident from the fact that, in 1971, there were as many as 55 million people residing in settlements classified as rural but with populations greater than 5,000 — a figure comprising about half the total urban population in the country in 1971. Of

POPULATION OF HINTERLAND TOWNS

| | 1981 | 1971 | Decade Growth Rate |
|-----------|-----------|-----------|--------------------|
| Calcutta | 13,77,493 | 1,021,385 | 34.86 |
| Bombay | 1,273,457 | 7,74,952 | 64.33 |
| Delhi | 2,072,871 | 1,176,191 | 76.24 |
| Madras | 972,492 | 727,878 | 33.01 |
| Bangalore | 1,127,269 | 887,630 | 39.58 |
| Hyderabad | 641,596 | 390,39 | 64.10 |

these, about 22 million lived in 1,358 villages with a population greater than 10,000 (15 million in Kerala alone) and the rest in about 5,000 villages in the 5,000-10,000 size range.

- 9 Reproduced in Mohan (1981).
- 10 The co-efficient of variation for urban population growth are calculated for the growth of towns above 20,000 only (columns 4, 5, 6 in Table 7) to avoid the variations due to low and definitional problems.
- 11 Including Bhutan, Nepal and Bangladesh.
- 12 The co-efficient of variation in the levels of urbanisation is taken for levels according urban population in towns above 20,000 as before columns 5, 6, 7, 8 in Table A-2).
- 13 States in Group A are these with per capita State Domestic Product (SDP) above the all state average SDP (ie Rs 1,107 in 1976-78) by 10 per cent or more. States in Group B have per capita SDP centering around a ten per cent range of the all-state average SDP, and states in Group C have a per capita SDP which is below the states' average SDP by more than ten per cent.

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