

POPULATION GROWTH IN NORTH EAST INDIA: A SCENARIO ANALYSIS

Dr. R. K. Mandal¹, Dr. Namita Dixit², Khushbu Agarwal³ and Dr. Manisha Shinde-Pawar⁴

¹Principal, Jamini Mazumder Memorial College, Patiram, DakshinDinajpur, West Bengal, India

²Assistant Professor, Fortune Institute of International Business, New Delhi

³Assistant Professor, Pacific Institute of Management, Pacific Academy of Higher Education & Research University, Udaipur

⁴Assistant Professor, Bharati Vidyapeeth (deemed to be University), Institute of Management and Rural Development Administration, Sangli

¹rkm_1966@yahoo.co.in, Orchid: <https://orcid.org/0000-0001-9621-7084>

I. INTRODUCTION

Each day the world population increases by over 200,000, demanding more shelter, bread and new city for more than a million inhabitants every week. According to UN News Centre on 24 February 2005, almost all of the increased population is taking place in the less developed countries, whose populations is expected to reach 7.8 billion in 2050 from 5.3 billion now, while the population of the developed countries will remain around 1.2 billion, it says. Between 2005 and 2050, eight countries like India, Pakistan, Nigeria, the Democratic Republic of Congo (DRC), Bangladesh, Uganda, the United States, Ethiopia and China are likely to contribute half of the world's population increase, while the population would at least triple in Afghanistan, Burkina Faso, Burundi, Chad, Congo, the DRC, Timor-Leste, Guinea-Bissau, Liberia, Mali, Niger and Uganda (Dutta and Mandal, 2018).

It is estimated that by 2030, less developed regions will account for nearly 80 percent of the world's urban population (United Nations Population Division 2008). The surge in urban population in developing countries has accompanied the well-documented urbanization of poverty (Ravallion, Chen, and Sangraula 2007). Despite the increase in urban poverty and the growth of slums, adequate attention has not been paid to the welfare of urban households. Urban poverty merits attention in its own right since it presents some issues distinct from those addressed in the typical analysis of poverty (Baker and Schuler 2004). There are three distinctive characteristics along which urban poverty and vulnerability differ from rural poverty: commoditization, environmental hazard, and social fragmentation (Moser, Gatehouse, and Garcia 1996).

Brief Description of North East India (NEI): North East Region (NER) of India or North East India (NEI) consists of eight states surrounded by Bangladesh, Myanmar, China, Nepal and Bhutan. Its boundary consists of 99% international border and remaining 1% is connected with main land called chicken's neck or Siliguri corridor. The Chicken's Neck is a narrow stretch of land of about 22 kilometres width, located in West Bengal (a State of India). The eight states are Assam, Meghalaya, Arunachal Pradesh, Tripura, Nagaland, Manipur, Mizoram and Sikkim. The North East India shares an international border of 5,183 kilometres out of 15,106 kilometres of land border of India showing 34.31 per cent with several neighbouring countries: 1,395 kilometres with Tibet Autonomous Region and China in the north and north east, 1,640 kilometres with Myanmar in the east, 1,596 kilometres with Bangladesh in the south-west, 97 kilometres with Nepal in the west, and 455 kilometres with Bhutan in the north-west of this region. The land area of the North East India is 2, 63,179 sq. km. covering 7.76 per cent of the geographical area of the country and has a population of over 46 million, which is 3.76 % of India's population¹.

Its overall density of population is 159 persons/km², though Assam, the principal state of the region, has a population density of 397 persons per km². In contrast, the state of Arunachal Pradesh, occupying the foothills of the Himalayas, has an average density of 17 persons per km². The distribution of population is highly irregular that reflects the sequent of occupancy, the agricultural potential of a state and the ruggedness and accessibility of the terrain. The most densely populated parts of the region are seen in the plains of Brahmaputra and Barak, in the plain in Imphal of Manipur and in the western part of Tripura². The largest city in NEI is Guwahati and other major cities are Agartala, Aizawl, Imphal, Itanagar, Silchar, Shillong, Dibrugarh, Dimapur, Kohima and Nagaon as per 2011 Census of India. The North East India consists of eight states shown below in the Diagram¹.

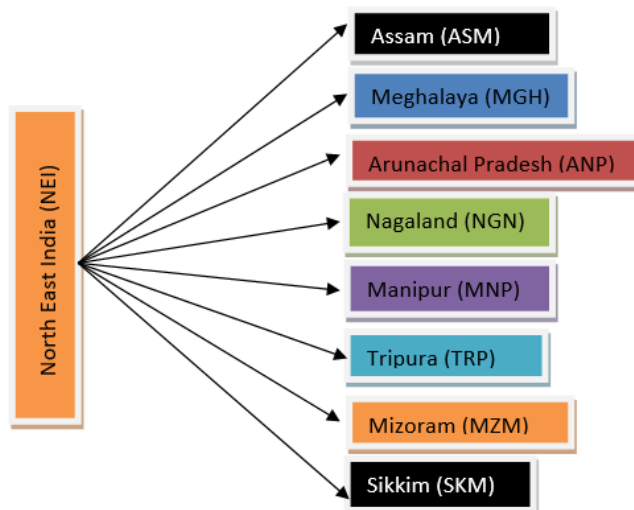


Diagram - 1

The location of North East India is strategically very important because of its connectivity with five countries. Its location is shown in the map given below.

Location of North East India

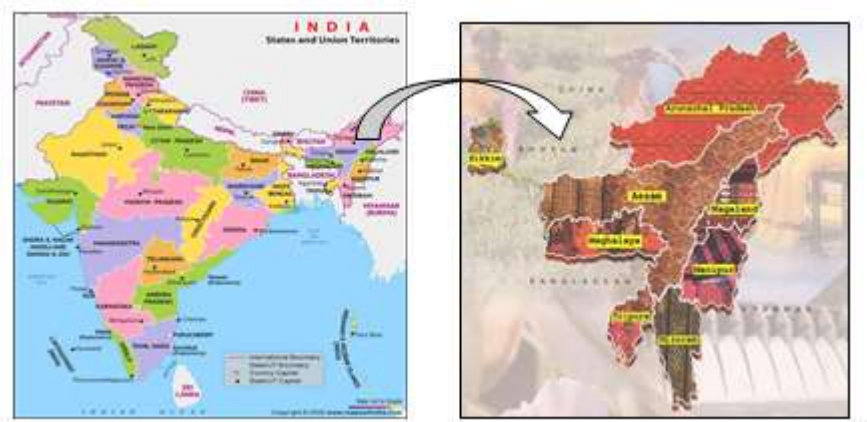


Fig. -1

Objective: The paper aims to analyze the scenario of population growth in North East India (NEI).

II. METHOD AND MATERIALS

This study is descriptive in nature based basically on data of secondary sources of human population. The data from secondary sources are collected from government offices, books, articles, various census reports, and websites published in different times. But the main sources of data are the human population census.

Analysis: The different materials collected from the various sources have been scrutinized, processed, organized and tabulated logically and systematically under appropriate heads of rows and columns of statistical tables in such a way to use the different statistical tools for calculation and thereby to get the results. In addition to graphical representations (Line, Pie-Chart and Bar Diagrams), simple numerical calculations like percentages, and decadal variation of population, etc. have been calculated.

III. RESULTS AND DISCUSSION

Population growth is the change in a population over time, and can be quantified as the change in the number of individuals of any species in a population using "per unit time" for measurement. Human population growth increased significantly after the Industrial Revolution from 1700 A D onwards. During the last 70 years, it has been seen a rapid increase in the rate of population growth due to medical advances and substantial increases in agricultural productivity, particularly beginning in the 1960s made by the Green Revolution. More and more children from the slums are being pushed into the job market as their parents find it impossible to feed their families. The young people of poor family from villages migrate to the cities for their livelihood to compete with the existing pool of unskilled workers for a very limited supply of job in servicesector. Wages are pushed down and in the long run could head to near-starvation levels even as per-capita city budgets for social spending are cut down. Even when allocations for social spending are made, little of the money sanctioned is actually spent

on the poor. As their numbers explode, their bargaining power for wage is desperately poor. The power of slum dwellers diminishes to the point where they cannot exercise any control on corrupt officials cheating them out of the government schemes (Dutta and Mandal, 2017). The population in the states of NEI is shown in Table-1 from 1901 to 2011 and Figure-1.

Table-1: Population in the States of NEI and India (in '000), 1901 - 2011

Year	ANP	ASM	MNP	MGH	MZM	NGN	SKM	TRP	NEI	India	%of Population of NEI to India
1901	U	3290	284	340	82	102	59	173	4330	238396	1.82
1911	U	3849	346	394	91	149	88	230	5147	252093	2.04
1921	U	4637	384	422	98	159	82	304	6086	251321	2.42
1931	U	5560	446	481	124	179	110	382	7282	278977	2.61
1941	U	6695	512	556	153	190	121	513	8740	318661	2.74
1951	U	8029	578	606	196	213	138	639	10399	361088	2.88
1961	337	10837	780	769	266	369	162	1142	14662	439235	3.34
1971	468	14625	1073	1012	332	516	210	1556	19792	548160	3.61
1981	632	18041	1421	1336	494	775	316	2053	25068	683329	3.67
1991	865	22414	1837	1775	690	1210	406	2757	31954	846388	3.77
2001	1098	26656	2167	2319	889	1990	541	3199	38859	1028810	3.78
2011	1383	31169	2722	2964	1091	1981	608	3671	45588	1210193	3.77

Source: Premi (2003: 110 -12), Census of India 2001, Statistical Abstracts & Census of India, 2011. N.B.: U=Unavailable.

The age-distribution in each state of NEI is a typical of high fertility population with a high proportion of the population in the younger age-groups. Manipur, Mizoram and Tripura have the lowest percentage of population below 15 years of age (37%) and this percentage is the highest in Arunachal Pradesh (43%). The proportion of the population of age 60 and above varies from just over 2 per cent in Nagaland to 8 per cent in Tripura (Dutta, 2002).

The total number of tribal population is 81.42 lakh which is approximately 25.71% of the total population. The percentage of Schedule Tribes varies from 13% (Assam) to 91% (Mizoram) which are above the country's figure (8%). However, more than three fourths of the household belong to scheduled tribe in the states of Mizoram (95%), Nagaland (96%), Meghalaya (89%), Arunachal Pradesh (68%) and while in Tripura (17%), Manipur (35%) and Assam (13%). (Dutta, 2002).

The following Fig.-1 gives the picture of the percentage share of population of different states of NEI with respect to India for the period 1901 to 2011. Assam is the biggest state in the NEI accounting for 1.38 per cent of the India's total population in the year 1901 which increased to 2.59 per cent in 2001 and 3.77 percent in 2011. Within the region, Assam was followed by Meghalaya (0.14 per cent) and Manipur (0.12 per cent) in the year 1901 but after 100 years the picture changed completely and thus in the year 2001, the state of Tripura came forward to occupy second position with 0.31 per cent of population followed by Meghalaya (0.23 per cent) and Manipur (0.21 per cent). In the year 2011 the respective shares stand at 8.05 per cent (Tripura), 6.50 per cent (Meghalaya) and 5.97 per cent (Manipur) respectively. The lowest contribution of population is for Sikkim (1.33 per cent), followed by Mizoram (2.39 per cent), Arunachal Pradesh (3.03 per cent) and Nagaland (4.35 per cent). In comparison India's population in 2011, Assam's shares (2.58 per cent) is the highest followed by Tripura (0.30 per cent), Meghalaya (0.24 per cent) and Manipur (0.22 per cent) while Sikkim's contribution in comparison to the country's figure is found to be lowest (0.05 per cent) followed by Mizoram (0.09 per cent), Arunachal Pradesh (0.11 per cent) and Nagaland (0.16 per cent).

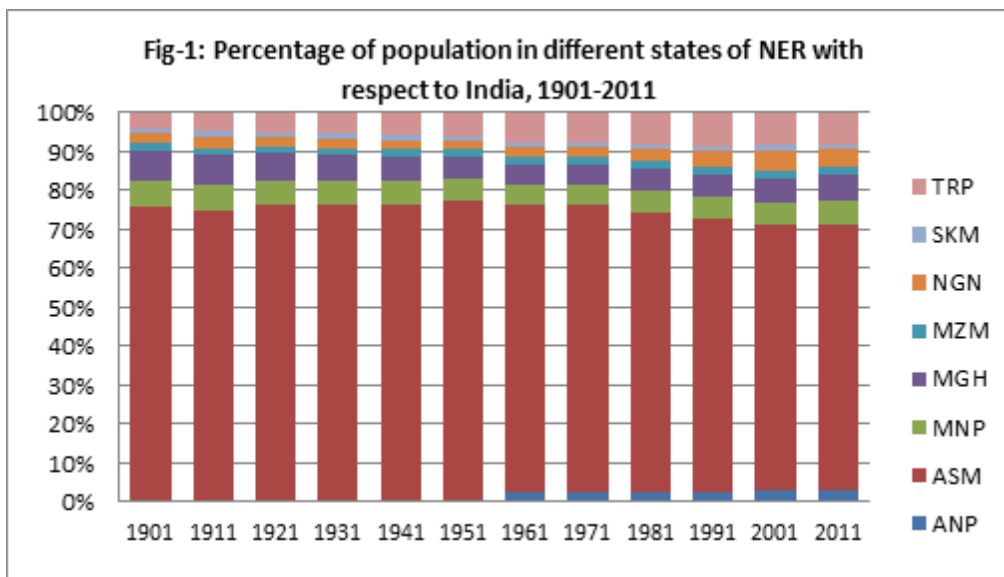
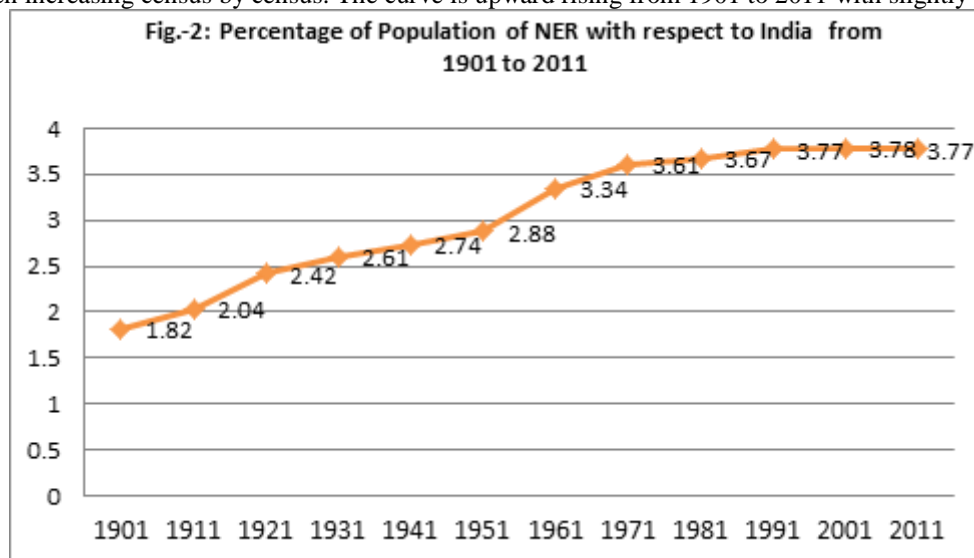


Fig.-2 shows the percentage of population of NEI with respect to India from 1901 to 2011. The percentage of population of NEI has been increasing census by census. The curve is upward rising from 1901 to 2011 with slightly up and down.



During the last four decades, birth as well as death rate has declined. A steep decline in birth rate has led to a decline in growth rate, despite the decrease in death rate. The highest decadal growth rate was between 1971 and 1981, but it has come down to 1.7 % in 2011, a figure that corresponds to the population growth rate for India.

Population Density: Population Density per square kilometer is the numbers of people living in one square kilometer, i.e., numbers of people per square kilometer are living. It is obtained by dividing the total number of population by the area, when the area is measured in kilometer.

That is,

$$\text{Population Density} = \frac{\text{Total Population}}{\text{Area in Square Kilometre}}$$

The area of all North East States and India are shown in Table-2. The areas of all North East States (NEI) and India are 262179 km² and 3.287 million km² respectively. Population Density per Sq. Km. during the period 1901- 2011 for North East States, NEI and India is also shown in Table-3.

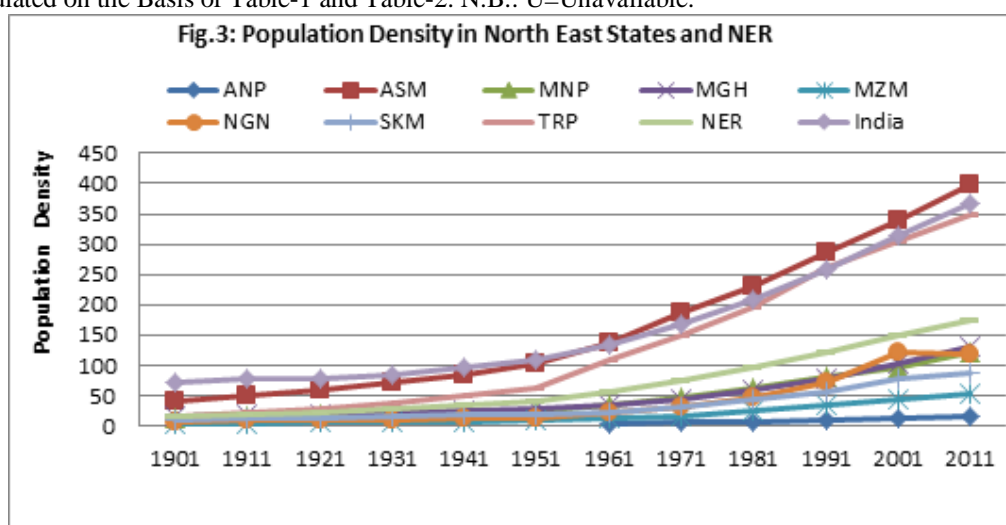
Table-2: Area in Square Kilometre of North East States and India

State	ANP	ASM	MNP	MGH	MZM	NGN	SKM	TRP	NEI	India (Approx)
Area in km ²	83743	78438	22327	22720	21081	16579	7096	10492	262179	3287000

Table-3: Density of Population during the period 1901- 2011 in North East States, NEI and India

	ANP	ASM	MNP	MGH	MZM	NGN	SKM	TRP	NER	INDIA
1901	U	41.94	12.72	14.96	3.89	6.15	8.31	16.49	16.52	72.53
1911	U	49.07	15.50	17.34	4.32	8.99	12.40	21.92	19.63	76.69
1921	U	59.12	17.20	18.57	4.65	9.59	11.56	28.97	23.21	76.46
1931	U	70.88	19.98	21.17	5.88	10.80	15.50	36.41	27.77	84.87
1941	U	85.35	22.93	24.47	7.26	11.46	17.05	48.89	33.33	96.95
1951	U	102.36	25.89	26.67	9.30	12.85	19.45	60.90	39.66	109.85
1961	4.02	138.16	34.94	33.85	12.62	22.26	22.83	108.84	55.92	133.63
1971	5.59	186.45	48.06	44.54	15.75	31.12	29.59	148.30	75.49	166.77
1981	7.55	230.00	63.64	58.80	23.43	46.75	44.53	195.67	95.61	207.89
1991	10.33	285.75	82.28	78.13	32.73	72.98	57.22	262.77	121.88	257.50
2001	13.11	339.84	97.06	102.07	42.17	120.03	76.24	304.90	148.22	312.99
2011	16.51	397.37	121.91	130.46	51.75	119.49	85.68	349.89	173.88	368.18

Source: Calculated on the Basis of Table-1 and Table-2. N.B.: U=Unavailable.



N.B.: Fig.-3 is drawn on the basis of Table-3.

When the area of a state or region or of a country and its constituent units are fixed over time, changes in population size will change the population density. Due to differential pattern of population growth lead to variation in the densities. Fig.-3 presents the changing pattern of population density in different states of NEI from 1901 to 2011. At the national level, population density has increased from 72.53 persons per square kilometer (sq. km.) in 1901 to 368.18 persons in 2011. The NEI with the sparsely populated states has recorded the lowest density of 148.22 persons per sq. km. in 2001. The density of the population of the NEI is 173.88, which is almost half of the national density (368.18) in 2011, while the density of the population was only 16.52 in NEI and 72.53 in India in 1901. It is important to note that the population density for the state of Assam (41.94) was below the national level (72.53) in 1901 and the pattern continues till 1951. But the situation changed during the year 1961 where Assam (138.16) crossed the country level (133.63) and the gap between the densities gradually increased and reached to 397.37 for Assam and 368.18 for India respectively in the year 2011. It is also important to note that in the state of Tripura population increases rapidly which may be observed through density levels of the state for the periods 1901 to 2001. The population density of the State of Tripura has increased from 16.49 persons per sq. km. in 1901 to 349.89 persons per sq. km in 2011. It is important to note that the population density in Sikkim (85.68) and Mizoram (51.75) are below 100 in the year 2011.

Therefore, Population Density for different states in North East Region (NEI) and India are different at different census years on account of which the curves are slightly up and down. The Population Density of India is higher than any other states of NEI, but the curve of Population Density of India is slightly coming down since 1961 census than that of Assam only and stands above all. Therefore, the Population Density curve of Assam stands above all after 1961 census. The Population Density curve of Arunachal Pradesh is lying lower than any other states in NEI as Population Density is lowest not only in NEI but also in India. The human population census started since 1961 in Arunachal Pradesh on account of which the curve starts from 1961. The Population Density of Mizoram is also lower than all states in NEI excepting Arunachal Pradesh, as a result the curve stands above only the curve of Arunachal Pradesh and lower than all. The positions of Population Density of all states in NEI and India from the bottom are Arunachal Pradesh, Mizoram, Sikkim,

Nagaland, Meghalaya, Manipur, NER, Tripura, India and Assam respectively. The average Population Density of NER is higher than those of Arunachal Pradesh, Mizoram, Sikkim, Nagaland, Meghalaya, & Manipur and lower than those of Tripura, and Assam respectively.

If we try to draw separately the position of Population Density only for NER and India, we see that the position of Population Density of India stands above the position of Population Density of NER throughout the concerned time period as shown in Fig. 4.

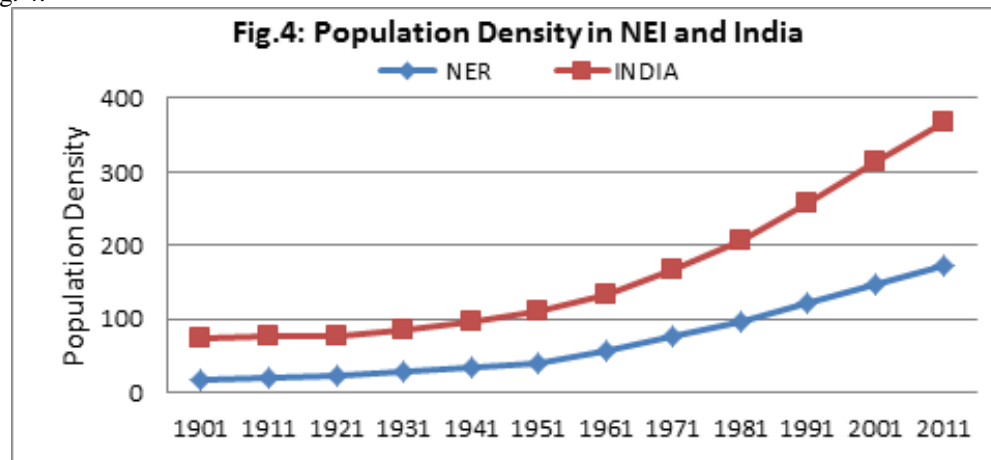


Fig.-4 is drawn on the basis of Table-3.

Decadal Growth Rate of Population

In other words, the population growth of a period can be calculated in two parts, natural growth of population (Birth—Death) and mechanical growth of population (Immigrant— Emigrant), in which Mechanical growth of population is mainly affected by social factors, e.g., the advanced economies are growing faster with so many favourable factors such high standard of living, security, high salary, etc. while the backward economies are growing slowly even with negative growth.

In demographics, decadal population growth rate (PGR) is the rate at which the number of individuals in a population increases in ten years as a fraction of the initial population. Specifically, PGR ordinarily refers to the change in population over a unit time period, often expressed as a percentage of the number of individuals in the population at the beginning of that period. This can be written as the formula:

$$PGR = \frac{\{P(t_2) - P(t_1)\} \times 100}{P(t_1)}$$

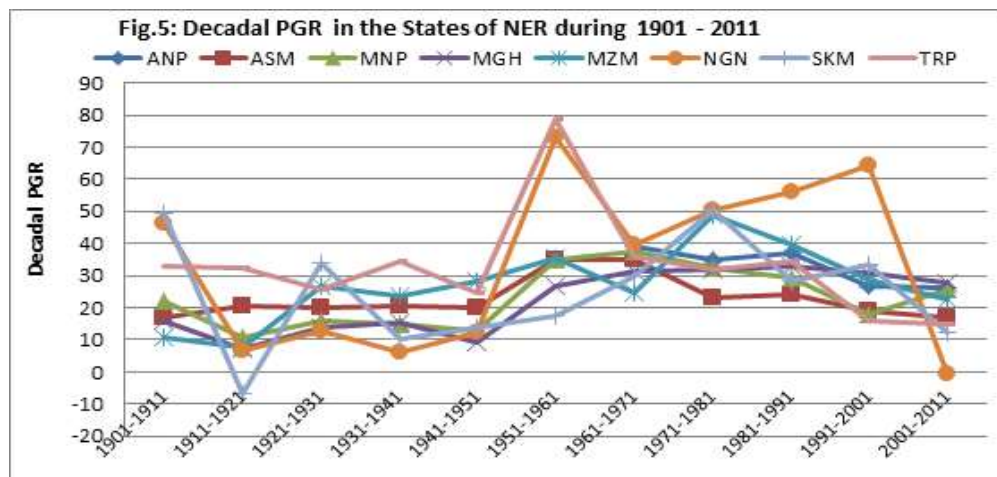
Where $P(t_2)$ = Population of Current Census Year and $P(t_1)$ = Population of Previous Census Year

Decadal Population Growth Rate (PGR) in the states of NEI and India are calculated from 1901 to 2011 as shown below in Table-4 and Fig. 5.

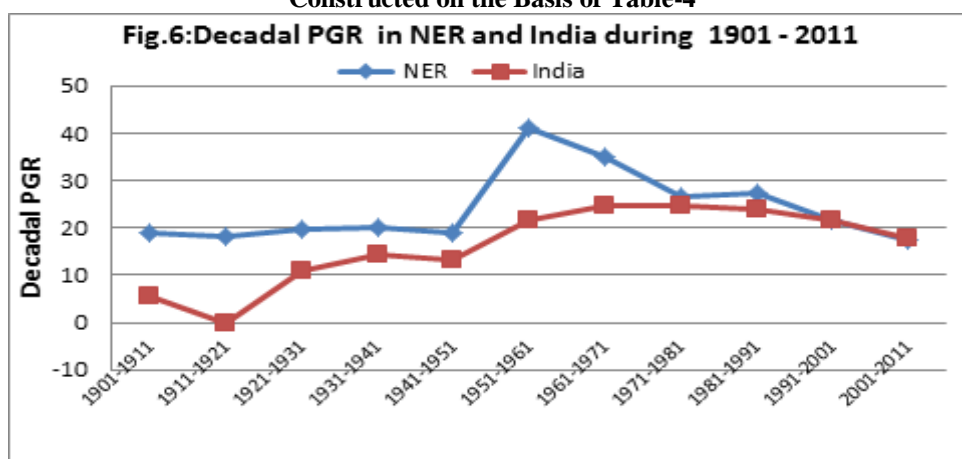
Table-4:Decadal Population Growth Rate (PGR) in the States of NEI and India, 1901-2011

Year	ANP	ASM	MNP	MGH	MZM	NGN	SKM	TRP	NEI	India
1901-1911	U	16.99	21.83	15.88	10.97	46.08	49.15	32.95	18.87	5.75
1911-1921	U	20.47	10.98	7.11	7.69	6.71	-6.82	32.17	18.24	-0.31
1921-1931	U	19.90	16.15	13.98	26.53	12.58	34.15	25.66	19.65	11.00
1931-1941	U	20.41	14.80	15.59	23.39	6.14	10.00	34.29	20.02	14.22
1941-1951	U	19.93	12.89	8.99	28.10	12.11	14.05	24.56	18.98	13.31
1951-1961	U	34.97	34.95	26.90	35.71	73.24	17.39	78.72	40.99	21.64
1961-1971	38.87	34.95	37.56	31.60	24.81	39.84	29.63	36.25	34.99	24.80
1971-1981	35.04	23.36	32.43	32.01	48.79	50.19	50.48	31.94	26.66	24.66
1981-1991	36.87	24.24	29.27	32.86	39.68	56.13	28.48	34.29	27.47	23.86
1991-2001	26.94	18.93	17.96	30.65	28.84	64.46	33.25	16.03	21.61	21.55
2001-2011	25.96	16.93	25.61	27.81	22.72	-0.45	12.38	14.75	17.32	17.63

Source:Source: Calculated on the Basis of Table-1. N.B.: U=Unavailable.



Constructed on the Basis of Table-4



Constructed on the Basis of Table-4

Table-4 and Fig. 5 shows the percentage of decadal variation of total population for different states of NER for the period 1901-2011. The changing pattern of population distribution among the states of NER is a consequence of changes in decadal growth rates over time, which is partly due to differentials in natural increase rates and partly due to in and out migration. The NER registered high population growth rate is mainly due to lesser sufferings from famines and epidemics, and considerable immigration/in migration. Assam, Manipur, Nagaland and Tripura experienced very high population growth rates during 1901-2011. The rapid population growth in Assam was mainly due to heavy immigration to the state's tea gardens from other states and also from Nepal & Bangladesh. The decadal growth rate of NER is always higher than all India level on account of which the curve of decadal growth rate stands above of the decadal growth rate of all India level as shown in Fig. 6.

The decadal growth rate in the country gradually declined from 24.80% during 1961-71 to 23.86% during 1981-91, which further declined to 21.55% during 1991-2001. It is remarkable to note that before independence, decadal growth rate of the country varies from 5.75 % during 1901-1911 to 14.22 % during the period 1931-1941. During the same period all the states of NEI excluding Mizoram, Nagaland and Sikkim have shown a declining trend in decadal growth rate. It is to be noted here that Nagaland showed highest decadal growth rate of 64.46% during the period 1991-2001. It is remarkable to note that highest variation occurred in the state of Tripura (78.72%) during the period 1951-61. The decadal growth rate of population (1991-2001) is the lowest in the state of Tripura 16.03 % followed by Assam (18.93%) and highest in the state of Nagaland (64.46) followed by Sikkim (33.25%). The region's growth rate of population (21.61 %) is slightly higher than the national average of 21.55 % during 1991-2001. It is to be noted that during the period 2001-2011 highest decadal variation is observed in the state of Meghalaya (27.81 %) followed by Arunachal Pradesh (25.96 %), Manipur (25.61 %), Mizoram (22.72 %) and all these four states are above the national level (17.63 %). It is important to be noted here that the negative variation is also being observed only in the state of Nagaland (-0.45 %), which shows the lowest variation among the states of NEI and which is followed by Sikkim (12.38 %), Tripura (14.75 %) and Assam (16.93 %).

Population Growth in a Span of 100 Years in NEI from 1911 to 2011

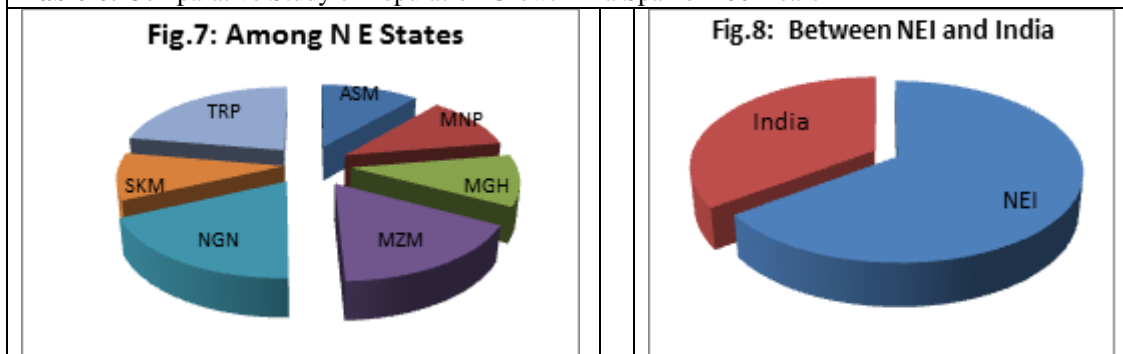
We now investigate the growth of people in different states of North East India (NEI) and India for the span of 100 years from 1911 to 2011.

Table-5: Population Growth after 100 Years in the States of NEI and India from 1911 to 2011(in '000)

Year	ANP	ASM	MNP	MGH	MZM	NGN	SKM	TRP	NEI	India
Population in 1911('000)	U	3849	346	394	91	149	88	230	5147	252093
Population in 2011('000)	1383	31169	2722	2964	1091	1981	608	3671	45588	1210193
Population Growth in Times	4.10*	8.10	7.90	7.52	11.99	13.29	6.91	15.96	8.86	4.80

Source: Constructed on the basis of Table-1. N.B.: U=Unavailable, *= Population Growth for Arunachal Pradesh for 50 years as the census was started from 1961 in Arunachal Pradesh.

Table-6: Comparative Study of Population Growth in a Span of 100 Years



From Table-6, Fig. 7 and Fig. 8, it is clear from the comparative study among states of North East India and NEI & India. In Arunachal Pradesh, Human Population Census was conducted first in 1961. So since 1961 with a span of 50 years, the population has increased 4.10 times in 2011 in Arunachal Pradesh. Likewise the population has increased 8.1 times in Assam, 7.9 times in Manipur, 7.52 times in Meghalaya, 11.99 times i.e., 12 times in Mizoram, 13.29 times in Nagaland, 6.91 times in Sikkim, 15.96 times i.e., 16 times in Tripura after a span of 100 years. Among all the states of North East India, the population growth is highest in Tripura. It is not a natural growth of population. It is nearly 16 times. What is the reason lying behind it? After independence of India in 1947, India was divided into India and Pakistan. Due to frequent life snatching attack of the Muslim on the Hindu in East Pakistan, the Hindu came to adjacent states of India to save their lives. Tripura is one of these states. Further, among the states of NEI, lowest growth rate is observed in the state of Sikkim (6.91 times) followed by Meghalaya (7.52 times).

Again, if we compare between NEI and India, the population has increased 8.86 times in NEI and 4.8 times in India after a span of 100 years from 1911 Census to 2011 Census. But the population in NEI has increased near about doubled in comparison to whole country. It is because of massive shifting of population from East Pakistan (now Bangladesh) to NEI in legal and illegal way. Till now the process is going in illegal way. Most of the Hindu in Bangladesh has taken shelter in India especially in NEI and West Bengal. As per 2011 census, the percentage of Hindu in Bangladesh was 8.54%. But the percentage of Hindu in Bangladesh at the time of Independence i.e., 1947 was 30%. Presently in addition to the Hindu, the Muslims are coming from Bangladesh and taking shelter especially in Assam. These Muslim people are encouraged, given shelter and helped economically by the existing Muslims in Assam.

IV. REASONS FOR POPULATION INFLUX

As NEI is surrounded by five foreign countries, there is every possibility of influx of population from these countries in search of food, employment, business, etc. It is also clear from the statistical information that Bangladesh was followed by Nepal in sending migrants to the NEI of India. In the recent years the flow of immigration from the neighboring countries shows an increasing trend. This heavy growth of population was mainly due to influx of people from the neighbouring countries or states in search of food, employment, business, etc.

However, the share became around 89 % in the census year of 1991, the absolute figure is 745 thousand remaining 11 % of the migrants to this region are from Nepal, Myanmar, Bangladesh, etc. However, total migrants, from outside the country, to this region stands at 834 thousand during 1991. The proportion of foreign migrants from Bangladesh to Assam was around 85 % among the total foreign migrant in the state. The respective percentage for the state of Tripura was more than 80% according to 1991 Census. This migrant no doubt has some impact on the social, economic, cultural and political sphere of the North- Eastern region.

V. CONCLUSION

It is high time that the Indian government had a *proactive policy rather than a reactive policy* to the important issue like immigration problem. The need of the hour is to understand that it is no longer a humanitarian problem but a security problem. Time has come to deal with assertively but without hampering bilateral relations. It is time for both the countries to understand the seriousness of the issue and set up time bound measures once and for all. This will help in its final solution and the problem will not emerge cyclically as it often does.

Cross-border migration between India and Bangladesh needs clear understanding, recognition, more information on the magnitude and operation of undocumented migration and effective management. Effective management is very much dependent on mutual as well as bi-lateral agreement along with regional, multilateral and international cooperation. It is clear that no barbed wire and draconian legal measures so far could stop cross-border population movements. Given the economic bottom-line, political sensitivity, cultural and socio-religious complications, the opening of a legal channel of migration may be considered as the most feasible option. It is important to realise that illegal migration is essentially a human problem caused by arbitrariness of the Radcliffe border and aggravated by poverty, limited employment opportunities at home and environmental hazards.

However, no policy in the region will be successful unless the people of the region are well conscious about their own health, food, sanitation etc. to upgrade the quality of life in the age of modernization. Hence, people's participation, particularly women, is urgently needed in any development programme of the government. Last but not the least is that government should establish the requisite institutional mechanism and enabling environment at all level of society to ensure that population factors are appropriately addressed within the decision making and administrative process of all governmental agencies responsible for economic, environment, social policies and programmes.

REFERENCES

- Baker, J. and N. Schuler (2004): "Analyzing urban poverty: A summary of methods and approaches", World Bank Policy Research Working Paper 3399.
- Dutta, P.C. (2002): "Population Growth and Environmental Crisis in North East India : Problems and Remedies" in Development Priorities in North East India(ed) , B. J. Deb, Concept Publishing Company, New Delhi.
- Dutta, P.C. (2002): "Population Growth and Environmental Crisis in North East India: Problems and Remedies" in B. J. Deb (ed.), Development Priorities in North East India, Concept Publishing Company, New Delhi.
- Dutta, P.C. and Mandal, R.K. (2018): Population, Energy and Biodiversity under Sustainable Development, Discovery Publishing, New Delhi, p.57.
- Moser, C., M. Gatehouse, and H. Garcia (1996): "Urban poverty research sourcebook moduleII: Indicators of urban poverty", UNDP/UNCHS (Habitat)/World Bank, Working Paper No 5, September.
- Pramanik, Bimal (2005): "Endangered Demography: Nature and Impact of Demographic Changes in West Bengal, 1951-2001", Calcutta Printing House, Kolkata.
- Pramanik, Bimal (2006): "Illegal migration from Bangladesh: A case study of Bangladesh" in B.B. Kumar (ed), Illegal Migration from Bangladesh, AsthaBharati, Delhi. Pp. 137-147.
- Ravallion, M., S. Chen, and P. Sangraula (2007): "New evidence on the urbanization of global poverty", Population and Development Review 33(4): 667-701.
- United Nations Population Division (2008): An Overview of Urbanization, Internal Migration, Population Distribution and Development in the World, 14 January, UN/POP/EGM-URB/2008/01

WEBSITES

1. [https:// en.wikipedia.org/ wiki/ Northeast_India#:~:text= The%20region% 20shares% 20an%20international, %2C%201%2C596%20kilometres%20\(992%20mi\)](https://en.wikipedia.org/wiki/Northeast_India#:~:text=The%20region%20shares%20an%20international,%2C%201%2C596%20kilometres%20(992%20mi))
2. https://link.springer.com/chapter/10.1007/978-94-007-7055-3_12