# Demographic Dividend and its impact on India: An overview

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Abstract: The World's current population of 7.6 billion and this will enhance to 9.8 billion in 2050.By 2020, the population of India is expected to overtake the China to become the world's most populous country and will have 900 million people of working age. The landscapes of India have 2.4% of the world total area and have 17.5% of the world population. The population of India in 2011 is 121.02 crore which is almost equal to the combined population of U.S.A, Indonesia, Brazil, Pakistan, Bangladesh and Japan together which is 121.43 crore. Currently India is facing Demographic Dividend and this change in India is opening up new economic opportunities. Population age grouped 15-64 years in India is 55% which is higher than China 38% leading to a higher number of working age group as compared to dependents. The India population under the age group of 15-29, comprises 27.5% of the total population, giving India a favorable demographic profile. Economic Growth is highly related to this young working labor which is increasing in India, so there should be creating new opportunities based on the skill of contemporary relevance. In this paper, an attempt has made to explore the challenges and benefits of Demographic dividend which is a burning topic of India. In addition to benefits and challenges, necessary pre-reap conditions for reaping the benefits demographic dividend are also addressed in this paper.

Keyword: Population, demographic dividend, working age- group, benefits and challenges

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## I. Introduction

The united nation has estimated that the world population grew at an annual rate of 1.23% during 2000-10. China registered a much more annual growth rate of population 0.53% during 2000-10, as compared to India 1.64%. World population was transformed in the 20th century as technological and social change brought decline in the birth rate and death rate .A "youth bulge" in the developing countries means absolute numbers of births rise and having lesser children. At the other extreme most countries in Europe now have a "vouth dearth" after decrease of low fertility rate. The population of India grew by one and half times in the first half of the twentieth century, 2001-2011 is the first decade which they actually added lesser population compared to the previous decade .The population of Maharashtra and U.P. substantially greater than the population of U.S.A. Decadal growth rate of population in the inter-censual period of 2001-2011, among the more populous state and Union territories, varies from a low of 4.86% in Kerala to a very high in Bihar 25.07%, J&K with 23.7% Chhattisgarh with 22.59% and Jharkhand with 22.34% also recorded a very high growth rate. Prior to 1921 India was in the first stage of population cycle and growth rate of population was very slow. From 1921 onwards, it has entered into the second stage characterized by low death rate, but birth rate considerably was high. Since 1951 its acceleration has acquired its horse speed in the form of explosion. By 2050, India is expected to have around 400 million more inhabitants than will China. According to the population foundation of India and the population reference Bureau expects 70 years of life expectancy will be achieved around 2050. India annual growth rate in the year 2013-14 is 1.27% as per US Census, it indicates that birth rate has reduced to 7.4% from 9.0% and thereby reducing the number of dependents on the working age population. Now, on account of reduction of birth rate, we go forward the base ages (0-4) of the pyramid of India in 2025 are not as wide as it for 2000 and new transition stage has come which is known as demographic dividend. Demographic dividend, as defined by the United Nations Population Fund (UNFPA) means, "the economic growth potential that can result from shifts in a population's age structure, mainly when the share of the working-age population (15 to 64) is larger than the non-working-age share of the population (14 and younger, and 65 and older) (http://www.unfpa.org/demographic-dividend). The beneficial effect of changes in age structure after a decrease in fertility has become known as the "demo-graphic dividend". As per the Annual Reports of the Ministry of Youth Affairs and Sports, 2016-17 youth make up to be the most dynamic and energetic for any institution for regulating, nearly 65% of population comes under "35". The Annual Report estimates that by the year 2020, the median age of India is 28 years as compare to the South Asian and China. The Indian population under the age

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group of 15-29, encompasses 27.5% of the total population, come under favorable Demographic profile. In order to avail this dividend, youth should be put in a circle of generating beneficial projects. Youth power would be channelized at a global scale. According to 2011 census, 41 % of Indian population is below the age of 20 years. Due to the increasing youth population many ill effects emerge from this demographic change. Today's youth have diverted to other crimes for maintain their living standard on account of ill effects of fast growing urban structure. A major reason for this negative outlook is the disparity between accessibility and availability. Various programs are initiated by the government but methods or means to acquire them are not very easy, hurdles in accessing these facilities emerge such as "financial constraint" or the social structure. Due to the increasing youth population, India's dependency ratio (0-14) 60 and above is declining, this portrayed the pressure on economy to generate employment opportunities that cause reduction of unemployment.

### **Demographic Dividend**

Demographic dividend means falling of a birth rate on account of decline of child and mortality rate and accompanied by an extension in average life expectancy that become the cause of increasing the working age population. It occurs as a result of a demographic transition. This demographic dividend is vital for country's economic growth.

### **Demographic Transition**

Demographic transition is the transition from a high birth rate and death rate to a low birth rate and low death rate. It takes place when a country or region develops from a pre-industrial to an industrialized economic. Demographic dividend is the outcome of demographic transition.

#### **Demographic Window of opportunity**

Demographic window of opportunity is defined a time period when demographic evolutions emerged and working age population become prominent. The timing and duration of this period is closely associated with declining fertility rate. When birth rate falls, the age pyramid shrinks and slowly younger population (under 15s) and dependency ratio also decreases. After a few decades working population will be decrease and elderly population will be increase as observed in Europe.

### **II.** Review of Literature

Many studies have been undertaken in the past regarding the demographic change and dividend in India. Mathur and Agarwal (2014) conducted the study on demographic dividend and its benefits and found that India is relatively a younger population and have "Demographic Dividend" that will lead to economic development, more working population and fewer dependents help in increasing accumulation of capital due to their increased savings. There were 1.2 billion youth aged 15-24 years globally in 2015. Youth can be a positive for economic development when provided with adequate knowledge and opportunities. Some countries anticipating rapid growth in youth population cause unemployment among the youth even some countries have low rate of youth population, but over the coming years could challenge the sustainable development (www.unpopulation.org.in). Various empirical evidence on the associations among economic growth, changes in age structure, labor force participation, and educational attainment (https://www.researchgate.net). Bose (1996) conducted the study on demographic imbalance and transition in India and said that there will be growing demographic disparity in India like economic disparity and it is matter of great concern for policy makers and planners. Demographers must look for beyond demographic statistics and anticipate the consequences of demographic imbalance between different regions and states in India and also between religions on 1991 census data. Singh (1986) carried the study on population mobility in India and find that migration is widely recognized as one of the major instrument of development and also helps to maintain the balance between the distribution of population and resources. Like other developing countries such as Asia Africa and Latin America population mobility is so high in India that it creates imbalance between the population and resources. Pravin (2001) carried the study on demographics of ageing in India and ascertain that there is a general presumption among the people that in the urban areas better health conditions would be prevailed and on account of this higher proportion of aged group in urban India. Belshaws (1948) studied on population pressure in India and analysis that population dynamics is the main cause of low per capita productivity. Due to high mortality rate, greater wastage has occurred and estimate that 22.05 of national income is used to maintain those who die before making contribution in production while on the other hand 6.05 in England.

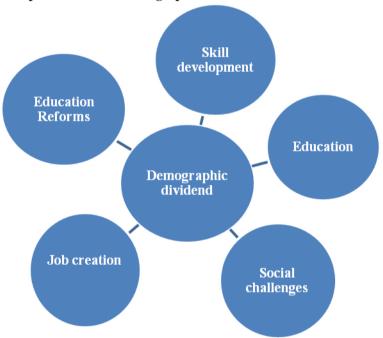
**Table: 1** Demographic Dividend (15 to 64) age –group and increasing working labor force reflect through census figure

Residence	Sex	Br	Broad age group (Years)								
		0-4	5-9	10-14	0-14	15-59	60+	15-64	65+		
	Total	9.7	9.2	10.5	29.5	62.5	8.0	65.2	5.3		
Total	Male	9.9	9.4	10.7	30.0	62.2	7.7	65.0	5.0		
	Female	9.5	9.0	10.3	28.8	62.8	8.4	65.5	5.7		
Rural	Total	10.3	9.5	11.0	30.9	61.0	8.1	63.7	5.4		
	Male	10.5	9.7	11.3	31.5	60.7	7.8	63.4	5.1		
	Female	10.1	9.4	10.8	30.3	61.3	8.4	63.9	5.8		
,											
Urban	Total	8.2	8.3	9.0	25.5	66.6	7.9	69.4	5.1		
	Male	8.3	8.6	9.2	26.1	66.2	7.6	69.1	4.8		
	Female	8.0	8.1	8.8	24.9	66.9	8.2	69.7	5.5		

Source: www.censusindia.gov.in

Note: Total percentage may not add to 100 on account of rounding in broad age group In the above table, it is clearly reflected that the population in the age group of 15-64 years are increasing as compared to other age groups. It will create a huge opportunity for India to avail this age group (15-64) which is known as demographic dividend.

### Necessary pre-conditions to reap the benefits of Demographic dividend



Skill development: In order to garner the benefits of demographic dividend. There should be a comprehensive investment by the government to increase the skill development programs for the emerging youth (Youth bulge), although government has done a lot in this regard. Various schemes are launched for skill development such as Deen Dayal Upadhyaya, Pradhan Mantri Kaushal Vikas Yojana, and Financial Assistance for skill training of persons with disabilities, National Apprentices promotion scheme, Craftsman training, skill development for minorities, and schemes for higher education youth in apprenticeship and skill (http://vikaspedia.in/social-welfare/skill-development/schemes-for-skill-development) The country's working age group (15-59 years) population mainly consists of youth (15-34 years) and it leads towards the path of development because it has great potential to grow than that of many others countries. In India demographic dividend will benefit only if the population (15-34 years) is appropriately skilled. For skill promotion government should provide skill development programs so that the unemployment rate must be reduced among the emerging youth, the government should also seen the implementation of these programs at the ground level. Prime Minister's National Council on Skill Development has spelt out policy advice and direction in the

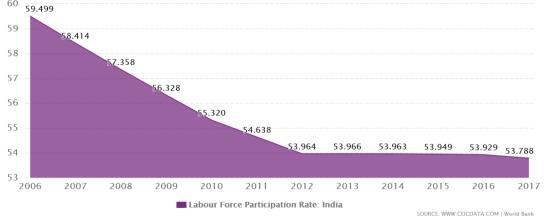
form of "Core Principles" and has given a Vision to create 500 million skilled people by 2022 through skill systems. NSDCB has taken upon itself the task of coordinating the skill development efforts of a large numbers of central Ministries/Departments.

Education: Education is seen as a key factor in economic growth. In order to drive the benefits of demographic dividend education should be increased among the emerging youth, especially the vocational education so that after attaining education, unemployment would not raised by leaps and bounds. In developing countries, in the first stage of the demographic transition, education policy seems to be the best way to avail the demographic dividend. Government policy focuses not only on population aging but also on expanding education attainment and increasing the lifecycle deficit surplus. Economic growth is possible only when both girls and boys have access to education. In the case of girls, when they reach at the secondary level education, it helps them to reduce the fertility. Secondary education helps girls to delay marriage and pregnancy and provide opportunities to come out their traditional roles. Education enables the girls to marry late and to have fewer children than other women who marry at a young age. Studies indicate that in African countries with high fertility and low average age at marriage, future population growth could be slowed by as much as 15 percent to 20 percent by delaying marriage and childbearing by five years. Data also indicate that education is closely tied to childbearing and desired family size. A recent study of 30 African countries found that women with secondary or higher education have on average lower fertility than women with no education (3.4 vs. 6.3 births per woman), and the same is true for desired family size (3.7 vs. 5.6 births per woman). Thus, education has an both reducing fertility and modifying social norms related (https://www.gatesinstitute.org/). "As a percentage of GDP, expenditure on education has gone up from 2.9 per cent in 2008-09 to 3.3 per cent in 2013-14. There is need not only to increase it further, but also address quality issues," the survey said, that skill development is necessary not only to derive the benefits of demographic but also for inclusive growth (https://economictimes.indiatimes.com/). In addition to skill development quality wise and vocational education is very important to avail the benefits of demographic dividend.

**Health:** Healthy children do better in school, and this success ultimately contributes to a higher skilled labor force. Youth also have health needs to be addressed, and maintaining the health of adult workers is critical to economic productivity. Demographic dividend will be benefit only if the workers remain fit and healthy .64 per cent of our children are fully immunized, compared to over 95 per cent in most of the developing countries. Many under five years of age still die from diarrhea and pneumonia. As girls reach adolescence and womanhood, they face the adversities of under-nutrition (33 per cent), anemia (57 per cent), early marriage and ill-prepared pregnancy - all of which contribute to the inter-generational perpetuation of poor health and nutrition. It has been estimated that India lost 9.2 million potentially productive years of life due to untimely cardiovascular deaths in the age-group of 35-64 years in 2000 (570 per cent more than the US) and is projected to lose 18 million years in 2030 (900 per cent more than the US). The numbers with diabetes are mounting. Tobacco kills over a million each year and mental illness brings misery to millions.

#### **Challenges of Demographic Dividend**

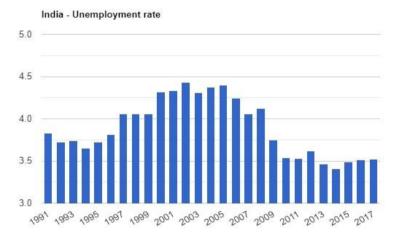
**1. Declining of labor force participation rate**: India has more young population labor force than other countries which can lead the country towards development and progress.



Source: https://www.ceicdata.com/en/indicator/india/labour-force-participation-rate

In India, 50% of working age-group out of labor force, according to the National Sample Survey, the labor force participation rate stood at 49.8% in 2017-18 falling sharply from 55.9% in 2011-12. According to the report. the fall in LFPR was more in rural as compare to the rural areas (https://economictimes.indiatimes.com). India is supposed to have a demographic dividend with a large section of young people entering the labor market. However, the report reveals that the LFPR for youth in the age group of 15-29 years has also declined from 44.6 per cent in 2011-12 to 38.2 per cent in 2017-18. The unemployment rate for this age group is estimated to be an startling 27.2 per cent in 2017-18. It is important to note that out of the people who have some sort of employment, about 80 per cent are in the informal sector with hardly any job security or retirement benefits. India has amongst the lowest women's labor force participation rates (LFPR) in the world. Not only women's participation rates are low, but have been showing a declining trend since 2004-05. Women's LFPR dropped from 42.7 per cent in 2004-05 to 31.2 in 2011-12 (https://www.ilo.org). The period from 2005 to 2010 saw a major decline in the number of people come under the labor force as the female labor force declined and reduced in the number of causal labor (http://www.indiaspend.com). It is important to note that out of the people who have some sort of employment, about 80 per cent are in the informal sector with barely any job security or retirement benefits. President Pranab Mukherjee said that India must reap its demographic dividend by improving the quality of teaching and focusing on skill development https://m.economictimes.com.

**Unemployment:** India faces youth unemployment as a major challenge for labor market policy. With only 10% of the accessible work provided by the formal sector, majority of the educated youth in India are either unemployed, underemployed, seeking employment or between jobs (Naik and Bobade, 2016). The situation of unemployment is so alarming that in Tamil Nadu over 4,000 people, including engineers and those holding business management degrees, applied for a handful of government jobs meant for sweepers. If this dividend is not utilized for



Source: The Global Economy.com the World Bank Economic growth, it will turn prove disastrous for India.

The World Bank provides data for India from 1991 to 2017. The average value for India during that period was 3.89 percent with a minimum of 3.41 percent in 2014 and a maximum of 4.43 percent in 2002.

# Benefits of demographic dividend

1. Active labor force (Labor supply): Country's economic growth rely on working labor force and demographic dividend lead a country to take off stage. Due to this dividend dependent population is reducing and as a result active and young population contributes to the economic activities. Now, women also employed in job and have few children than before. Labor is the main factor of production and produce goods and services along with other factor of production create assets for the economy. So, demographic dividend gives active young population and takes the country to the well off, as is reflected in table 2 the country's working population increasing day by day and contribute in economic growth.

**Table: 2** State-wise population, percentage of workers and increase of workers during 2001-2011 (in lakh)

S.NO.	States/UTs	Population	1	Workers		% of Workers to			
						total population		workers 2001	
		2001	2011	2001	2011	2001	2011		
1.	Andhra Pradesh	762.10	845.80	348.94	394.23	45.79	46.61	12.98	
2.	Arunachal Pradesh	10.98	13.84	4.83	5.88	43.99	42.49	21.74	
3.	Assam	266.56	312.06	95.93	119.70	35.79	38.36	25.48	
4.	Bihar	829.99	1040.99	279.75	347.25	33.71	33.36	24.13	
5.	Goa	13.48	14.59	5.23	5.77	38.80	39.55	10.33	
6.	Gujarat	506.71	604.40	212.56	247.68	41.95	40.98	16.52	
7.	Haryana	211.45	253.51	83.77	89.17	39.62	35.17	6.45	
8.	H.P.	60.78	68.65	29.92	35.59	49.23	51.84	18.95	
9.	J&K	101.44	125.41	37.54	43.23	37.01	34.47	15.16	
10.	Karnataka	528.51	610.95	235.35	278.73	44.53	45.62	18.43	
11.	Kerala	318.41	334.06	102.84	116.19	32.30	34.78	12.98	
12.	M.P.	603.48	726.27	257.94	315.74	42.74	43.47	22.41	
13.	Maharashtra	968.78	1123.74	411.73	494.28	42.50	43.99	20.05	
14.	Manipur	21.67	25.70	10.70	11.59	49.38	45.10	8.32	
15.	Meghalaya	23.18	29.67	9.70	11.86	41.85	39.97	22.27	
16.	Mizoram	8.89	10.97	4.67	4.87	52.53	44.39	4.28	
17.	Nagaland	19.90	19.78	8.48	9.74	42.61	49.24	14.86	
18.	Orissa	368.05	419.74	142.76	175.42	38.79	41.79	22.88	
19.	Punjab	243.59	277.43	91.27	98.97	37.47	35.67	8.44	
20.	Rajasthan	565.07	685.48	237.67	298.86	42.06	43.06	25.75	
21.	Sikkim	5.41	6.11	2.63	3.08	48.61	50.41	17.11	
22.	Tamil Nadu	624.06	721.47	278.78	328.85	44.67	45.58	17.96	
23.	Tripura	31.99	36.74	11.60	14.70	36.26	40.01	26.72	
24.	Uttar Pradesh	1661.48	1998.12	539.84	658.15	32.48	32.94	21.92	
25.	West Bengal	801.76	912.76	294.82	347.56	36.77	38.08	17.89	
26.	Uttarakhand	84.89	100.86	31.34	38.72	36.92	38.39	23.55	
28.	Jharkhand	269.46	329.88	101.89	130.98	37.52	39.71	29.57	
29.	Chhattisgarh	208.34	255.45	96.80	121.80	46.46	47.68	25.83	
30.	A &N Island	3.56	3.80	1.36	1.53	38.20	40.26	12.50	
31.	Chandigarh	9.01	10.55	3.40	4.04	37.74	38.29	18.82	
32.	Daman and Diu	1.58	2.43	0.73	1.21	46.20	49.79	65.75	
33.	Delhi	138.50	167.88	45.45	55.87	32.82	33.28	22.93	
34.	Lakshadweep	0.61	0.65	0.15	0.19	24.59	29.23	26.67	
35.	Pondicherry	9.74	12.48	3.43	4.45	35.22	35.66	29.74	
36.	India	10286.1 1	12105.7 0	4023.60	4817.4 3	39.11	39.79	19.73	

Source: Economic Survey of Delhi, 2014-15

Due to this dividend dependent population is reducing and as a result active and young population contributes to the economic activities. Now, women also employed in job and have few children than before. Labor is the main factor of production and produce goods and services along with other factor of production create assets for the economy. So, demographic dividend gives active young population and takes the country to the well off, as is reflected in table 2 the country's working population increasing day by day and contribute in economic growth.

- **2.** Capital formation: Capital formation depends upon saving and saving come from working age population. As a result, when number of dependents reduced and active labor force increases, they save more and it gear up investment and capital formation. On account of demographic dividend, national saving rises and it increases stock of capital and productivity in developing country.
- **3. Raising Domestic Demand:** Demographic dividend provide the way through which domestic demand can be raised, increasing domestic demand is brought about by the increasing GDP per capita and the decreasing dependency ratio (Roy and Roy).
- **4. Increase of saving**: demographic dividend means increasing of youth population whereas dependent population reduced and independents or working population increase for which saving rate rises and leads towards investment through increasing stock of capital.
- **5. Demographic dividend and growth**: Indian labor force in the age group 30-49 over the period 2011-30 has increasing while the share of this group in other developed countries such as China, Korea and United States

will be declining. It can be a source of advantage for country. On the other hand in most developed and developing countries like china it has to been declining. So, it has proved a very beneficial for the country's growth and development (Gudaganavar and Gudaganavar, 2001).

India has entered in new usher where the share of population of working age-group has greater than nonworking age group. According to International Labour Organization (ILO) report, India has three assets in present that no country has, more working population contribute towards saving and investment in the economy.

#### III. **Concluding Remark**

India is set to become one of the youngest countries of the world by 2050. India will have the onus to reap the twin benefits from its demographic dividend domestically and Diaspora dividend internationally. Currently only 2% of India's workers have received formal skill training as compared to 68% in the U.K. 75% in Germany and 96% in South Korea. India should create employment opportunities through skill development. During the period from 1991-2010, India's public expenditure on education reduced from 4.3% to 3.4%, but the same decade other BRICS countries have increased public expenditure on education, over the years, as a percentage of GDP as well as total expenditure (Varma, 2016) One econometrician estimates that from the 1970s onward, 40 to 50% of the per capita income was attributed to the ongoing demographic dividend. For availing the benefits of demographic dividend, government should invest in education sector especially in vocational or technical education as well in health sector so that healthy and productive skill manpower lead the economy towards. IMF found that substantial segment of the growth experienced by India since the 1980s is attributable to the country's age structure and changing demographics. By 2026 India's average age would be 29 which are least among the global average (www.imf.org.in).

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