



ISSN: 2230-9926

International Journal of Development Research
Vol. 5, Issue, 10, pp. 5881-5887, October, 2015

Full Length Research Article

GROWTH OF CITIES IN NORTH-EAST INDIA

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ARTICLE INFO

Article History:

Received 25th July, 2015
Received in revised form
24th August, 2015
Accepted 19th September, 2015
Published online 31st October, 2015

Key words:

Census Data,
Town Size,
Growth Pattern,
Exponential Models,
Composite Index.

ABSTRACT

The present paper tries to investigate the association between the selected urban facilities and the increasing dominance of Class-I cities over lower order towns (Census of India, 2001) and also attempts to show the growth patterns of towns and cities (Census of India, 1901 to 2001) in the North East Region of India. The study found that availability of urban amenities such as good electrification, medical facilities, recreation, cultural facilities etc. play significant role in attracting people to migrate to urban centers that lead to increasing dominance of Class-I cities. There is a remarkable differences exist between states in terms of number of towns and cities and their growth pattern reveals the high regional inequality nature of urban centers that is the main feature of North East Region of the country. Over the years, while continuous growth of urban population prevails in Class-I cities, the concentration of population in medium and small towns fluctuated or decline. The number of urban centers grows from 16 to 245 during 1901 to 2001, and majority of towns became Class-I cities by 2001 Census. Assam gained the largest number of Class-I cities compared to other states in the region.

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INTRODUCTION

The world population is becoming predominantly urban and the distribution of urban population takes place among settlements of differ sizes. According to their functionality indicates that dwelling place develops as hamlets, villages, towns, cities and metropolitan cities through time. Metropolitan cities are most developed dwelling sites with their complex, and dynamic activities, functionality and assimilation of people. Generally, cities grow initially by benefiting from the increasing agglomeration economy, but after a certain stage due to congestion and crowding diseconomies set in and subsequently urban sprawl existed into the adjoining area. In such manner the mono-centric urban structure becomes multi-centered and dominates the rest of the urban system. In this process the small and intermediate towns are growing slowly compared to large cities. Later on the smaller towns have grown as a result of congestion and crowding in the large and intermediate towns. In the North-East context, as being happened to other states, the growth of urban population is more influenced by economic development. In fact people tend to migrate to towns and cities for employment opportunities and all types of economic activities that take place in urban economy.

For example, good electrification, medical facilities, sanitation, recreation, cultural facilities etc. are available in towns and cities, which were absent in rural areas. Actually, small towns have limited number of functions like fulfillment of daily needs, small hospitals, small market, vegetables, clothing, circulation of newspapers etc. Thus bigger towns and cities have attracted people from smaller towns and in order to get jobs and better living people tends to migrate in cities and larger towns nearer from their village.

As a result bigger cities become expanded in size and population and more dominating over the smaller towns. However, in the present study with respect to North East Region (NER) there are doubts that whether there is any correlation between availability of urban amenities and growth of population since it is believed that mere availability of urban amenities would not cause the growth of urban population especially in cities of the region. Therefore, the present study tries to analysis the urbanization trends and patterns in general and the reason for the dominate of Class-I cities in terms of growth and the like. Further, in the present study we use decennial Census data collected from 1901 to 2001 to examine the past and most recent trends of urban growth and distribution of urban population at state level and at region level as well. To determine the growth and distributional patterns of towns and cities Town Directory of Population Census of India has been employed.

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Investigation has also been done with respect to the association between some of the selected urban components in order to understand the increasing dominance of Class-I cities over others in the NER.

MATERIALS AND METHODS

This paper is based on secondary data. The study of growth of towns/cities, especially having 100,000 populations in 2001 is by backward tracing of population from 1901 to 2001. Calculation on percentage change in population form one census year to another with respect to base year population has been done as:

Decadal growth rate: Population in 2001- pop. in 1991/pop. in 1991*100 Annual growth rate: (decadal growth rate)/10 In order to explain the association between some of the selected urban amenities and the increasing dominance of Class-I cities over lower order towns, composite indices have been done. Composite index is calculated by the following method for each of the variable.

Standardize value

(Actual value – Minimum value) / (Maximum value – Minimum value). The selected urban components in the present study are given below:

- Sanitation- water born
- Educational facilities (in terms of number)
- Primary, middle/junior secondary, Secondary/matriculation
- Arts, science, commerce and law college, and
- Number of university
- Recreational and Cultural facilities
- Stadium, cinema and auditorium
- Medical facilities (in terms of number)
- Hospitals, hospital beds, dispensary, and dispensary beds
- Electrification (number of connection)
- Domestic, industrial, commercial, road lighting (points), and other
- Credit (in terms of number)

Banks, agricultural credit societies, and non-agricultural credit societies.

In order to meet the objective of the study relatively to the correlation between the growth of Class-I cities and the amenities available in it, weight has been given for all the variables with certain number, say, 1, 2, 3, 4 and so on and all similar variables were grouped into one category and single variable were calculated in such a way that every 100 households use well according to the given population. In case of electrification, every 100 households have electric connection per the percentage of the given population. After weighting has been done with all the values of every single variables were summed up and standardized for all the variables with the formula (Actual value – Minimum value) / (Maximum value – Minimum value).

The composite indicators have been calculated using UN model of Human Development Index. The resulting index values ranges from 0 to 1 (with lower score indicating a lower quality/quantities of urban amenities). Furthermore, in order to know the level of correlation between the variables and growth of the cities, correlation method has been employed, that is, the sum of the values of the composite indices and the rate of urban population growth has been correlated. Furthermore, 't' test (to test the level of significant) has been done in order to prove whether the hypotheses is true or not.

CLASSIFICATION OF TOWNS

Census of India has classified towns in six categories on the basis of population size.

Table 1. Census Classification of Towns

Town Class	Category	Population Size
Cities	Class-I	100,000 or more
Medium Towns	Class-II	50,000-99,999
Small Towns	Class-III	20,000-49,999
	Class-IV	10,000-19,999
	Class-V	5,000-9,999
	Class-VI	Less than 5,000

Urban area which has population more than 100,000 is called city while population below 100,000 is called town. In India, the definition of urban is more rigorous. Both civic status as well as demographic criteria is taken for declaring a settlement urban. The census of India defined the urban places on the basis of the following criteria (Census of India 2001).

- **Statutory towns:** All places with a municipality, corporation, cantonment board or notified town area committee etc. so declared by state law.
- **Census towns:** Places which satisfy following criteria:
 - A minimum population of 5000
 - At least 75% of male working population engaged in non-agricultural pursuits; and
 - A density of population of at least 400 persons per sq km. (1000 per sq. mile).
 - A town with its outgrowths is treated as an integrated urban area and is designated as an urban agglomeration. So an urban agglomeration constitutes:
 - A city or a town with a continuous outgrowth, the outgrowth being outside the statutory limit but falling within the boundaries of the adjoining village; or
 - Two or more adjoining town with their outgrowth, if any as in (i) above, or
 - A city and one or more adjoining towns with or without outgrowths all of which form a continuous spread.

Urbanization in North East India

The urban population in North East India at the beginning of twentieth century was only 1.6 lakh constituting 3.9 percent of the total population in 1901, which increased to 5.5 million comprising 15.5 percent of total population in 2001. By the latest Census 2011 the urban population rose to 8.2 million (Fig. 1) and constituted 21.3 percent of the total population in the NER.

Similar to the growth pattern of the total population the urban population did not grow much until 1921, however, after 1921, the level of urbanization grew consistently and very fast especially during the decade 1951-61 — when the decennial urban growth rate was recorded as high as 139.3 percent — perhaps due to partition of the country in 1947. Unlike other major states, towns in the North East Region has not much merged/declassified during the time of the adoption of new definition of classification of rural-urban areas and towns, and largely the state of Assam experienced the same and consequently the urban growth rate was observed the highest during 1951-61, when there was significant decline in urban population growth rate at the national level. Subsequently, the urban population has slowed down but sudden dropped has been observed from 1991 onwards yet not less than 20 percent (Table 2).

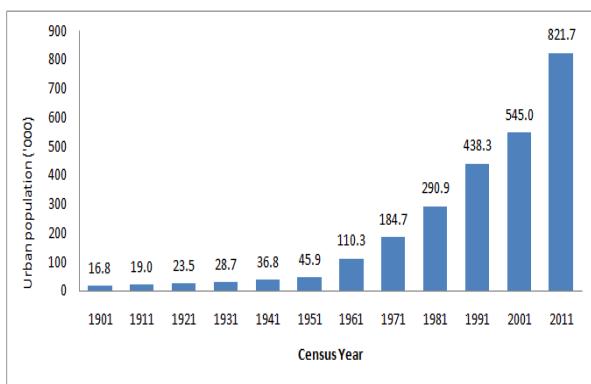


Figure 1.Growth of Urban Population, North-East India, 1901-2011

It is important to note from Table 2 that from 1901 to 2001 the total population grew by 10 times, whereas the urban population increased by 49 times indicating that urbanization is much faster when compared to the growth of the total population and also even faster than the national average (10 times).

The net addition in urban population was around 8 thousand during 1931-1941, which rose to a sharp increase of 6.5 lakh during 1951-1961. The latest Census of 2011 shows that the net addition was 5.5 million during 2001-2011. Further, the level of urbanization at the state level and its growth rate of urban population has been given in Table 3.

Of all the states, Mizoram tops the list with 51.6 percent level of urbanization, followed by Manipur with a distant of 30.3 percent, Nagaland with 29 percent and Tripura with 26.2 percent and of course Assam which is the largest state in NER stood at the lowest (12.91 percent) according to 2011 Census. Although Meghalaya was the leading state with 14.6 percent urbanization in 1971, but its position slipped to 2nd last rank (among the seven states) by 2011 as Mizoram picked up urbanization during the 1980s. Apart from the state of Assam, Meghalaya (20.08 percent) and Arunachal Pradesh (22.7 percent) are the least urbanized states which were much lower than the national average of 31.16 percent in 2011.

Growth of Cities/Towns in North-East India

Unlike the national pattern, Table 4 presents the growth of towns/cities from 1901 to 2011 that indicates an increasing trend consistently over time. The peak of growth of towns has been observed in 1961 with the net addition of as high as 40 towns. Considering the growth of towns compared to before and after 1950s, the growth rate of towns was slower and sluggish before 1950s, however, it became faster from 1951 onwards. Of course the growth rate during 1901-1951 was slow but it was steady.

From 1951 onwards the growth of towns was faster and larger. It is evident from Figure 2 that the growth rate of the towns from 1901 was increased by 14 towns till 1951 whereas it increased by 317 towns from 1951 to 2011 and at present the total towns reached at 347 (Fig.2) excluding the emerging towns (from 2001 to 2011) in Assam, Tripura and Arunachal Pradesh.

Table 2. Level and Growth of Urbanization, North-East India, 1961-2001

State	Level (% of urban population to total population of the state)						Growth Rate			
	1961	1971	1981	1991	2001	2011	1971-81	1981-91	1991-2001	2001-2011
Arunachal Pradesh	-	3.7	6.56	12.21	20.75	22.67	139.6	152.98	117.3	37.55
Assam	8.87	8.73	9.88	11.08	12.91	14.08	92.66*		39.1	27.61
Manipur	7.69	13.18	26.42	27.69	24.11	30.21	165.36	34.73	13.8	42.74
Meghalaya	-	14.55	18.07	18.69	19.69	20.08	63.98	36.36	37.9	31.03
Mizoram	5.36	11.36	27.7	46.2	49.63	51.51	222.61	160.27	39.1	27.43
Nagaland	5.19	9.95	15.52	17.28	17.24	28.96	133.95	74.74	63.1	67.38
Tripura	6.19	10.43	10.99	15.26	17.06	26.18	38.93	85.75	30.2	76.08
North East	7.6	9.4	11.7	13.9	15.5	21.3	57.48	50.68	24.39	50.73

* for 1971-1991
Source: Census of India 1961, General Population Tables, Part II-A(I), Series 1; Census of India services 1, India, population 1 of 1972, Final Population Tables, Census of India 1991, Population 2 of 1991, Census of India 2001, Final Population Totals, Registrar General and Census Commissioner, New Delhi

Table 3. Number of Towns in the State Level

State	1961	1971	1981	1991	2001	2011
Arunachal Pradesh	-	4	6	10	17	44 (27)
Assam*	54	74	80	87	125	125
Manipur*	1	8	32	30	37	37
Meghalaya	6	6	7	7	16	38 (22)
Mizoram	-	-	6	22	22	45 (23)
Nagaland	3	3	7	9	9	35 (26)
Tripura*	6	6	10	18	23	23
North East	70	101	148	183	249	347

(*) = Number of new towns added in 2011. *States which data is not available for 2011.

Source: Same source from the above

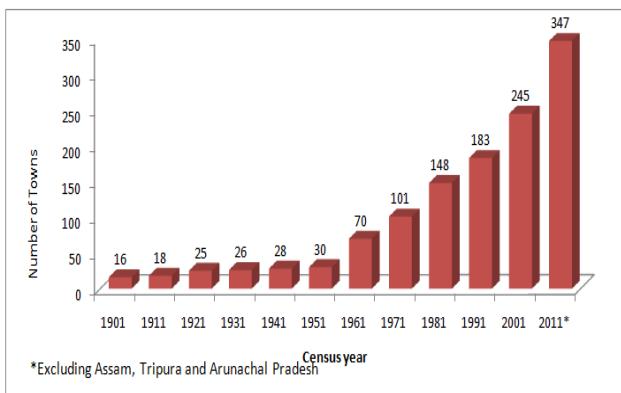


Figure 2. Number of Towns, North-East India, 1901-2011

Distribution of towns by size class

The cities/towns in India are classified into six-fold classification. The first size class known as cities comprises places having 100 thousand and more, and the last category consists of tiny towns with population less than 5 thousand. From Table 5 we may find that although there was fluctuation in growth of urban population at some points during 1901-2001, the growth of towns has continuously increased from 16 to 347. In 1901, about 16 towns were accommodating all urban dwellers, and then in 2011 the number of cities increased to 347 with a total population of 168437 and none of them had a population of one lakh in 1901. By 1951, the number of towns had increased to 29, and, by 2011, the number (including urban agglomerations) has become 347 (Table 4).

The proportion of Class-I cities' population in India's North East was increased slowly up to 1951, but thereafter, there was a sudden spurt in the number of towns/cities and their population. The 64 towns of 1961 accounted for half the urban population in the entire North East at that time, which has now become two-thirds (see Table 5). In respect of proportion of population of Class-I cities, in 1961, it was only 14.5 percent to the urban population in the region but it has been significantly increased to 37.3 percent in 2001 Census. In fact there was a sudden spurt of city population from 1971-81 decades which was 19.2 percent in 1971 and increased to 37.4 percent in 1981. Similarly, the number of Class-I cities grows from 8 to 10 in 1991-2001 decade, but further increased by two Class-I towns between 2001 and 2011 (Table 4).

Furthermore, before 1961, there was no Class-I town which crosses more than one lakh population in the entire region. There were 16 towns of Class-II, IV, V and VI towns which were the predominant towns at that juncture (in 1901). In 1951, there were two second class towns and ten six class towns which showed a growth of 14 additional towns in the region. Again, in 1981, there were 57 towns that was a triple growth of 44 additional towns and in 2001 there were a total of 245 towns and cities in the region. With respect to Class-I cities, there was only one such city, namely, Guwahati in 1961, and in 1971, one more city Imphal had added to it. Till 1971, the two were the only cities of this category and in 1981, their number increased to 3 (added by Agartala), and by 1991 the number of such cities increased to 8, accounting to one-thirds of north east's urban population. In 2001 Census, the number of these cities increased to 10.

Table 4. Number of Towns by size class in North-East India : 1901-2001

Census Year	All Class	I	II	III	IV	V	VI
1901	16	-	1	-	2	8	5
1911	18	-	1	-	4	9	4
1921	25	-	1	-	5	7	12
1931	26	-	1	2	5	9	9
1941	28	-	1	3	7	7	10
1951	30	-	2	6	7	4	10
1961	64	1	4	9	14	26	10
1971	91	2	7	11	33	24	14
1981	57	3	1	6	14	15	18
1991	188	8	6	32	52	58	32
2001	249	10	11	47	74	80	27
2011	347	12*	-	-	-	-	-

*Two new Class I cities have emerged by 2011, 1 from Assam and the other from Nagaland. Source: Town Directory 1981, 1991 and Final Population Tables-UA and Towns, 2001. Provisional Population Totals, Census of India 2011.

Table 5. Percentage of Urban Population by Size-class of Towns/UAs in North-East India, 1901-2001

Census Year	Class-I (100,000 or More)	Class-II (50,000-99,999)	Class-III (20,000-49,999)	Class IV (10,000-19,999)	Class V (5,000-9,999)	Class VI (Less than 5,000)
1901	-	42.8	-	13.5	33.7	9.8
1911	-	39.1	-	26.9	29.2	4.5
1921	-	34.5	-	30.9	20.2	14.1
1931	-	30.9	15.5	23.1	22.4	9
1941	-	27.5	23.1	28.2	13.8	8.2
1951	-	27.9	37.6	20.6	6.2	7.4
1961	14.5	22.1	22.6	16.6	20.4	3.4
1971	19.2	25.2	17.4	24.6	11.2	2.7
1981*	37.4	7.01	15.5	16.5	16.4	6.9
1991	36.9	9.3	22.1	18.1	9.5	2.6
2001	37.3	10.3	22.1	17.5	9.4	1.6

Source: Town Directory 1981, 1991, and Final Population Tables -UA and Towns, 2001. Registrar General and Census Commissioner, New Delhi.

The five new Class-I cities which had been added in 1991 were Shillong, Dibrugarh, Jorhat, Silchar and Aizawl. New Class-I towns such as Nagaon and Tinsukia (all these new cities belonged to Assam) were added in 2001 Census (Table 7). Finally, by 2011 Census namely, Dimapur and Tezpur are the new Class-I cities coming up from Nagaland and Assam respectively. As part of further analysis, it is, however, noteworthy that the urban population in cities from 1961 to the present was interesting too. The twelve Class-I cities and UAs account for 37.3 percent of the entire urban population in the North East. Table 6 also gives clear picture that cities' population has been increasing constantly since 1961 and yet in 1961-71 there was a sudden increase which was from 19.2 per cent to 37.4 percent of population to the total urban population in the region.

Out of the twelve Class-I cities, nearly two third were confined to Assam and the others were mainly the capital city of the state.

Urban services and growth of class-I Cities

The calculation of the composite indices reveals that there was high positive correlation (0.86) between urban amenities and growth of population among the Class-I cities. The composite table also presents that Guwahati precedes other cities when considering the composite index of urban amenities available in it. It is evident that (from Table 6) good credit facilities, enough extraction of water from different sources, good medical facilities and educational facilities are the best point that attracts people to migrate to the city and in return led to

Table 6. Population growth rate of Cities/UAs, North-East India, 1961-2011

City/UAs	State	1961-71	1971-81	1981-91	1991-2001	2001-2011
Guwahati	Assam	51.36	-	131.6	40.12	18.29
Imphal	Manipur	48.21	56.05	26.76	28.59	166.12
Agartala	Tripura	8.65	121.7	19.04	20.74	110.36
Shillong	Meghalaya	21.01	24.62	20.57	0.87	166.68
Aizawl	Mizoram	122.35	134.7	108.4	47.05	27.84
Silchar	Assam	28.09	-	119.57	35.91	45.9
Dibrugarh	Assam	37.39	-	49.51	11.19	15.31
Jorhat	Assam	183.23	-	58.52	7.48	27.27
Nagaon	Assam	46.47	-	68.09	16.54	35.25
Tinsukia	Assam	92.89	-	34.61	37.93	23.23
Dimapur	Nagaland	116	164.6	73.9	71.6	26.18
Tezpur	Assam	65.03	-	38.16	78.91	1.96

Source: Town Directory 1981, 1991 and Final Population Tables -UA and Towns, 2001. Provisional Population Totals, Census of India 2011

Table 7. Standardize values of Urban Amenities among the Class-I Cities, North-East India, 2001

City	Extraction of water from different sources per 100 HH	Sanitation, Recreation and Cultural Index	Credit index	Medical facilities index	Electrification per 100 H.H.	Educational facilities index	Composite index	Rank
Imphal UA(Manipur)	0.91	0.32	0.30	0.03	0.64	0.67	0.48	2
Aizawl NT(Mizoram)	0.42	1.00	0.01	0.01	0.01	0.69	0.35	3
Agartala MCI(Tripura)	0.54	0.12	0.20	0.06	0.70	0.14	0.29	5
ShillongUA(Meghalaya)	0.01	0.01	0.17	0.01	0.58	0.20	0.16	10
Guwahati UA (Assam)	1.00	0.61	1.00	1.00	0.24	1.00	0.81	1
Nagaon UA (Assam)	0.68	0.16	0.01	0.01	1.00	0.09	0.33	4
Dibrugarh UA(Assam)	0.21	0.23	0.13	0.01	0.18	0.30	0.18	9
Jorhat UA (Assam)	0.38	0.15	0.10	0.02	0.19	0.28	0.19	8
TinsukiaUA (Assam)	0.53	0.10	0.04	0.01	0.63	0.27	0.26	6
Silchar UA (Assam)	0.55	0.14	0.06	0.01	0.38	0.25	0.23	7
Tezpur UA (Assam)	0.30	0.05	0.01	0.03	0.51	0.01	0.15	11

Source: Computation of author

#The values ranges between 0 to 1 (0= minimum and 1= maximum)

Correlation Index= 0.80

Note: N.T – Notified Town

M.CI – Municipal Council

U.A – Urban Agglomeration

As indicated above, in 2001, population of Class-I cities constituted 37.36 percent of the total urban population. In this process most of the cities emerging from the region were basically from Assam. Hardly, each state contributes one or more city yet Arunachal Pradesh did not have even one Class-I city till 2011 Census. Hence, it is evident from the above table (Table 5) that one third of the urban population is contributed by Class-I cities in the region and perhaps the reason for the growth of these towns were through migration or natural growth of the population, in addition to certain urban services available in it.

the growth of population as such. In a way, due to significant development in urban facilities Guwahati experience the fastest growth compared to other cities in the north east region. Imphal, the capital city of Manipur stood the second fastest growing city in the region. In fact, Imphal is the primary business hub of Manipur. On the basis of composite index, Imphal dominate other lower classes of towns in the state by virtue of good source of water and excellent educational facilities available in. The other attraction of Imphal is that due to good electrification, sanitation, recreation and cultural facilities that people from the surrounding towns and villages migrate to the city and that cause the growth of population and

size of the city as well. The next fastest growing city in NER is Aizawl NT of Mizoram. Apart from availability of government establishments, Table 7 indicates that there is good sanitation, recreation and cultural facilities in the city. Moreover, Aizawl has good educational amenities as well as good source of water in the city. Due to these reasons the capital has attracted people from the surrounding towns and villages and led to significant growth of its population that dominate other smaller towns in the state. Nagaon UA of Assam is also one of the most rapidly growing cities in NER. Based on composite index table (Table 6), it is evident that the city has good electrification (1.00), followed by good sources of water (0.68), good sanitation, recreational and cultural facilities.

Agartala MIC ranks the fifth position as far as urban amenities are concerned. Agartala is the capital city of Tripura. The composite index table indicates that the city has excellent electrification coupled with good sources of water and as a result it attracts people living in the surrounding towns and villages to migrate to the city. Apart from these, the city has good credit facility, educational institutions and other recreation facilities as well. Tinsukia UA is one of the rapidly growing cities in NER. Tinsukia is a regional business hub in the Indian state of Assam. The city has experienced rapid growth since the recent past due to her good electrification on the one hand and excellent sources of water (0.53) on the other. Further, good educational facilities and recreation and cultural facilities are the point of attraction that cause the growth of the city in terms of population and dominance. Silchar UA is also one of the emerging Class-I cities in NER, and is the headquarters of Cachar district in the state of Assam.

It is the economic gateway to the state of Mizoram and part of Manipur. The city of Silchar is the second largest city of Assam after Guwahati in terms of population and municipal area. The composite index table indicates that the city has its dominance due to her good sources of water (0.55) and good electrification (0.31). Silchar also has good educational facilities in addition to good sanitation, recreation and cultural facilities (0.14). Shillong UA is the capital city of Meghalaya. Shillong is fast emerging as an education hub for the entire northeastern region. Other attractions include good electrification (0.68), good educational facilities (0.20), and good credit facilities (0.17).

Tezpur UA is one of the rapidly growing cities in NER and belonging to Assam. Tezpur is an ancient city on the banks of the river Brahmaputra and is the largest of the north bank towns with a population exceeding 100,000. It is situated 175 kilometers (109 mi) north east of Guwahati, the second largest city of Assam, considered to be the "Cultural Capital of Assam". The major attraction of the city that can attribute to the growth of the city are: good electrification (0.66), good source of water (0.30) and good recreational and cultural facilities (0.05). Jorhat is a 2nd city in Assam which acts as a gateway to upper Assam and to Nagaland. It was the last capital of the Ahom Kingdom. It is the home to many historical monuments of Assamese culture. The city today has evolved to be one of the major commercial and business hubs of the state with growing numbers of restaurants, flats,

shopping centers and educational institutions. The city also serves as the base for tourism to famous places such as the Kaziranga National park, the largest river island Majuli, etc. Apart from certain factors that contribute to the growth of the city, factors such as good sources of water (0.38), good educational facilities (0.28) and good recreation and cultural facilities (0.15) are important for the same. Dibrugarh UA is the District Head-quarter of Dibrugarh and it is the hub of all economic development/activities happening around the district. Economic activities in the district are dominated by two major industries: Oil and natural gas and Tea production. The other major factors that contribute to the growth of the city are: good educational facilities (0.30), recreation and cultural facilities (0.23) and good source of water (0.21).

$H_0 =$ There is a lack of significant relationship between growth of population and development in terms of urban amenities.

The correlation table values indicate that the significance level (.01), that is, 9 degree of freedom gives a value of 2.821 which indicates highly significant. Here since the 't' calculated value (5.00) is greater than the 't' table value (2.821), we reject the null hypothesis and conclude that there is highly significant correlation between growth of population and development in terms of urban amenities.

Concluding Remarks

The pattern of growth of cities in North East India is characterized by continuous concentration of population and activities in large cities. This is manifested in a high percentage of urban population being concentrated in Class-I cities and its population has systematically gone up over the decades in the last century. As per 1901 Census percentage of population in Class-II, IV, V and VI were 42 percent, 13 percent, 37 percent and 10 percent, respectively. According to 1991 Census, about one thirds (36 per cent) of the North-East urban population lived in Class-I cities with more than 100,000 population. In 2001 it has increased to 37 percent. Over the years there has been continuous concentration of population in Class-I cities. By contrast, the concentration of population in medium and small towns either fluctuated or declined. Indeed, the basic reason for the increasing dominance of Class-I cities is due to the availability of urban services such as good electrification, medical facilities, sanitation, recreation, cultural facilities among others (including graduation of lower order towns into Class-I categories). It may be observed that in 1961 there was only one Class-I town, that is, Guwahati in Assam. That has gone up to eleven cities in 2001 and by 2011 there was an addition of one city. More than half of the cities in NER emerged from 2001 Census onwards.

REFERENCES

- Bhagat, R.B. 2004. Dynamics of urban population growth by size class of towns and cities in India, *Demography India*, 33 (1), 47-60.
- Brush, J. 1962. *The Morphology of Indian Cities* in Roy Turner (ed.) *India's Urban Future*, University of California Press, Berkeley.

- Census of India. 2001. *Final Population Totals*, Series 14, Manipur, Director of Census Operations, Manipur.
- Clark D. 1998. Interdependent Urbanization in an urban world: An Historical Overview, *The Geographical Journal*, 164 (1), 85-95.
- Davis, Kingsley. 1955. The origin and growth of urbanization in the world, *The American Journal of Sociology*, 60(5), 429-437.
- Jha, V.N. 2006. *Small Towns and Regional Development*, Rajesh Publications, New Delhi.
- Kadi, A.S. and Mageri, M.N. 2009. The growth of cities in India, *Demography India* 39.
- Kumar, Bipin. 1995. The growth of cities and level of urbanization: 1901-1991, *Journal of Social Economic Studies*, 12 (2), 82-92.
- Kundu, A. 1997. Trends and Structure of Employment in the 1990s: Implication for Urban Growth, *Economic and Political Weekly*, 32 (4): 1399-1405.
- Mishra, H.N. and Chapman. 1991. The growth of large cities in India: 1971-81, *Geoforum*, 22,(3), 271-278.
- Premi, M.K. 2006. India's urbanization and its future implications, *Man and Development*, 21-37.
- Singh, Kuldip. 2006. *Small and Medium Towns: A Geographical Perspective*.Rajat Publications, New Delhi.

Appendix

City	State	Extraction of water from different sources per 100 HH (%)	Sanitation, Recreation and Cultural Index	Credit index	Medical facilities index	Electrification per 100 H.H. (%)	Educational facilities index
Imphal UA	Manipur	17.99	35	134	602	23.77	541
Aizawl NT	Mizoram	8.19	102	51	358	8.16	553
Agartala MIC	Tripura	10.53	16	107	901	25.11	193
Shillong UA	Meghalaya	0	4	99	337	22.27	236
Guwahati UA	Assam	19.66	64	331	12289	13.94	754
Nagaon UA	Assam	13.33	20	53	353	32.41	164
Dibrugarh UA	Assam	4.19	27	87	355	12.62	299
Jorhat UA	Assam	7.53	19	78	412	12.66	288
Tinsukia UA	Assam	10.44	14	62	205	23.41	278
Silchar UA	Assam	10.84	18	69	271	17.37	270
Tezpur UA	Assam	5.95	9	51	508	20.47	105
