

INDIA'S DEMOGRAPHIC TRANSITION AND ITS IMPACT ON ECONOMIC DEVELOPMENT

Rohini Kumari

Assistant Professor, Department Of Economics, N.B.G.S.M. College Sohna, (Gurugram)

ABSTRACT

Demographic transition is the single most important feature for understanding India's development. The demographic transition represents both huge past achievements of the country, as well as substantial challenges that lie ahead. It provides an important overarching framework for the study of much of the India's socio-economic development. Furthermore, the demographic transition allows us make some comparatively firm statements about where the country is going. In recent years, there has been an increasing focus on the relationship between population growth and economic development. This research paper studies briefly about demographic transition of India and how does population growth affect economic development. Does economic development accelerate or retard population growth or does population growth accelerate or retard economic development. It also comprises the data of the population with in the country as well as some international comparisons. Lastly, this paper also future prospects of population growth.

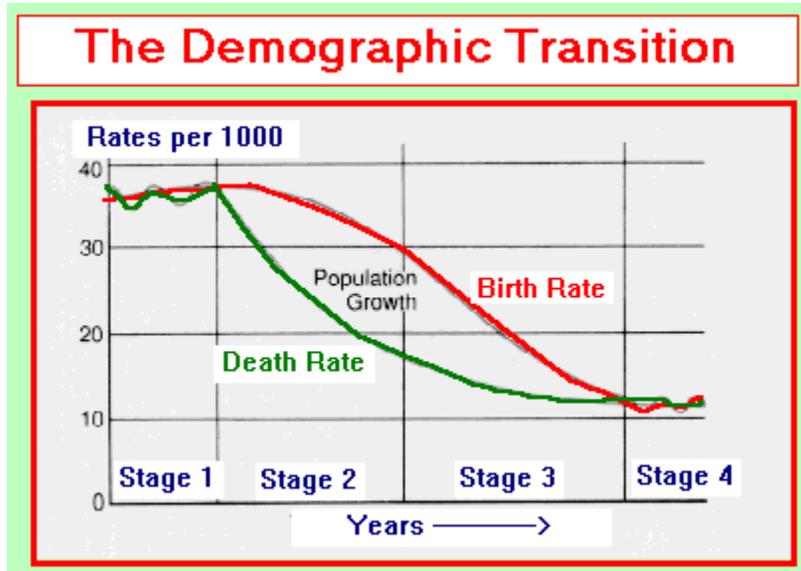
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The Theory of Demographic Transition:

Theory of demographic transition attempts to explain the various stages of population growth. Before economic development, countries, for centuries, had stable or very slow growing population as a result of a combination of high birth rate and high death rate. With the economic development resulting in higher incomes, improved public health facilities, there was marked decline in mortality that gradually raised life expectancy from under 40 to over 60 years.

However, the decline in death rate was not immediately accompanied by a decline in fertility rate. Thus, countries pass through the stage two called "population explosion". Finally, stage three is reached when forces and influences of modernisation and economic development cause fertility to decline so that eventually falling birth rate converges with lower death rate leaving

little or no population growth.



India's Demographic Transition:

At the time of the independence in 1947, India's population was about 345 Million. Life expectancy was around 33 years, and total fertility rate (TFR) was close to 6 births. The decades following the 1940s have seen greater change. The major was related to mortality rate. Immediately, after the independence, the government of India placed great stress upon the improvement of the health of its people. As a result, there was a modest increase in life expectancy and death rate fell down everywhere. And, with the pervading crude birth rate of 45 per thousand (1901-2001) and decline in the crude death rate were sufficient to raise the average annual rate of population growth over 1% per year during 1920-1940. Reduction in death rate after 1947 resulted in a significant increase in the population growth rate, almost 2% per year during 1951-1961. In the following three decades, population growth rate remain stagnant.

It was only during the 1991-2001 that the birth rate fell faster than the death rate, which cause decline in the rate of population growth. Although, the TFR for the India as a whole is still well above the "Replacement level" (around 2.1), the fertility in India has been fallen sharply in recent decades from around 6.0 in 1961 to 2.4 in 2012.

India- Selected Health Indicator

S. No	Parameters	1951	1981	1991	2001	2011
1	Crude birth rate (Per 1000 population)	40.8	33.9	29.5	25.4	21.8
2	Crude death rate (Per 1000 population)	25.1	12.5	9.8	8.4	7.1
3	Total fertility rate (TFR per woman)	6.0	4.5	3.6	3.1	2.4
4	Maternal mortality rate (Per 1 lakh live births)	NA	NA	NA	301	178
5	Infant mortality rate (Per 1000 live births)	NA	NA	NA	NA	42
6	Child mortality rate (Per 1000 children)	57.3	41.2	26.5	19.3	13.3
7	Life expectancy at birth	33	55.5	59.4	63.4	66.1
8	Population (in Million)	361	685	843	1027	1210

Source: Ministry of Health and Family Welfare and Office of the Registrar General. Economic Survey 2009-10, 2010-11, 2011-12, 2012-13.

Fertility Trends:

Fertility rates vary radically across the country- between regions, between states and between districts. The average fertility rate of about three per couple is an amalgam of fertility rates well above five per couple for some districts, while other districts have fertility rates that are quite substantially below the replacement level. For example, for the state of Kerala as a whole-consisting 14 districts – the average fertility rate is now around 1.8 which is lower than the rates of China, the USA, Britain and France. In fact, the fertility rate is also below the replacement level already for Tamil Nadu and demographic calculations suggests that several other states (including Andhra Pradesh, Gujarat, Punjab, HP and WB) will have below replacement fertility rates within the next three to five years. In particular, the Indian states that have done well tend to have been those which had laid solid foundation of participatory development and social

support early on and actively promoted the expansion of human capabilities, especially in terms of education and health.

Figure 16: Total fertility rate in India over 10 decades (Census of India)



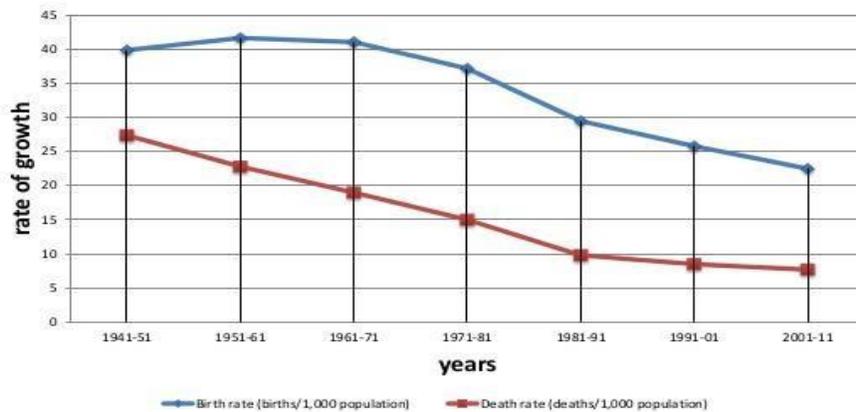
Birth rates and Death rates:

The Annual Sample Registration System (SRS) survey done by the government census office for the year 1998 to 2008 has come out with some astonishing figures showing dramatic changes taking place in the population indicators of some states that are not reflected in the country level data.

Crude birth rate – the number of live births per 1000 population- dipped from 26.4 to 22.8 for the whole country between 1998 and 2008. That is 14% decline. In 2012, it has been reported as 22.1. But in eight major states, the decline was much more. In Punjab, the birth rate fell down 23% followed by Kerala and Maharashtra (20%) and West Bengal (18%).

Countrywide, the crude death rate came down by 18% in a decade. Crude death rate, according to Census Survey 2011, fell down to 7.1. MP and Rajasthan saw 23% dip in death rates. There has been a significant decline in infant mortality rates from 72 in 1998 to 53 in 2008 and 44 in 2012.

Birth rate & Death rate in India



Mortality Rate Trends:

Another health indicator includes mortality rate which is divided into three categories: Infant Mortality Rate, Child Mortality Rate (0-4), and Maternal Mortality Rate. Prior to development period, IMR, CMR and MMR were high due to lack of health facilities, hospitals, lack of education, lack of sanitation and low level of calories. However, after the planning period and with the development of economy, government laid more stress on the improvement of health of its people. As a result of improved health facilities infant mortality and maternal mortality rates declined sharply. The data related to mortality rates is shown in table given below:

S. No	Parameters	1951	1981	1991	2001	2011
1	Infant Mortality Rate (Per 1000 population)	146	110	80	66	42
2	Child (0-4) Mortality Rate (Per 1000 population)	57.3	41.2	26.5	19.3	13.3
3	Maternal Mortality Rate (Per 100000 population)	NA	NA	NA	301	178

Age Structure of India

Age structure of a population can have a larger effect on economic growth especially when it shifts. In recent years, India's demographic profile has begun to evolve in a way that is potentially more favourable to economic growth. Rapid rise in the population of "Working Age" to "Non-Working Age" population contributing to extremely fast economic growth. In 2015, age distribution of India depicts that about 28.79% of Indian population fell into the 0- 14 year category, 65.6% into the 15-65 year group and 5.62% were over 65 year of age. Age structure of India is shown by population pyramid. The age structure of population affects a nation's key socio-economic development. Countries with young populations need to invest more in health sector and education.

Age Structure

1	65 years and above	5.62%
2	15 years to 64 years	65.60%
3	0 years to 14 years	28.79%

Population Projection of India

During the next few decades India's population continues to grow, although at a slowing rate, it will continue to urbanise; it will start to age. All demographic growth in the period of 2026 will occur at age above 15 years. There will be little change in the number of children aged less than 15 years in 2026, and possibly a modest decline. By mid-century, the country's population will have surpassed that of China, it may do this around the year 2030 and it may well be approaching 1.6 billion.

Turning to fertility and mortality, it seems reasonable to consider that by 2026 the total fertility rate for the country as a whole will be approximately two births per woman. It seems plausible to suggest that women will continue to move toward a family building pattern. The average life expectancy for both sexes combined in 2026 may will be about 69 years. According to National Population Stabilisation Fund on 11th July 2015, India recorded 127, 42, 39,769 constituting 17.25% of world population and growing at 1.6% per annum could the country as the most populous in the world by 2050. If current growth rates continue, India will have 1.63 billion people by 2050 and will surpass China.

Population Growth and Economic Development

Population growth rate affect the economic development in both ways i.e. positively and negatively. India is considered as the country with maximum youth population. India's future demographic evolution will also have significant implication for the economy, education, environment and economic growth. However, it requires better policy changes in the field of education, gender equity, human development, health issues and other factors. Now let's take a look at these factors separately to know about India's policy towards the population growth and economic growth.

1. Public Expenditure and Education Policy

Public expenditure on education is an important policy instrument for realising the goals and for the development of education. Recognising the contribution of education in economic development, and keeping in line with the human investment revolution in economic thought, the government of India for the first time accepted the concept of investment in education in its 1968 policy and quantitatively fixed a target of 6% of national income to be invested on education from the public exchequer by 1986. The proportion of GNP invested in education by the government was 3.5% in 2004-05 compared to very low level of 0.6% in 1951-52. India had no doubt made significant achievements in the development of education. The education system at all levels was thrown open to all – rich; poor and middle income classes, men and women, rural and urban populations, and backward and non-backward segments of the population. Despite of these achievements, the failures are also shocking. Even after the nearly seven decades of independence, the number of children in the compulsory age group (6-14) outside the school system is large. Despite significant improvements, inequalities – gender, regional and religious/caste are still high both in the education system. Lastly, the quality of education at all levels is depressingly low.

Education needs to be transformed into a powerful instrument of social change and national development. Unfortunately, neither are the total resources available to education adequate, nor are they spent efficiently on various levels. There is a strong need for the government to substantially increase their spending on education. It is generally felt that it is not the financial resources, but a strong political will that is lacking.

2. Trend in Social Sector Expenditure

Items	2007- 2008	2008- 2009	2009- 2010	2010- 2011	2011- 2012	2012- 2013	2013- 2014	2014- 2015
As Per Cent of GDP								
Expenditure on social services	5.91	6.8	6.9	6.8	6.6	6.6	7.2	6.7
Education	2.59	2.9	3.0	3.1	3.1	3.1	3.2	3.1
Health	1.27	1.3	1.4	1.3	1.2	1.2	1.3	1.2
Others	2.05	2.6	2.5	2.4	2.2	2.2	2.6	2.5

Source- Reserve Bank of India as obtained from Budget Document of union and State governments Economic Survey 2012-12, 2013-14, 2014-15.

3. Health Care as a Social Responsibility

Health care has been one of the most neglected aspects of development in India. Despite stirring statements in planning documents on the centrality of health and health care, the field has suffered from persistent neglect in public policy in general and development planning in particular. A direct consequences of inadequate official attention to health matters is that the Indian population continues to be exposed to a high incidence of communicable diseases and readily preventable illness. Communicable disease are seen to be responsible for more than half of the burden of disease in India. The incidence of undernourishment and nutrition related ailments in India is very high by international standard. The expenditure made by the different countries on health issues are given below:

Expenditure on Health in Developed and Emerging Economies**(As percentage of GDP)**

Country	Expenditure on health (2010 or latest available year)		
	Public	Private	Total
Australia	6.2	2.9	9.1
Norway	8.1	1.4	9.4
United Kingdom	8.0	1.6	9.6
United States	8.5	9.1	17.6
Mexico	2.9	3.3	6.2
Indonesia	1.3	1.3	2.6
Brazil	4.2	4.8	9.0
Russian Federation	3.2	1.9	5.1
India	1.2	2.9	4.1
China	2.7	2.4	5.1
South Africa	3.9	5.0	8.9

Source: OECD Factbook 2013: Economic, Environment and social statistics.

4. Human Resource Development

Human resource development plays an important role in economic developments. Third world countries, it is said, have remained underdeveloped on the account of under-development of human resources. The general masses are illiterate or their education level is low, they are unskilled and untrained, and their general health is poor. Therefore, large scale investment in human resources is required. Investment in education and public health care contributes to human resource development. Such investment helps in increasing a more productive labour force, empowering it with increased knowledge and skill. Similarly, investment on health is important which takes the form of investment in medical knowledge in disease prevention and in treatment and rehabilitation.

In India, the expenditure on education is not considered an investment. It is treated as a social service and is meant only to improve the quality of man's life. The public outlay on education as percent of GDP had stagnated in three decades since 1980s. However, in the 1990s the ratio of

public expenditure to GDP has actually declined from the peak 4.4% in 1981 to 3.6% as against the goal of 6.0% of GDP. On the basis of Human Development Index published by UNDP, India ranked very low as compared to developed countries. The HDI of various developed and developing countries are given below:

India's Position and Trends in the Global HDI 2016

Country	HDI Value	HDI Rank	Life Expectancy	Mean Year of Schooling	Expected Year of Schooling	GNI Per Capita (PPP\$)
Norway	0.949	1	81.7	17.7	12.7	67,614
United States	0.920	11	79.2	16.5	13.2	53,245
Germany	0.926	4	81.1	17.1	13.2	45,000
United Kingdom	0.909	16	80.8	16.3	13.3	37,931
Russian Federation	0.804	48	70.3	15.0	12.0	23,286
Brazil	0.754	79	74.7	15.2	7.8	14,145
Australia	0.939	3	82.5	20.4	13.2	42,822
Denmark	0.925	6	80.2	19.4	12.7	44,159
Sri Lanka	0.766	72	75	14	10.9	10,789
China	0.738	91	76	13.5	7.6	13,345

India	0.624	131	68.3	11.7	6.3	5,663
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Source: Human Development Report 2016.

5. Gender Equity and the Demographic Transition

There is much evidence now, based on inter-country comparisons as well as inter-regional contrasts within India, that woman's empowerment can have very strong effect in reducing fertility rates. Speedy fertility declines in the states of Kerala, Tamil Nadu or Himachal Pradesh in India can be firmly linked to the rapid enhancement of female education and other sources of empowering of young women. In fact, the principal variables that seem to account for inter-district variations in fertility rates in India are directly linked to women's empowerment, in particular female literacy and women's participation in gainful employment.

Female literacy not only has a strong impact in reducing child mortality rates. Similarly, women's employment opportunities and related source of empowerment contribute to their security in old age, and offer some protection from the adversities of widowhood.

6. Demographic Dividend as a source of Development

Demographic dividend refers to a demographically linked economic boost caused by a rise in the working age population (15-59) years or in some cases 15-64 years and consequent drop in the dependency ratio. A country is expected to reap the demographic dividend when share of its working population is larger than share of its non-working population. India is currently going through the phase of demographic dividend. Economic growth may be enhanced by the demographic bonus from the projected diminishing age dependency ratio. Benefits will arise if there are consequent increase cannot be taken for granted. It is virtually certain that the country's working age population is going to grow faster than the total population and it may roughly 50% bigger in 2026 compared to 2001.

Demographic Dividend of India: A declining 0-14 population will impact both elementary (5-14 age) and higher education (15-29 age). Thus, total enrolment in primary schools has fallen and total enrolment in higher education has increased since 2013. The dependency ratio for India is expected to fall from 54% in 2010 to 49% in 2020. India is better placed in this respect than most other countries. Thus states already well into the demographic window should actively pursue policies for employment generation to the already bulging labour force. Economic growth may be enhanced by the demographic bonus deriving from the projected diminishing age dependency ratio. Benefits will arise if there are consequential increase in saving and investment.

But such increase cannot be taken for granted. To reap the much hyped demographic dividend advantage of India, better educated and healthy population is a must. This calls for more reforms in the education system and health sector.

7. Population Growth and Urbanisation

The rise in the proportion of the population living in urban areas- has been another key development which has facilitated the reduction in mortality and fertility rates. Among other things, urban areas offer economies of scale in terms of providing both health and family planning amenities. If you live in a town, it is much harder to raise a large number of children. It is so because the cost of living in a town is much larger than the cost of living in a villages. With the development of Indian economy, urbanisation has been increased very much. However, the population of urban sector as a whole grows either because of rural to urban migration or because of urban natural increase. The process of urbanisation occurs because the urban sector grows faster than the rural sector. It does so because during the demographic transition, it has two main source of growth- urban natural increase and rural to urban migration in which migration from rural to urban also contributed a lot due to lack of employment opportunities in rural areas. However, it should also be noted that process of urbanisation and demographic transition has little impact on economic development.

8. The Future

As noted, demographic transition provides an excellent framework for studying many aspects of development. During the next few decades, India's population will grow, although at a slowing rate; it will continue to urbanise; it will start to age. By mid-century, the country's population will surpass the China, it may do this around 2030, and it may well be approaching to 1.6 billion. Turning to fertility and mortality, it seems reasonable to consider that by 2026, the country's fertility rate will be two per woman and they will continue to move towards family planning. India's future demographic evolution will also have significant implication for the economy, education, health and environment. Economic growth may be enhanced by the demographic dividend if it will be properly utilised. Benefits will arise if there is consequential increase in saving and investment. It was also argued that new demographic transition of India will a new population policy to protect our demographic assets while preparing for difficult challenges that lie ahead and also protect the future generation from catastrophic consequences.

CONCLUSION

To conclude, we can say that demographic transition has three kinds of effects on the economy as well as on its development. The pessimistic theory i.e. Malthusian theory says that population

growth rate has negative effect on economic development, while optimistic theory views that population growth rate has positive effect on economic development and lastly neutralist theory says population growth has no effect on economic development. With the development of economy, India's fertility rates, mortality rates has been declined very much. However, population growth rate also increased almost 2 per cent per annum. Currently, India's maximum population lies between the groups of 15-59 years age, that is why India's working population to non-working population ratio is very high. It is currently going through the age of demographic dividend. To utilise the demographic dividend, it is must to increase the saving and investment. To reap the benefits of demographic dividend, expenditure on social issues, public health, education, human capital must be increased. Therefore, we can say that India's demographic transition offers significant opportunities. It must therefore act soon to implement the policy mix required for economic development.

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