

Critical Analysis of India's Demographic Dividend in Twenty First Century

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Youth of India is blessed with phenomenal energy and this energy would bring very good results for the country.

Narendra Modi (Prime Minister –India)

Abstract:

The oldest civilization in world the diverse nation India is a young nation today. India's population is roughly 1.25 billion or 125 crore. About two thirds of our population is below the age of 35 years, an age limit that is generally considered to be the boundary of youth. India has roughly 830 million or 83 crore people below the age of 35 years. To put these numbers in perspective, India's young population (that is below 35 years) is more than double the total population of USA. Interestingly India's young population is roughly 10 crore (100 million) more than the total population of all the G7 countries combined. This situation presents our country with a golden opportunity with a potential to make us a real superpower. India's predominantly youth population is seen as a demographic dividend when many countries have aging populations. The advantages a nation can gain with young population is called demographic dividend. In the long term, economic growth is a function of the total number of workers and their average productivity. Although the number of workers are growing, labor productivity in the country is near stagnant. Moreover, the number of unemployed people is increasing every day. And while India does have a large and growing number of graduates, their quality, skill and employability remain a serious concern. The latest surveys conducted by various government and non-government agencies confirm once again that there is urgent need to make the entire twelve years of schooling a legal right. The surveys has thrown up worrisome trends that belie the media frenzy over Skill India, Digital India, Start Up India, Make in India, and Ek Bharat, Shreshta Bharat. This paper is an attempt to study the ground reality of the much hyped demographic dividend in India. The author tries to understand whether it is a myth or untapped potential in the hands of the government. How to get the optimum out of this dividend is also being explored.

Keywords: Demographic Dividend, Employability, Underemployment, Disguised Unemployment, Workforce Shortage

Introduction:

India has one of the world's youngest populations, with median age of 27.9 years, with 66% of its 1.3 billion people in the working age bracket of 15 to 64 years. About 12-15 million of them will join the workforce every year in the next five years, according to a study by global consultancy Boston Consulting Group and industry body Confederation of Indian Industry in 2017. India boasts about its demographic

dividend, but this dividend cannot be taken for granted in the face of high rates of youth unemployment, underemployment, disguised unemployment and skill deficit-low productivity and low wages trap of the informal sector. And while India does have a large and growing number of graduates, their quality, skill and employability remain a serious concern. *This is particularly so because an increasingly young population without any productive employment opportunities will be a problem rather than an advantage.* Moreover, the high rates of unemployment or joblessness coupled with rising income inequality will eventually impose limits on consumption, which has been the top driver of economic growth in India. India's predominantly youth population is seen as a demographic dividend when many countries have aging populations. But India's demographic dividend may not result in an economic Dividend. India needs trained manpower to boost its manufacturing capabilities, but a large number of Indian youths may lack even basic employability.

Demographic Dividend: the definition

The **demographic dividend** is defined as the accelerated economic growth that may result from a decline in a *country's birth and death rates* and the subsequent change in the *age structure of the population*. With fewer births each year, a country's young dependent population declines in relation to the working-age population.

According to Investopedia, Demographic dividend refers to *the growth in an economy that is the resultant effect of a change in the age structure of a country's population*. The change in age structure is typically brought on by a decline in fertility and mortality rates. A demographic dividend is the accelerated economic growth that can result from improved reproductive health, a rapid decline in fertility, and the subsequent shift in population age structure. With fewer births each year, a country's working-age population grows larger relative to the young dependent population. With more people in the labor force and fewer children to support, a country has a window of opportunity for economic growth if the right social and economic investments and policies are made in health, education, governance, and the economy.

The Indicators of Demographic Dividend

While most countries have seen an improvement in child survival rates, birth rates remain high in many of them, particularly in least developed countries. These countries, therefore, rarely enjoy an economic benefit known as the demographic dividend. Demographic dividend is an occurrence in a country that enjoys accelerated economic growth that stems from the decline in fertility and mortality rates. A country that experiences low birth rates in conjunction with low death rates receives an economic dividend or benefit from the increase in productivity of the working population that ensues. As fewer births are registered, the number of young dependents grows smaller relative to the working population. With fewer people to

support and more people in the labor force, an economy's resources are freed up and invested in other areas to accelerate a country's economic development and the future prosperity of its populace.

Much like India, Indonesia and the Philippines have also witnessed a steady growth in their working age population. With more and more young men and women joining the workforce every year, a new economic order backed by positive demographic growth has come into play. While India and some Southeast Asian economies are seeing an increase in their working age population, most of Asia's nations are ageing, and while this creates emerging challenges, ageing populations will also generate a growth cluster of new business opportunities. To receive a demographic dividend, a country must go through a demographic transition where it switches from a largely rural agrarian economy with high fertility and mortality rates to an urban industrial society characterized by low fertility and mortality rates.

In the initial stages of this transition, fertility rates fall, leading to a labor force that is temporarily growing faster than the population dependent on it. All else being equal, per capita income grows more rapidly during this time too. This economic benefit is the **first dividend** received by a country that has gone through the demographic transition. The first dividend period generally lasts for a long time - **typically five decades** or more. Eventually, however, the reduced birth rate reduces the labor force growth. Meanwhile, improvements in medicine and better health practices leads to an ever-expanding elderly population, sapping additional income and putting an end to the demographic dividend. *At this stage, all else being equal, per capita income grows at a decelerated rate and the first demographic dividend becomes negative.*

An older working population facing an extended retirement period has a powerful incentive to accumulate assets to support themselves. These assets are usually invested in both domestic and international investment vehicles, adding to a country's national income. The increase in national income is referred to as the **second dividend** which continues to be earned **indefinitely**. The benefits gotten from a demographic transition is neither automatic nor guaranteed. Any demographic dividend to be gotten depends on whether the government implemented the right policies in areas such as education, health, governance, and the economy. In addition, the amount of demographic dividend that a country receives depends on the level of productivity of young adults which, in turn, depends on the level of schooling, employment practices in a country, timing and frequency of child bearing, and economic policies that make it easier for young parents to work. The dividend amount is also tied to the productivity of older adults which depends on tax incentives, health programs, and pension and retirement policies.

There are four main areas where a country can find demographic dividends:

1. **Savings:** During the demographic period, personal savings grow and can be used to stimulate the economy.
2. **Labor supply:** More workers are added to the labor force, including more women.

3. **Human capital:** With fewer births, parents are able to allocate more resources per child, leading to better educational and health outcomes.
4. **Economic growth:** GDP per capita is increased due to a decrease in the dependency ratio.

Analysis of Population Age Shift in India

The data on population by age and sex is vital for demographers, health administrators etc. for planning and evaluation of various developmental and health programs. The classification of rural/urban, sex and even marital status by age unveils the characteristics of population composition and provides disaggregated data for target oriented projects. The data on percentage distribution of population by age, sex and residence for all broad age groups from 0-4, 0-14, 15-59 and 60+ for India (2015) is presented in table 1 below.

| Table 1: Distribution of Population by Age, Sex and Residence, India 2015 All figures in percentage. Total may not add to 100 % because of corrections in survey (Source:SRS 2015) | | | | | | | | | | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|-----|-----|-------|--------|-----|--|------|-------|-----|
| Sex & Residence ↓ | Age⇒ In Years | 0-4 | 5-9 | 10-14 | 15- 59 | 60+ | | 0-14 | 15-64 | 65+ |
| | Total | 8.6 | 9.0 | 9.7 | 64.4 | 8.3 | | 27.3 | 67.5 | 5.2 |
| | Male | 8.8 | 9.2 | 9.9 | 64.1 | 8.0 | | 27.9 | 67.1 | 5.0 |
| | Female | 8.4 | 8.8 | 9.5 | 64.7 | 8.6 | | 26.6 | 67.8 | 5.5 |
| | | | | | | | | | | |
| Rural | Total | 9.2 | 9.5 | 10.2 | 62.9 | 8.3 | | 28.9 | 65.8 | 5.3 |
| | Male | 9.4 | 9.6 | 10.4 | 62.6 | 7.9 | | 29.4 | 65.6 | 5.0 |
| | Female | 9.0 | 9.3 | 10.0 | 63.1 | 8.6 | | 28.3 | 66.2 | 5.6 |
| | | | | | | | | | | |
| Urban | Total | 7.3 | 8.0 | 8.6 | 67.2 | 8.4 | | 23.9 | 70.9 | 5.2 |
| | Male | 7.5 | 8.2 | 8.8 | 67.2 | 8.3 | | 24.5 | 70.5 | 5.0 |
| | Female | 7.1 | 7.9 | 8.4 | 68.2 | 8.5 | | 23.3 | 71.3 | 5.3 |

A gradual decline is noticed in the share of population in the age group 0-14 from 41.2 to 38.1 per cent during 1971 to 1981 and 36.3 to 27.3 percent during 1991 to 2015, whereas, the proportion of economically active population (15-59 years) has increased from 53.4 to 56.3 percent during 1971 to 1981 and 57.7 to 64.4 per cent during 1991 to 2015. On account of better education, health facilities and increase in life expectancy, the percentage of elderly population (60+) has gone up from 5.3 to 5.7 percent and 6.0 to 8.3 percent respectively during the periods under reference. As instances of age heaping, under reporting and over reporting have been observed in different age groups and at single age during the survey, corrective actions have been taken to rectify such instances.

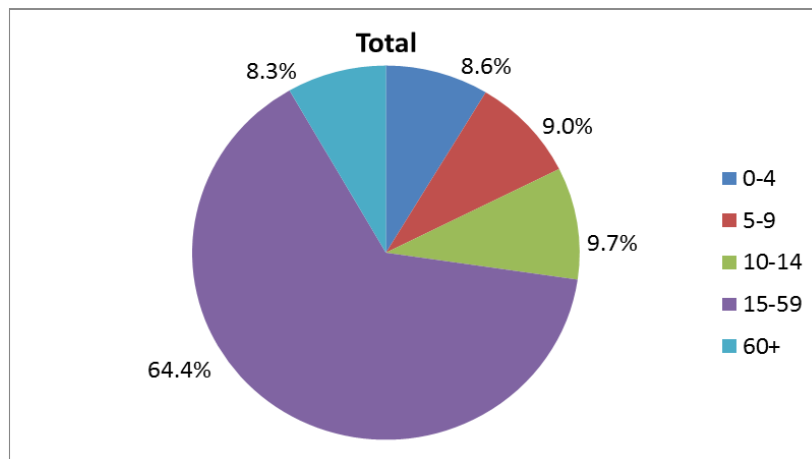


Figure 1: Population Composition on Basis of Age (India, 2015)

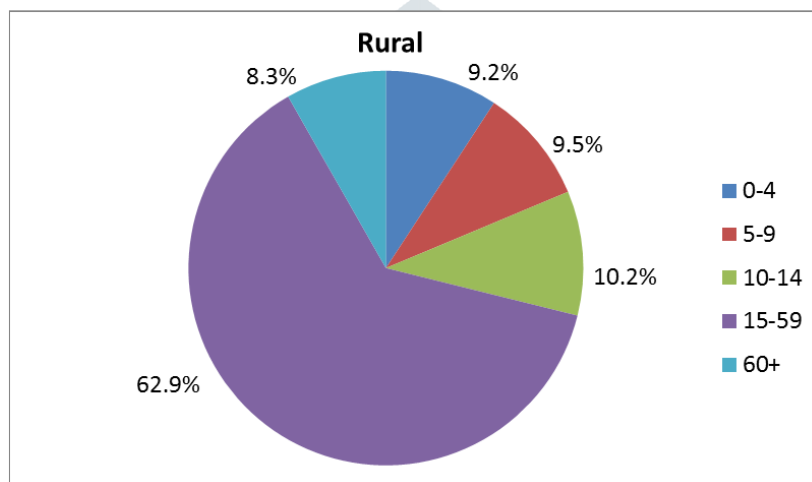


Figure 2: Population Composition on Basis of Age in Rural (India, 2015)

It is observed from the Table 1, and the pie charts in figures 1 to 3, that for most of the age groups, Male-Female differences in the age distribution of population are negligible except in the combined age-group of 0-14, 15-59, 60+, 15-64 & 65+. In the age-group 0-14, Male population is about one percent more than Female, whereas in the age-group 60+ as also 65+, percentage of Female are 0.6 and 0.5 percent more than Male. The proportion of young children in the age group 0-4 and also the proportion of population in the age group 0-14 are higher in rural areas than in urban areas both for Male and Female. A higher proportion of Male and Female in the working age group 15-59 live in urban areas as compared to rural areas.

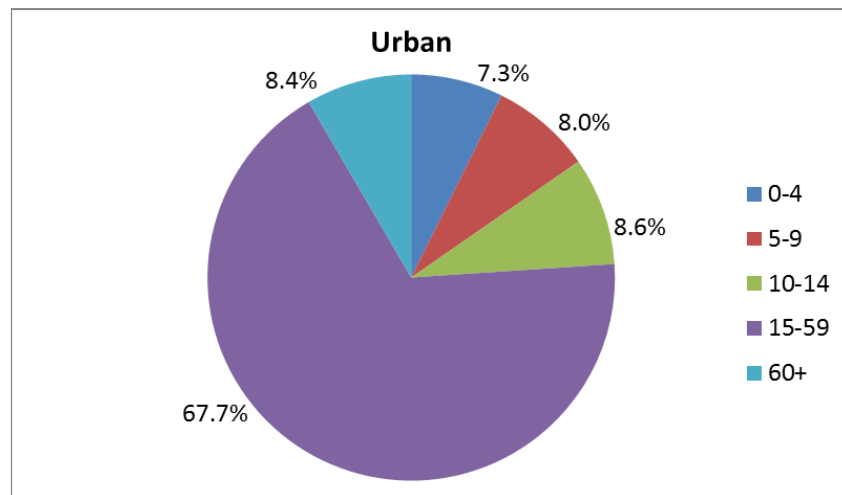


Figure 3: Population Composition on Basis of Age in Urban (India, 2015)

Economic growth is a function of the total number of workers and their average productivity. In long run, the population can become the biggest resource, only if it suitable to be part of the workforce and not a burden. Although the number of workers are growing, labor productivity in the country is near stagnant, as most of them are employed by the informal sector. Moreover, the number of unemployed people in India is increasing every day.

India's predominantly young population is seen as a demographic dividend when globally many countries have aging populations. But India's demographic dividend may not result in an economic dividend. India needs trained manpower to boost its manufacturing capabilities, but a large number of Indian youths may lack even basic employability. Figure 4, represents the population pyramid of India for year 2015, and the basic need for demographic dividend is visible, but the skill and training through good education system need to be studied in order to gain dividend out of the population.

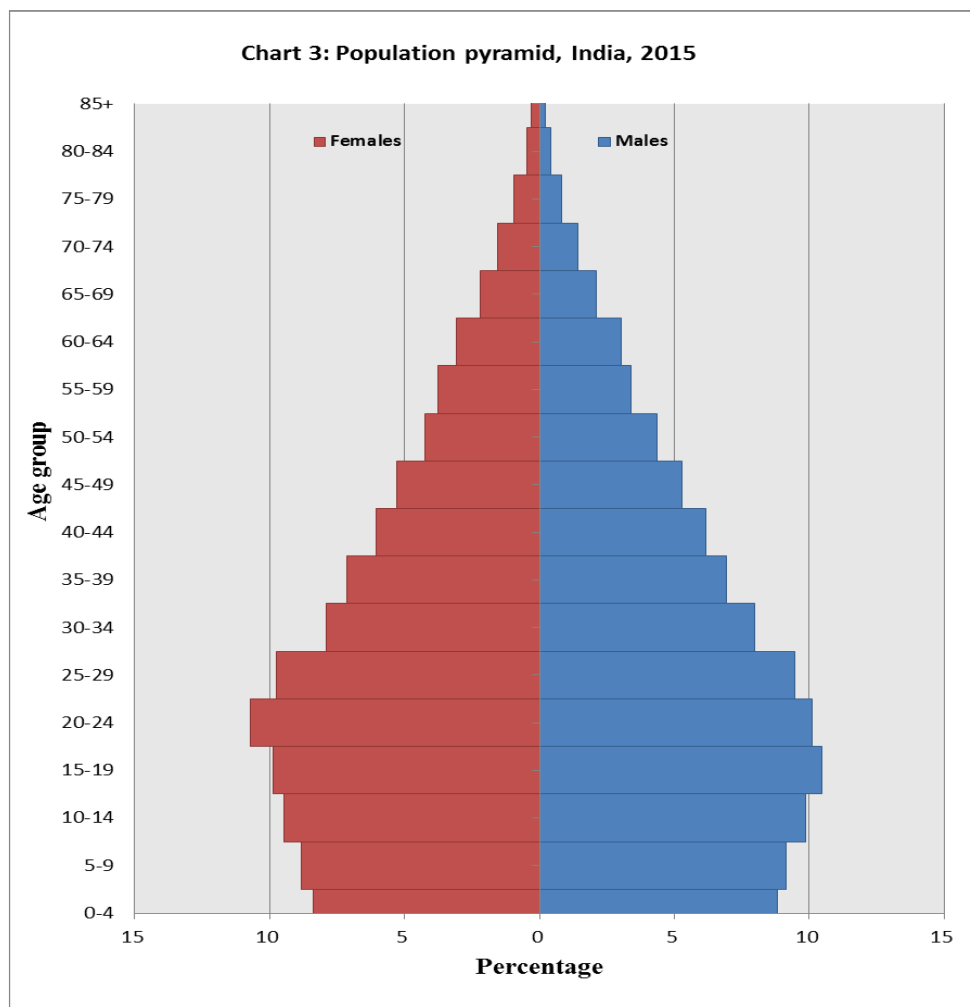


Figure 4: Population Pyramid of India (2015)

India, with its abundant human resources, increasing foreign investments and rising disposable incomes, is on its way to becoming a global economic power. However, India needs to take a proactive approach to prepare its workforce for the changing needs of the market, thereby creating a new highly skilled workforce for the ageing world. According to **International Monetary Fund (IMF)**, India's continuing demographic dividend can add about 2 percent to the annual rate of economic growth, if harnessed properly.

Critical Analysis of Population Dividend

A recent **CMIE-BSE study** estimates that India added 2 million jobs between August 2016 and August 2017, whereas it added 15 million people in the year to its workforce. To make matters worse, more births are happening in poor families mainly concentrated in the poorer states of Bihar, Uttar Pradesh, Madhya Pradesh, Rajasthan and Jharkhand. The poor can't afford nutritious food and quality education or healthcare to their children, and are adding new members to India's pool of unskilled or low skilled and largely unemployable workforce. More than 90 percent of the country's workforce is unskilled or low skilled and most are employed by the informal sector wherein productivity and wages are low. Also, employment opportunities are primarily increasing in the informal sector which was first jolted by demonetization and

then by a poorly conceived and implemented GST. The report estimates that demonetization has resulted in job losses of approximately 3 to 12 million people mostly in the informal sector.

Jobless growth is the biggest future risk to India's political and social stability, especially since financing a basic income program would be fiscally too difficult for India. According to 12th **Annual Status of Education Report (ASER)**¹ 2017, 86 per cent of the youth in the 14-18 age group are still within the formal education system, either in school or in college. In this digital era where entrance exams, recruitment process, courses and various government services are conducted and offered online, more than half of the rural youth in the country have never used computer or Internet.

The use of mobile phone is widespread in the 14-18 age group (73 per cent), the use of internet and computer was much lower. While 28 per cent and 26 per cent of teens used Internet and computers, almost 60 per cent had never used computers and 64 per cent had never used the internet. The report also showed that 25 per cent of the youth could not read basic text fluently, more than half of them struggled with basic arithmetic operations. Even after 8 years of schooling they could not read class 2 level texts and 53 per cent of them alone can read simple English sentences. The teens also fared poorly in geography and general knowledge in across the country when they were questioned about the name of India's capital.

- Among the rural youth aged from 14 to 18, 59% had never used computers and 64% had never used Internet.
- About 25% of this age group cannot read basic text fluently in their own language.
- 36% of the students could not name the capital of our country
- Only 43% of them can solve the simple arithmetic problems

The survey also points out that the enrollment gap between males and females in the formal education system increases with age. There is hardly any difference between boys' and girls' enrollment at age 14; but at age 18, 32 percent of females are not enrolled as compared to 28 percent males. The survey also noted significant gender differences in mobile phone and computer/internet usage: while only 12 percent of males had never used a mobile phone, this number for females was at 22 percent. About 59 percent of these youths had never used a computer and 64 percent had never used the internet. While 49 percent of males had never used the internet, the figure for females stood close to 76 percent.

According to the **Economic Survey 2017** the growth boost from the demographic dividend is likely to peak within the next five years, as India's working age population plateaus. However, there is no cause for panic as India may not see the sharp deceleration in growth experienced by the East Asian countries because its working age ratio will fall much more gradually than in other countries. The government feels demonetization and GST are good for India's economy in terms of facilitating formalization, which is needed to boost productivity and wages. However, forced formalization without addressing the factors that

lead to increased informal sector activity, such as the lack of access to cheaper institutional capital, technological know-how and marketing support along with an untamed skill deficit, may all aggravate the employment situation further.

Partham Foundation conducted a survey in 2017, to check the status of education in India, some key findings this report is as follows. Although 86 percent of 10- 18 age group are still in school or college, this number, decreases sharply with age, particularly among females. About 42 percent are working, overwhelmingly on a family farm; roughly 25 percent cannot read a simple text in their own language fluently, and only 43 percent are capable of solving a basic division problem; 49 percent of males and roughly 76 percent of females have never used the Internet; of the 60 percent who want to study beyond grade 12, almost half cannot read a grade 2-level text; less than two-thirds could correctly do commonplace financial calculations like managing a budget or making a purchase decision; and although many of the youth had professional aspirations (males favoring the army, police and engineering; with females showing interest in teaching or nursing), 40 percent had no role models for the career they aspired to.

According to the **Registrar General of India (RGI)** and **Census Commissioner's report** (2011), India's working age population (15-64 years) is now at 63.4% of the total, as against just short of 60% in 2001. The numbers also show that the '**dependency ratio**' — the ratio of children (0-14) and the elderly (65-100) to those in the working age — has shrunk further to **0.55**. As fertility falls faster in urban areas, rural India is younger than urban India; while 51.73% of rural Indians are under the age of 24, 45.9% of urban Indians are under 24. However urban India still has a higher proportion in the key 15-24 age group than rural India. India, as expected, is not getting any younger. **India's median age has risen from around 22 years in 2001 to over 24 years in 2011**. Overall, India has 472 million people under the age of 18, and 49.91% of its population is under the age of 24.

According to the **International Institute for Population Sciences**, Mumbai, the proportion of the population under the age of 24 has dropped by four percentage points, but demographers caution that this should not be interpreted as a sign that the youth bulge is shrinking. With falling fertility, the number of infants and children is what reduces first and this is what we are seeing with the number of under-25s falling. Indeed the numbers show that the proportion of children in the 0-4 and 5-9 age groups has fallen in comparison to 2001. For the first time, the proportion of children in the 10-14 age group has also fallen, as the effect of families reducing the number of children they have begins to be felt. However the proportion of those in the 15-19 and 20-24 age groups has risen over 2001.

The key issue in terms of a demographic dividend is whether this growing youth bulge has the right skills for the workforce. India's archaic labor laws are an issue as well, with top companies in the organized sector are increasingly relying on contractual workers to get around them. Almost half of the workers employed in

the organized sector are now contractual; hence they have no job security or social benefits and often get lower wages compared to their permanent counterparts. Many of India's non-working women, especially in the cities, are highly qualified but either never work or leave their jobs post-maternity as quality childcare support is lacking even in large cities.

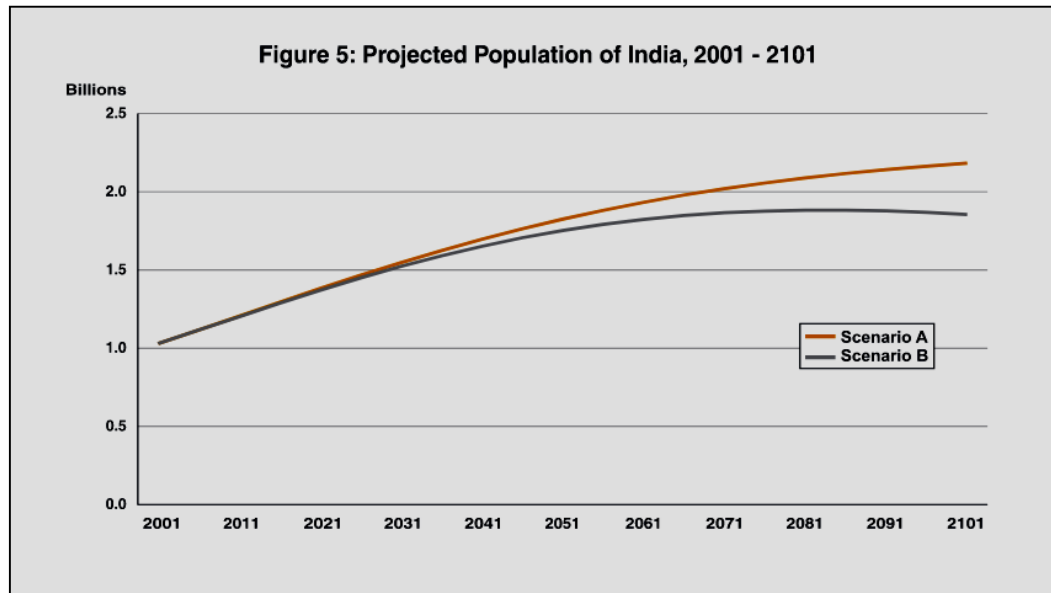


Figure 5: Projected Population of India (Source: Population Foundation of India)

According to the **United Nations Population Fund (UNFP)**, the economic growth potential resulting from shifts in a population's age structure, mainly when the share of the working-age population (15 to 64) is larger than the share of non-working-age population (14 and younger, and 65 and older) should be considered as dividend. A country is expected to reap the demographic dividend when the share of its working population is larger than the share of its non-working population. India is currently going through a phase of the demographic dividend. As per the population research carried out by the United Nations (UN), the countries located in Latin America and Asia are reaping the maximum benefit of the demographic dividend. The developed countries have had their peak times and now their percentage of the dependency ratio is high (Dependency ratio can be defined as the ratio of the non-working and working population). Further, China's one child policy reversed the demographic dividend it reaped since the 1960s. Dependency ratio will remain high due to factors like ageing population

Low birth rate High Life expectancy Low death rate Demographic Dividend and Development

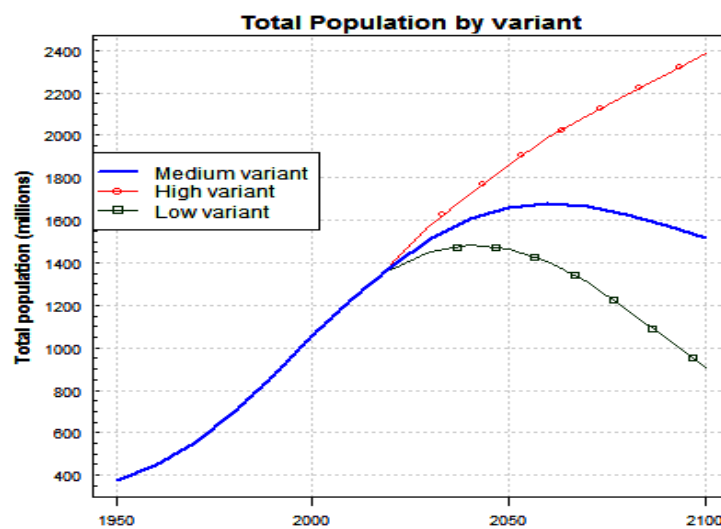


Figure 6: Projected Median Variant of the Population of India

(Source: Population Foundation of India)

The “low variant” has India’s population peaking at 1.5 billion in the year 2042 and entering a period of decline thereafter. The “medium variant” has India’s population peaking at about 1.7 billion in the year 2061 and declining subsequently. The “high variant” has India’s population increasing relentlessly throughout this century and crossing the 2 billion mark in the final decades. This, on the basis of the Sample Registration Survey data, is unlikely to materialise. Obviously, we must do all that we can in a democratic manner to ensure that the “low variant” becomes a reality but the probability favours the “medium variant”.

To reap the benefits of the demographic dividend, countries have to take some special measures that are aimed at economic development and better living standards. They need to invest in the following to get the maximum benefits of Demographic Dividend: Health and Security Education Employment generation Social security The peak of the demographic dividend is approaching fast for India. This peak will be reached in the early 2020s for India as a whole; peninsular India will peak around 2020 while hinterland India will peak later (around 2040). This presents an overall good window of opportunity for states in the hinterland in comparison to peninsular India. Failing to act on time can result in unemployment and imbalance in the economy.

The workforce participation of women in the country is already one of the lowest in the world and instead of improving, it is deteriorating further. According to a **survey by CII** in 2016, it fell to 22.5 percent in 2016 from 37 percent in 2005. That shaves off an estimated 2.5 percent from India’s GDP every year. The low women labor force participation rate will adversely affect key sectors such as banking, IT, medicine/nursing, hospitality and retail as these sectors usually have a high proportion of women in their workforce. From the demand side, the low participation rate of women will affect the growth potential of the cosmetics, educational and health services, and travel and hospitality in the form of lower demand for these products and services.

The most important factors promoting joblessness is the poor quality of education in both liberal arts and STEM (Science, Technology, Engineering, and Mathematics) with no emphasis on employability of the graduating students is a major factor contributing to the problem of unemployment. Also, exogenous factors such as growing protectionism in the developed world and rapid technological changes present new threats, and will make it difficult for India to benefit from its favorable demography. That is also the reason why even the biggest companies are facing difficulties in hiring suitably skilled employees.

According to **Government of India (HRD)** report 2017, 63.5 million people in 20-35 age group have entered the workforce in the last five years. Considered as the largest millennial population in the world, the Indian youth bolsters expectation of a long economic boom. A recent survey shows Indian millennials are unsure of themselves and a bit dragged down at work place—far from being a dynamic, focussed workforce.

According to a **HBR-Ascend survey in 2017** (Skills and Challenges faced by Millennials Today) more than 40% of the millennials consider "excessive workload" is their biggest hindrance to perform more effectively at the workplace. The second biggest barrier is "office politics," as per 39.17% respondents. When it comes to analytical or soft skills, Indian millennials fail miserably in the survey. Less than 5% of the youth say they have the persuasion skills needed to be successful at the workplace. According to the report a meager 8.5%, analytical skill is their area of strength. However, they showed confidence in the technical skills they have that are needed to do their jobs. Office politics is considered the top barrier by women (46.36% respondents), whereas excessive workload is seen as the top barrier by men (43.07%). The survey results hardly paint Indian millennials as sturdy, driven youth capable of triggering an economic boom.

According to **The Voice of Asia** (Series : Demographics fuelling Asia's shifting balance of power) report, most countries in Asia are grappling with an ageing population, and an imminent workforce shortage. India is among a handful of South Asian countries that sits on a **demographic gold mine**. India has a median population age of 27.3 years compared to that of 35 years for China and around 47 years for Japan. It is estimated that India has around 390 million millennial and about 440 million in the Gen-Z cohort. About 12 million people are added to the working age population every year. Demographic growth is significant as it is intrinsically linked to economic growth and therefore, cannot be ignored.

Another report (2017) by **Deloitte India**, states that 'India will account for more than half of the increase in Asia's workforce in the coming decade, but this isn't just a story of more workers: these new workers will be much better trained and educated than the existing Indian workforce, and there will be rising economic potential coming alongside that, thanks to an increased share of women in the workforce, as well as an increased ability and interest in working for longer. The consequences for businesses are huge. But in order

to reap the dividends of its demographic potential, India need to first equip its workforce with the necessary skills to contribute to the national economy. Also it is predicted that with the invasion of machines and improvement in robotics, India needs to pay special attention to skilling and re-skilling its workforce with a focus on the changing nature of today's jobs.

According to **Anbound (A Chinese Think Tank)** Report (2017) India is increasingly emerging as a real long term threat to China and has all the makings to become China 2.0. It is widely expected that *India will have a demographic dividend for another 25 to 30 years*, post which India's total labour force is expected to start reducing. In other words, India have only 30 years, at best, to reap the benefits of the largest young work force in a country anywhere in the world. Although India currently has the largest set of young people, the issue is that a disturbingly large portion of this group is either totally unemployed or only partially employed and that also primarily in the unorganized sector. This is due to a variety of factors including skills shortage and lack of jobs. It is not hard to see the implications if this young population is not given jobs and thereby an opportunity for a respectable way of living. This opportunity also presents us with an acute dilemma. Apart from the lost opportunity in terms of GDP growth and rise in economic activity, this potentially entails social unrest that could have a negative knock on effect on India's positive growth outlook.

According to **The Economists**, the working population in India is set to rise considerably over the next decade or more. By 2020, the average Indian will be only 29 years of age, compared with 37 in China and the U.S., 45 in Western Europe, and 48 in Japan. Moreover, by 2030, India will have the youngest median age of 31.2 years, while China's will be 42.5 years. Most major economies will see a decline of working age adults (20-64 years). This means that India will see a significant rise in working age adults India's "dependency ratio," that is the number of dependents to working people is low at 0.6, compared with the developed countries. That ratio is going to decline further with fertility rates continuing to fall. The demographic dividend is a window of opportunity in the development of a society or nation that opens up as fertility rates decline when faster rates of economic growth and human development are possible when combined with effective policies.

According to the Human Development Report (HDR) published by the United Nations Development Programme (UNDP), India is still in the medium human development category with countries like China, Sri Lanka, Thailand, Philippines, Egypt, Indonesia, South Africa, and even Vietnam has a better rank. Therefore health and education parameters need to be improved substantially to make the Indian workforce efficient and skilled. Government established National Skill Development Corporation (NSDC) to contribute significantly (about 30 per cent) to the overall target of skilling / up skilling 500 million people in India by 2022, mainly by fostering private sector initiatives in skill development programmes and providing funding. Major objectives of NSDC are :

- Upgrade skills to international standards through significant industry involvement and develop necessary frameworks for standards, curriculum and quality assurance
- Enhance, support and coordinate private sector initiatives for skill development through appropriate Public-Private Partnership (PPP) models; strive for significant operational and financial involvement from the private sector
- Focus on underprivileged sections of society and backward regions of the country thereby enabling a move out of poverty; similarly, focus significantly on the unorganized or informal sector workforce.
- Play the role of a "market-maker" by bringing financing, particularly in sectors where market mechanisms are ineffective or missing
- Prioritize initiatives that can have a multiplier or catalytic effect as opposed to one-off impact.

Thus government seems serious about harnessing the potential of demographic dividend through development of skills. However, more holistic measures are needed to make the Indian work force not just economically competitive but also efficiently competitive.

Conclusion: A Way Forward

If there was ever a time for the demographic dividend that India is banking on to start paying off, it is now. Census data released on Friday shows that India's youth bulge is now sharpest at the key 15-24 age group, even as its youngest and oldest age groups begin to narrow. And going forward, the failure to address the skill deficit by providing adequate and relevant education, skills and training can greatly impact India's economic future, especially as it poses a big challenge for existing and potential investors looking to expand their presence in India.

To improve employability of graduating students, the educational institutions need to coordinate with corporates in designing course curriculum. MOOCS and other short term online courses and certifications could be equally helpful in skill upgrade of existing and potential employees and they should be promoted by the government. Since, population growth rates differ from states to states, encouragement to inter-state migration (e.g. from poorer states to richer states) can solve the twin problem of the shortage of workers in southern region and relatively excess supply of workers in northern states such as Bihar and UP. Disruptive technological breakthroughs such as automation and 3D printing, although a global phenomenon, will further dilute the importance of labor cost advantage in production, and will make it even more difficult for India to provide jobs for its workforce going forward. Cheaper capital or low interest rates combined with India's unfriendly labor laws have induced top companies in the organized space to switch to capital intensive or labor-saving production methods. That imposes limits on the growth of jobs in India.

The years 12 to 20, are very crucial years in the life of a young person. These are years when career paths are chosen, and when the transition to secondary and higher levels happens. It's high time the government of India shine the spotlight on this age group in the following years. Unless we ensure that our young people reach adulthood with the knowledge, skills, and opportunities they need to help themselves, their families, and their communities move forward, India's much awaited 'demographic dividend' will not materialize.

Since most of the new jobs that will be created in the future will be highly skilled and lack of skill in Indian workforce is another serious challenge. There are serious problems with Indian higher education. These include a shortage of high quality faculty, poor incentive structures, lack of good regulation. As bad as Indian higher education is, the worst problems are in primary education. After all, without a good foundation, subsequent education cannot happen easily and effectively. This is true even for vocational training, not just elite education for the advantaged and talented. At the primary level, there are also serious problems with health and nutrition that impact the effectiveness of education and the capacity for learning.

An obvious solution to successfully tap this rare opportunity is to effectively link India's twin problems of unemployment (of a workforce that is largely unskilled) with our lack of world class infrastructure in the country such as roads, ports and airports, an area (i) that is labour intensive, (ii) where India is generations behind the developed world and (iii) that could add serious thrust to India's growth story. The challenges are many including funding and skills shortage. Funding is something that partly needs to come from outside the national borders. In recent years, India has taken proactive steps to deal with the disruptions in the job market with the 'Skill India' initiative being one of them. That said, it needs to be a continuing process of upgrading skills in a rapidly changing environment.

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