Morphology of Urbanisation in India

Some Results from 1981 Census

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The Provisional Population Totals of the 1931 Census reveal a marked acceleration in the pace of urbanisation in India during the decade 197181. This paper seeks to place this development in its pro per 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 welt 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

This paper is published in two parts. The first part, published below, examines the urbanisation record in India since 1901 and the pattern of growth of towns and cities. The second part of the paper, which will appear next week, will analyse the regional pattern of urban growth and also attempt an interpretation of urbanisation in India.

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 zresults).

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 190l.[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 countries[3] 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 component!. First, is the natural growth of population

TABLE 1: GROWTH OF URBAN POPULATION IN INDIA[1] 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 INDIA[1]

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

already residing in urban areas. Second, is the net rural-urban in-migration 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 re-classified as towns. It is important to disaggregate these three components in order to understand the process underlying urbanisation, ie, the rises in the proportion of population classified 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 density of at least 400 people per sq km and (Hi) 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 problems[4] 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 — ie, 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[6] 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 Puniab. (Total 1971 popuation 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 Kreala, 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, 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 or 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 interpretation 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 1981

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 — ie, 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 1OT1-81 was about 2.1 per cent, which places India at about the 97th rank in 124 countries.[8] 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 1961 (000)	Population 1971 (000)	Annual Rate of Growth	Number of Towns 1971	Population 1971 (000)	Population 1981 (000)	Annual Rate of Growth
4 million +[1]	2[3]	9,887	13,001	2.82	2[3]	13,001	17,392	2.95
1-4 million	5[4]	7,983	12,006	4.14	7[6]	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 1 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 his level the distinction between village and town would necessarily nvolve judgment and discretion even in applying the more rigorous definiion of urbanisation.[8] Since the urban character of bigger towns is more easily recognisable, classification proplems 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 Cass l, 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 subregion, 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.

II

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 class	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 class 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 taster 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 id 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 Mze 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, thare 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 Iain (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 19B1, 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* start] frfe differences between the rates of growth beween 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 HINTERLAND[1]

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. In 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 oyer 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 arc more unstable and occupy a less important place, in the settlement structure. 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 lor 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 growh of Calcutta has been consistently 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 lor 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. Altarnatively, 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, cnused 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 hasi grown at a rate significantly higher than in the pircvious 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 has been defined as an area within a roughly 100km 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 4.8 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 yean 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 binterlands

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.

Notes

1 Census of India 1971. India Series 1, Report of the Expert Committee of Population Projections, Paper 1

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 Word 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 a? 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 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).

Kunal Engineering Company

KUNAL ENGINEERING COMPANY reports impressive results for the financial year (15 months) ended lune 30, 1982. Gross profit (before interest and depreciation) increased to Rs 198.95 lakh from Rs 109.52 lakh for the previous 12 months ended March 31, 1981. The turnover increased to Rs 745.21 lakh from Rs 585.35 lakh. These results have been achieved despite adverse conditions prevailing in the textile machinery industry. After making provisions and adjustments relating to the previous year, the amount available for appropriation has increased to Rs 79.88 lakh from Rs 48.89 lakh. The accounts for the financial year comprise a period of 15 months ended June 30, 1982, following the decision to have the financial year of the company end on June 30 every yeat instead of March 31. A final dividend of 13 per cent on equity capital (subject to deduction of tax) has been recommended by the board — a; Rs 1.30 per equity share of Rs 10. The company had paid an interim dividend of 12 per cent in March, The total dividend for the period thus comes to 25 per cent. For the year ended March 31, 1981, the dividend paid was 24 per cent. The board has recommended a bonus issue *in* the ratio of 1:2. The share capitjl of the company is Rs 90 lakh, which will increase to Rs 135 lakh, after the completion of the bonus issue. The company had made a 1:3 bonus issue in the year 1977. The company's spindle insert expansion project has been completed (barring one or two items of equipment) and the company is now in a position to offer heavy duty spindles to international stand* ands for woollen, worsted, tyre cord, man-made fibre, thread making applications. The project for the manufacture of textile rings under technical know how from Reiners Furst, West Germany, is nearing completion and commercial production is expected to commence by December 1982. The company has received letters of intent for manufacture of critical textile machinery components like yarn carriers (plastic and paper), rubber cots and aprons, spindle tapes and tangential /flat belts.