

A STUDY ON POPULATION GROWTH OF ASSAM IN THE POST INDEPENDENCE PERIOD (1951-2011)

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Abstract

Assam, a state situated in the north eastern region of India is the gateway to the region of India having geographical area of about 78,438sq km. It shares about 2.4% of country's landmass and providing shelter to 2.6% of India's population as per census of 2011. Rapid growth of population is one of the biggest obstacle in the way of the economic development of the state. It influences various aspects of the development of the region like social development, health, education, national income etc. Rapidly changing pattern of the state's population is a matter of concern in the present days. By realising the relevance of this matter. This paper highlights the trend of growth of state's population during the post-independence period and how the population is spreading across different religions and the possible reasons behind such changing patterns. Tremendous inflow of migrants into the state has left it with the massive problem of population explosion and has contributed to the changing population pattern. This work also shows the relationship between total population and migration by estimating the marginal impact of intrastate and international migration on total population by using the multiple linear regression model.

Keywords: Post-Independence, Population Explosion, Intrastate Migration, International Migration, Population Distribution.

JEL Codes: R23, P23, C13

INTRODUCTION

The growth of population is a burning issue before every nation as it can put huge pressure on development aspects of a country. The development of a region depends on the human resource it has but growth of population beyond certain limit can hinder the growth process. Sometimes population can either be a growth promoting factor or a growth retarding factor. If the state's population is higher in quantity rather than quality then it may be a liability instead of an asset. The growth of population in India is not a new phenomenon. Various researchers have made contributions in this sphere. Assam is a state of heterogeneous population with socio-cultural and ethnic diversity. According to the census of India 2011, the population of Assam was 312.05 lakh of which 159.39 were male and 152.66 lakh were female. The decadal growth rate of population during 2011 to 2011 was 17.07%. The density of population of Assam in 2011 was 398 persons per sq km (**Assam State Portal**). The awareness and consciousness regarding the

massive population growth of the state is important for each and every person as it will help in proper planning and careful use of resources. The present work is conducted to understand the trends of population change and to assess the different reasons responsible for this. Moreover Assam has been the victim of non-regulated or illegal migration since independence which results in rapid growth of population leading to hindrance in the developmental process. The UN Population Division (**UNPD**) has defined migrants as “ persons who move to a country other than that of their usual residence for a period of at least one year so that the country of destination effectively becomes their new country of usual residence” people around the world migrate for a variety of reasons and purposes. Among them are the most obvious economic benefits, the protection of living, and the eradication poverty, educational opportunities for the child as well as political and environmental changes. It is sometimes voluntary and at other times it is forced (**Sharma, 2015**).

OBJECTIVES OF THE STUDY

1. To show and analyze the decadal growth of the state’s population and population density after independence.
2. To evaluate the growth and distribution of population in terms of religion.
3. To estimate the impact of migration on total population using multiple linear regression model.

RESEARCH HYPOTHESIS

Null hypothesis or **H₀**: There is no relationship or association between the total population and the migration. In other words, population of Assam is not affected by the intrastate and international migration.

Alternative hypothesis or **H₁**: Population of Assam is significantly affected by the intrastate and international migration.

METHODOLOGY

In order to fulfill the objectives of the study, the study has used various relevant secondary data provided by some research journal, official publications like Economic Survey of Assam, Census of India and various websites of central and state governments of India. Various analytical tools like tables, graphs and multiple linear regression model are used to meet the objectives of the paper. Data analysis was performed using Microsoft excel.

DISCUSSION AND FINDINGS

Decadal Variation and Density of Population in Assam during (1951-2011)

The decadal growth rate and density of population are vital parts of census operations. The decadal growth rate gives an overview of the percentage of the total population growth in a particular decade and the term ‘density of population’ implies the average number of persons living per square kilometer. The population growth and its density

increasing at a tremendous rate which can be easily realized from a study of trend of population of Assam from 1951 to 2011. The table1 shows that between 1951 to 2011 there is an increase of about 232 lakh population in Assam indicating an increase in its density of population by 295 between this time periods. This is primarily because of the fact that during the post-independence period the decadal growth rate of population in Assam was very high as obvious from the following table.

In 1961 and 1971 it was very close to 35% indicating a tremendous increase in its population due to substantial number of immigration from Bangladesh and high birth rate. It can also be noted that due to the adverse situation during the war of independence of Bangladesh in 1971, there was an inflow of specially Bengali Hindus to various parts of India including the state of Assam. Millions of refugees migrated to India and they were not sent back to their home country by the govt. of India **(Dutta, 2015)**. One of the determinants of population is the density of population which refers to the number of persons per square kilometer.

It is distinct from the table1 that during the post-independence period the density of population in Assam has tremendously increased which implies heavy pressure of population on land **(Barbhuiya, 2017)**. The increasing density of population has also several implications. Rising pressure on land as a result of increasing density of population reduces the productivity of agriculture. The following table1 shows the trend of population in Assam.

Table 1: Trends in Population of Assam, (1951-2011)

YEARS	POPULATION (LAKH)	% DECADAL GROWTH	DENSITY OF POPULATION
1951	80	+19.93	102
1961	108	+34.98	138
1971	146	+34.95	186
1981	180*	+23.36	230
1991	224	+24.24	286
2001	226	+18.92	340
2011	312	+17.07	398

Source: Census of India, *interpolated based on the figures for 1971 and 1991 as 1981 census was not held in Assam.

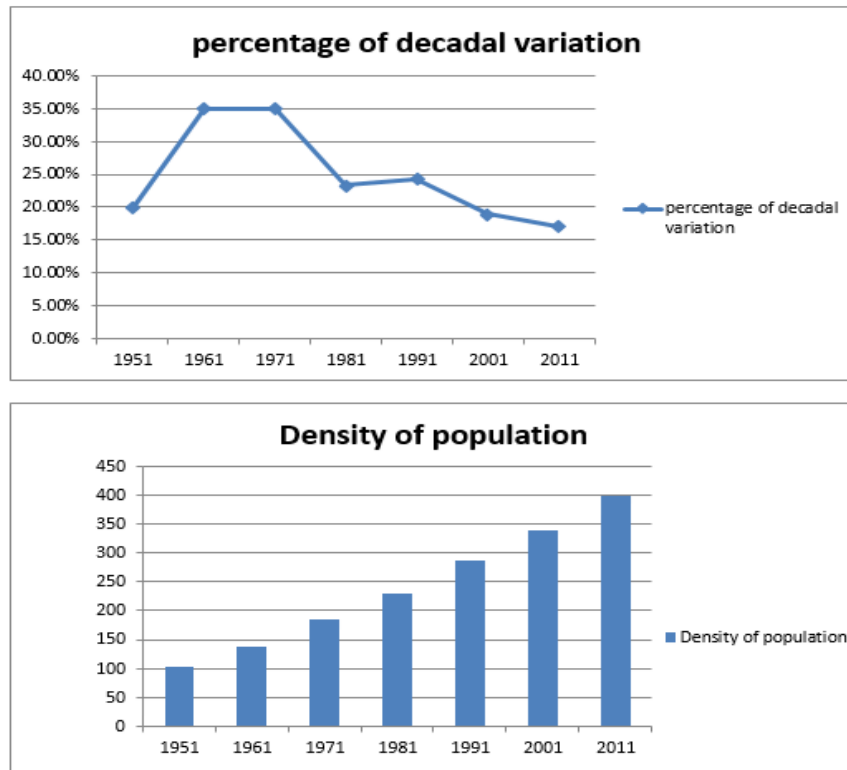


Figure 1: Decadal Growth Rate and Density of Population in Assam (1951-2011)

Religion-Wise Distribution and Growth of Population in Assam

Assam is the most populated state of the North-East region and has a diverse population of many religions and communities. According to 2011 census, Muslim is the second largest religion and fastest growing in terms of growth rate. Almost 61.47% of the total population is from Hindu religion and the percentage share of Muslim population to the total population is about 34.22% as distinct from the following table 2. All other religions like Christian, Buddhist, Jain, and Sikhs have a combined share of about 4% to the total population.

Table 2: Religion in Assam by Population

Si no.	Religion	%	Total population
1	Hindu	61.47%	19180759
2	Muslim	34.22%	10679345
3	Christian	3.74%	1165867
4	Buddhist	0.18%	54993
5	Jain	0.08%	25949
6	Sikh	0.07%	20672
7	Others	0.09%	27118
8	Religion not stated	0.16%	50873
Total population			31205576

Source. (Population census, 2011)

According to the 2011 census, Hindus are in majority in Assam. It covers 61.47% of the total population. Of the total 27 districts in Assam at that time, 18 districts had a majority of Hindus. The Muslim population of Assam is 1.07 crore (34.22%). Muslims play an important role in the assembly and Lok Sabha elections in Assam. Nine of the 27 districts follow Islam with a majority. According to the 2001 and 2011 censuses, the Muslim population in Assam grew steadily at the rate of 29%. The growth rate of Hindus, on the other hand, declined from 15% in the 2001 census to 10% in the 2011 census. Dhubri district had a growth rate of 5.62% in the Hindu population in 1991-2001 while the Muslim growth rate during this period was 29.58%.

In 1991, 28.73 per cent of the district was Hindus. According to the 2011 census, the Hindu population has come down to 19.92 per cent. But the Muslim population continues to grow. In Karimganj district too, the disproportionate growth rate of Muslim population has contributed more than the Hindu population. The Muslim population has increased from 47.99 per cent in 1991 to 52.53 per cent in 2001. Moreover, according to the 2011 census, the Hindu population has increased by 42.48% and the Muslim population has increased rapidly to 56.36%. In parallel, in Hailakandi, Nagaon and Barpeta districts, the distribution and development of the Muslim community is faster than that of Hindus.

However, in the districts of upper Assam such as Golaghat, Jorhat, Sivasagar, Dibrugarh and Tinisukia, as well as in the north Cachar hill districts, the growth and development of the people of Hindu religion is much higher than that of muslims. The changing demographic situation has pushed the mainstream Assamese to the margins in many parts of the state. Their democratic rights are under threat due to the changing demographic conditions.

Table 3: Population in Assam by Religion

SI no	District	Total population	Hindu (%)	Muslim (%)
01	Dhubri	1949258	19.92	79.67
02	Chirang	482162	66.50	22.66
03	Baksa	950075	82.40	14.29
04	udalguri	831668	73.74	12.66
05	Kokrajar	887142	59.64	28.44
06	Bongaigaon	738804	48.61	50.22
07	Goalpara	1008183	34.51	57.52
08	Barpeta	1693622	29.11	70.74
09	Nalbari	2823768	63.71	35.96
10	Kamrup	1517542	57.82	39.66
11	Kamrup metro	1253938	84.89	12.05
12	Darrang	928500	35.25	64.34
13	Sonitpur	1924110	73.95	18.22
14	Lakhimpur	1042137	76.49	18.57
15	Dhemaji	686133	95.47	1.96
16	Morigaon	957423	47.20	52.56
17	Nagaon	2823768	42.39	55.36
18	Golaghat	1066888	85.99	8.46
19	Jorhat	1092256	93.21	5.01
20	Sivsagar	1151050	87.51	8.30
21	Dibrugarh	1326335	90.35	4.86

22	Tinisukia	1327929	88.96	3.64
23	Karbi anglong	956313	80.10	2.12
24	Dima hasao	214102	67.07	2.04
25	Karimganj	1228686	42.48	56.36
26	Hailakandi	659296	38.10	60.31
27	cachar	1736617	59.83	37.71
TOTAL		31205576	61.47	34.22

Source: (Census of India, 2011)

Migration and Its Impact on Population of Assam

Besides the natural cause of migration, one of the possible reasons behind the rapid growth of population in Assam is the huge inflow of migration. Due to tremendous inflow of migrants, Assam has been experiencing a rapid growth in its population. To show the association between total population and migration, migration in Assam has been classified into three types namely- Intrastate migration, Interstate migration and International migration. In order to fulfill our objective the following multiple linear regression model is formed-

The model $Y = a + b_1X_1 + b_2X_2$

Where,

Y= Total population of Assam

X₁=Intrastate migration

X₂=International migration

b₁= Marginal impact of intrastate migration on total population

b₂= Marginal impact of international migration on total population

Table 4: Total Population and Migration

Districts	Total population	Intrastate migration	International migration
Kokrajhar	905,764	266,689	8,666
Dhubri	1,637,344	321,049	7,687
Goalpara	822,035	182,991	7,860
Bongaigaon	904,835	202,078	12,653
Barpeta	1,647,201	333,939	8,991
Kamrup	2,522,324	742,308	16,169
Nalbari	1,148,824	320,951	5,577
Darrang	1,504,320	322,144	9,766
Morigaon	776,256	156,590	4,009
Nagaon	2,314,629	420,051	26,131
Sonitpur	1,681,513	345,654	10,628
Lakshimpur	889,010	170,311	2,968
Dhemaji	571,944	156,387	3,044
Tinsukia	1,150,062	226,607	7,934
Dibrugarh	1,185,072	281,014	3,522
Sibsagar	1,051,736	193,383	1,171
Jorhat	999,221	207,519	1,414

Golaghat	946,279	220,696	1,726
Karbi Anlong	813,311	189,240	6,629
North cachar hills	188,079	52,921	1,198
Cachar	1,444,921	306,310	23,474
Karimganj	1,007,976	190,214	16,154
Hailakandi	542,872	112,707	3,187

After plotting the above data in excel, following results are obtained-

	Coefficient	t Stat	p-value
Intercept	543876.6	4.54	0.000199
Intrastate	11.85594	3.51	0.002191
International	42.13	3.89	0.000907

Regression Statistics	
Multiple R	0.81
R square	0.66
F significance	1.81-05(0.0000181)

At 5% level of significance

Interpretation of the result- Based on the outcomes of the regression analysis, the constructed regression model becomes $Y = 543876.6 + 11.85X_1 + 42.13X_2$. The estimated value of R which is also known as the coefficient of correlation is 0.81. It indicates a higher degree of relationship between the dependent variable (population) and the independent variables (intrastate and international migration). The estimated value of R^2 which is also known as the coefficient of determination is 0.66 which indicates that 66% of total variations in the dependent variable (population) is being explained by the explanatory variables (intrastate and international migration). It also indicates that our model lacks some important explanatory variables which can explain the remaining 34% variations in the total population. Since the overall significance is 0.0000181 which is less than 0.05 indicating reliable and statistically significant independent variables. The p-values 0.002(intrastate migration) and 0.000907(international migration) are less than 0.05 implying that our null hypothesis stating that there are no association or relationship between the total population and the migration is false. By considering the p-values we can also say that the international migration is more significant as compared to the intrastate migration.

CONCLUSION AND RECOMMENDATIONS

From the study we can come to the conclusion that the rapid growth of population has become a burning problem of the state. The higher gap between birth rate and death rate is the major reason behind such changing pattern of the population of Assam. Moreover, huge inflow of Migrants also contribute to the population explosion of the State. This has created a plethora of problems before the state since it is a poor region. Rapidly growing population can serve as a source of labor force but on the other hand it becomes a threat as it will create enormous pressure on land which results in the reduction of agricultural land leading to a fall in agricultural productivity. Moreover rising population also create the problem of inflation as with the growing population, the demand for products also

increase. Based on the empirical evidence, we can come to the conclusion that the population of Assam is significantly affected by the huge inflow of intrastate and international migration. It obvious that Assam is going to face lower economic growth due to its rapidly rising population. In order to be free from such hindrance some effective measures should be taken like the promotion of inclusive growth which will ensure development to all sections of the society. Policies should be formulated to eradicate poverty from the state, empowerment of women should be encouraged, and spreading of education and awareness about the adverse impact of population explosion will go a long way in this direction.

References

- 1) Basumatari, S. (2014). Pattern and Process of Population Migration in Assam. ISOR-Journal of Humanities and Social Science, 19(12), 25-31.
- 2) Sarma, M. (2015). A study of migration from Bangladesh to Assam, India and its impact (Doctoral dissertation).
- 3) Cantat, C., Pécoud, A., & Thiollet, H. (2023). Migration as crisis. American Behavioral Scientist, 00027642231182889.
- 4) Doley, B. (2020). Migration into Assam and its Political and Social Impacts on Society. European Journal of Molecular & Clinical Medicine, 7(04), 2020.
- 5) Sharma, C. K. (2012). The immigration issue in Assam and conflicts around it. Asian Ethnicity, 13(3), 287-309
- 6) Narzary, M., & Devi, M. (2022). Trends and patterns of migration in Assam: Its Inflows and Outflows. Journal of Positive School Psychology, 184-19
- 7) Chowdhury, B., "Migration and Population Growth: A Case Study of Assam", Indian Journal of Applied Research, Vol. 3, No. 6, pp. 125-127, 2013.
- 8) Assam, T. G. (1998). Illegal Migration into Assam. Guwahati: Raj Bhawan.
- 9) Basumatari, S. (2014). Pattern and Process of Population Migration in Assam. IOSR Journal of Humanities and Social Science, 19 (12), 25-31.
- 10) Bhende, A. A., & Kanitkar, T. (1978). Principles of Population Studies. Mumbai: Himalaya Publishing House.
- 11) Bogue, D. J. (1961). International Migration. New Delhi: Asia Publishing House.
- 12) Dhar, P. K. (1987). The Economy of Assam including Economy of North East India. New Delhi: Kalyani Publishers.
- 13) (2Gol001). Census of India. New Delhi: Government of India.
- 14) Gol. (2011). Census of India. New Delhi: Government of India.
- 15) (2Gol013-2022). Economic Survey, Assam. Guwahati: Government of Assam