

Population and Development with reference to India and Assam

Mainu Moni Saikia

Assistant Professor

Department of Economics, Bahona College

Email: mainusaikia215@gmail.com

Abstract:

There are more people in India than any other country in the world. If current projections hold true by 2024, India will become the world's most populous nation. At 1.13 percent, it is the 112th fastest-growing country in the world. In 2020, the average age of an Indian is predicted to be 29 years old. The growth of the human population is both a means and an aim in itself. If they're strong enough, they're a benefit, but if they're too strong, they're a liability. An overabundance of people has made India a liability rather than an asset. As a result, economic planning and growth in India, with a particular focus on Assam, has been hindered by the country's population explosion. The researcher concluded that India's population and GDP are strongly linked. The researcher has compared the SGDP of each state with its population in order to determine whether or not GDP is correlated with population. No association has been observed between annual population increase and inflation in India, according to the study. In other words, India's population does not have a substantial effect on inflation. Due to many external influences, inflation may be altered. Even while India's GDP continues to expand as people grow, there is no major negative influence of population expansion on this growth. Since the last two decades, Indian GDP has increased at a rapid pace, despite the country's overpopulation problem. Indian GDP (PPP) of \$10.40 trillion is presently the third-largest economy globally; however, despite this, India is rated 116th in terms of per capita income and 130th in terms of HDI. Increasing populations are having a negative impact on living standards. When there is too much population, there is an abundance of difficulties such as poor per capita income and the inability to raise capital; excessive pressure on land; social problems; economic instability; social insecurity; and environmental degradation.

Keywords: Over-population, India, Assam, GDP, Social development, Per capita income, HDI, Food problem, Economic development.

Introductions:

There are around 17.99 million individuals in India, which roughly equates to one person in every six persons on the planet. India is on track to overtake China as the world's most populous country in the near future. If current projections hold true by 2024, India will become the world's most populous nation. At 1.13 percent, it is the 112th fastest-growing country in the world. Over half the population of India is under the age of 25 and more than two-thirds of the population is under the age of 35. The average age of an Indian in 2020 is predicted to be 29 years, while the dependence ratio is expected to be little over 0.4. People are both the means and the ends of economic growth. If they're strong enough, they're a benefit, but if they're too strong, they're a liability. An overabundance of people has made India a liability rather than an asset. As a result, India's population growth has proven to be a significant obstacle to the country's economic development efforts [1].

In India, population growth is both a means and an aim in itself. An asset if it's strong enough, but a liability when it's too strong. An overabundance of people has made India a liability rather

than an asset. Overpopulation in India has shown to be a major concern for economic planning and growth in the country. Approximately 17 percent of the world's population is made up of India's current population. It's also worth noting that these individuals are spread out throughout 3.28 million square kilometers of our land mass. With a population of 166 million people, Uttar Pradesh is the most populous state in India. States like Lakshadweep, which has a population of just 60000 people, on the other hand, have a population of 0.5 million people. More than half of India's population is concentrated in five large states: Uttar Pradesh, Maharashtra, West Bengal, and Andhra Pradesh. In spite of its size, Rajasthan has a population that accounts for only 5.5% of India's total.

Population growth is the increase or decrease in the number of people in a population over the course of a given period of time. Several demographics, socio-cultural, and economic elements are linked to it; it is therefore an important part of any area's population study. It shows the dynamic nature of the area's demographics. Rapid population expansion, induced by high fertility and large-scale migration, leads to a huge increase in population strain on resources and a major shift in population's demographic and socioeconomic characteristics. As a result, the state of Assam is experiencing a wide range of demographic, socioeconomic, and political issue [2].

Since the last two decades, Indian GDP has increased at a rapid pace, despite the country's overpopulation problem. Indian GDP (PPP) of \$10.40 trillion is presently the third-largest economy globally; however, despite this, India is rated 116th in terms of per capita income and 130th in terms of HDI. Increasing populations are having a negative impact on living standards. When there is too much population, there is an abundance of difficulties such as poor per capita income and the inability to raise capital; excessive pressure on land; social problems; economic instability; social insecurity; and environmental degradation [7]. Changing population dynamics have a significant impact on India's economic planning and development. In spite of the country's growing population and tremendous natural resources, India is still classified as a developing nation [3]. India is still unable to make appropriate use of its natural resources to meet the needs of an expanding population. In India, poverty is rampant due to a lack of proper shelter, food, medical care, and a lack of education. There are many villages in India where there is no electricity, little food for a huge portion of the population, and very little health care and education.

Statement of the Problem:

Overpopulation does not depend simply on the quantity or density of the population, but on the ratio of population to available sustainable resources. How our natural resources are handled and dispersed to the entire population also plays a role in this equation. Economic growth is hampered by overpopulation, which is one of the greatest dangers and most serious problems. Increasing human population is predicted to alter the worldwide land use patterns accessible for agriculture, forest land cover, and the proximity of different types of water bodies. Our natural resources, such as land, water, forests, and ecosystem services, are under enormous strain due to human population expansion. This research paper aims to demonstrate the negative effects of overpopulation on our country's economy.

Objectives of the Study:

The primary goals of this research are as follows:

1. India's population increase will be examined in this study.

2. Examine how India and Assam's overpopulation have affected their development.
3. To propose a strategy for turning this population into an asset.

Data collection

This study is based on secondary data collected from various sources like research papers, websites, articles, reports, etc.

Decadal Variation of Population in Assam:

It is estimated that Assam has a population of 3,11,69272 based on the 2011 Census of India; 1, 59,54,927 men and 1, 52, 14,345 females. During the decade 2001-2011, the population of the State grew by 16.93%, compared to a national average of 17.64%. Assam's population grew at a far faster rate than the rest of the country throughout the course of the last century (Fig 1). Migration from neighbouring states and nations may be to blame for this disparity.

Assam's overall growth rate for the period 1991-1911 was 16.99 percent, compared to the national average of 5.76 percent. Assam was still recuperating from widespread Kala-ajar disaster in the preceding decade, which explains why this was the lowest growth in the last five decades [4].

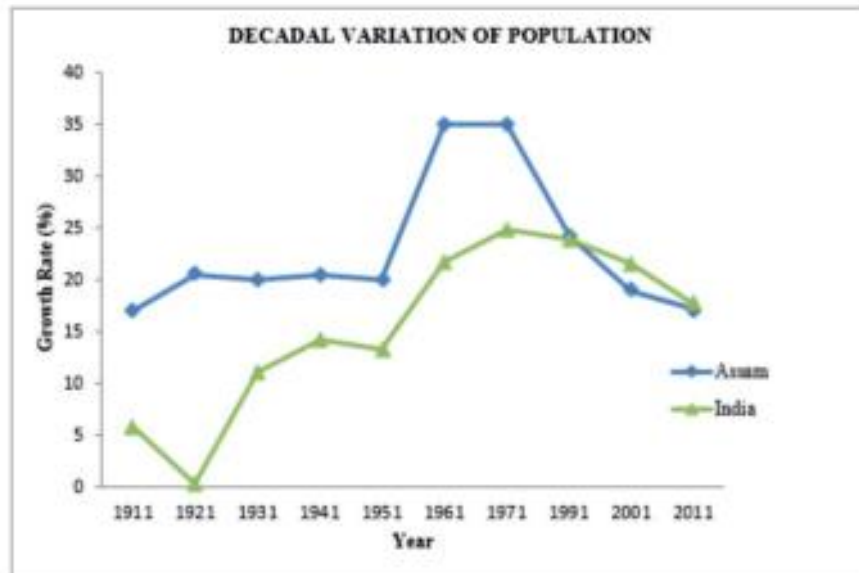


Fig 1: A graph displaying the changing population growth rates in Assam and India throughout the course of several time periods

Due to epidemics like cholera, plague, influenza, and famines occurring at an alarmingly high rate, India witnessed a negative growth rate of 0.31 percent between 1911 and 21. According to the Indian community, the year 1921 is known as "The Year of Great Divide". Instead, Assam saw a positive growth rate of 20.48 percent during the same time period. Assam's population grew at a somewhat lower rate in the 1921-31 period than in the previous decade. Assam's growth rate in this decade was 19.91 percent, compared to India's 11.1 percent. There was a comparable growth rate in the following two decades as well, with a growth rate of 20.4 and 19.93 percent, respectively. There were three main factors that contributed to the state's population growth during this time period: natural population growth, the rise of the tea industry, and immigration from East Bengal (now Bangladesh) and Nepal.

The population grew by 34.98 percent between 1951 and 1961, compared to India's 21.64 percent growth rate over the same period. Due to the large-scale migration from East Pakistan (now Bangladesh) of Bengali Hindus during the partition of India, there has been an increase in population. As a result of their mass migration and subsequent settlement in Assam's plains, the population there experienced an unexpected spike during this decade. Between 1961 and 1971, the U.S. economy grew by 34.95 percent on average.

Growth rates began to decline after this period, and for the first time, Assam's growth rate of 18.92 percent in 1991-2001 fell below the national average [8]. 17.06 percent of Assam's population grew recently, compared to 17.68 percent of India's population increase [5]. Most of the decline can be attributed to the introduction of various methods of contraception and the rise in the overall level of education.

Data Analysis:

A look at table-1 shows that the population has grown by 30.58 percent from 1998, from 983 million people to 1283 million in 2017. In 1998, the fertility rate was 3.45 children per woman; in 2017, it was 2.33 children per woman.

S. No.	Year	Population (Million)	%age change	Fertility Rate	S. No.	Year	Population (Million)	%age change	Fertility Rate
1	1998	983	--	3.45	11	2008	1150.2	1.43%	2.75
2	1999	1001	1.83%	3.38	12	2009	1166.23	1.39%	2.67
3	2000	1019	1.80%	3.31	13	2010	1186.00	1.70%	2.62
4	2001	1028.6	0.94%	3.24	14	2011	1210.57	2.07%	2.59
5	2002	1056	2.66%	3.18	15	2012	1213.37	0.23%	2.48
6	2003	1072	1.52%	3.11	16	2013	1223.58	0.84%	2.42
7	2004	1089	1.59%	3.04	17	2014	1238.89	1.25%	2.38
8	2005	1101.32	1.13%	2.97	18	2015	1254.02	1.22%	2.35
9	2006	1117.73	1.49%	2.90	19	2016	1268.96	1.19%	2.33
10	2007	1134.02	1.46%	2.82	20	2017	1283.60	1.15%	

Table-1: India's population growth (1998 to 2017)

S. No.	Year	Unemployment Rate	S. No.	Year	Unemployment Rate
1	1998	4.06	11	2008	4.12
2	1999	4.06	12	2009	3.75
3	2000	4.32	13	2010	3.54
4	2001	4.33	14	2011	3.53
5	2002	4.43	15	2012	3.62
6	2003	4.31	16	2013	3.46
7	2004	4.37	17	2014	3.41
8	2005	4.4	18	2015	3.49
9	2006	4.24	19	2016	3.51
10	2007	4.06	20	2017	3.52

Table2:In India, the percentage of people out of work (1998 – 2017)

Table 2 clearly shows that the unemployment rate was highest in 2002 and 2005 and lowest in 2014. After 2014, the unemployment rate began to rise again. 2016 saw a decline in India's number of unemployed people from 48.26 million to 44.85 million people. During the period from 1971 to 2016, the number of unemployed people reached a record high of 48.26 million in 2014 and a record low of 5.10 million in 1971, while the number of employed people in India climbed to 29650 thousand from 28999 thousand in 2012. From 1971 to 2012, the number of employed people in India averaged 25169.51 thousand, with an all-time high of 29650 thousand in 2012 and a record low of 17491 thousand in 1971. When it comes to trading economics,

Year	GDP (in Bil. US\$ PPP)	GDP per capita (in US\$ PPP)	Share of world (GDP PPP in %)	GDP growth (real)	Inflation rate (in Percent)	Government debt (in % of GDP)
1998	1,774.40	1,789	4.00 %	6.2 %	13.1 %	68.1 %
1999	1,954.00	1,935	4.19 %	8.5 %	5.7 %	70.0 %
2000	2,077.90	2,018	4.16 %	4.0 %	5.6 %	73.6 %
2001	2,230.40	2,130	4.26 %	4.9 %	4.3 %	78.7 %
2002	2,353.10	2,210	4.30 %	3.9 %	4.0 %	82.9 %
2003	2,590.70	2,395	4.46 %	7.9 %	3.9 %	84.2 %
2004	2,870.80	2,612	4.58 %	7.8 %	3.8 %	83.3 %
2005	3,238.30	2,901	4.77 %	9.3 %	4.4 %	80.9 %

2006	3,647.00	3,218	4.95 %	9.3 %	6.7 %	77.1 %
2007	4,111.10	3,574	5.16 %	9.8 %	6.2 %	74.0 %
2008	4,354.80	3,731	5.21 %	3.9 %	9.1 %	74.5 %
2009	4,759.90	4,020	5.68 %	8.5 %	11.0 %	72.5 %
2010	5,312.40	4,425	5.95 %	10.3 %	9.5 %	67.5 %
2011	5,782.00	4,750	6.09 %	6.6 %	9.5 %	69.6 %
2012	6,209.90	5,034	6.23 %	5.5 %	10.0 %	69.1 %
2013	6,713.10	5,371	6.41 %	6.4 %	9.4 %	68.5 %
2014	7,340.00	5,797	6.65 %	7.4 %	5.8 %	67.8 %
2015	8,024.60	6,255	6.96 %	8.2 %	4.9 %	69.6 %
2016	8,705.00	6,697	7.23 %	7.1 %	4.5 %	68.9 %
2017	9,459.00	7,183	7.45 %	6.7 %	3.6 %	70.2 %

Table 3: Economic growth from the period of 1998 to 2017

A comparative study on India and Assam:

Income Levels:

As a starting point, it's only reasonable to talk about income levels. When it comes to per capita income, Assam was a little above the rest of India in the early 1950. Since then due to a lack of growth, it has remained significantly lower than the rest of India's per capita income in recent decades [6]. There has also been an expanding disparity between the state's standard of life compared to the national average. At 1980-81 prices, Assam's average per capita income was Rs 1374 for the three-year period from 1980-81 to 1982-83. According to the matching national estimate of Rs 1672, it was around 18% lower than that. At 1980-81 prices, Assam's average per capita income was Rs 1702 and India's was Rs 3211 for the 1999-00 to 2001-02 triennium, a difference of more than 45 percent. Comparisons of income at 1980-81 prices are shown in both Table 4. Using current pricing, a similar comparison indicates a 40% difference in recent years.

Year	Income Level (Rs)		Income Indices	
	Assam	All-India	Assam	All-India
1980-81	1284	1625	100.0	100.0
1981-82	1402	1692	109.2	104.1
1982-83	1437	1699	111.9	104.6
1983-84	1470	1804	114.5	111.0
1984-85	1447	1827	112.7	112.4
1985-86	1510	1857	117.6	114.3
1986-87	1437	1893	111.9	116.5
1987-88	1468	1929	114.3	118.7
1988-89	1446	2099	112.6	129.2
1989-90	1517	2198	118.1	135.3
1990-91	1544	2267	120.2	139.5
1991-92	1575	2226	122.7	137.0
1992-93	1557	2298	121.3	141.4
1993-94	1583	2394	123.3	147.3
1994-95	1589	2512	123.8	154.6
1995-96	1595	2643	124.3	162.6
1996-97	1605	2804	125.0	172.6
1997-98	1605	2877	125.0	177.1
1998-99	1569	3003	122.2	184.8
1999-2000	1656	3134	129.0	192.9
2000-01Q	1705	3192	132.8	196.5
2001-02Adv	1745	3307	135.9	203.5

Table 4: Per Capita Real Income: Assam vs. All-India

GSDP Growth Rates:

Table 5 shows the average annual growth rate of the gross state domestic product (GSDP) since 1980-81. This table shows that GSDP grew at a pace of roughly 3.3% per year between 1980 and 2001. The post-liberalization growth rate of the Assamese economy has not changed since the beginning of the economic reform process in 1991. It is true that Assam's current growth rate is comparable to that of the Indian economy prior to the mid-1970s, when it was called "Hindu." Over the past two decades, the state's economy has remained essentially stagnant, particularly in the post-reform era.

Period	(Per cent per annum)			
	Primary	Secondary	Tertiary	GSDP
1980-90	2.16	4.13	4.37	3.34
1991-2001	1.89	3.88	4.52	3.27
1980-2001	1.81	3.80	4.57	3.25

Table 5: Growth in Real Gross State Domestic Product

The trend growth rates are shown for the primary, secondary, and tertiary industries in Table 5. During the 1980s and 1990s, the primary sector grew at a rate of about 2% per year. There has been little change in the growth rates of the secondary and tertiary sectors. Growth in the primary and secondary sectors has slowed, but this has been offset by growth in the service sector. The three industries' growth rates remain stagnant, though, as a whole.

Poverty:

There has been a slowdown in the rate of per capita income growth in Assam. Table 6 provides government estimates of the percentage of Assamese and Indians who fall below the poverty level. In 1973-74, Assam had a poverty rate of 51%, which was lower than the national average of 55%. However, the decline in poverty in Assam has been slower than in the rest of India since then. Between 1993-94 and 1999-2000, the amount of poverty in Assam decreased by around 5%, whereas India as a whole decreased by nearly 10% during the same period. During 1999-2000, 36% of Assamese residents lived below the poverty level, as opposed to 26% of India's population at large. Due in significant part to the state's stagnant income growth, we argue below. For Assam's social development process to take off, the stagnancy in growth must be broken.

Years	Assam			All-India		
	Rural	Urban	Total	Rural	Urban	Total
1973-74	52.67	36.92	51.21	56.44	49.01	54.88
1993-94	45.01	7.73	40.86	37.27	32.36	35.97
1999-2000	40.04	7.47	36.09	27.09	23.62	26.1

Table 6: Poverty Rate Percentage of the Population

Main effects of Over-population:

- In comparison to other emerging countries, the population of India is expanding at a rapid rate. Larger investment is required to attain a given rate of per capita income growth. In spite of the fact that India's GDP and per capita income have both risen over the past decade, per capita income has grown at a far slower rate. This negatively impacts economic growth. As of 2017, India's population growth rate was 1.15 percent, and the capital-output ratio was 4:1. It means that 4.6 percent of investment is needed to maintain the current growth rate of the economy.
- Per capita income is low because of the large population and the quick rate of growth. While India has overtaken China to become the world's third-largest economy, it still lags behind the United States in terms of per capita income. As a result of overpopulation, per-capita income has increased over the past two decades, although at a very modest pace.
- Overpopulation in India has stifled the growth of capital in the country. People with a high birth rate and a low life expectancy are more likely to have many dependents. More than a third of India's population is under the age of 14. These people rely heavily on others for their survival. To put it simply, they are unproductive consumers, which reduces the ability of people to save. As a result, the rate at which new capital is being created decreases. Capital formation is hindered by a lack of access to the populace.
- In India, population growth is a major contributor to the country's food shortages. As the demand for food grows, there is a decrease in the amount of food being produced. A significant percentage of agricultural land is being converted to industrial, residential, and urban development projects and highways and other forms of infrastructure due to overpopulation. In turn, this causes a food deficit in the country.
- In 2017, India was listed at the 100th position on the Global Hunger Index, according to a survey, however this year India has been ranked at the 103rd position. Indians are among

the 45 countries that suffer "severe levels of hunger," according to a report by Welthungerhilfe and Concern Worldwide (Times of India, 2018)

- Unemployment is a major problem in India, and it needs to be addressed. Overpopulation is a major contributor to joblessness. India's vast population necessitates a large labour force. A country's inability to provide jobs for the full working population is largely attributable to a lack of capital resources. In an underdeveloped country like India, the norm is open unemployment in urban areas and disguised unemployment in rural regions.
- India's rapid population increase has resulted in a low standard of living. Life's simplest essentials, such as food, water, and shelter, are lacking. As the population grows, so does the demand for health care facilities, schools, transportation, and other public services.
- Overpopulation has resulted in the burden of unproductive consumers, which has a negative impact on the economy. Many youngsters in India are reliant on their parents. Many people between the ages of 15 and 59 are unable to obtain a job. In 2001, 39.2 percent of the population was employed, compared to 60.
- Unproductive workers make about 8% of the workforce. The high rate of dependent children is to blame for this high level of dependency. This reliance has a negative impact on the ability to save money. (Mehta) Poverty is number eight on our list of things to avoid. In India, poverty is a major problem. Poverty in India rises as the population grows. As of 2011, 21.9 percent of the country's 1.2 billion citizens were living below the poverty level of \$1.25, according to United Nations Millennium Development Goals (MDG). People have to spend a significant amount of money raising their children. It has a negative impact on saving and capital formation. As a result, it is impossible to improve production methods. It indicates a poor level of labour productivity.
- Overpopulation causes a wide range of social issues. Slum areas are formed as a result of the movement of people from rural areas to urban areas. Unsanitary and unhygienic living conditions are commonplace. Educated young people are frustrated and angry when they cannot find work or live in poverty. As a result of this crime spree, robbery and beggary are common, as are prostitution and murder. Terrorism in the United States today is a manifestation of the frustration felt by young, educated people who are unable to find work. Overcrowding, traffic jams, accidents, and pollution are all direct consequences of overpopulation in big cities.
- Due to India's rapid population increase, there is a lot of pressure on the country's land resources. Land is under more strain as the population grows. Sub-dividing and fragmenting land holdings are becoming more and more common as land becomes scarcer per population. More and more farmland is being developed for industrial, commercial, and residential purposes. Environmental degradation is a direct result of population growth. Pollution, toxic wastes, and damage to the ecosystem increase with a higher birth rate. It has a negative impact on the country's economic progress. In a nutshell, population growth is stifling economic growth. As a result, it must be managed effectively.

Suggestions:

India has a massive and fast-growing population. Population growth of one percent means that 1 crore people are being added annually, but the current population growth rate is greater than one percent, resulting in an annual addition of more than 1 crore people. Effective population control methods are urgently required for the sake of society's well-being. Population expansion is

mostly caused by a high birth rate, as we all know. As a result, policies aimed at reducing the overall birth rate should be implemented.

1. Social Measures

- If possible, marriage should be performed at the age of 30 years old at the earliest. This will shorten the time it takes for females to conceive and so lower the fertility rate. There is a minimum age for marriage set by the government at 21 years old for men and 18 years for women. It's not enough to simply tell individuals that marriage is the right thing to do at the age of 30.
- Most underdeveloped countries do not regard women as equal to males in terms of strength and authority. For the sake of having more sons than daughters, people continue to have children. To promote a healthy and well-informed population, it is important to give women a voice in the decisions that affect them the most, such as childbirth.
- All of the world's issues can be solved via education. A person's and a nation's success depends on their ability to learn. A high population growth rate can be easily understood by educated people. In terms of population control, education, particularly for women, can be a boon. Educated people can quickly see the advantages of having a small family. Most initiatives like awareness campaigns and women's empowerment will be ineffective and useless if they are not properly educated [9].
- Poverty is a major factor in the development of societal ills. Poverty. Overcrowding is caused in part by a lack of resources. As a rule, the poor are illiterate and uneducated. They have a high fecundity rate and produce a large number of offspring. When it comes to population management, they don't adhere to family planning or any other strategy. Because of this, the government should take initiatives to alleviate poverty so that people are aware of the benefits of family planning and can make informed decisions.
- People in India are now more inclined to have a male child than a female child because of a shift in social norms. Due to this, the number of pregnancies rises as women wait for the arrival of a male kid before having a baby. People's attitudes need to shift in this way. Equal preference should be given to both sexes.
- A family by choice, rather than by chance, is the goal of family planning. In order to control the birth rate, people might take preventative steps. Contraceptives for birth control and adequate medical facilities are essential for family planning. The government should offer a variety of incentives to encourage people to use birth control.

2. Economic Measures

- People's incomes should rise as a result of more jobs being created by the government. People will have a better standard of life as a result, and they'll be more likely to have smaller families.

- Many individuals will be able to find work if the agricultural and industrial sectors are effectively developed. Their level of living would rise as a result of a rise in their income.
- As the standard of living rises, the tendency to have big families decreases. Smaller families are more common among those who aim for a more affluent lifestyle. The government can and should do more to raise the level of living for its citizens.
- The government should provide incentives for people to use birth control measures in various forms. Incentives in the form of educational, health, or financial assistance can significantly impact the population. Incentives such as free or subsidised education for a single child or a set amount of money for people with two or fewer children can encourage people to embrace small family norms.

Conclusions:

A nation's population is critical to its growth. It is both a means and an end in itself for the advancement of the economy. Unchecked population growth is a national advantage that can turn into a liability. Assam has become a burden because of India's overpopulation. As a result, economic planning and development in India and Assam have been hindered by population growth. The population has expanded by 30.58 percent since 1998, when there were 983 million people, to 1283.60 million people in 2017.

Since the last two decades, Indian GDP has increased at a rapid pace, despite the country's overpopulation problem. Indian GDP (PPP) of \$10.40 trillion is presently the third-largest economy globally; however, despite this, India is rated 116th in terms of per capita income and 130th in terms of HDI. Increasing populations are having a negative impact on living standards. When there is too much population, there is an abundance of difficulties such as poor per capita income and the inability to raise capital; excessive pressure on land; social problems; economic instability; social insecurity; and environmental degradation. Changing population dynamics have a significant impact on India's economic planning and development. In spite of the country's growing population and tremendous natural resources, India is still classified as a developing nation. India is still unable to make appropriate use of its natural resources to meet the needs of an expanding population. In India, poverty is rampant due to a lack of proper shelter, food, medical care, and a lack of education. Today, India and Assam are in dire straits because of a shortage of power in many communities, a dearth of food, and a lack of medical and educational services.

References:

1. Datt Gaurav and Sanjukta Mukherjee, 2000: "Looking Beyond the Kuznets Hill? A Characterization of the Evolution of Inequality in India During 1960-94", *Journal of Quantitative Economics*, Vol. 16, No.1.
2. Kar, B. K. (2002) : "Population" in A. K. Bhagabati, A. K. Bora and B. K. Kar (eds), *Geography of Assam*, Rajesh Publications, New Delhi, pp. 115-155.
3. Ahlburg, D.A. (2002), 'Does Population Matter; A Review Essay', *Population and Development Review*, 28 (2): 329-50.

4. Ahlburg, D.A. (1996), 'Population Growth and Poverty', in D.A. Ahlburg, A.C. Kelley and K.O. Mason (eds), *The Impact of Population Growth on Well-being in Developing Countries*, Berlin: Springer-Verlag, pp. 219-58.
5. Dyson, T., R. Cassen and L. Visaria (eds) (2004), *21st Century India: Population, Economy, Human Development and the Environment*, Oxford: Oxford University Press.
6. Williamson, J.G. (2001), 'Demographic Change, Economic Growth, and Inequality', in N. Birdsall, C. Kelley and S.W. Sinding (eds), *Population Matters: Demographic Change, Economic Growth and Poverty in the Developing World*, Oxford: Oxford University Press, pp. 103-36
7. Anderson, D. (2004), 'Modelling the Environment: the Production and Use of Energy', in T. Dyson, R. Cussen and L. Visaria (eds), *21st Century India: Population, Economy, Human Development and the Environment*, Oxford: Oxford University Press
8. Sharma, H. N. and B. K. Kar (1997) : "Pattern of Population Growth in North-East India", in A. Ahmad, D. Noin and H. N. Sharma (eds) *Demographic Transition: The Third World Scenario*, Rawat Publications, Jaipur and New Delhi, pp. 73-93
9. McNay, K., P. Arokiasamy and R.H. Cassen (2003), 'Why are Uneducated Women in India Using Contraception? A Multilevel Analysis', *Population Studies*, 57 (1): 21-40.