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## Regional Pattern of Growth of Towns in India During 1961-71

It is possible to understand the ramifications of the urbanization process of a given territory through a breakdown of the growth of urban population into its four components, viz. (a) natural increase in the already existing urban centres, (b) net rural to urban migration, (c) reallocation of the rural settlements due to the extension of existing municipal boundaries, and (d) the emergence of new points of concentration. The first three components indicate concentration of urban activities in the already existing urban centres, while the emergence of new towns suggests a dispersal of urban functions over a wider geographical area.

The new urban centres may develop contiguously, and have intimate functional relationships with the existing urban places, as satellites or suburbs in an urban agglomeration<sup>1</sup>. They may alternatively develop as independent urban centres away from the existing cities and metropolises.

1. "An urban agglomeration is made up of main town together with adjoining areas of urban growth and is treated as one urban spread. ...Each such agglomeration may be made up of more than one statutory town, adjoining one another such as a Municipality and the adjoining Cantonment, etc. and also other urban growths such as a Railway Colony, University Campus, etc." Census of India, 1971, *Series I-India*. Paper 1 of 1972, *Final Population*, Delhi: Manager of Publications, 1972, p. 155.

These new urban centres might be the ones with existing rural settlements as nuclei or the ones created for a specific purpose such as Bhilai, Barauni and Gandhinagar. The growth of satellites and suburbs around metropolises and large cities implies increasing concentration of economic functions in the latter. On the other hand, the growth of independent townships dispersed over a large area signifies a proliferation of economic and urban functions over a wider geographical area, which could be of advantage to balanced regional development.

It is, therefore, useful to analyse the pattern of growth of new towns and the type of functions they perform (whether basic or non-basic) over time. Accordingly, the present study is confined to examining the pattern of emergence of new towns in India during the sixties. We first identify these patterns statewise and regionwise. Next, we present a set of tentative hypotheses to explain the growth of new towns. These are examined with the help of data on new towns that emerged during the fifties and the sixties. The final section of the paper discusses some implications of the growth pattern of new towns for the trend of urbanisation in India.

### New Towns in the 1971 Census

Of the 3121 urban places in the country, 571 places were recognised as new towns in the 1971 census<sup>2</sup>. The new towns constituting 18.3 per cent of all urban places, accounted for about 4.6 per cent of nation's urban population in 1971 but for 16.6 per cent of the decadal urban growth. Table-1 gives the relevant data for different States and Union Territories of Indian Union.

The variation among the States in the contribution of new urban centres to total urban growth, ranges from the minimum of zero per cent in Nagaland and a few Union Territories to 100.0 per cent in Arunachal Pradesh. Even when the Union Territories are excluded the range of variation remains quite large, for example, for the proportion of new

2. Census of India 1971, Paper 1 of 1972, *Final Population*, when used in conjunction with paper 1 of 1971 *Supplement, Provisional Population Totals, Series I-India* gives the final list of new towns that appeared in India between 1961 and 1971.

TABLE 1-STATEWISE DISTRIBUTION OF NEW TOWNS, THEIR PROPORTION IN TOTAL URBAN CENTRES, POPULATION OF NEW TOWNS, AND AS PERCENT OF TOTAL URBAN POPULATION AS WELL AS PERCENT OF URBAN GROWTH DURING 1961-71

State/Union Territories	No. of New Towns	New Towns as Percentage of all Urban places	Population of New Towns	Population of New Towns as Percentage of the :	
				Total Urban Population	Net Urban Growth
India	571	18.29	5,008,517	4.59	16.61
1. Andhra Pradesh	38	16.96	389,458	4.64	18.30
2. Assam	19	25.67	143,039	10.78	26.92
3. Bihar	50	24.75	675,023	11.98	39.24
4. Gujarat	49	22.69	458,086	6.11	21.01
5. Haryana	4	6.15	27,650	1.56	5.93
6. Himachal Pradesh	7	19.44	19,166	7.92	26.63
7. Jammu & Kashmir	7	15.55	23,539	2.74	8.89
8. Kerala	21	23.86	333,600	9.62	36.57
9. Madhya Pradesh	30	12.04	203,613	3.00	9.44
10. Maharashtra	24	8.28	209,510	1.33	4.60
11. Manipur	7	87.50	41,126	29.07	55.50
12. Meghalaya	1	16.67	4,730	3.21	15.93
13. Mysore	24	9.80	239,310	3.36	12.87
14. Nagaland	0	0.00	0	0.00	0.00
15. Orissa	22	27.16	355,725	19.28	48.35
16. Punjab	2	1.85	23,865	0.74	3.70
17. Rajasthan	12	7.64	123,820	2.73	9.81
18. Tamil Nadu	155	35.31	903,048	7.24	25.99
19. Tripura	0	0.00	0	0.00	0.00
20. Uttar Pradesh West Bengal	49 44	15.08 19.47	369,984 382,629	2.99 3.49	12.72 15.77
Union Territories					
22. A & N Islands	0	0.00	0	0.00	0.00
23. Arunachal Pradesh	4	100.00	17,288	100.00	100.00
24. Chandigarh	0	0.00	0	0.00	0.00
25. Dadra & Nagar Haveli	0	0.00	0	0.00	0.00
26. Delhi	0	0.00	0	0.00	0.00
27. Goa, Daman & Diu	0	0.00	0	0.00	0.00
28. L. M. & A Islands	0	0.00	0	0.00	0.00
29. Pondicherry	2	33.33	64,308	32.43	58.84

towns it varies from zero per cent in Nagaland to 35.3 per cent in Tamil Nadu. For the proportion of total urban growth during the decade the variation goes up to 55.5 per cent in Manipur. The table further shows that in a number of states, viz., Assam, Bihar, Himachal Pradesh, Kerala, Manipur, Orissa and Tamil Nadu, the population of new towns accounts for more than a quarter of the urban growth during the decade reflecting the importance of new towns in their process of urbanization during 1961-71.

Table-2 gives the distribution of districts of India according to the number of new towns which emerged during the decade 1961-71. It is noticed from this table that out of 356 districts in the country in 1971, 157 did not have any new town and another 101 had one new town each. The whole of the northern, north-western, central, far eastern (Assam, Nagaland, and Tripura states), and the Deccan plateau region hardly had any growth of new urban centres during the period under consideration.

TABLE 2-DISTRIBUTION OF DISTRICTS OF INDIA ACCORDING TO THE NUMBER OF NEW TOWNS THEY GOT IN 1971 CENSUS

<i>Class interval (Number of New Towns)</i>	<i>Number of Districts</i>
0	157
1	101
2	39
3	14
4	19
5	10
6-10	9
11-20	3
21 and over	4
<b>Total</b>	<b>356</b>

If we classify districts on the basis of concentration of new towns into "high" (districts with 11 or more new towns), "medium" (5 to 10 new towns), and "low" (1 to 4 new towns), it is then observed that the districts of Hazaribagh in Bihar, Chingleput, Coimbatore, Madurai Salem

and Tirunelveli in Tamil Nadu, and Twenty-four Parganas in West Bengal are of high concentration. There are nineteen districts in the country, four in Tamil Nadu, three each in Gujarat and Uttar Pradesh, two in Bihar, and one each in Andhra Pradesh, Kerala, Madhya Pradesh, Maharashtra, Manipur, Orissa and West Bengal, that have a medium concentration of new towns. The remaining 173 districts that have new towns are with low concentration of them.

' It may be pointed out here that the districts with "high" concentration of new towns are not necessarily the districts which show either a higher proportion of new towns in relation to the ones which existed in 1961 or a high contribution of the population of new towns to total urban population. In fact, among the seven districts which had high concentration of new towns, only in two districts, namely, Hazaribagh and Salem, the population of new towns constituted more than 20 per cent of their total urban population.

An important feature of the emergence of new towns during the sixties is that a large proportion of them (218 out of 571) form part of urban agglomerations of the existing metropolises and cities. Table-3 gives the statewise distribution of new towns which form part of urban agglomerations. It is clear that, while in a number of states none of the new towns falls in the urban agglomerations of the existing towns, in Bihar, Tamil Nadu and West Bengal a large number of new towns are part of urban agglomerations. It is interesting to note that in Tamil Nadu, out of 155 new towns 134 are parts of urban agglomerations.

This analysis of the growth of new urban centres in India clearly indicates that the new towns that emerged during the sixties have not been evenly distributed in terms of geographical coverage. Also, the fact that 38.2 per cent of new towns are parts of urban agglomerations, points to a further concentration of urban and economic functions in the existing metropolises and big cities.

### **Some Hypotheses Explaining the Growth of New Towns**

This section is mainly concerned with evolving hypotheses to explain the pattern of growth of new towns in India during the-sixties. These

TABLE 3-STATEWISE DISTRIBUTION OF NEW TOWNS, ALL TOWNS IN URBAN AGGLOMERATIONS; AND NEW TOWNS AS PARTS? OF URBAN AGGLOMERATIONS INDIA-1971

India	State/Union Territory	Number of New Towns	Number of all Towns in urban agglomerations	New Towns in Urban agglomeration
		571	627	218
1.	Andhra Pradesh	38	21	8
2.	Assam	19	5	1
3.	Bihar	50	60	23
4.	Gujarat	49	25	5
5.	Haryana	4	0	0
6.	Himachal Pradesh	7	2	0
7.	Jammu and Kashmir	7	4	0
8.	Kerala	21	0	0
9.	Madhya Pradesh	30	24	5
10.	Maharashtra	24	48	5
11.	Manipur	7	0	0
12.	Meghalaya	1	4	1
13.	Mysore	24	20	1
14.	Nagaland	0	0	0
15.	Orissa	22	5	2
16.	Punjab'	2	3	0
17.	Rajasthan	12	10	2
18.	Tamil Nadu	155	232	134
19.	Tripura	0	0	0
20.	Uttar Pradesh	49	55	1
21.	West Bengal	44	101	28
Union Territories				
22.	A. and N. Islands	0	0	0
23.	Arunachal Pradesh	4	0	0
24.	Chandigarh	0	2	0
25.	Dadra and Nagar Haveli	0	0	0
26.	Delhi	0	3	0
27.	Goa, Daman and Diu	0	0	0
28.	L. M. and A. Islands	0	0	0
29.	Pondicherry	2	3	2

hypotheses, based on our experience during the planning period extending from 1951 to 1971 are stated below :

- (i) When the number of new towns in a district is one or two only, the new towns are resultant of process of evolution, that is, a village grows in size and takes up some urban functions to become qualified for being called a town. A large majority of such towns are small in size and belong to classes V and VI<sup>3</sup>.
- (ii) Districts which had a large number of new towns in the 1961 census would either have none or a few new towns in 1971. However, when a district is covered by intensive development activities due to various projects, it may show a larger number of new towns in 1971 as well.
- (iii) A large number of new towns are likely to develop in the vicinity of a fast developing metropolitan growth centre. This would happen when the metropolis itself has reached a stage where it cannot develop further within its own municipal boundaries.
- (iv) Number of new towns in a district is inversely proportional to the number of urban centres per 1,000 sq. km. already in existence at the previous census.

Since, for testing the first hypothesis, we require the names of those villages which emerged as towns in 1971, this will be possible only when the volume on *General Population Tables* becomes available. On the basis of Table 4 which presents a bivariate distribution of the districts according to the number of new towns, that emerged in them during the fifties

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3. In the Indian Census cities and towns are classified into the following six size classes on the basis of their population :

Class	
I	100,000 and above
II	50,000 to 99,999
III	20,000 to 49,999
IV	10,000 to 19,999
V	5,000 to 9,999
VI	Below 5,000

and the sixties, it may be mentioned here that as many as 98 districts (27.5 per cent) in the country did not get any new town during 1951-71 while another 92 districts got only one new town each. The number of districts getting two new towns each during 1951-71 (two in 1951-61, and none in 1961-71, or none in 1951-61 and two in 1961-71, or one each in each decade) comes to 54. Thus this analysis shows that 27.5 per cent of the districts did not have any new town during the past two decades and 41.0 per cent had only one or two towns during this period.

TABLE 4—BIVARIATE DISTRIBUTION OF THE DISTRICTS OF INDIA ACCORDING TO THE NUMBER OF NEW TOWNS IN 1961-71

<i>New Towns of the 1961 Census</i>										
	0	1	2	3	4	5	6-10	11+	TOTAL	
<i>New Towns of 1971 Census</i>	0	98	28	19	5	3	2	2	0	157
	1	64	17	9	3	1	2	5	0	101
	2	18	7	5	3	2	1	3	0	39
	3	3	2	3	1	0	3	2	0	14
	4	6	4	3	1	1	2	2	0	19
	5	2	3	1	0	2	0	2	0	10
	6-10	1	3	1	1	0	1	0	2	9
	11+	0	0	1	0	0	0	3	3	7
	Total	192	64	42	14	9	11	19	5	356

NOTE: There were 336 districts in India at the time of the 1961 Census. In getting the number of new towns in each district in 1961, the district boundaries have been adjusted so as to correspond to the 1971 census district boundaries.

If one looks at the new towns in those districts which had only one or two new towns each during the sixties, it is found that out of a total of 179 such new towns, 119 (or 66.5 per cent) have a population of less than 10,000. If we consider towns with population less than 10,000 as small and assume an equal distribution of small and bigger towns in these dis-

districts, then the above proportion is found to be statistically significant<sup>4</sup>. This is in accord with the second part of our first hypothesis.

Data presented in Table-4 are utilised to test the second hypothesis. There are 35 districts (according to the 1971 census district boundaries) which had five or more new towns in 1961. Out of these 35 districts, 4 did not have a single new town during the sixties and another 11 had one or two new towns each. On the other hand, there were 11 districts which had five or more new towns both in 1961 and 1971, the remaining 9 districts having 5 or more new towns in 1961 and 3-4 new towns in 1971. These differences are found to be statistically non-significant<sup>5</sup>. We will, however, require more data to test further the validity of this hypothesis.

According to the third hypothesis, we expect a large number of new towns in the vicinity of the metropolises or large cities as part of their urban agglomerations. It has been shown earlier in this paper that out of 571 new towns that came up in the sixties, 218 (or 38.2 per cent) are part of urban agglomerations. The nine metropolises of India, with a population of one million and over have a total of 180 cities and towns in their agglomerations out of which 72 (40.0 per cent) are new towns. The number of new towns in the urban agglomerations of these metropolises would have been much larger but for the peculiar characteristics of Bombay and Delhi. The Corporation area of these two metropolises was expanded significantly during the fifties<sup>6</sup> so much so that whatever new developments have taken place in these two areas during the sixties, they have become part of the existing Corporations instead of new towns with separate entity. If we consider urban agglomerations of cities with population lying between 100,000 and 1,000,000, we find again a large number of new towns in their agglomerations. The proportion of new towns among all

4. The computed value of the critical ratio for the proportion in this case is 4.71 which is significant at 1% level.

5. The computed value of the critical ratio for the proportions is 6.98 and is non-significant.

6. The area of Greater Bombay increased from 90.84 sq. miles to 169.00 sq. miles, and that of Delhi from 67.0 sq. miles to 92.99 sq. miles between 1951 and 1961, while, the area of New Delhi decreased from 32.82 sq. miles to 16.50 sq. miles during the same period due to changes in jurisdiction. Census of India 1961, Vol. I, *India*, Part II-A (i), *General Population Tables*, Delhi: Manager of Publications, 1964; pp. 123 and 128.

towns in their agglomerations is, however, comparatively smaller than the proportion for the metropolises. For instance, among 66 cities that have 269 towns in their agglomerations, there are 94 new towns (35.0 per cent). The difference between the percentage of new towns in the urban agglomerations of the metropolises and the cities, however, is statistically non-significant<sup>7</sup>.

The fourth hypothesis states an inverse relationship between the density of urban centres in a district at a particular census and the growth of new towns in that district by the time of the next census. Thus, if a district was having *a* large number of urban centres, say, per 10,000 sq. km. of its area at the time of the 1961 census, it was assumed that the potential for the growth of new towns in such a district would be relatively low, while a district with a small number of towns per 10,000 sq. km. of its area would be expected to have a large potential for the growth of new towns. This hypothesis is based purely on a balanced distribution of urban places in a given geographical area (Central Place theory) and it does not take into consideration the variations in economic prosperity of different regions,

To test the above hypothesis all districts under the Union Territories were excluded since it is well known that some of the districts in the Union Territories are hardly more than the size of a city or town. The product moment coefficient of correlation between the density of urban centres in each of the remaining districts in 1961 and the number of new towns in 1971 is +0.23 and is statistically significant at 1 per cent level.<sup>8</sup> This shows that, instead of a negative correlation between the two variables as was hypothesized, there is a definite positive relationship between them. This is perhaps because of the intervening variables of climatic and topographical conditions on the one hand and economic backwardness or prosperity on the other hand. It will be worth investigating the above hypothesis further by including the influence of intervening variables and if possible modify in the light of these investigations.

7. The critical ratio for the proportions here is 1.09 which is non-significant.

8. The computed value of/*t* for 337 degrees of freedom is 4.33 and is significant at 1% level.

## **Implications of the Observed Growth Patterns of the New Towns**

From the empirical evidence presented in this paper it is observed that out of 356 districts of the 1971 census of India, 98 districts (27.5 per cent) did not have a single new town during the past two decades, whereas 146 districts (41.0 per cent) had upto two new towns only. There are only 17 districts in the entire country which got eleven or more new towns (i. e. "high" concentrations) during 1951-71. The districts having a relatively larger number of new towns are mostly concentrated in Eastern Uttar Pradesh, Southern Bihar, Southern West Bengal, parts of Madhya Pradesh and Tamil Nadu.

If it is assumed that the establishment of new towns in a district helps in creating basic infrastructure in terms of roads, electricity, water supply, new transportation routes, educational facilities etc., we may safely conclude that the districts which got a large number of new towns are mainly the ones which benefited most from developmental efforts. In other words, the developmental effort in the country during the past two decades has, to a large extent, been concentrated only in few districts. It is believed that these particular districts have potentialities to attract capital and new industries at least in the short run and therefore may show a higher growth of urban population during the seventies as well.

It has been pointed out in this paper that a large proportion (38.2 per cent) of new towns are parts of urban agglomerations. The heavy concentration of new towns around metropolises and big cities suggests that the new towns are dependent for their growth on the economy of the city of which they form a part. Their functional characteristic (whether basic or non-basic) is also dependent on the nature of industrial development in the 'core' city. Unless there is a policy with regard to regional distribution of investment, the past trend of development of new towns is likely to continue during the next ten to twenty years.

Further, while the new towns account only for 4.6 per cent of the urban population in 1971, they account for 16.6 per cent of the net urban growth during the decade. There are eight districts in the country where entire urban growth is the result of the emergence of new towns. At the State/

Union Territory level, it is only Arunachal Pradesh where emergence of new towns is alone responsible for the urban growth. Apart from this, in a number of states, namely, Assam, Bihar, Manipur and Orissa in the eastern zone, Himachal Pradesh in the north-western zone and Kerala, Tamil Nadu and Pondicherry in the southern zone, more than one quarter of the total urban growth during 1961-71 was due to the emergence of new towns, reflecting the importance of new towns in the urbanization process of these regions.

Keeping in view the fact that occasionally the question of balanced regional development has been raised in India<sup>9</sup>, and that urbanisation and industrialization are concomitant to development, we may say that the past experience about the growth of new urban places does not point towards such a process of development. It would, therefore, be necessary to have a greater dispersal of basic economic functions over wider geographical area in the next two to three decades if we at all wish to achieve the goal of balanced regional development. These observations are tentative and are based on the existing data. Perhaps when new data become available, these may require revision and modification.

9. Planning Commission, *Fourth Five Year Plan, 1969-74*, Delhi : Manager of Publications; p. 398. See also *Third Five Year Plan*, Delhi : Manager of Publications, 1961; p. 689; and also Roy Turner (ed.), *Indians Urban Future*, Berkeley : University of California Press, 1962, papers by Pitamber Pant "Urbanization and the Long-Range Strategy of Economic Development"; Sachin Chaudhury, "Centralization and the Alternate Forms of Decentralization : A Key Issue", and Britton Harris, "Urban Centralization and Planned Development."