

**URBAN DEVELOPMENT
IN
NORTH-EAST INDIA
POTENTIALITY AND PROBLEMS**

**DR. B. DATTA RAY
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B. Datta Ray
Secretary

North-East India Council for Social Science Research
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INTRODUCTION

The urbanisation process had a late start in North-East India but it gained momentum since 1971. The urban population in the country stood at 217.61 million in 1991 and is expected to touch 300 million by 2002 A.D. But the level, rate and pattern of urbanization are not uniform over time and space in North-East India. There is palpable intra regional variation the range being maximum of 46.1 per cent in the hilly Mizoram and minimum 11.1 per cent in the plains of Assam suggesting fast pace of urbanisation in the hilly semi-subsistent triable states and slow and low in plain area as of Assam. The Census of 1991 reveals that the highest percentage of urban population is recorded by Kamrup district (32.76), whereas the lowest percentage is found in the Dhemaji district (1.86). In the Barak Valley though Silchar city accounts for 1.1 lakh population, the level of urbanization is low. It is because of the fact that the percentage of rural population is relatively high in the absence of many towns with small size of population. The spatial pattern of urbanization in North-East India is characterized by unequal distribution of urban population.

The 1991 census reveals that in the entire North-East India there are 183 towns, of which 87 towns (47.5 per cent) are in Assam, 30 in Manipur, 22 in Mizoram, 18 in Tripura, 10 in Arunachal Pradesh, 9 in Nagaland and 7 in Meghalaya. Of the 8 Class I towns, with population above one lakh, 4 in Assam

(Guwahati, Dibrugarh, Silchar and Jorhat) and one each in Manipur, Meghalaya, Mizoram and Tripura. In the Class II category with population of 50,000 to 99,999, there are 6 towns in the region, with 4 in Assam (Dhubri, Nagaon, Tezpur and Tinsukia) and 2 in Nagaland (Dimapur and Kohima).

Physical limits in the horizontal expansion of geographical area in class I and II towns in North-East India seem to have already been approached. Problems of over-crowding, slum dwelling, population, drainage and sewage disposal, water scarcity, power supply, public health and sanitation, education and medical facilities are experienced acutely in all towns of North-East India. All the problems are detrimental to urban civic life which in turns retard the economic health of these towns.

Administrative compulsions, economic necessities, social attitudes and strategic requirements determined the setting up and growth process of towns. Throughout the history of urbanisation of North-East India, towns have been imposed on rural landscape for administrative and strategic purposes without any major consideration of urban potentiality. An urgent need to assess the urban potentiality both in macro and micro levels have been felt. It is necessary to assess the carrying capacity of urban centres and study the rural hinterland of each town. As most of the urban centres of the region have come up unplanned, there is serious lack of infrastructures, transport and communication linkage, training and servicing facilities.

Due to lack of agricultural and large scale industrial potentialities for towns in this region, attention has to be paid to small and medium size manufacturing units including servicing industries for small towns's growth and viability. Trade, marketing and transport facilities are to be planned in conformity

with the regional character.

Planned Human Resource Development is the prime requisite for any socio-economic advancement of North-East India. Nearly sixty percent of the people are illiterate. To cope with this dismal situation open schooling system with vocational facilities should be explored to make the small towns vibrant, active and healthy nodal points in the urban settlement pattern.

Growing urbanization would exert stress on local environment and threaten the quality of life. Most of the poor in the next century would likely be in urban centres and their living conditions would be worse than those of rural poor.

Poverty is a direct and growing threat to the urban future. The sheer numbers of poor are threatening to overwhelm the urban settlements. Unlike the people belonging to other income groups, the standard of living of urban poor is going to be worse when compared to the rural poor. The poor in the small towns in North East do not have the means to meet the basic needs of shelter, water, health and education. Thousands of urban poor children are plagued by problems like school drop-outs, loafour and sexual exploitations. For women, urban life is fraught with insecurity with the threats to them and their families and scarcities of health care and educational facilities which could have enabled them to escape from poverty.

The Eco-systems in North-East India are already at the risk from unplanned urban development. Proper planning for municipal services and urban engineering are badly needed to find a lasting solution to severe environmental pollution and health hazards in all towns in North East India which stand on delicate ecological balance.

The concept of modern strong villages with balanced growth and development may be examined

in the context of North-East India's urbanisation spread. Raising the living standard of rural areas through radical land reforms and rational land relations might help to restore ecological and economic balance.

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Chapter 1

ROLE OF SMALL AND MEDIUM-SIZED TOWNS IN THE DEVELOPMENT OF NORTH-EAST INDIA

Pabitra Giri

INTRODUCTION

A town serves as a central place to its hinterland; at the same time, it is a point of link between the hinterland and the rest of the world. The role of small towns in the urbanisation process determines and gets determined by the pattern of development in the long run. It would be worthwhile, therefore, to discuss briefly the development process in the North-East India, before we take up the small town issue.

Geographically, the North-East India stands in relative isolation from the rest of India, owing to (i) distance from the rest of the country, (ii) closure of relatively short-distance and cheap transport routes through Bangladesh after Independence and (iii) inadequate development of rail and road transport facilities. However, the relative isolation has not led to an inward-looking development process. Rather the development in the area is by and large an example of outward-looking enclave type of development for historical and other reasons.

Historically, under the colonial rule, the

development process started in this region with the export oriented tea plantation, exploitation of forest resources and oil. These industries have relatively weak production linkages with the rest of the economy. Most of the inputs are imported from and output produced are exported to outside the region. Besides, ownership and control of these activities and also of wholesale trade and commerce were, and still are, at the hands of the migrants from the outside the region (Planning Commission, 1981, p. 5). Consequently, investible surplus is siphoned out of the region.

Secondly, the region is neither homogeneous nor integrated in terms of market. It lacks of physical, social as well as economic integration. While poor physical integration is due to topographical barriers, social integration is lacking because the population comprises a large number of tribal groups. These communities are mostly engaged in traditional low productivity farming. Therefore, the rural economy in the region is largely a collection of subsistence economies and lacks market integration. Besides, the region has recently been subdivided into a number of political units, which although fulfilled the demand of self-control of the major ethnic groups in the region, might adversely affect the economic integration of the region (Ganguly, 1978, p. 40).¹

Thirdly, in view of its strategic location, the region has received a substantial amount of central government help in terms of funds and jobs. However, central government investments are made more from the strategic perspective than from the long term regional development perspective. Money injected into the region by the central government raises the purchasing power of a privileged few but fails to strengthen the local income and employment generation process. This is primarily because of underdeveloped supply conditions in both farm and

non-farm production activities. Consequently, a large majority of the local people are left out of the purview of the current development process.

The pattern of enclave type development has contributed to the social and political tension observed in the recent years in the North-East. The situation has been aggravated by the population growth, largely due to in migration from both inside and outside the country (Planning Commission, 1981, p. 4). The migrants, more endowed than the local people, have obtained more than proportionate share in the non-farm employment. Local people have to depend primarily on agriculture, but there is not much scope for additional employment in view of limited availability of cultivable land and lack of modernisation.

In this context, it may be noted that the future development scenario of North-East India outlined in many of the writings, put emphasis, either explicitly or implicitly, on the outward-oriented industrial growth. Accordingly priority areas identified are transport, power and human capital development. The agricultural development is taken into consideration just for improving the economic conditions of the rural people, but not as a precondition for the overall economic development of the region (See for example, Munshi, 1978, p. 11; Ganguly, 1978, p. 44). However, unless the regional market expands and becomes sizeable, modern industries, even if located in the region, cannot be competitive with the industries in other parts of India. Improvement in the transport link with the rest of India by itself will not be able to ensue a sustainable broad-based development process in the region. It will only facilitate the drain of the natural resources of the region and perpetuate the enclave type of growth.

One may think of an alternative development scenario that would be primarily inward-looking with

emphasis on the utilisation of local resources and expansion of local markets. In the initial phase, priority will be given to the development of rural sector by improving agriculture and allied activities. Concomitantly efforts will be made to diversify the rural economy and strengthen rural-urban relationship.² Once the regional market develops, relatively large scale and export-oriented industries, in which the region would acquire comparative advantage, will be established.

The role of small and medium-sized towns in the North-East India will be discussed here in the perspective of the alternative development scenario. Section 2 will analyse how the emerging pattern of urbanisation in the North-East India is by and large related to the enclave type of development and its deficiencies. Section 3 will examine the prospects of the small and medium-sized towns in the North-East with reference to the alternative development scenario.

It will be useful at this point to address briefly the definitional issue. There is no formal definition of what is a small town and what is a medium-sized town. census of India classifies the towns into six categories and treated class II (with population 99,999-50,000) and class III (49,999-20,000) towns as medium-sized and towns with less than 20,000 population as small (Census of India, 1986, p. 351).³ Although 20,000 population seems to be a reasonable cut off point for small towns in view of the small average size of villages in the North-East India, it has no analytical justification as such.⁴ Given a natural growth rate of around two percent a year, small towns of today will cross this cut off point in future. Indeed, when we talk about small and medium-sized towns, we are concerned actually with the lower order towns in urban hierarchy. So we will discuss here about the lower order towns in general rather than using a

specific cut off point. The relevant data will be reported in terms of the census size categories.

URBANISATION IN NORTH-EAST INDIA—TRENDS & PATTERNS

The level of urbanisation in the North-East India was less than half of the all-India level in 1971. During the last two decades the rate of urbanisation in the region as a whole was faster compared to the all-India rate, although the level of urbanisation was less than the all-India average in 1991 (Table 1).

Table 1: Level and Rate of Urbanisation in Eastern India

	Urbanisation Level			Urbanisation rate		Share of Urban pop.
	1971	1981	1991	1971-81	1981-91	1991
Arunachal	3.70	6.56	12.21	77.31	100.97	2.41
Assam	8.82	9.88	11.08	12.07	12.35	56.71
Manipur	13.19	26.42	27.52	100.33	4.16	11.61
Meghalaya	14.55	18.07	18.60	24.19	2.93	7.55
Mizoram	11.36	24.67	46.10	117.18	86.84	7.28
Nagaland	9.95	15.52	17.21	55.91	10.95	4.82
Tripura	10.43	10.99	15.30	5.32	39.21	9.62
N-E India	9.43	11.75	13.90	24.59	18.31	100.00
All India	19.91	23.44	25.72	17.29	10.20	—

Source: Census of India 1991, Paper 2 and 1991, Provisional population Totals: Rural-Urban Distribution.

'—' = not applicable

However, the rate of urbanisation was neither uniform across the states nor stable (excepting in Assam) over the decades. The higher rate of urbanisation was primarily experienced by the smaller states. For instance, during 1971-81, in both Manipur and Mizoram, rate of urbanisation was more than 100 percent, but during 1981-91, the rate for Manipur dropped to 4.16 percent only (a number of small towns were declassified), while in case of Mizoram the

rate of urbanisation slowed down but it was still quite high at 86.84 percent. In contrast in Tripura, the rate of urbanisation was quite low (5.32 per cent) during 1971-81 but increased to 39.21 percent in the following decade. The unstable rate of urbanisation in the North-Eastern states indicates, perhaps, that urbanisation in this region is not linked to broad based economic progress but to administrative and other contingent factors, like political movement and forced migration.

Table 2: Average annual exponential growth rate of population

	Urban		Rural		Urban-rural growth differential	
	1971-81	1981-91	1971-81	1981-91	1971-81	1981-91
Arunachal	8.74	9.28	6.03	6.84	6.03	6.84
Assam	3.27	3.27	1.27	1.29	1.27	1.29
Manipur	9.76	2.98	1.16	2.34	8.60	0.62
Meghalaya	4.95	2.74	2.36	2.77	2.59	-0.03
Mizoram	11.71	9.57	2.37	0.07	9.34	9.64
Nagaland	8.50	5.58	3.42	4.29	5.08	1.29
Tripura	3.29	6.19	2.41	1.61	0.58	3.78
N-E India	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
All India	3.83	3.09	1.78	1.80	2.05	1.29

Source: Census of India 1991, Paper 2 of 1991.
n.a. = not available.

As mentioned earlier, the North-East India is not a homogeneous region. In terms of topography, excepting Assam and Tripura, all others states are predominantly hilly area. This has its impact on the urbanisation pattern. In the hill areas, for ecological reason, villages are small and scattered; and village people mostly depend on subsistence 'jhum' cultivation. In such a situation urban settlements will be few in number and small in size. Apart from towns on the hill, there are another category of small towns, located at the base of hills. These are essentially enlarged form of the traditional market places, where

hill people trade their products with people from plains. In contrast, in Assam, particularly in the tea growing areas, the small urban settlements are developed as nodal point of transport and trade to cater the needs of the tea gardens, which are scattered over the area. Besides, agricultural surplus from the settled cultivation in the plains of Assam has contributed to the growth of small towns. In recent decades, with the expansion of administrative set up, a new category of small towns has emerged in hills and elsewhere also. These towns are imposed administrative centres, with some trading activities catering to the purchasing power injected through the public sector employment.

Thus, in the urban structure of the North-East, the small and medium-sized towns are predominant both in terms of number and the share of urban population (Table 3.) In 1991, 72 percent of the towns in North-East India are small towns (with less than

Table 3: Size-Distribution of Towns in North-East India, 1991

	I	II	III	IV	V	VI	Total
Arunachal	—	—	—	5	5	—	10
Assam	4	4	20	32	15	12	87
Manipur	1	—	3	5	17	4	30
Meghalaya	1	—	2	2	2	—	7
Mizoram	1	—	2	3	5	11	22
Nagaland	—	2	2	3	2	—	9
Tripura	1	—	4	7	4	2	18
N-E India	8 (38.2)	6 (9.1)	33 (23.1)	52 (17.3)	50 (9.2)	29 (3.1)	183 (100)
All India*	300 (64.9)	345 (11.0)	947 (13.3)	1167 (7.9)	740 (2.6)	196 (0.3)	3696 (100)

Source: Census of India 1991, Paper 2 of 1991.

* Excluding Jammu and Kashmir

Note: Figures in parenthesis indicates percentage share of total urban population.

20000 population) accounting for 29.8 percent of

urban population and 24 percent towns are medium-sized accounting 32.2 percent of urban population. If we look at the all-India (excluding Jammu and Kashmir) figures, small and medium-sized towns together accounted for 92 percent of all towns but only 35 percent of the total urban population. It appears that though in the North-East the small and medium-sized towns accounted for a larger share of urban population, such towns are relatively less in absolute number. Another disquieting feature is that the relatively small urban system is dominated by one or two large urban centres, which is largely due to the enclave type development. From the ecological point of view, further expansion of these cities are not desirable.

Another notable aspect of urbanisation in the North-East India is that, during the last three decades the small and medium-sized towns are growing steadily (excepting in Tripura), while the cities has experienced relatively slow growth, particularly during 1981-91 (Table 4). Although apparently this trend is satisfactory, we must note, firstly, that many of these towns are very small in size; the high rate of growth is due to the very low base, while absolute expansion is relatively small. Secondly, many of the small towns are new administrative centres; the initial growth impulse, largely due to the administrative jobs, is unlikely to continue in future.

The process of urbanisation in the North-East India is largely due to migration. Both rural and urban population growth rates are higher than the natural growth rate and urban growth rate exceeds the rural growth rate in most cases (Table 2). To go by Census of India migration data, in 1981, in the North-Eastern states 40 to 60 per cent of urban male population are migrants, excepting in Manipur (Table 5). Moreover, a large proportion 40 to 70 percent of

urban migrants are out-of-state migrants, again Manipur being the exception. This indicates that rural-urban interaction is weak in the region.

Table 4: Growth rate of common towns in different-size classes

State	Years	Size-classes						
		I	II	III	IV	V	VI	All
Arunachal	71-81	—	—	—	—	78.64	49.30	57.98
	81-91	—	—	—	—	85.51	44.30	80.76
Assam	51-61	—	—	54.07	54.42	59.91	76.67	56.27
	61-71	45.00	37.39	56.61	26.03	46.90	49.62	46.29
Manipur	71-91	—	—	—	—	—	—	—
	51-61	—	—	—	—	—	2266.07	2666.1
	61-71	—	48.21	—	—	—	—	48.21
	71-81	56.05	—	—	—	133.73	121.99	77.82
Meghalaya	81-91	28.09	—	38.47	41.93	44.82	20.59	33.36
	51-61	—	34.75	—	—	—	847.12	43.19
	61-71	—	21.01	—	113.94	62.19	—	25.27
	71-81	42.32	—	—	127.63	44.73	—	39.98
Mizoram	81-91	27.23	—	29.55	60.28	28.47	163.77	36.36
	51-61	—	—	—	—	105.14	—	105.14
	61-71	—	—	—	122.63	—	—	122.63
	71-81	—	—	134.70	—	186.01	—	142.85
Nagaland	81-91	—	107.19	—	106.82	104.60	—	106.50
	51-61	—	—	—	—	—	75.66	75.66
	61-71	—	—	—	—	168.28	—	168.28
	71-81	—	—	59.39	70.62	—	—	65.93
Tripura	81-91	—	—	63.71	50.72	68.83	—	60.46
	51-61	—	—	28.84	—	—	—	28.84
	61-71	—	82.70	—	27.33	29.70	—	57.64
	71-81	31.84	—	—	17.71	14.82	—	26.27
All India	81-91	19.25	—	24.47	15.75	23.30	28.96	19.47
	51-61	31.01	26.49	25.42	25.49	27.07	50.48	28.51
	61-71	36.07	33.79	33.33	31.58	33.40	35.26	34.43
	71-81	37.16	37.33	38.47	36.47	40.04	48.14	37.56
	81-91	34.49	31.60	29.57	28.41	30.02	43.88	32.81

Source: (1) Census of India, Occasional Paper 1 of 1986, Study on Distribution of Infrastructural Facilities in Different Regions and Levels and Trends of Urbanisation, pp. 354-356;

(2) Census of India 1991, Series 1 India, Paper 2 of 1991, Provisional Population Totals: Rural-Urban Distribution, pp. 419-425.

Notes: (i) All India figures for 1971-81 excludes Assam, and that for 1981-91 excludes both Assam and Jammu-Kashmir.

(ii) For computing 1981-91 figures an Urban Agglomeration is treated as a single entity.

'—' = nil

Table 5: Percentage distribution of birth place urban male migrants by types of movements, North-East India, 1961, 1971, 1981

		within district	inter district	inter state	from outside India	total	% of male migrant in popn.
Arunachal Pradesh	1961	—	—	—	—	—	—
	1971	13.9	1.8	60.5	23.8	100.0	84.2
	1981	16.1	5.3	63.9	14.7	100.0	60.0
Assam	1961	19.2	13.6	30.1	37.1	100.0	59.0
	1971	23.5	15.1	31.9	29.5	100.0	53.2
	1981	na	na	na	na	na	na
Manipur	1961	43.4	—	34.4	22.2	100.0	15.0
	1971	50.2	10.6	30.0	9.2	100.0	15.0
	1981	39.6	31.7	25.6	3.1	100.0	9.1
Meghalaya	1961	20.7	19.7	26.4	33.2	100.0	59.1
	1971	22.3	0.7	49.8	27.2	100.0	46.2
	1981	28.3	8.8	50.5	12.4	100.0	46.9
Mizoram	1961	75.0	7.6	4.4	13.0	100.0	55.8
	1971	89.1	5.6	3.6	1.7	100.0	62.7
	1981	75.8	9.3	13.3	1.6	100.0	59.4
Nagaland	1961	43.3	0.4	41.8	14.5	100.0	61.7
	1971	15.6	5.0	66.7	12.7	100.0	79.0
	1981	23.1	27.4	44.2	5.3	100.0	68.6
Tripura	1961	8.4	—	6.4	85.2	100.0	60.0
	1971	7.4	4.1	7.3	81.2	100.0	52.6
	1981	10.3	8.0	9.6	72.1	100.0	41.3
All India*	1961	26.8	31.1	28.5	13.6	100.0	43.7
	1971	26.3	33.3	29.9	10.5	100.0	37.5
	1981	27.7	36.3	28.6	7.4	100.0	34.9

Source: Census of India, 1981 (Census Monograph No. 2), Internal Migration in India, 1961-81 (An Analysis), (S.K. Sinha), 1986. n.a. = not available

* Excludes Assam.

In short, in spite of the relatively high share in the total urban population, the number of small and medium-sized towns is inadequate and their high growth rates over past three decades seems to be transient in nature. This points to some of the basic deficiencies of the small and medium-sized towns: Firstly, the small and medium sized towns do not

have strong and diversified economic base. Secondly, they have relatively weak linkages, both physical and economic linkages, with the rural sector.

ECONOMIC BASE OF TOWNS IN THE NORTH-EAST INDIA

To examine the economic base of towns in the North-Eastern India, we look at the functional classification of towns and urban agglomerations in 1991. On the basis of the proportion of workers engaged in nine industrial categories, Census of India 1991 has classified towns into five function groups (Census of India 1991, Occasional Paper No. 3 of 1994):

1. Primary (comprising industrial categories I-IV),
2. Industry (V & VI),
3. Trade (VII),
4. Transport (VIII) and
5. Services (IX).

The leading function of a town is the function having the largest proportion of workers. Moreover, in terms of the degree of diversification of function, towns are classified into three groups: mono-functional (if the leading function accounts for more than forty percent), bi-functional (if 60 percent or more workers are in two of the five functions) and multi-functional (if 60 percent or more workers are found in three functions).

Table 6 shows the number of 'service' towns (towns with service as the leading function) for each state in the North-East India and the share of the service towns in urban population. It can be observed that the urbanisation process in the North-East India is predominantly based on the 'service' towns. It may be noted, here, that the service activities largely

consist of government financed services, *e.g.*, public

Table 6: Number and population of UAs/Towns having services as the predominant/leading function according Mono, Bi and Multi-functional categories in the North-East India, 1991.

States	No.	All		Mono-func.		Bi-func.		Multi-func.	
		% Pop*	No.	% Pop	No.	% Pop	No.	% Pop	
Arunachal	(10)	9	92.8	9	100.0	0	0.0	0	0.0
Assam	(87)	28	59.5	6	5.5	14	81.7	8	12.8
Manipur	(30)	2	41.3	1	97.1	0	0.0	1	2.7
Mizhalaya	(7)	6	96.4	3	91.2	2	6.4	1	2.4
Mizoram	(22)	2	53.1	2	100.0	0	0.0	0	0.0
Nagaland	(9)	9	100.0	8	72.5	1	27.4	0	0.0
Tripura	(18)	16	89.9	11	72.9	3	16.3	2	10.8
N-E India	(183)	72	**	40	**	20	**	12	**
All India	(3697)	736	26.7	250	22.2	180	42.9	306	34.6

Source: Census of India 1991, Occasional Paper No. 3 of 1994. Functional Classification of Urban Agglomerations/Towns of India 1991, p. 56.

Note: Figures in brackets show the total number of Urban Agglomeration/town.

* Percentage of population with respect to the total urban population.

** Figures not reported, needs detail estimation.

administration-including defence, education and health services. Besides, many of these service towns are mono-functional. In Manipur and Mizoram, although the importance of service towns in urban population is relatively low (41 and 53 per cent respectively), the non-service towns are predominantly agricultural towns. In Manipur, for as many as 26 towns (accounting for 55 per cent of urban population) primary sector is the predominant function, while in Mizoram for 20 towns (accounting for about 47 per cent of urban population). Only in Assam, the towns have some sort of a diversified economic base: 35 towns are trading towns accounting for about 25 per cent of urban population and another 12 towns are industry-oriented (having 6.44 percent share of urban population).

To relate the functional character with the size-class of towns, most of the lower order towns (below 50,000 population) in the North-East states, of course, excepting Assam, are 'service' towns. In Assam, there are 79 lower-order towns in 1991, of which 22 are 'service' towns but they are bi-functional or multi-functional in nature, with trade and commerce being the next important function. Another 33 are trading towns and two are 'transport and communication' oriented towns. All 12 'industrial' towns are lower order towns.

What is more significant is that the functional classification of the towns are not changing much over the decades. In Assam, out of 54 towns in 1961, functional classification changed for 18 during 1961-71 and for only 8 during 1971-91. In Meghalaya, Mizoram and Tripura there was no change at all during 1961-91 (Appendix 1).⁵

SMALL AND MEDIUM-SIZED TOWNS AND RURAL-URBAN RELATIONSHIP

Not only the economic base of the small and medium-sized towns is not diversified but their linkages with the villages are relatively weak. This is partly due to the hilly terrain and small and scattered villages, but more important is the fact that the average road density (per sq. km area) in the North-East India is lower than the all-India average. The large majority of villages are not only away from the towns, but also not connected by surfaced roads. From Table 7 it may be seen that a very high percentage of villages are having population less than 500. Most of them are situated more than 20 km away from a town and not accessible by any all-weather surfaced road.

The situation can be accounted for, at least in

Table 7: Percentage of inhabited villages for selected population sizes and distance ranges from the nearest town, 1981

State	Percentage of villages inhabited with persons		% of inhabited villages with distance from nearest town		Inhabited villages with pucca road connection (percentage)
	200	< 500	< 500	> 20 km	> 50 km
Arunachal	80.79	94.75	96.10	91.59	3.73
Assam	25.27	55.62	50.90	15.69	19.55
Manipur	50.10	74.53	59.65	35.37	13.30
Meghalaya	69.63	93.50	91.30	57.00	7.29
Minoram	n.a.	n.a.	n.a.	n.a.	n.a.
Nagaland	34.79	68.65	88.85	71.77	9.17
Tripura	63.33	83.79	72.08	36.20	8.76
All India	n.a.	n.a.	n.a.	n.a.	25.13

Source: Census of India, Occasional Paper 1 of 1986, Study on Distribution of Infrastructural Facilities in Different Regions and Levels and Trends of Urbanisation.

n.a. = not available

part, by to the fact that the existing road network (National and State Highways) are laid primarily to serve the interest of defence rather than regional development. The surfaced roads are away from the large rural settlements, which are presumably in agriculturally potential areas (as can be seen from the maps and data provided with the Census village directory). So the small and medium-sized towns, which has been established as administrative centres given the existing road network, are away from the large villages. It is quite likely that many of the existing small service towns would not fit as ideal central places of a 'generative' rural-urban relationship.

As observed earlier, in the North East India, the small and medium-sized towns are relatively less in number and town density per square kilometer area is relatively low compared to all-India averages. But in view of the terrain conditions and consequent difficulties in realising the economies of scale, the

region should have a greater number of lower order towns. Further, there are many pockets, including some parts of Assam, where few towns exist. In these areas paucity of small towns and subsistence agriculture are complementary to each other.

The physical access to a town is only a necessary but not sufficient condition for the formation of rural-urban linkages. Links are forged between the two sectors through trade, input-output links, flow of funds and flow of information. The data on the structure of work force show that in the North-Eastern states proportions of workers engaged in trade and manufacturing are much less than that at the all-India level (Table 8). Further, the proportion of workers engaged in trade is less in rural areas

Table 8: The Structure of Workforce in North-East India, 1991

(percentage)

State	Agri- culture	Mining	Manufac- turing	Cons truction	Trade	Trans- port	Ser- vices
Arunachal	67.26	0.18	2.68	5.98	3.31	1.13	19.47
Assam	73.50	0.49	3.99	1.57	6.84	2.50	11.11
Manipur	69.97	0.03	8.11	1.55	3.83	1.21	15.30
Meghalaya	74.21	0.60	2.15	1.59	5.26	1.45	14.75
Mizoram	65.77	0.22	2.61	2.47	5.19	1.14	22.61
Nagaland	75.20	0.06	1.71	1.77	3.19	0.89	17.19
Tripura	63.79	0.29	4.94	1.47	7.68	2.77	19.06
N-E India	72.19	0.41	4.02	1.76	6.23	2.19	13.19
All India	66.92	0.61	10.03	1.94	7.45	2.80	10.25

Source: Compiled from Census of India 1991, Primary Census Abstract (Data provided in floppies).

compared to urban areas indicating, perhaps, a weak trading network between the rural and urban sectors (Table 9). This is an outcome of various interacting factors, like absence of physical infrastructure, paucity of agricultural surplus, lack of diversification of the rural economy and also the motivational deficiency among the native people.

Table 9: The Structure of urban workforce in North-East India, 1991**(percentages)**

State	Agriculture	Mining	Manufacturing	Construction	Trade	Transport	Services
Arunachal	8.85	0.00	5.64	13.18	12.02	3.94	56.36
Assam	8.72	1.06	13.75	5.66	28.61	11.50	30.69
Manipur	43.02	0.07	13.99	3.27	10.79	2.67	26.19
Meghalaya	8.58	0.68	7.98	5.73	19.15	6.14	51.73
Mizoram	40.69	0.51	5.35	3.97	10.87	2.45	54.94
Nagaland	14.30	0.26	4.75	5.54	15.97	4.25	54.94
Tripura	10.15	1.08	9.22	3.86	20.19	8.10	47.39
N-E India	15.80	0.80	11.50	5.31	22.45	8.42	35.73
All India	13.34	1.12	25.07	5.07	21.99	8.28	25.12

Source: Same as in Table 8.

THE PROSPECT OF SMALL AND MEDIUM-SIZED TOWNS AND THE NEED FOR RURAL-URBAN INTEGRATION

Urbanisation level in the North-East India is low but the rate of urbanisation is high. Therefore, it is expected that in the coming decades a good number of small and medium-sized towns will emerge. Besides, in the hill areas, topography warrants that the small and medium-sized towns rather than the large cities should be the vehicle of urbanisation. More importantly, the small towns growth is complementary to the inward-looking development, which, as discussed earlier, is the only sustainable process of development in the North-East India at this stage. The prospect and potentiality of small town development should be considered in light of this alternative scenario of development and the concomitant need for transforming the rural economy through a process of integration between the rural and urban sector.

Under the inward-looking development scenario, the broad priority areas are almost similar as under

the outward-looking scenario, namely, transport, power, industry, agriculture, and human capital development. But the difference will be in detail, in the focus, in the sequencing of priorities over time and space. Thus, in the choice of transport links, preference should be given not so much for inter-regional transport links, as for intra-regional transport links, linking the villages with the small towns by all-weather surfaced road. For efficient utilisation of scarce resources, priority should be given to those small towns which have maximum potentiality for rural-urban linkages, for instance towns at hill-foot, towns with large and resourceful hinterland. Hopefully, several such towns could be identified from the existing service towns. Their links with the rural hinterland may be strengthened not only through construction of link roads, but also by the way of provision of other facilities and services, including health, education, information and technical services at the small and medium-sized towns.

Concomitantly, the surrounding rural economy has to be developed and diversified, by extension of modern agricultural and allied practices, *e.g.*, the sericulture, horticulture etc. To attain this goal, emphasis should be given on the provision of related infrastructural services.

The composition of production activities in the urban area is an important determinant of the rural-urban linkage and diversification of the rural economy. At the initial stage, the urban production should have link with the demand from local agriculture and allied activities and rural households, and on supply side with locally available resources. Not only this will help in developing input-output linkages and income generation at the local level, but also expose a large number of people to relatively advanced technology and practices.

Last but not least in importance is the role of

rural-urban integration in changing socio-cultural set-up and human capital development. The processes are slow, particularly so in the North-East because of ethnic heterogeneity, and interacting. The agricultural development and rural-urban integration ensures that the process will embrace the majority of population.

However, it will not be easy to move toward the alternative development scenario as it would mean not merely changes in the infrastructural set-up and the location matrix of urban system, but also a different social equation emerging in the process of rural-urban integration. The rural people, including various ethnic groups, will demand for an increasing share of urban jobs and facilities. There will be a conflict of interest between the cities on the one hand and the small and medium-sized towns and rural areas on the other. Greater share of resources for agriculture and smaller towns means less for the cities. As the interest of the existing privileged groups are bound to be affected at least in the short run, they, being mostly city based and more organised compared to rural people, would try to undermine the required change in the policy direction. Of course, in the absence of broad-based sustainable expansion of the regional economy, in the long-run the conflicts and tensions between various interest groups would increase rather than decrease.

To conclude, in the North-East India, the need for an urban system supporting a broad-based development process will be fulfilled provided small and medium-sized towns are integrated with the rural economy, facilitating integration of agriculture and non-farm activities at local level. There is scope for pursuing an active policy to achieve the goal. The various problems of small towns, *e.g.*, availability and improvement of civic amenities, financing of local urban bodies should be addressed from this overall perspective.

NOTES

1. Of course, the North-Eastern Regional Council has been established to facilitate the physical and economic integration of the region, but one cannot be very sure about its effectiveness (See, Dass, 1985; Agarwal, 1985).

2. See Mathew (1981) for studies indicating the feasibility of rural diversification.

3. Since towns with one lakh or more population is treated as city, it would be at least consistent with the convention if we set 99,9999 as the upper limit the population range for the small and medium-sized towns. However, under the Eighth Five Year Plan, the coverage of the Integrated Development of Small and Medium Town scheme has been extended to towns with less than three lakh population (Planning Commission, 1992).

4. Of course, accepting 20,000 as the cut off mark saves a lot of computation as we can use data made available by Census of India in six size-classification of towns.

5. The functional classification used in Appendix 1 is different from what is used in Table 5. Functional classification used in Appendix 1 is based on the proportion of workers in the non-agricultural workers only. For the methodology of this type of classification see Mitra (1981).

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APPENDIX

Appendix 1: Change in the functional classification of selected North-East India Towns, 1961 to 1991.

State	Town	Sc71	MFT61	MFT71	MFT91	FST61	FST71	FST91	M61	T61	S61	M71	T71	S71	M91	T91	S91
Assam																	
	Gauhati	I	S	M	T	SS	MMf	TTg	37	18	45	40	30	30	21	41	38
	Silcher	II	T	T	T	TTg	TTg	TTg	20	42	38	19	45	36	20	45	35
	Dibrugarh	II	T	T	T	TTg	TTg	TTg	20	42	38	20	51	29	22	46	32
	Nowgong	II	S	T	T	SS	TTg	TTs	20	37	43	22	46	32	28	45	28
	Tinsukia	II	T	T	T	TTg	TTg	TTg	25	39	36	25	39	36	27	51	22
	N. Lakimpur	III	S	T	T	SS	TTg	TTg	23	33	44	21	46	33	23	43	33
	Jorhat	III	S	T	T	SS	TTg	TTg	19	37	44	16	51	33	18	51	31
	Pandu	III	T	T	*	TTg	TTg		8	73	19	16	79	15			
	Hojai	III	T	T	T	TTg	TTg	TTg	26	43	31	18	55	27	20	56	23
	Dhubri	III	S	T	T	SS	TTg	TTg	23	37	40	29	42	29	29	40	31
	Sibsagar	III	S	M	M	SS	MMg	MMg	32	23	45	43	31	26	41	34	25
	Karimganj	III	T	T	T	TTg	TTg	TTg	15	43	42	20	45	35	19	42	39
	Lumding	III	T	T	T	TTg	TTg	TTg	8	83	19	5	80	15	18	58	23
	Barpeta	III	M	T	T	MA	TTg	TTg	51	28	21	23	49	28	23	40	36
	Tejpur	III	S	S	T	SS	SS'	TTg	24	30	46	24	37	39	24	41	35
	Kharputia	IV	T	T	T	TTg	TTg	TTg	19	57	24	22	64	14	21	64	16
	Mariani	IV	T	T	T	TTg	TTg	TTg	21	62	17	26	59	15	27	59	15
	Dhing	IV	T	T	T	TTg	TTg	TTg	17	50	33	25	49	26	26	43	31
	Digboi	IV	M	T	M	MMf	TTg	MMf	43	23	34	35	45	20	40	39	21
	Kokrajhar	IV	S	T	T	SS	TTg	TTg	29	31	40	26	39	35	27	34	38
	Radhakish	IV	S	S	*	SS	SS		30	28	42	15	36	49			
	Orepure																

Town	Sc71MFT61	MFT71	MFT91	FST61	FST71	FST91	M61	T61	S61	M71	T71	S7	1M9	1T91	S91	
Doom Dooma	IV	T	T	T	TTg	TTg	TTg	31	40	29	28	50	22	22	56	22
Barpeta Rd	IV	T	T	T	TTg	TTg	TTg	31	45	24	25	53	22	25	56	19
Gauripur	IV	T	T	T	TTg	TTg	TTg	20	45	35	35	38	27	29	40	30
Kailasahar	IV	S	S	S	SS	SS	SS	24	23	53	10	30	60	8	28	64
Golaghat	IV	S	T	T	SS	TTg	TTg	23	31	46	21	43	36	22	46	32
Mankachar	IV	T	T	T	TTg	TTg	TTg	17	49	34	31	50	19	26	50	24
Hailakandi	IV	S	S	S	SS	SS	SS	23	33	44	24	37	39	20	38	42
Bongaigaon	IV	T	T	T	TTg	TTg	TTg	29	48	23	25	58	17	18	65	18
Nalbari	IV	S	T	T	SS	TTg	TTg	33	31	36	23	47	30	24	42	34
Mangaldai	IV	S	S	S	SS	SS	SS	28	26	46	27	36	37	24	37	39
Goalpara	IV	S	T	S	SS	TTg	SS	18	32	50	23	44	33	26	36	39
Bilasipara	IV	T	T	T	TTg	TTg	TTg	31	43	21	36	48	16	34	46	20
Digboi OT	IV	M	M	M	MMf	MMf	MMf	75	6	19	65	16	19	58	14	28
Naharkatia	IV	M	T	T	MMg	TTg	TTg	43	31	24	36	45	19	34	47	19
Dhekiajuli	IV	T	T	T	TTg	TTg	TTg	13	49	38	22	54	24	21	49	31
Sualkuchhi	IV	M	M	M	MA	MA	MA	78	13	9	73	13	14	72	12	16
Abhayapuri	V	T	T	S	TTg	TTg	SS	30	36	34	23	39	28	26	34	40
N-Gohati	V	M	S	S	MA	SS	SS	43	31	26	32	34	34	22	28	50
Sarthebari	V	M	M	M	MMf	MA	MA	77	11	12	48	35	17	38	34	28
Bihpuria	V	T	T	T	TTg	TTg	TTg	34	38	28	20	53	27	19	54	27
Badarpur	V	T	T	T	TTg	TTg	TTg	1	95	4	25	51	24	11	64	25
Haflong	V	S	S	S	SS	SS	SS	16	23	61	19	29	52	21	20	59
Rangia	V	S	T	S	SS	TTg	SS	18	38	44	17	55	27	13	38	49
Sapatgram	V	T	T	T	TTg	TTg	TTg	26	46	28	40	47	13	39	44	18
Tangla	V	T	T	T	TTg	TTg	TTg	27	44	29	22	60	18	19	58	22
Dergaon	V	S	S	S	SS	SS	SS	15	13	72	12	23	65	10	20	71
Kamakhya	V	S	S	*	SS	SS	SS	22	25	53	19	40	41			
Nazira	V	M	T	M	MMf	TTg	MMf	47	23	30	31	38	31	38	32	30

State	Town	Sc71	MFT61	MFT71	MFT91	FST61	FST71	FST91	M61	T61	S61	M71	T71	S71	M91	T91	S91
	Lakhipur	VI	T	T	S	TTg	TTg	SS	22	57	21	26	51	23	28	35	37
	Chabua	VI	T	T	T	TTg	TTg	TTg	24	48	28	25	51	24	23	55	23
	Amingaon	VI	T	T	M	TTg	TTg	MMf	31	60	9	16	65	19	37	36	28
	Tihu	VI	M	T	T	MMf	TTg	TTg	43	31	26	35	43	22	19	43	38
	Palasbari	VI	M	T	T	MA	TTg	TTg	50	27	23	30	49	21	30	44	26
Manipur																	
	Imphal	II	M	M	S	MA	MA	SS	53	21	26	40	29	31	29	25	46
Meghalaya																	
	Shillong	II	S	S	S	SS	SS	SS	10	19	71	17	28	55	18	29	53
	Mawlai	IV	S	S	S	SS	SS	SS	23	20	57	32	31	37	18	26	56
	Nongthmmai	IV	S	S	S	SS	SS	SS	8	12	80	15	16	69	13	23	64
	Tura	IV	S	S	S	SS	SS	SS	15	14	71	12	21	67	17	26	57
	Jowai	V	S	S	S	SS	SS	SS	28	18	54	32	22	46	12	27	61
	Shillong (Cant.)	IV	S	S	S	SS	SS	SS	4	9	87	24	37	39	15	26	59
Mizoram																	
	Aijal	III	S	S	S	SS	SS	SS	38	16	46	21	26	53	22	24	55
Nagaland																	
	Kohima	III	S	S	S	SS	SS	SS	7	10	83	10	9	81	12	12	77
	Dimapur	IV	S	T	T	SS	TTg	TTg	7	46	47	25	44	31	22	43	35
	Mokokchung	IV	S	S	S	SS	SS	SS	21	8	71	8	10	82	17	26	57
Tripura																	
	Agartala	II	S	S	S	SS	SS	SS	22	30	48	12	30	58	12	29	59
	Belonia	IV	S	S	S	SS	SS	SS	24	26	48	17	35	48	10	32	58
	Khowai	V	S	S	S	SS	SS	SS	18	34	48	12	38	50	11	32	57

Notes: Sc 71 = Size-class in 1971

MFT 61 = Main Function type 1961

M = Manufacturing with Mining and Construction

T = Trade & Commerce & Transport & Communication

FST 61 = Functional sub-type in 1961

MA = Manufacturing-household

MMf = Manufacturing-nonhousehold

MMg = Manufacturing-mining

S = Services

TTg = trading and commerce

TTt = Transport and Communication

M61 = percentage of non-agricultural workers in manufacturing, mining and construction in 1961

T61 = percentage of non-agricultural workers in trade and commerce & transport and communication in 1961

S61 = percentage of non-agricultural workers in services in 1961

* merged with other city/town

Sources: 1961 and 1971 values are from Ashok Mitra et al. (1981), Shifts in the functions of cities and towns of India, 1961-71;

1991 values are computed from 1991 census data using Mitra's method.

Chapter 2

THE ROLE OF SMALL TOWNS IN THE DEVELOPMENT PROCESS OF NORTH-EAST INDIA

N.N. Bhattacharyya

As per 1991 census about 65 per cent of India's urban population lived in class I cities having population of 100,000 and above, including 23 million cities and the remaining 35 per cent of the urban population lived in class II (50,000-99,999), class III (20,000-49,999), Class IV (10,000-19,999), class V (5,000-9,999) and class VI (below 5,000) towns. This uneven spatial distribution of urban population has resulted in highly irregular concentration among different categories of urban centres. In North-East India there were 183 urban centres, of which 87 were in Assam, 30 in Manipur, 22 in Mizoram, 18 in Tripura, 10 in Arunachal Pradesh, 9 in Nagaland and 7 in Meghalaya in the year 1991. The distribution of urban population at the state level shows greater imbalances in North East India. Although Assam has the highest number of urban settlement, Mizoram with 46.2 per cent is the most urbanized states of the region. The least urbanized part of North-East India is Assam (11 per cent). In the states of Manipur (28 per cent), Meghalaya (19 per cent), Nagaland (17 per cent), Tripura (15 per cent) and Arunachal Pradesh (12 per cent), the proportion of urban population to total population is higher than that of Assam. Thus

the growth of urban centres and urban population in North East India is rather slow and insignificant. This is mainly due to its rural economy and a poor level of industrialization. The urban population of North East India stands at 4.3 million and it comes to about 14 per cent of the total population as against the country's 26 per cent. This accounts for only 2 per cent of India's urban population. The 1991 census has given one lakh plus status to eight urban centres of North East India, namely Guwahati (677,571), Shillong (222,273), Imphal (200,165), Agartala (157,636), Aizwal (154,343), Dibrugarh (123,885), Silchar (115,045) and Jorhat (111584). The city of Guwahati which achieved such status in 1961 continues to be largest city in the entire North East India. The six towns which were grouped under class II were Nagaon (93,324), Tinsukia (73,760), Dhubri (65,861), Dimapur (56,918), Tezpur (54,999) and Kohima (53,122). Nearly 47 per cent of the total urban population of the region live in these cities and major towns and the rest 53 per cent of the urban population live in 169 towns which are small in size. These small towns are not evenly distributed among the states of North East India. Assam has the highest number of such towns (79), Manipur (29), Tripura (17), Mizoram (21), Arunachal (10), Nagaland (7) and Meghalaya (6). These small towns have special significance for the entire region because they can play a greater role in the process of social and economic development and thus in securing a better quality of life.

The urban system of India has evolved during the past 100 years under the impact of colonial economic and administrative policies in a lopsided manner. Kingsley Devis and his followers shared a great concern over the rapid urban growth and massive rural urban migration in India as early as 1960 and they strongly advocated local autonomy planning and

steps to bring about dispersed urban industrial development. Similarly in 1967 McGee coined the term 'pseudo urbanisation' to describe the phenomenal growth of large urban cities in south and southeast Asia on the face of mounting unemployment, lopsided occupational structure, mushrooming of squatter settlements, inadequate transport and sanitation facilities and so on. All these problems are detrimental to the civic life of the major urban centres which create a serious threat to the quality of urban life in the country.

It is mentioned that there are 169 small urban centres in North East India. These small towns have a predominantly rural economic base, and a substantial segment of its work-force being in agriculture. Agriculture is a space consuming activity and it is labour intensive. It requires fertilizers, processing plants, distribution depots and marketing facilities etc. Similarly the rural people require economic and social services. All these facilities and services cannot be provided everywhere. These may be provided in a rational manner in the small towns. It is to be noted that the small towns appear in a hierarchy because there are different grades of demands from the villages, each having different thresholds of population and ranges of goods. Such a urban hierarchy should be properly developed without gaps so that every area and everyone can get equal opportunities. These hierarchy of towns not only provide services for the increased production in the rural sector of economy, but also provide new innovations. Thus they work as catalysts of social change. Therefore, stress should be given to small towns because they are closer to rural people and hence will have a greater impact on the lower strata of the society. Besides, these small towns will be able to avoid pitfalls of inhuman environment that exist in

the major towns and cities like Guwahati. Thus it can be concluded that the resource-based small towns may enliven the local economy, generate more employment opportunities for the rural people and also give a positive check on the migrants from the rural areas and small towns to the major towns and cities.

An examination of the settlement hierarchy in North East India shows that there is a discordance between 14 major urban centres and 35998 villages. There is very little generative link between urban and rural sectors of economy in the settlement system of the region. The growth of cities and major urban centres is essentially a 'centre-down' strategy of development in India and hence this strategy has no appeal for the 'bottom-up' or development from below. But small urban centres constitute some important elements in the development process for both centre-down and bottom-up strategy which are now gaining currency everywhere. In the entire north-eastern region of India there are 169 small urban centres and most of these are potential growth centres. These small urban centres have a significant role in the face lift of the countryside especially to their surrounding rural areas. But forcible shift of activities and services from the major urban centres to the minor or small towns without having the required resource base and infrastructural facilities should be avoided. Economic viability and the future distribution of demand should be primary consideration for adopting a policy on planning for growth centres and regional development of North East India.

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Chapter 3

TOWNS WITHIN TOWN-SYSTEM—

A CASE STUDY OF NORTH-EASTERN REGION

Surendra Singh

INTRODUCTION

There are numerous studies on different aspects of population dynamics, trends of urban growth, regional dimensions of demographic characteristics, functional hierarchies and morphology of towns of the North-Eastern part of the country (Chittaranjan 1978, Goel 1983, Gopalakrishnan 1991, Taher 1993, Borthakur 1993, Sharma 1995). Some studies are also conducted on the specific problems of urban settlement structure, internal dynamics and land use changes in the town-morphology (Mahanta 1986, Sarma 1989, Chakraborty N. 1991, Chakraborty S. 1991, Chakraborty, et. al. 1995, Singh I. 1995, Singh L. 1995). In fact, town do not grow in isolation. There require proper infrastructure and strong surroundings to grow properly. Therefore, the parameters of town growth and urban dynamics are not only concerned with the internal assemblages of the town structure but also related to the external linkages with the other towns of higher orders in its spatial as well as vertical arrangements. Thus, a strong and well-organised town-system of a region leads towards its well-balanced development and fast growth. Towns are having multi-

dimensional characteristics with in the town-system and accelerate various developmental processes through them. Therefore, the strategies of socio-economic development are expected to be prepared on the basis of optimisation of town-systems of an area through organising properly the urban space following 'growth centre approach' of development (Sen *et. al.* 1975, Bhat *et. al.* 1976, Whyte 1979, Misra & Sundram 1980). As a result, towns which are main elements of town-systems are considered as interaction points of socio-cultural activities, the market point as places of exchange of commodities, the functional nodes for the tertiarisation of rural economies because they also act as the centres of raw material processing and absorption of surplus labour available in their surroundings. Therefore, the growth, demographic composition and functional characteristics of towns are directly or indirectly dependent on the parameters which are related to the functional hierarchy and ordering of the spatial arrangement of towns.

So far as spatial organisation of towns of the North-Eastern Region is concerned, there is general observation of the planners, administrations, geographers and regional economists regarding the urban dynamics and spatial linkages of socio-economic activities of the region that the organisation of urban agglomerations over space is too weak to collapse because of inherent conflicting nature of economic as well as demographic forces. The North-Eastern Region of the country is socio-culturally rich, however, there are social conflicts and tensions because of weak interactions and, consequently, the tribal societies of the hill areas have been living in isolation since long. Nagaland is a case of complete social isolation, while the starting stage of socio-economic interaction through town-organisation can be seen in the states of Assam and Tripura (the plains of the region). Immigration,

in-flow of essential commodities and out-flow of raw and unprocessed resource materials of the area, weak forward and backward linkages of regional economies and weak core-periphery relations of spatial interactions and space-economy are main causes of weakening the town-organisations of the region. As a result, town-system might be working only to diffuse or distribute the essential commodities trading from outside the region. Therefore, the functional structure of even lower order towns of the system which are much closer to the resource structure of the region might also be emerging on the basis of 'push forces' of spatial organisation of the economy rather than the processings of local resource base. There are, thus, many and varied aspects to be studied regarding space economy and regional development of the North-Eastern Region in light of transformation of economic space through town-system, elements and processes of space-economy of the region and the physical and functional structures of towns at different hierarchic orders. However, study of the size-growth, rank-size regularities and the emerging patterns of towns over economic landscape of the North-Eastern Region is equally important in understanding the underlying processes of socio-economic changes and role of towns in the development of regional economies of the region. These aspects of towns-systems are dealt here with the present piece of research.

URBAN GROTH AND MIGRATION

Third World Countries' population has been called 'demographic transition and even for some countries, it is called demographic revolution'. These changes have become increasingly evident in the past thirty to forty years. It is true in case of India and specially the

North-Eastern Region where rapid population growth at annual average rate of 2.81% from 4.27 million to 10.26 million persons during 1901-1951 and 5.19% rate from 10.26 million to 31.55 million persons during the 40 years of the last half-century 1951-1991 have been recorded. It is the consequence of two demographic factors:

- (i) *the natural growth* of population because of a large gap of 19.8% between birth rate (30.5%) and death rate (10.8%) specially in the plains of Assam during 1990-92, though this gap has been slightly reducing in the region from 21.6% to 19.8% during the last decade (1981-83 to 1990-92) (Registrar General of India 1994), and
- (ii) *the immigration* from the other parts of the country as well as outside country specially during the 1950s when decadal variations of population figures has been recorded 34.3% during 1951-61 with a reduction of upto 30.5% per 1981-91. It is interesting to note here that these figures of decadal variations of total population have always been higher than the national averages (that are 21.5% for 1951-61 and 23.8% for 1981-91).

So far as acceleration of urban processes in the North-Eastern Region is concerned, it is obvious from the urban population trends that there has been a significant increase in urban population from its negligible volume of 1901 to a big volume of 4.38 million in 1991. As a result, a record rate of decadal variation of urban population has been figured which is higher than the decadal variation of total population in almost all the states of the region during all the decades of the century (Table 1). The decades of the mid century (specially the 1950s) are of significant

Table 1. Percentage Decadal Variation of Urban Population in the N.E.R. (1901-11 to 1981-91)

(Figs., in %)

Decades	Name of the States							
	Arunachal Pradesh	Assam	Tripura	Manipur	Meghalaya	Mizoram	Nagaland	All India
1901-11	—	20.55	6.48	3.34	41.76	—	21.66	0.35
1911-21	—	36.80	13.35	7.17	26.13	—	15.15	8.27
1921-31	—	27.58	23.72	7.25	54.25	—	1.11	19.12
1931-41	—	28.30	84.69	16.21	43.93	—	27.11	31.97
1941-51	—	65.73	140.74	-97.13	53.20	—	17.62	41.43
1951-61	—	126.57	141.81	2226.07	100.78	105.14	364.41	26.41
1961-71	—	65.01	57.64	108.95	25.27	164.85	168.28	38.23
1971-81	139.63	58.79*	38.93	165.36	63.98	222.61	133.95	46.14
1981-91	167.04	39.58*	86.69	34.67	36.76	161.02	73.18	36.47

N.B. * the growth rates have been worked out on the interpolated population figures for 1981.

Sources: 1. Census of India 1991, Series-1, paper 2 of 1992, the *Final Population Tables*.

2. *Basic Statistics of North-Eastern Region-1995*, NEC publication Shillong, Table 3, p. 45.

records when the highest degree of decadal variation of urban population of more than 100% has been marked in the North-Eastern Region. During the decade 1951-61, a record decadal growth of 2,226.07% was marked in the state of Manipur. Further, another fact regarding the acceleration of urban processes can be highlighted by comparing the figures of the population share residing in the urban areas of the region. In spite of faster growth of urban population in the North-Eastern Region of the country, the percentage share of urban population is still marked very low i.e., 13.89%, nearly half of the national average, i.e., 26.13% in 1991. In the state-wise distribution of this share, Mizoram ranked on first which occupies a markable share of 46.1% as recorded the most urbanised state of the region in 1991. It may be a misleading fact. It is figured highest urbanised because of misinterpretation of the census definition

of urban areas and even small villages of about 2,000 population size have been declared as urban centre by the state government. Infact, it is obvious that the process of urbanisation in the North-East is being accelerated fast at its very low level of urban standards. It means there is an initial stage of urbanisation following the 'take-off' stage of its acceleration which would influence the functional as well as socio-economic structure of towns of the region. These facts of urbanisation may further be examined by analysing the growth of towns in its regional frame.

GROWTH AND POPULATION SIZE OF TOWNS

Town-growth is true reflection of intensification and diversified nature of socio-economic activities (i.e., agglomeration of human activities forms a force of attraction for the growth of towns), increasing degree of spatial interactions (i.e., expansion of the influencing zones of towns) and continuum in spatial organisation of concentrated activities of the area (i.e., core-periphery concavities). On account of these established relationships of the socio-economic parameters of town-growth over space, towns always follows 'principle of allometric growth*' in its town-system. it means bigger towns of the system have higher growth rate with their increasing diversity in the socio-economic structure and strong spatial interactions and *Vice-Versa*. These regularities of towns may be tested considering the town-classes of the

* The concept of allometric growth is based on the log-linearity of the distribution of town, e.g., $Y = ax^b$, which can be written as $\log Y = \log a + b \log X$, where b refers to rate of change of towns w.r.t. the cnage of whole system. This is as—

$$b = (\Delta \log Y / \Delta \log X).$$

It is proportionate change. It can be rewritten as

$$b = \{(\Delta Y / Y) \div (\Delta X / X)\}.$$

North-Eastern Region of the country.

The study of town-growth can be made in two ways—(a) the changes in the number of towns over time in different town-classes, and (b) the hierarchic ordering of towns within the town system. Going through the general observations of Table-2 regarding changes occurring in various town-classes, there seems a clear cut quality in the growth and increase the number of towns in the North-Eastern Region during the last decade (1981-1991). Table 2 reveals that, on

Table 2. Number of Towns in various Town-Classes according to their Population Sizes (1981 & 1991)

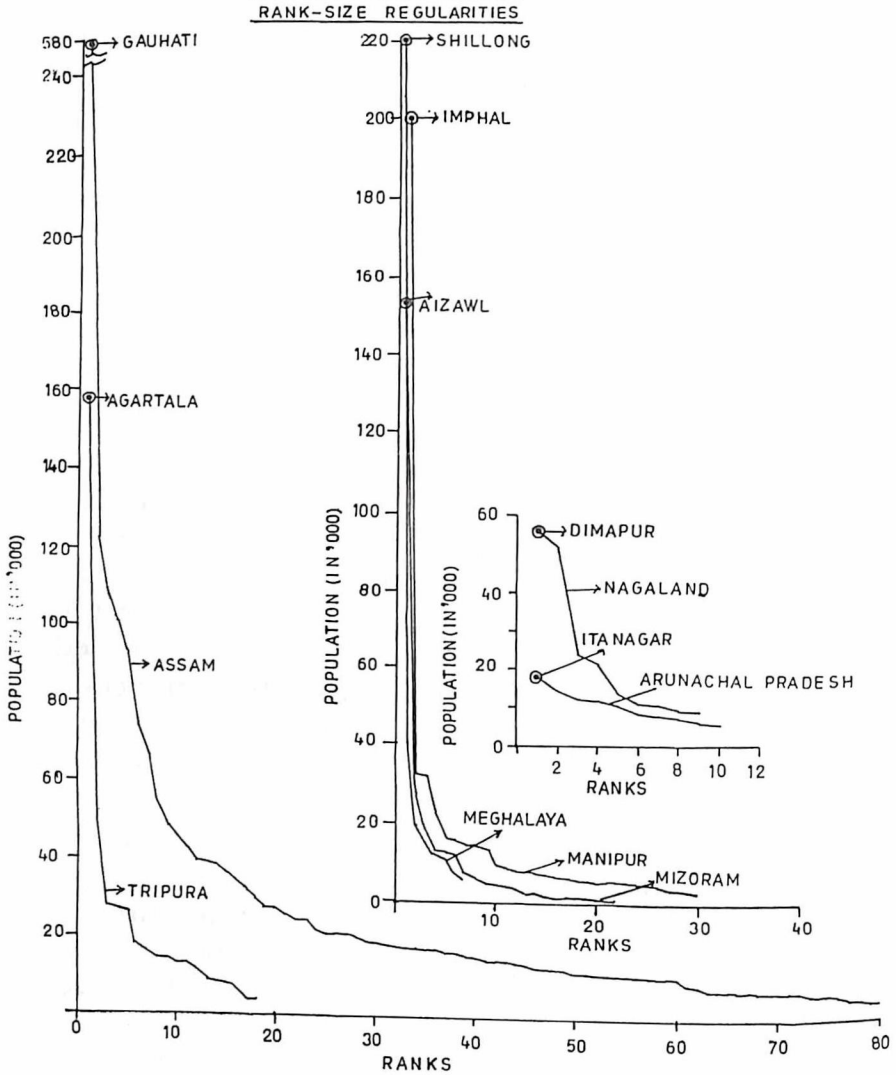
States	Very large (> 100,000)		Large size (100,000- 50,000)		Medium (50,000- 20,000)		Small (20,000- 10,000)		Very small (10,000>)		Total No. of Town	
	1981	1991	1981	1991	1981	1991	1981	1991	1981	1991	1981	1991
(A) The Plains:												
1. Assam	4	4	5	4	12	20	22	32	23	27	66	87
2. Tripura	1	1	—	—	1	4	4	7	4	6	10	18
(B) The Hills:												
3. Arunachal	—	—	—	—	—	—	—	5	9	5	9	10
4. Nagaland	—	—	—	2	2	2	2	3	3	2	7	9
5. Manipur	1	1	—	—	2	4	4	5	25	20	32	30
6. Megha laya	1	1	—	—	1	2	1	2	4	2	7	7
7. Mizoram	—	1	1	—	—	2	1	3	4	16	6	22
Total	7	8	6	6	18	34	34	57	72	78	138	183

Sources: 1. Census of India, 1981.

2. Provisional Population Tables, paper 2 of 1991, census of India 1991.

one hand, a fast increase has been recorded in the medium, small and very small size towns (below 50,000 population size); there is a record increase of 16 towns (from 18 to 34) in the middle size class (50-20 thousand population size), 23 towns (from 34 to 57) in the small size class (20-10 thousand population) and 6 towns at very small size class (of below 10 thousand of population) in the North-Eastern Region

of the country during the 1980s. While on the other hand, a stationary condition of change in the number of towns has been observed in the large and very large size classes (above 50 thousand population) in entire region during the same period, though there may be a significant record growth of population of the individual towns in the region. The state-wise distribution of large size towns (100,000-50,000 population) shows interesting features of distribution that the plains of the Bramputra valley and the Mizoram Hills have lost one large size town in each state during 1980s, while the state of Nagaland has transformed two medium size towns to larger ones. Thus, the larger order towns are maintaining their strength, however, there are record changes in their distributional patterns and placements. Moreover, the individual position of towns within the town-system can be examined by placing the strength of town according to their ranks. The 'rank-size regularities' of town distribution would explain the tendency of proportionate (*i.e.*, allometric) growth. Putting towns according to their ranks for the states of North-Eastern Region, it can be concluded that, though there is higher degree of spatial interaction in the well-matured higher order town-systems emerging in the plains of Assam and Tripura on account of direct impact of migration influx from rural to urban and from the other parts of the country, however, one can find 'primacy' in the town distribution in these areas. The similar features of distribution are also emerging in the hill areas of Meghalaya, Manipur and Mizoram where the state capitals are growing faster than the other towns of lower-orders (Fig. 1). The middle size class towns are stagnant with insignificant growth in these states. As a result, rank-size curves are more concave for these states. But, the cases of Arunachal Pradesh and Nagaland are different with less concavity in their



town distribution. It may be because of the initial stage of their socio-economic development and town-growth which minimises the gaps between the sizes of higher and lower order towns. In general, it can be said that a significant gap between higher and lower order towns within the town-system has been existing due to some irregularities in the town-growth. This gap in the distribution increases the degree of primacy by weakening the smooth functioning of town systems. Therefore, there is a fundamental fallacy in the distribution and growth of the towns of the North-Eastern Region. It can be explained implicitly by analysing the spatial arrangements of town systems.

SPATIAL ORGANISATION OF TOWNS

The spatial arrangement of towns at different orders as shown by Table 3 is an emergence of *five* higher order town-systems within which the groups of three to seven middle order towns are categorically emerging. Each middle order town is linked with a group of nearly eight lowest order towns of the organisation (Table-3). Further more, this arrangement of towns in the region can be studied by taking into account the main functional parameters of towns as the elements of spatial system. For instance, if the towns are considered as the *nodes* of areal forces because they are working with integrating the backward and forward linkages of production processes and the transport routes are recognised as *channels* of radiating the spread effects of developmental activities in the spatial organisation of towns, then the developmental processes in the region are operated through the combination of geographical forces of the town surroundings, which are bound up tightly through the central place constraints, form a functional hierarchy. If these elements of the spatial organisation are working loosely in the areas of

Table 3: Number of Towns according to Town Orders (1991)

<i>Name of Higher/Middle order towns.</i>	<i>No. of lower order towns within</i>
<i>I. Bogaigaon Town System (Higher order):</i>	
1. Kokrajhar (Middle order)	5
2. Dhubri (Middle order)	4
3. Golpara (Middle order)	6
4. Bogaigaon (Middle order)	8
<i>II. Guwahati Town System (Higher order)</i>	
1. Rangia (Middle order)	8
2. Tejpur (Middle order)	5
3. Nogaon (Middle order)	5
4. Dimapur (Middle order)	8
5. Lumding (Middle order)	5
6. Shillong (Middle order)	4
7. Guwahati (Middle order)	6
<i>III. Dibrugarh Town System (Higher order):</i>	
1. Tinsukhia (Middle order)	12
2. Lakhimpur (Middle order)	5
3. Jorhat (Middle order)	9
4. Dibrugarh (Middle order)	4
<i>IV. Silchar Town System (Higher order):</i>	
1. Agartala (Middle order)	18
2. Aizawal (Middle order)	12
3. Lunglai (Middle order)	9
4. Silchar (Middle order)	7
<i>V. Imphal Town System (Higher order):</i>	
1. Imphal (Middle order)	5
2. Thaubal (Middle order)	18
3. Churachandpur (Middle order)	7

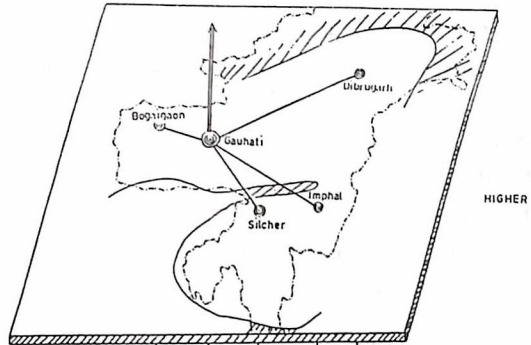
N.B.: 13 towns have not been included in this system of classification.

functional attraction, there is a need to strengthen them optimally through accelerating the decision making processes for geo-space development. There are following salient features of spatial organisation of towns emerging in the North-Eastern Region of the country (see Fig. 2)

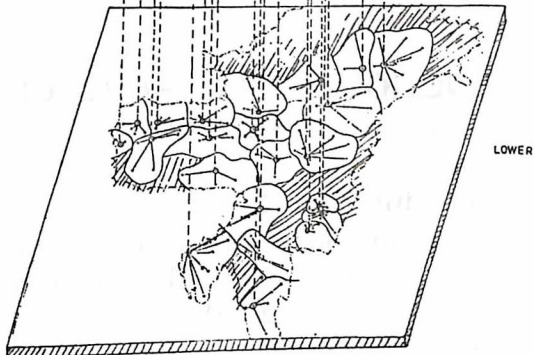
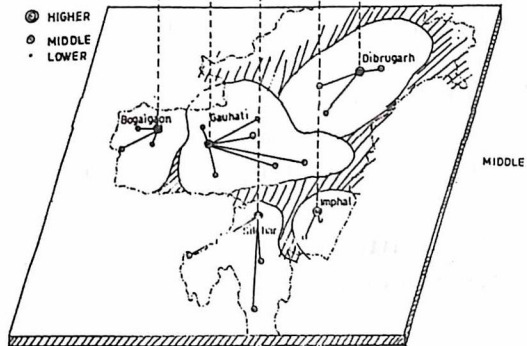
1. SPACING AND SPATIAL ARRANGEMENTS OF TOWNS

(a) The town-organisations of the lower

TOWN-SYSTEMS



- Orders**
- ⊙ HIGHEST
 - ⊚ HIGHER
 - MIDDLE
 - LOWER



Brahmaputra valley of the Assam state and the Agartala plains of Tripura follow weak ordering and very less spacing among various orders because of the fast growth of higher order towns and the effects of immigration specially during partition.

(b) Tura and Shillong town organisations of Meghalaya, Aizwal of Mizoram, Itanagar and Pasighat organisations, emerging in Arunachal Pradesh which have enough space because of their growth in the hill and Mountainous areas of the North-East, are weak in their nodality character and inter-connectivity.

(c) organisations based on Jorhat, Dimapur and Tezpur towns have been growing fast because of their rich resource background of two type of ecological niches of the middle Brahmaputra plains and surrounding hill areas of western Arunachal Pradesh and Naga hills.

(d) The Dibrugarh and Tinsukia town-organisations of upper Brahmaputra valley are having complex functional structure of oil-based industrial development.

(e) The Guwahati based town-organisation is well-matured because of the biggest trade town of the region.

(f) the emergence of Silchar-based organisation in based in the corridor-growth of smaller towns between two types of hill geo-ecology.

2. FUNCTIONAL HIERARCHY AND TOWN ORDERING

In fact, internal functional dynamism of the towns, especially of hill areas of the region, does not have much influence on the regional economies because of diffused and dependent development of urban centres. However, the external functional linkages of town growth which lead to the functional

hierarchy and spatial ordering, are noticeable in this connection (Chakraborty et. al. 1994).

The validity of functional hierarchy and its weaknesses can be highlighted by putting the towns and delineating regional boundaries of spatial organisation with considering the interaction patterns of various functions of the region and connectivity of the towns especially at lower order where town growth is recorded remarkable. On account of non-availability of data for such parameters of towns, the studies on functional linkages are not available. However, nearest-neighbour conditions of spatial interactions can be imposed for establishing functional hierarchy and town-ordering. Adopting shortest distance criteria for for the demarcation of trade zones of towns, it is found that the town-organisation of the North-Eastern Region follows 'administrative principle' (i.e., $k = 7$), rather than 'Market or Transport Principle' with the distortion of shape and size of trade areas. It may be because of the impact of historical and cultural backgrounds of towns which are emerging on the rich resource-space intensive agricultural landscape in the plains, and tribal subsistence agricultural landscape of the hills and mountains.

3. OCCUPATIONAL DIFFERENTIATIONS

In fact, there are significant differentiations in the occupational structure of towns at various orders. The following conclusions can be drawn from the Table 4 which shows variations of demographic and occupational parameters of the towns.

(a) The average size of population of lower order towns is nearly 8.2 thousand which is approximately ten times lesser than the size of middle order towns which have more than one lakh average size of population, while the highest order town (i.e., Guwahati

Urban Agglomeration one in number) is more than five times larger than the middle order towns having a population size of 5.77 lakhs in 1991.

(b) The average annual growth rate of these towns is higher at higher order and *Vice Versa*. Say for example, the average annual growth is recorded 2.7% of lower order towns, 3.5% of higher order towns and 9.4% of the highest order town, while the sex ratio is inversely related to the size as well as growth of the towns. The sex ratio is low (783 female per 1000 males) at the highest order town in 1991, while it is recorded medium (834 female per 1000 male) at middle order and high (883 female per 1000 male) at lower order towns. The higher growth rate of population with low sex ratio at higher order towns is a clear indication of male-dominated immigration of the rural population towards these towns.

(c) Dependency ratio is recorded highest in the higher order towns (2.36). It means the share of children and aged persons are proportionately higher in these towns which destroy the shape of age-sex pyramids.

(d) The functions which are being performed in the lower order towns are agriculturally dominated and more than one-fifth share of total working force is still engaged in primary activities (agriculture and allied services) while this proportion is very low at higher order towns (Table 4). Further, it is interesting to note that the tertiary sector (trade, transport and services) is dominating at all the town-orders and has strong increasing percentage share of working force from lower order (60.2%) to the higher order (78.7%) and then to the highest order (83.8%). But the manufacturing sector is very weak in all town-systems. Within manufacturing sector, household and cottage industries are having significant places at lower order towns and, consequently, ratio of the work force

employed in household industries with other than household industries is higher (.1532) aqt lower order towns. This ratio has been recorded highest (1.60) on a newly emerged town (namely Lamlai) of Churachandpur town-system emerging in the Manipur valley of agriculturally dominated economic landscape.

CONCLUSIONS

Of course, the study of town-system is very much useful for preparing an integrated-device for the developmental strategies of an area/region. In fact, lower order towns of the town-system, which are emerging over economic space with different socio-economic characteristics at the threshold of established town-systems throughout the country, act as 'growth-points' through which the new chennals for the transmission of developmental impulses are possible (Misra 1973). Likewise, lower order towns of the town-system existing in the North-Eastern Region (that may be called newly emerging growth points of the region) are also different in their demographic as well as socio-economic characteristics. An obvious duality can be observed in the structural features of town-system existing in the North-East. Higher order towns have peculiar characteristics of fast growing population with male dominated immigrants coming in from lower order towns and near surroundings of rural areas. The proportion of dependents (*i.e.*, children and too aged persons) is higher with strong tertiary sectors of these towns. On the other hand, lower-order growing towns of the North-East (below 10,000 population) are characterised with the dominance of rural immigrants of active female agricultural labour force (because of persistance of low dependency ratio with low sex ratio in most of the towns of this order). It can be observed as direct shift of occupational

structure from primary activities to service sectors. Industrial sector is weak and insignificant. As a result, jobs which are being generated on those towns are main attraction for rural migrants. It plays a dominant role in socio-economic transformation of these towns.

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Table 4: Occupational Structure of Different Town-Orders (1991)

Name of the Order/ Town	Total Population (1991)	M/F Ratio (F per 1000 M)	20 years Growth rate (%)	% of main workers Total Population	Depen- dency Ratio	% of share of workers in				Household		
						Agricul- tural Activities (I + II)	Mining Plantation Fishing (III + IV)	Manu- facturing (Va + Vb)	Trade Transport (VI + VII VIII)	Other Services (IX)	Other then HH (HH/O)	
<i>Highest Order:</i>												
Guwahati (U.A)	5,77,591	783	188.25	33.60	2.00	2.39	1.90	11.80	46.52	37.30	.05822	
<i>Higher Order:</i>												
Bogaigaon	48,907	834	96.02	29.58	2.34	0.93	0.79	12.45	68.15	17.67	.0656	
Tinsukhia	73,760	742	34.33	34.21	1.90	3.40	1.43	26.81	54.13	13.36	.0473	
Silcher	1,12,045	919	118.73	28.98	2.44	1.18	2.71	9.97	51.37	34.75	.0681	
Imphal (MC)	1,98,535	949	56.18	26.74	2.78	3.10	3.77	17.30	31.06	44.65	.6047	
	1,08,313	834	69.30	30.02	2.36	2.15	2.51	16.63	51.18	27.61	.1964	
<i>Middle Order Representative:</i>												
<i>Bogaigaon Town-Order Towns</i>												
Kokrajhar	Gosaigaon	11,316	842	—	30.40	2.28	13.40	4.15	7.70	43.98	30.75	.0601
Dhubri	Golakganj	6,220	916	—	28.58	2.46	10.69	1.12	18.22	49.83	20.24	.2196
Golpara	Bohari	7,583	910	—	23.92	3.13	13.72	2.42	22.32	45.26	15.88	.5399
Bogaigaon	Pathsala	7,236	820	44.11	28.26	2.48	18.29	3.96	12.76	38.29	26.96	.0611
<i>Gauhati</i>												
<i>Town-Order:</i>												
Rangia	Bokakhat	6,997	820	—	30.75	2.23	16.30	4.74	13.94	39.17	27.23	.0963
Tejpur	Dhakjuli	15,459	873	48.25	31.99	2.17	15.36	1.82	21.03	43.84	25.80	.1075
Nogaon	Jagi Road P. Mill	3,790	812	—	33.90	1.94	9.33	0.15	91.98	1.94	6.15	.0000
Dimapur	a. Bakajan	11,008	830	—	30.33	2.30	17.97	1.23	27.46	35.34	18.33	.0540
	b. Phek	8,432	644	—	40.22	1.47	17.92	3.71	2.12	1.06	63.50	.2807
Lumding	Maibong	5,802	738	—	34.64	1.92	4.28	4.29	3.98	47.26	40.05	.4107
Shillong	Jowai	20,713	981	90.28	33.06	1.96	2.00	0.80	7.53	30.23	59.42	.0617
Guwahati	Jagi Road	13,582	828	—	33.11	2.02	12.29	1.40	31.73	41.74	15.23	.2227

Name of the Order/ Town	Total Population (1991)	M/F Ratio (F per 1000 M)	20 years Growth rate (%) (1971-91)	% of main workers Total Population	Depen- dency Ratio	% of share of workers in					Household	
						Agricul- tural Activities (I + II)	Mining Plantation Fishing (III + IV)	Manu- facturing (Va + Vb)	Trade Transport (VI + VII VIII)	Other Services (IX)	Other HH/O	
<i>Dibrugarh Town-Order:</i>												
Tinsukhia	a. Naharkatu	15,037	808	39.57	33.50	1.98	6.25	11.91	16.18	47.64	18.01	.0516
	b. Roing	7,271	657	—	33.53	1.86	6.35	4.35	3.20	30.76	54.18	0.833
Lakhimpur	Bihpuria	8,506	866	61.83	33.38	2.17	17.83	1.57	1.20	46.83	22.18	.0278
Jorha	Majira	8,336	854	50.20	27.59	2.64	10.52	20.26	8.69	33.48	26.52	.2922
Dibrugarh	Moranhat	3,978	861	57.61	28.30	2.52	3.82	4.17	19.89	49.82	25.84	.0419
<i>Silchar Town-Order:</i>												
Agartala	Seronura	8,135	922	27.51	—	—	—	—	—	—	—	—
Aizawal	Sairang	3,532	840	—	—	—	—	—	—	—	—	—
Lunglai Baiti		2,331	1004	—	—	—	—	—	—	—	—	—
Silchar Lala		8,031	954	55.91	27.89	2.97	24.11	0.94	8.93	38.26	26.92	.3846
<i>Imphal Town-Order:</i>												
Imphal Andro		6,796	977	—	27.91	7.45	90.94	0.32	2.59	1.32	4.78	.5454
Thaubal	Wangjing	5,305	1,036	18.87	—	—	—	—	—	—	—	—
Churachandpur	Lamlai	3,606	905	—	33.50	3.11	76.82	0.33	5.38	5.62	11.42	1.6000
Averages		8,292	883	54.12	33.53	2.12	19.39	3.72	16.34	33.54	26.96	.1532

Source: 1. Census Operation Offices of various States through NICNET.
2. Provisional Population Tables, Paper 2 of 1991, Census of India, 1991.

Towns are the focal points of trade and administration. Administrative compulsions, economic and commercial necessities influence the location and development of towns. Strategic requirements also determine the setting up of new and small towns. New towns in North East India are over grown villages; trading centres with some rural development administrative outfits which become urban settlements. Most of the urban centres do not enjoy modern sanitation facilities, portable and safer water supply. Urban centre in North East India numbering 195 (1991) are like slum like situation with no civic amenities, education, health care, and modern sanitation facilities. There is hardly any agricultural surplus to sustain the urban life and social development. Social and economic compulsions lead people to migrate in urban centres where bulk of people live in dire poverty. These small towns do not have much scope and potentiality for genuine growth. They grow when Government administrative machinery expands. For their growth as vibrating life centres, North East India's economy must be expanded with Agricultural surplus to sustain urban development. Appropriate steps must be taken to streamline the management structure by abolishing the system of multiplicity of authorities for urban planning and its execution.

* * * * *

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