

DEMOGRAPHIC DIVIDEND IN INDIA: A SYNOPTIC VIEW**Dr. Swapan Kumar Roy***Assistant Professor in Commerce, Bethuadahari College, Bethuadahari, Nadia.***Suhas Roy***Assist. Professor in Commerce (Economics) Bethuadahari College, Bethuadahari, Nadia, West Bengal.***Abstract**

The term “Demographic Dividend” is a much talked about subject today. In India, it has also been a cynosure of discussion. It is a population bulge in the working age category and occurs when a falling birth rate changes the age distribution of a population. It is a rise in the rate of economic growth due to a rising share of the working age population. Demographic dividend is essentially due to two factors – declining birth rate and improvement in life expectancy. The pertinent question is whether India will be able to reap the benefits of demographic dividend through increasing its employability and quality of labour force. It is known that demographic dividend does not last long. India is passing through a phase of unprecedented demographic changes. These demographic changes are likely to contribute to a substantially increased labour force in the country. The census projection report shows that the proportion of working age population between 15 and 59 years is likely to increase from approximate 58% in 2001 to more than 64% by 2021. Such a trend would make India one of the youngest nations in the world. So one of the India’s competitive advantages is its demographic dividend. This demographic dividend provides India great opportunity but it also poses a great challenge. It will benefit India if our population is healthy, educated and appropriately skilled. In this backdrop, an attempt has been made in this paper to (a) discuss about the conceptual understanding of demographic dividend, demographic transition and demographic windows of opportunity; (b) show how demographic dividend helps a country like ours; (c) examine whether India will be able to garner demographic dividend; (d) discuss the policies and strategies taken by the Government of India in order to reap the benefits of demographic dividend; and (e) make concluding remarks.

KeyWords: *Demographic Dividend, Demographic Transition, Economic Growth, Employability, Human Capital, and Life expectancy.*

Prologue

The term “Demographic Dividend” is a much talked about subject today. In India, it has also been a cynosure of discussion. The pertinent question is whether India will be able to reap the benefits of demographic dividend through increasing its employability and quality of labour force. Mere increase in the volume of population cannot solve the issue. Even only the rise in working population may not be a solution. India can exploit the benefits of demographic dividend if the working population gets employment opportunities, infant mortality rate and dependency ratio are reduced, adult literacy rate is increased, health care facilities are galore and quality of labour force is improved. This all may help reap the benefits of demographic bonus.

Aims of the Study

The aims of the study are

1. To discuss about the conceptual understanding of the terms “Demographic Dividend”, “Demographic Transition”, and “Demographic Windows of Opportunity”;
2. To show how demographic dividend helps a country like ours;
3. To examine whether India will be able to garner demographic dividend;
4. To discuss the policies and strategies taken by the Government of India in order to reap the benefits of demographic dividend;
5. To make concluding remarks.

Methodology

The entire gamut of discussion in this study is based on secondary sources of data. The different books, journals, newspapers, UNDP Reports, Government publications and related websites have been consulted in order to enrich the study.

Understanding Demographic Dividend, Demographic Transition and Demographic Windows of Opportunity

Demographic Dividend

Demographic Dividend is the economic benefits that derive from demographic change. It is a population bulge in the working age category. It occurs when a falling birth rate changes the age distribution of a population so that fewer investments are needed to meet the needs of the youngest age groups and resources are released for investment in economic development and family welfare. At this stage, there are relatively more adults in the population of the productive labour force. By demographic dividend, we mean a rise in the rate of economic growth due to a rising share of the working age population. It may occur only once during a demographic transition and lasts for just a few decades. Demographic dividend is essentially due to 2 factors: (a) Declining birth rate and (b) Improvement in life expectancy.

Demographic Transition

Declining mortality is one of the determinants of demographic transition. Demographic transition refers to the transition from high birth and death rates to low birth and death rates as a country develops from a pre-industrial to an industrialized economic system. Experience worldwide suggests that demographic transition typically takes place from largely rural agrarian society to a predominantly urban industrial society. It is a shift in a population from a situation of high fertility and high mortality to a new situation where fertility and mortality are low.

Demographic Windows of Opportunity

It is defined to be that period of time in a nation's demographic evolution when the proportion of population of working age group is particularly prominent. This occurs when the demographic architecture of a population becomes younger and the % of people able to work reaches its height. UN population department has defined the windows of opportunity as 'period when the proportion of children and youth under 15 years falls below 30% and the proportion of the people 65 years and older is still below 15%'. Typically, the demographic windows of opportunity last for 30-40 years depending upon the country.

How Does Demographic Dividend Help?

Demographic dividend is delivered through several mechanisms. These are mentioned hereunder.

1. **Labour Supply:** The country's economic boom depends on a young and productive labour force. The children born during periods of high fertility finally leave the dependent years and can become workers. Women now have fewer children than before. They are better educated than older cohorts. They are not confined now to their home only. Women are employed in jobs outside of the home. So they are productive in the labour force. This force plays a pivotal role in helping any country's economy to take off.

2. **Savings:** The demographic transition affects the savings, which in turn affects the prospects for investments and growth. Working-age adults tend to earn more and can save more money than the very young. Personal savings grow and serve as a partial resource for industrial investments that fuel economic growth. As the number of dependents decreases individuals can save more. This increase in national savings rates increases the stock of capital in developing countries and leads to higher productivity as the accumulated capital is invested.
3. **Human Capital:** The demographic transition begins with changes in mortality that results in a population that lives longer and stays healthier. A longer life expectancy causes fundamental changes in the way that people live. Decreases in fertility rates result in healthier women and fewer economic pressures at home. This also allows parents to invest more resources per child that leads to better health and educational outcomes. Participation of women in the labour force enhances their social status and personal independence. A society, which is experiencing a demographic dividend, is certain to experience deep-rooted changes in its culture, as its people become more valuable assets.
4. **Increasing Domestic Demand:** The increasing domestic demand is brought about by the increasing GDP per capita and the decreasing dependency ratio.

Can India Garner the Demographic Dividend?

The question peeps in our mind whether India can garner the demographic dividend. The promise of demographic dividend does not last long. To be noted that demographics play a crucial role in shaping the size of the labour force and economic productivity and demographic structure has a bearing effect on economic growth. As compared to 1980s, it is clear that a number of advanced countries (like Europe, Japan and USA) have ageing populations because of low birth rates and low mortality rates. One of the India's competitive advantages is its demographic dividend. Demographic dividend occurs when the proportion of working people in the total population is high because this indicates that more people have the potential to be productive and contribute to growth of the economy.

The country's working age (15-59 years) population, as of now, largely consists of youth (15-34 years) and as a result its economy has the potential to grow more quickly than that of many other countries, including China. India is passing through a phase of unprecedented demographic changes. These demographic changes are likely to contribute to a substantially increased labour force in the country. The census projection report shows that the proportion of working age population between 15 and 59 years is likely to increase from approximately 58% in 2001 to more than 64% by 2021. In absolute numbers, there will be approximately 63.5 million new entrants to the working age group between 2011 and 2016. Further, it is important to note that the bulk of this increase is likely to take place in the relatively younger age group of 20-35 years. Such a trend would make India one of the youngest nations in the world. In 2020, the average Indian will be only 29 years old. Comparable figures for China and the US are 37, 45 for West Europe, and 48 for Japan. This 'demographic dividend' provides India great opportunities, but it also poses a great challenge. It will benefit India only if our population is healthy, educated and appropriately skilled. Therefore, greater focus on human and inclusive development is necessary to best utilize the demographic dividend.

According to the Census of India, while the proportion of population in the under 14 age group declined from 41% in 1961 to 35.3% in 2001, the proportion of population in the age group 15-59 increased from 53.3% to 56.9% during the same period. The proportion of those above 60 years of age also increased from 5.6% to 7.4%. In terms of absolute numbers, the increase in the 15-34 age-group populations is even more dramatic: from 174.26 million (31.79%) in 1970 to 354.15 million (34.43%) in 2000. The youth segment of population is projected to peak at 484.86 million in 2030.

Table-1 exhibits the trends of population in different age groups in India.

Table-1: Trends of Population in different age groups in India (1951-2050)

Year	Child Population (%) (0-14 years)	Working Population (%) (15-59)	Old Population (%) (60 - 80+)
1951	37.48	57.12	5.39
1955	38.84	48.94	5.09
1960	40.40	54.38	5.22
1965	41.50	53.22	5.28
1970	40.85	53.67	5.48
1975	40.08	54.28	5.64
1980	39.39	54.80	5.82
1985	38.67	55.30	6.03
1990	37.78	56.15	6.30
1995	36.65	56.71	6.64
2005	32.98	59.56	7.46
2010*	30.72	61.30	7.96
2015*	28.67	62.29	9.04
2020*	26.74	63.05	10.21
2025*	24.80	63.71	11.49
2030*	22.87	64.25	12.90
2035*	21.07	64.50	14.44
2040*	19.74	64.06	16.19
2045*	18.85	63.02	18.13
2050*	18.22	61.55	20.23

Source: United Nations Department of Economics and Social Affairs/Population Division World Population Prospects: the 2006 Revision, Volume 1

Note: 1951-2005 actual values and 2010-2050(*) projected values.

The analysis of the above Table-1 shows the increasing trend of child population (%) during the period from 1951 to 1965. The declining trend of child population is noticed while the figures in percentage

(from 1970 to 2005) are analyzed. The projected values shown in the years (2010-2050) also indicate the decreasing trend of child population. Working population (%) during the period from 1951 to 1965 shows the fluctuating trend of population. The increasing trend of working population is observed during the period from 1970 to 2005. The projected values (2010 to 2040) show the increasing trend. The analysis of the above Table also shows the increasing trend of old population (excepting the year 1951).

The demographic fact has important implications for the labour market. According to official data, India's labour force, which was 472 million in 2006, is expected to be around 526 million in 2011 and 653 million in 2031. It is noteworthy that the growth rate of labour force will continue to be higher than that of the population until 2021. According to the Indian Labour Report, 300 million youth would enter the labour force by 2025, and 25% of the world's workers in the next 3 years would be Indians.

With over 1.2 billion people, India accounts for nearly 1/6th of global population. While the rate of growth of population has consistently declined, India's population increased by nearly 180 million persons during 2001-2011 (the highest in the world in absolute terms). However, India is also passing through a phase when its dependency ratio will decline from an estimated 74.8 in 2001 to 55.6 in 2026 with a corresponding increase in the share of persons in working-age group. With labour being a key factor of production, a demographic dividend is a clear positive for growth. It has, however, been pointed out that much of the growth in population will occur in states that are currently poor. Therefore, for this dividend to accrue, it will be necessary to build human capital in adequate measure.

Trends in the dependency ratio in India are depicted in Table-2.

Table-2: Trends in the Dependency Ratio in India

Year	Dependency Ratio	Child Dependency Ratio	Old-Age Dependency ratio
1950	73	67	6
1955	74	68	6
1960	76	70	6
1965	78	72	6
1970	79	72	7
1975	77	71	7
1980	74	67	7
1985	72	65	7
1990	69	62	7
1995	68	60	8
2000	64	56	8
2005	60	51	8

2025	48	36	12
2050	50	27	22

Source: Economic and Political Weekly, December 9, 2006

The scan of the Table-2 shows: (a) increasing trend of dependency ratio (1950-1970) and decreasing trend of the same (from 1975 to 2025); (b) increasing trend of child dependency ratio (1950-1970) and decreasing trend of the same (1975 – 2050) and (c) increasing trend of old-age dependency ratio (1950-2050).

The Human Development Report (HDR) published by the United Nations Development Programme (UNDP) estimated the HDI in terms of 3 basic capabilities to live a long and healthy life, to be educated and knowledgeable, and to enjoy a decent economic standard of living. According to HDR 2011, the HDI for India was 0.547 in 2011 with an overall global ranking of 134 (out of the 187 countries) compared to 119 (out of 169 countries) as per HDR 2010. However, a comparable analysis of the trends during 1980-2011 shows that although lower in HDI ranking, India has performed better than most (including high and very high human development) countries in terms of average annual HDI growth rate. India is behind only China and Bangladesh in this regard. If average annual HDI growth of 2000-2011 is viewed, India (1.56%) is even ahead of China (1.43%). While China performed very well in terms of growth of HDI in the 1980s, there was a deceleration in the 1990s and 2000s. On the other hand, India, which seems to have faltered in the 1990s, has picked up again with its growth rates during 2000-2011 surpassing even those of the 1980s (as shown in Table-3).

Table-3: Trends in the Human Development Index (1980-2011)

HDI rank	Country	1980	1990	2000	2005	2009	2010	2011	Average Annual HDI Growth rate (%)		
									1980-11	1990-11	2000-11
1	Norway	0.796	0.844	0.913	0.938	0.941	0.941	0.943	0.55	0.53	0.29
2	Australia	0.850	0.873	0.906	0.918	0.926	0.927	0.929	0.29	0.30	0.23
101	China	0.404	0.490	0.588	0.633	0.674	0.682	0.687	1.73	1.62	1.43
97	Sri Lanka	0.539	0.583	0.633	0.662	0.680	0.686	0.691	0.80	0.81	0.80
134	India	0.344	0.410	0.461	0.504	0.535	0.542	0.547	1.51	1.38	1.56
146	Bangladesh	0.303	0.352	0.422	0.462	0.491	0.496	0.500	1.63	1.69	1.55
	World	0.558	0.594	0.634	0.660	0.676	0.679	0.682	0.65	0.66	0.66

Source: HDR 2011 and Economic Survey 2011-2012

Table-4 depicts the Total Fertility Rate (TFR) and Growth Rate of Total and Old Population over the period 1950-2050

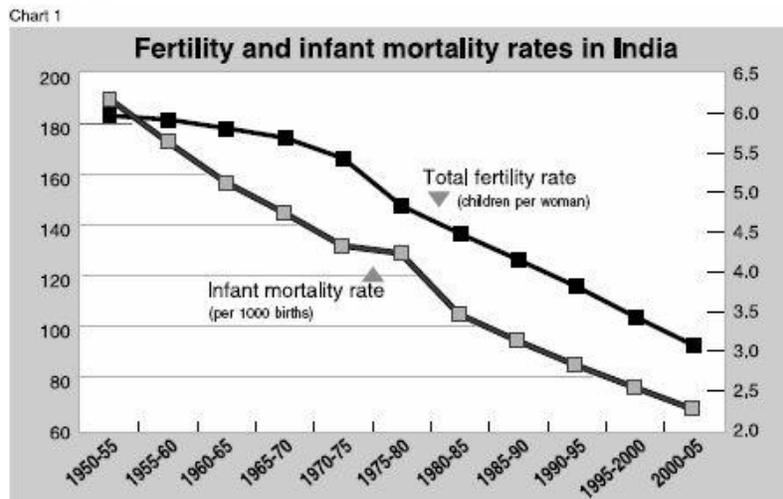
The analysis of Table-4 manifests the declining trend of total fertility rate (during the period from 1950 to 2050). It also shows the decreasing trend of total population in terms of growth rate (%) during the same period. If the older populations in terms of growth rate are analyzed, the fluctuating trend is observed.

Table-4 Total Fertility Rate (TFR) and Growth Rate of Total and Old Population over the period 1950-2050

Years	TFR (Children per women)	Growth Rate (%)	
		Total Population	Older Population
1950	6.0	2.0	2.0
1975	4.8	2.1	2.9
2000	3.0	1.5	2.7
2025	2.1	0.8	3.2
2050	1.8	0.4	2.2

Source: United Nations, 2002

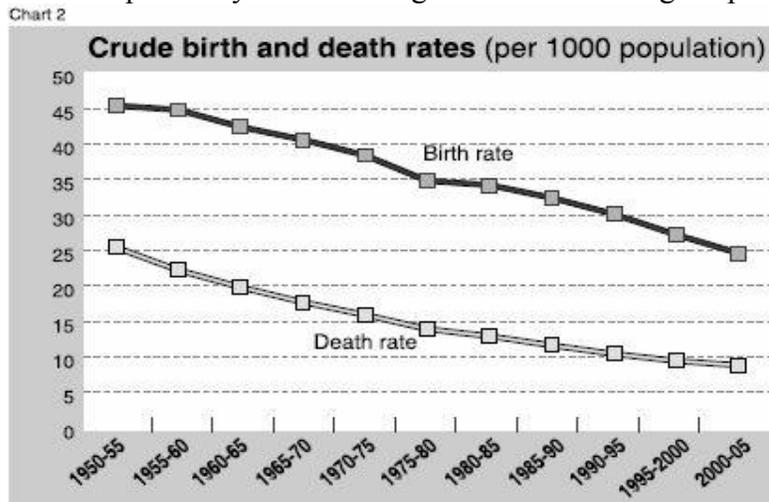
The fertility and infant mortality rates in India during the period from 1950-55 to 2000-05 are shown in Chart-1. As Chart-1 shows, during the first 2 decades of post-independence development, while infant mortality rates fell significantly, the fertility rate was more or less stagnant. This would have increased the population of young people significantly, merely because of greater child survival. In the 3 decades since then, though the fertility rate has been declining, the infant mortality rate has fallen quite sharply, with possibly the same effect.



Source: Business Line, 17th January 2006

Chart-2 shows the crude birth and death rates (per 1000 population) during the period from 1950-55 to 2000-05. One consequence of these trends is the sharper fall in the crude death rate than the birth rate, though declining mortality in the higher age groups would have influenced this as well. The effect of

these trends on the dependency ratio has been along expected lines. The total dependency rose initially because of a rise in the child dependency ratio and stagnation in the old-age dependency ratio.



Source: Business Line, 17th January 2006

Life expectancy or expectation of life at a given age is the average number of years, which a person of that age may expect to live, according to the mortality pattern prevalent in that country. Demographers consider it as one of the best indicators of a country’s level of development and the overall health status of its population. Table-5 shows the Life Expectancy at Birth and at Age 60 by Sex over the period 1950-2050.

Table-5: The Life Expectancy at Birth and at Age 60 by Sex over the period 1950-2050

Year	Life Expectancy (Years) at Birth			Life Expectancy at Age 60 (Years)		
	Male	Female	Total	Male	Female	Total
1950	39.0	38.0	38.7	NA	NA	NA
1975	53.3	52.4	52.9	NA	NA	NA
2000	63.6	64.9	64.2	16.1	17.9	17.0
2025	69.9	73.4	71.6	18.1	20.7	19.4
2050	73.5	77.4	75.4	19.4	22.2	20.8

Source: United Nations, 2002

The analysis of the above Table-5 shows the increasing trend of both life expectancy at Birth (1950-2050) and life expectancy at Age 60 by Sex (2000-2050).

Table-6 shows “Average Annual Increment in Youth Population (in 1000s).

Table-6: Average Annual Increment in Youth Population (in 1000s)

Year	UN Population Database			Registrar General of India		
	Total	Male	Female	Total	Male	Female
2001-2006	4028.8	2022.6	2006.2	5406.2	3025.2	2381.2
2006-2011	2680.8	1330	1350.4	3532.4	1670.4	1861.8
2011-2016	1312.6	621.2	691.8	-212.9	-343.6	131
2016-2021	226.4	76	150.4	-1857.4	-777.2	-1080.2
2021-2026	45.2	-8.8	54	-1112	-290.2	-821.6

Source: Economic and Political Weekly, December 9, 2006 and Business Line, January 17, 2006

Official Indian projections based on the 2001 Census and the SRS (Sample Registration System) show that India's youth population stood at 195.1 million in 2001 and was expected to increase by an annual average figure of 5.4 million during 2001-06 and 3.5 million during 2006-11, before beginning to decline (as evident from Table-6).

The above deliberations substantiate that India can reap the benefits of demographic dividend.

Deriving Demographic Dividend: Policies and Strategies Undertaken By the Government of India

Higher education is of vital importance for the country, as it is a powerful tool for building a knowledge-based 21st century society. To prepare for the challenges of the 21st century, the government has taken a number of initiatives during the 11th Plan period focusing on improvement of access along with equity and excellence, adoption of state-specific strategies, enhancement of the relevance of higher education, through curriculum reforms, vocationalization, networking, and use of information technology and distance education along with reforms in governance in higher education. A large scale expansion in university education has been initiated during the 11th Five Year Plan by setting up new educational institutions comprising 30 central universities, 8 new Indian Institutes of Technology (IITs), 8 new Indian Institutes of Management (IIMs), 10 new National Institutes of Technology (NITs), 20 new Indian Institutes of Information Technology (IIITs), 3 new Indian Institutes of Science education and Research (IISERs), 2 new Schools of Planning and Architecture (SPAs), 374 model colleges, and 1000 polytechnics. The government has initiated many schemes for elementary and secondary education. Sarva Shiksha Abhiyan (SSA), National Programme for Education of Girls at Elementary Level (NPEGEL), National Programmes of Mid Day Meals in Schools, Model Schools Scheme, Vocational Education, Saakshar Bharat/Adult Education, Inclusive Education for the Disabled at Secondary Stage and Rashtriya Madhyamik Shiksha Abhiyan are some of the schemes initiated by the government.

For trapping demographic dividend in India, the 11th Plan relies not only upon ensuring proper health care but also gives major emphasis on skill development and encouragement of labour intensive industries. The global economy is expected to witness a skilled manpower shortage to the extent of around 56 million by 2020. Thus the demographic dividend in India needs to be exploited not only to expand the production possibility frontier but also to meet the skilled manpower requirements of India and abroad. To reap the benefits of demographic dividend, the 11th Five Year Plan had favoured the

creation of a comprehensive National Skill Development Mission. As a result, a “Coordinated Action on Skill Development” with three-tier institutional structure was created in early 2008. It consists of The Prime Minister’s National Council on Skill Development (NCSM), National Skill Development Coordination Board (NSDCB) and National Skill Development Corporation (NSDC). The NCSM appointed an adviser to the Prime Minister in the NCSM in January 2011.

Prime Minister’s National Council on Skill Development has spelt out policy advice, and direction in the form of “Core Principles” and has given a Vision to create 500 million skilled people by 2022 through skill systems. NSDCB has taken upon itself the task of coordinating the skill development efforts of a large number of Central Ministries/Departments and States. The NSDC has geared itself for preparing comprehensive action plans and activities, which would promote PPP models of financing skill development. Various strategies for the 12th Plan improved access to quality education, better preventive and curative health care, enhancing skills and faster generation of employment are being finalized to ensure greater productivity of Indian workers.

As on 31 October 2011, the NSDC has approved 34 training projects spread across 177 districts in 20 sectors. The NSDC has also approved 8 sector skill councils (SSCs). A new strategic framework for skill development for early school leavers and existing workers has been developed since May 2007 in close consultation with industry, State Governments, and experts. At present, 1386 modules for employable skills covering 60 sectors have been developed, 36 assessing bodies empanelled for conducting assessment, 6753 vocational training providers registered and more than 12.19 lakh persons trained/tested (since inception).

Epilogue

When a population has a high dependency ratio, a nation will struggle to generate growth in income and output. When the dependency ratio is low, economic miracles tend to happen. Demographic composition of any nation plays an important role in the growth and development of the economy. The proportion of working age group in the total population is deemed to be more important for framing the policies for economic growth and development. Health systems as a whole need to be strengthened, with primary health care expanded, including vaccination. Sexual and reproductive health care and information and education on sex and family planning need to be improved. The quantity and quality of education needs to be improved. Vocational training need to be expanded so that youth can develop the skills required for productive employment. Education and skill building hold tremendous promise for reaping the Demographic Dividend for our society and democratic polity, just as it poses formidable challenges to policy making for socio-economic development of our country. Knowledge has come to occupy centre-stage in the development process with the realization that a significant new relationship has emerged between knowledge and the economy. A better-trained and educated labour force is a prerequisite for meeting the labour supply requirements of sustained higher growth.

References

1. Singh, Teshu, Demographic Dividend in China: A Challenge Ahead, IPCS Special Report 121, Institute of Peace and Conflict Studies, New Delhi, April 2012.
2. Dr. Chandrasekaran Memorial Lecture delivered by Dr. Narendra Jadhav, Member, Planning Commission, Government of India, New Delhi, on 30th October 2009 at IIPS, on “Demographic Dividend and Demographic Nightmare”,