



Demographic Dividend of India : Opportunities and Challenges

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Abstract: India stands on the cusp of a demographic dividend, as highlighted by the United Nations Population Fund, with over 600 million people aged 18 to 35, and a projected peak in the working-age population (20–59 years) at 59% around 2041. This research article delves into the opportunities and challenges associated with India's demographic dividend, exploring its potential economic benefits until 2055–56. Examining the literature and statistical trends, the article uncovers opportunities such as a positive growth in the working-age population, stability from 2019 to 2022, and positive economic growth rates in the post-pandemic era. Challenges include fluctuations in the working-age population growth, vulnerability to external shocks, and disparities in labor force participation. Policy implications are delineated, emphasizing the need for skill development, economic stability measures, sustained educational investments, and healthcare reforms. It concludes that while India has the potential to harness its demographic dividend, strategic attention to economic stability, health expenditure, and employment structures is imperative. The article underscores the significance of well-crafted policies that address both opportunities and challenges, aiming for sustainable economic growth and improved overall well-being.

Key Words: Demographic Dividend, Economic Growth, Employment, Health Care, Education, Skill Enhancement.

1. INTRODUCTION

The United Nations Population Fund says that demographic dividend is when a country's economic growth potential increases because there are more people of working age (15 to 64 years old) compared to those who are not working age (14 years and younger, and 65 and older). This happens when the age structure of the population changes in a country (UNFPA). India has over 600 million people aged 18 to 35, and 65% of them are under 35 years old. The demographic dividend in India, meaning the economic benefit from having a large working-age population, is expected to last until at least 2055–56. It will be at its highest around 2041 when the working-age population (20–59 years) is predicted to be 59%. This is a big opportunity for growth if the right conditions are in place or created, as mentioned by Dharmendra Pradhan, India's Minister of Education, Skill Development, and Entrepreneurship in an interview in 2023. India between 15 and 64 years old (working-age population) has increased more than those aged 14 or below and above 65. This change in Demographic Dividend is because of a decrease in the total fertility rate (number of births per woman). According to the United Nations Population Fund, India's Demographic Dividend opportunity is from 2005-06 to 2055-56. As per the 2018-19 economic survey, India's Demographic Dividend will peak around 2041 when the population between 20 and 59 years old is expected to reach 59%. Currently, 62.5% of India's population is in the 15-59 age group, which is increasing and will peak around 2036 at approximately 65%. The median age in India is projected to be 28 by 2020, much lower than China, the US, Western Europe, and Japan. Since 2018, India's working-age population has been growing more than the dependent population (children below 14 and people above 65), and this trend is expected to continue until 2055.



Going through the literature review it has been noticed that the demographic dividend of India is gifting the country so many opportunities. As the nation witnesses a decline in birth rates, the proportion of the working-age population is on the rise relative to the dependent young. This demographic shift opens a window of promise for economic growth, provided the right mix of social and economic investments is applied strategically in areas such as health, education, governance, and the overall economy. The potential benefits of the Demographic Dividend are substantial, ranging from increased labor force productivity to the creation of fiscal space, enabling a redirection of resources towards essential physical and human infrastructure. This article explores the opportunities and challenges associated with India's Demographic Dividend, shedding light on how the nation's evolving population dynamics can pave the way for significant economic advancements and societal transformations. These opportunities are not free of cost, rather come with some formidable challenges that demand attention and strategic solutions. From the asymmetry in demographics across the states, low labor force participation rate within the working-age population, coupled with a pervasive lack of essential skills needed for the evolving job market. India's position in the UNDP's Human Development Index at 130 out of 189 countries underscores the imperative need for improvements in health and education parameters. Additionally, the informal economy poses a hurdle in reaping the benefits of demographic transition, while the specter of jobless growth looms large, fueled by factors such as de-industrialization, de-globalization, the fourth industrial revolution, and technological progress.

With this background, this article is just a statistical enquiry into the opportunities and challenges of demographic dividend of India. The objective of this article is to trace the trends of opportunities and challenges of demographic dividend of India over the years. That is why statistical tools have been used to analyze the statistical facts collected from different sources as mentioned in the bibliography.

2. Literature Review

Going to review the literature in the context of countries other than India specially it has been observed that in an article (Navaneetham, et al., 2012) critically reviews, analyzes, and synthesizes the age structural transition in South Asia, focusing on Bangladesh, India, Nepal, Pakistan, and Sri Lanka. It estimates the first demographic dividend using an accounting framework and discusses the socioeconomic development opportunities and challenges arising from age structural transition. India's regional differentials in the timing and pace of age structural transitions are highlighted, offering unique advantages. The paper emphasizes the need for the right institutional contexts and policies to harness the demographic dividend for high economic growth and an increased standard of living. Focusing on Brazil, Russia, India, China, South Africa (BRICS), and the European Union, Misra, R. (2015) uses a fixed-effect model to examine the relationship between GDP growth rate and demographic dividend. The results show a positive impact, validating the hypothesis that demographic dividend positively influences economic growth. The study emphasizes the transient nature of the demographic dividend and the need for effective policies for sustained economic growth. Focusing on Bangladesh Uddin, Md Jalal, and M. R. Karim, 2016 explores the potential benefits and challenges associated with demographic dividends. It underscores the importance of employment opportunities in realizing the benefits and the role of human resource development and to formulate policies for skill development and education at all levels to make the most of the demographic dividend. Failure to seize this opportunity is highlighted as a potential risk for the nation. Examining the demographic changes in Oman, Islam, M. Mazharul (2020) explores the opportunities and challenges associated with the country's demographic transition. The study reveals a significant decline in fertility and mortality rates and identifies two distinct periods of demographic dividend. To leverage the demographic dividend, the paper suggests timely steps to develop human resources and formulate policies for economic development. Using time series data (2016) he also analyzes the demographic transition in Bangladesh and its implications. It emphasizes the need for efficient management of the demographic dividend that is expected to peak during the 2020s and remain open until the 2030s. Focusing on the Sahel region, in a paper May, John F. (2017) addresses major development challenges and security threats. He advocates for a fivefold agenda, including improving human capital, increasing savings and investments, promoting good governance, creating jobs, and accelerating demographic transition. The paper stresses the necessity of coordinated policies for these sectors to realize a demographic dividend in the Sahel countries. He, in another paper (2017) examines the prospects for Sub-Saharan Africa to enjoy a demographic dividend. It highlights the importance of accurately defining sub-populations and conditions necessary for faster fertility decline. The paper emphasizes the need for coordinated policies in macroeconomic management, human capital, trade, governance, and labor and capital markets to capitalize on the demographic transition and achieve sustainable development. Cardona, C et al. (2020) makes a systematic literature review which explores policies and programs contributing to a favorable



environment for generating and harnessing a demographic dividend in sub-Saharan African countries. The study categorizes data into pre-dividend and early-dividend phases, identifying sectors such as governance, family planning, maternal and child health, education, women's empowerment, and labor market. The paper emphasizes the importance of a coordinated approach to policy implementation. Sarker T. (2021) explores the links between demographic dividend, the digital economy, and sustainable development in Nepal. Utilizing multiple regressions, it analyzes economic variables of demographic dividend, digital economy indicators, and environment-related issues. The study provides a framework for policy implications, discussing the impact of COVID-19 and offering insights for attaining Sustainable Development Goals in Nepal.

Coming to the context of India, a few research workers seem to shed light on different dimensions of demographic dividend. Some of them are in the view that demographic dividend of India is unlocking economic growth to the country. The demographic dividend hinges on the premise that increased labor supply boosts the production of goods and services while a declining child dependency ratio stimulates savings and investment. This dual effect on the economy creates a favorable environment for GDP growth (Bhagat, 2014). As more members of a family enter the workforce, household expenditures on dependents decrease, leading to increased savings, investments, and innovation (Varma, 2016). Furthermore, a youthful population contributes to high consumption, thereby acting as a catalyst for production and GDP growth. The growth effects of a favorable age structure can significantly contribute to per capita income growth, providing a potential uplift to the standard of living (Joe et al., 2018).

The opportunities are not challenge free. Without translating the challenges into opportunities India will lose the great chance of being one of the super powers in the world. So, the researchers are trying to trace out the challenges. One major deficit is the lack of employment opportunities, compounded by inadequate education and health conditions of the population. Skill development of the labor force emerges as a critical challenge, reflecting a mismatch between demand and supply in the labor market (Swami, 2016). India faces a significant deficit in education and health, hindering the transformation of a growing labor force into a skilled workforce. Health challenges are exacerbated by rising urbanization, leading to an increase in non-communicable diseases. A substantial burden of malnutrition persists alongside the emergence of lifestyle diseases (Bhagat, 2014; Chandrasekhar et al., 2006). The informal sector's large share of employment poses challenges in maintaining work quality, emphasizing the need for labor market reforms (Talreja, 2014). Unemployment, poverty, and mental health issues are closely linked challenges that impact the ability of the Indian youth to serve as a demographic dividend (Chaturvedi & Saboo, 2019).

In view of some researchers the opportunities can only be reaped when there are proper policy measures. Addressing the challenges requires a comprehensive policy approach. Health policies aimed at improving the health status and covering health risks are crucial for boosting economic growth. Similarly, educational policies need to strengthen infrastructure, ensuring quality and inclusivity (Bhagat, 2014). Moreover, policy interventions should focus on transferring the surplus labor from agriculture to high productivity sectors and bridging the skill gap. Labor market reforms, promotion of innovation, and enforcement of existing policies are essential aspects of policy formulation (Talreja, 2014). Skill development emerges as a recurring theme in the literature, underscoring its critical role in transforming the demographic dividend into a productive force. The challenge lies in transferring surplus labor to industry, necessitating a focus on skill matching and creating opportunities for both supply and demand sides (Talreja, 2014). Policies must emphasize job creation, vocational training, and continuous skill enhancement to fully harness the demographic dividend. A multifaceted approach involving industry-academia collaboration, vocational education, and awareness campaigns is crucial for equipping the young population with the necessary skills (Mishra, 2020). The overarching vision is one of sustained inclusive growth. To achieve this, India must address challenges such as low competitiveness, fiscal issues, and institutional reforms. The focus should extend beyond immediate economic concerns, incorporating societal issues like poverty eradication, gender empowerment, and reduction of inequalities. Investing in human capital through education, healthcare, and skill development is imperative for long-term success (Joe et al., 2018).

In conclusion, India stands at a crucial juncture with the potential to harness its demographic dividend for substantial economic growth. However, realizing this potential requires a concerted effort to address challenges in education, health, and employment. The literature emphasizes the importance of comprehensive policies that not only create job opportunities but also focus on skill development, health improvement, and social inclusivity.



3. Analysis

To analyze trends of the opportunities and challenges of demographic dividend of India time series data have been collected from the following sources. The reference period is 2012 to 2021-22.

3.1 Population of 15-64 Age Group

Table 1 : Demographic dividend from 2012 to 2022

Years	Population of 15-64 years
2012	64.70
2013	65.06
2014	65.40
2015	66.73
2016	66.05
2017	66.36
2018	66.66
2019	66.93
2020	67.92
2021	67.51
2022	67.80

Source : Statista 2023

The population of individuals aged 15-64 years has shown a general increasing trend over the years, indicating a growing working-age population. While the overall trend is positive, there are fluctuations in the growth rate. For instance, there is a noticeable increase from 2012 to 2015, followed by a slight decrease in 2016. The population then continues to rise until 2019, where a peak is observed at 66.93, before slightly decreasing in 2021. The consistent growth in the working-age population suggests a potential for a demographic dividend. From 2019 to 2022, the population in the 15-64 age group remains relatively stable, with minor fluctuations. This stability could provide a window of opportunity for economic planning and harnessing the demographic dividend. A sustained increase in the working-age population can potentially boost economic activities, provided there are corresponding employment opportunities and supportive policies. This, in turn, can lead to increased productivity and economic growth.

Slope is 2.89

3.2 Economic Growth

Table 2 : Economic growth of India over the years compared with demographic dividend

Year	Growth Rate of DD	Rate Economic Growth
2012		5.46
2013	0.56	6.39
2014	0.52	7.41
2015	2.03	8.00
2016	-1.02	8.26
2017	0.47	6.80
2018	0.45	6.45
2019	0.41	3.87
2020	1.48	-5.83
2021	-0.60	9.05
2022	0.43	7.00

Source: United Nations- World Population Prospects



Table 2 includes the Growth Rate of Demographic Dividend (DD) and the Rate of Economic Growth for the years 2012 to 2022. The Growth Rate of Demographic Dividend (DD) indicates the percentage change in the demographic dividend from one year to the next. Positive values represent growth, while negative values indicate a decline. The DD Growth Rate shows variations over the years, ranging from -1.02% in 2016 to 2.03% in 2015, suggesting fluctuations in the growth of the working-age population. The Rate of Economic Growth represents the percentage change in the country's economic output from one year to the next. Positive values indicate economic expansion, while negative values represent a contraction. The Economic Growth Rate also exhibits fluctuations, with the highest growth recorded at 9.05% in 2021 and the lowest at -5.83% in 2020. There is no consistent positive or negative correlation between the Growth Rate of Demographic Dividend and the Rate of Economic Growth. The year 2020 stands out as a challenging period, marked by a positive DD Growth Rate (1.48%) but a significant negative Economic Growth Rate (-5.83%). This may be attributed to the global economic downturn caused by the COVID-19 pandemic, impacting various sectors. Despite the challenges in 2020, the subsequent years (2021 and 2022) show positive Economic Growth Rates, indicating a post-pandemic recovery. For the reference period the long run trend for both DD and growth rate of economics is negative, but still there was DD around 64 percent.

The slope of DD is -0.55 and of Economic growth is -0.19

3.3 Trends DD Compared with Health Care Expenditure

Table 3 : Percentage of DD compared with health expenditure
Over the years

Year	Percentage of DD	%of health Expenditure as the share of GDP
2012	64.70	3.33
2013	65.06	3.75
2014	65.40	3.62
2015	66.73	3.60
2016	66.05	3.50
2017	66.36	2.94
2018	66.66	2.86
2019	66.93	2.94
2020	67.92	2.96
Trend	2.51	-6.09

Source: World Bank.

Table 3 shows the percentage of health expenditure as the share of GDP. It reflects the portion of the country's economic output dedicated to healthcare. The values range from 2.86% in 2018 to 3.75% in 2013, showcasing variations in health expenditure over the years. The overall trend indicates fluctuations in health expenditure as a percentage of GDP, with a negative growth trend (-6.09%) observed in the trend row. While the percentage of DD is increasing, the health expenditure as a percentage of GDP exhibits variations, including a negative trend. This suggests that the growth in the working-age population does not necessarily correspond directly to an increase in health expenditure. The negative growth trend in health expenditure as a percentage of GDP raises economic considerations. It may indicate challenges or constraints in allocating a higher percentage of the GDP to healthcare, potentially influenced by broader economic factors. Policymakers should consider the evolving demographic trends and the associated healthcare needs.

3.4 Trend of Unemployment Compared with DD

Table 4: Unemployment rates compared with % of DD over the years

Year	Percentage of DD	Unemployment Rate
2012	64.70	8.10
2013	65.06	8.04
2014	65.40	7.98
2015	66.73	7.92
2016	66.05	7.84
2017	66.36	7.73
2018	66.66	7.65



2019	66.93	6.51
2020	67.92	10.20
2021	67.51	7.71
2022	67.80	7.33
Long run trend	2.89	-0.20

Source: computed on the basis of data from World Bank

The unemployment rate represents the percentage of the labor force that is unemployed. The values range from 6.51% in 2019 to 10.20% in 2020, showcasing variations in the unemployment rate over the years. In table 4, the long run trend row indicates an overall negative growth in the unemployment rate, suggesting a decrease in unemployment over the long term. The trends in DD and the unemployment rate do not exhibit a clear correlation. While the percentage of DD is generally increasing, the unemployment rate shows fluctuations, including a notable increase in 2020. The negative growth trend in the long run for the unemployment rate suggests an improvement in the employment situation over time. However, the spike in the unemployment rate in 2020 might be influenced by external factors such as the COVID-19 pandemic. The significant increase in the unemployment rate in 2020 aligns with the global economic challenges posed by the pandemic. It highlights the vulnerability of employment markets to external shocks.

3.5 Government Educational Expenditure Growth

Table 5 : Government Educational Expenditure Compared with % of DD over the years

Year	% of DD	Govt. educational expenditure as % of GDP
2012	64.70	3.79
2013	65.06	4.08
2014	65.40	3.84
2015	66.73	4.11
2016	66.05	4.25
2017	66.36	4.3
2018	66.66	4.36
2019	66.93	4.4
2020	67.92	4.29
2021	67.51	4.63

Source: World Bank

Government educational expenditure is represented as a percentage of GDP. The values range from 3.79% in 2012 to 4.63% in 2021, showing fluctuations over the years. Despite variations in the percentage of DD, the government's educational expenditure as a percentage of GDP remains relatively stable. The lack of significance in the change implies that the observed fluctuations in educational expenditure are within expected bounds.

Table 6: Test Statistics

	Govt. educational expenditure as % of GDP	Rate of unemployment	Govt. health expenditure as % share of GDP	Economic growth
Chi-Square	.000 ^a	.000 ^a	.778 ^b	.000 ^a
Df	8	8	7	8
Chi value	1.000	1.000	.998	1.000
Table value at 5% level of significance	15.51	15.51	14.07	15.51
Comment	No significant change	No significant change	No significant change	No significant change



Table 6 tests whether there is significant change in different dimensions of Indian economy including government effort. Using Chi Square test it has been observed that of the four dimensions, namely Govt. educational expenditure as % of GDP, Rate of unemployment, Govt. health expenditure as % share of GDP, Economic growth there is no significant change so as to harvest the growing DD of Indian economy.

3.7 Employment Opportunities Available

Table.7: Distribution of total employment across sectors (%)

Worker	2011-12			2017-18		
	Unorganized	Organized	Total	Unorganized	Organized	Total
Informal	82.6	9.8	92.4	85.5	5.2	90.7
Formal	0.4	7.2	7.6	1.3	7.9	9.3
Total	83.0	17.0	100	86.8	13.2	100

Source: Computed from NSS 68th unit level data on employment, unemployment, 2011-12 and periodic Labor Force Survey, 2017-18

Table 7 shows that in 2011-12, the unorganized sector accounted for 83.0% of total employment, which increased to 86.8% in 2017-18. The informal segment within the unorganized sector was predominant, constituting 92.4% in 2011-12 and rising to 90.7% in 2017-18. The organized sector's share of total employment increased from 17.0% in 2011-12 to 13.2% in 2017-18. The informal sector continues to be a significant source of employment, with a slight decline from 92.4% to 90.7% of total employment. This trend suggests that a substantial portion of the workforce is engaged in informal economic activities, which may present challenges in terms of job security, social security, and benefits. The formal sector's share of total employment increased from 7.6% to 9.3%. While this indicates a positive shift towards more organized and potentially stable employment, the formal sector's contribution to total employment remains relatively low. There is an opportunity to diversify and enhance employment in the organized sector, potentially leading to more stable jobs with better benefits and social security. Focusing on skill development programs can prepare the workforce for formal employment opportunities, aligning skills with the needs of the organized sector.

The high prevalence of informal employment poses challenges related to job security, lack of benefits, and limited access to social security measures. The slow growth of formal sector employment suggests a challenge in expanding opportunities for stable and secure employment.

3.8 What is the Trend of Health Indicators?

Let us consider the health trends on the basis of infant mortality rate and life expectancy at birth.

a) Infant Mortality Rate

Table 8 : Infant mortality rate over the years

Years	Infant Mortality Rate
2010	45.1
2011	43
2012	40.9
2013	38.8
2014	36.9
2015	34.9
2016	33.1
2017	31.4
2018	29.7
2019	28.3
Slope	-0.53
Chi value	1.850
Table value	16.92
Comment	Not significant

Source: United Nations- World Population Prospects



As per table 8 the calculated slope of -0.53 suggests a moderate rate of decline in the infant mortality rate per year. The chi square test indicates that the observed decline in the infant mortality rate is not statistically significant. The non-significant result suggests that the observed trend in infant mortality may be due to random variation rather than a systematic health care development.

b) Life Expectancy at Birth

Table 9 : Life expectancy at birth over the years

Years	Life expectancy at Birth
2012	67.32
2013	67.77
2014	68.07
2015	68.37
2016	68.67
2017	68.97
2018	69.27
2019	69.5
2020	69.73
2021	69.96
2022	70.19
2023	70.42
Slope	3.61
Chi value	1.00
Table value	21.03

Source: United Nations- World Population Prospects

As per the table 8 the trend in life expectancy at birth indicates a consistent increase from 2012 to 2023. Life expectancy has risen from 67.32 in 2012 to 70.42 in 2023. The calculated slope of 3.61 suggests a substantial and consistent increase in life expectancy per year. The chi-value being 1.00 is compared to the table value of 21.03 indicates that the observed increase in life expectancy is not statistically significant at the given confidence level.

4. Findings

Based on the forgoing analysis and discussion the following opportunities and challenges can be traced in the context of demographic dividend in India.

Opportunities:

- The population of individuals aged 15-64 years has shown a positive increasing trend, indicating a growing working-age population in India.
- The consistent growth in the working-age population presents an opportunity for a demographic dividend, which could lead to increased productivity and economic growth.
- The stability in the population of the 15-64 age group from 2019 to 2022 provides a window of opportunity for economic planning and harnessing the demographic dividend.
- Despite challenges in 2020, subsequent years (2021 and 2022) show positive economic growth rates, indicating a post-pandemic recovery and an opportunity for economic resurgence.
- Government educational expenditure as a percentage of GDP remains relatively stable, indicating a consistent effort to invest in education.
- The increase in the organized sector's share of total employment from 7.6% to 9.3% suggests an opportunity for growth in formal and potentially stable employment.



- Focusing on skill development programs can prepare the workforce for formal employment opportunities, aligning skills with the needs of the organized sector.
- The consistent increase in life expectancy at birth from 2012 to 2023 provides an opportunity for a healthier and potentially more productive workforce.

Challenges:

- Fluctuations in the growth rate of the working-age population, such as a decrease in 2016 and a slight decrease in 2021, pose challenges for consistent economic planning.
- The challenging period of 2020, marked by a positive demographic dividend growth rate but a significant negative economic growth rate, highlights vulnerability to external shocks like the COVID-19 pandemic.
- Fluctuations in health expenditure as a percentage of GDP, including a negative growth trend, suggest challenges in allocating a higher percentage to healthcare despite the growing working-age population.
- Fluctuations in the unemployment rate, particularly the notable increase in 2020, highlight challenges in maintaining employment stability during external shocks like the pandemic.
- The dominance of informal employment poses challenges related to job security, lack of benefits, and limited access to social security measures.
- While there is growth in formal sector employment, the contribution to total employment remains relatively low, indicating a challenge in expanding opportunities for stable and secure employment.
- Non-significant changes in health indicators, including infant mortality rate and life expectancy, suggest challenges or limitations in achieving significant improvements in health care development.

In conclusion, India has the opportunity to harness its demographic dividend, but challenges in economic stability, health expenditure, and employment structures need strategic attention to fully realize the potential benefits.

5. Policy Implications

Based on the foregoing findings the following policy implications can be suggested –

- There is need to develop and implement policies that align with the growing working-age population, focusing on skill development programs to enhance employability and productivity.
- Initiative should be taken to implement measures to ensure economic stability, particularly during external shocks like pandemics, by diversifying economic activities and enhancing resilience to global challenges.
- The government should continue and enhance stable government investment in education to ensure a skilled and educated workforce, supporting long-term economic growth and development.
- Still there is need to formulate and implement strategies for post-pandemic recovery, emphasizing measures that facilitate economic resurgence and address vulnerabilities exposed during challenging periods.
- Considering the health issues it is suggestive to review and reform health expenditure policies to address fluctuations and negative trends, ensuring that a growing working-age population is supported by a robust and responsive healthcare system.
- The government should introduce policies to address fluctuations in the unemployment rate, with a focus on maintaining employment stability.
- Developing policies that encourage and promote formal sector employment, fostering a transition from informal to formal employment to improve job security, benefits, and social security is the need of the time.
- Measures to enhance social security for workers engaged in informal employment should be undertaken, addressing challenges related to job security and benefits.
- There is need to formulate of comprehensive health care development strategies, addressing challenges highlighted by non-significant changes in health indicators, with a focus on achieving measurable improvements in infant mortality rates and life expectancy.
- Government effort should be there to establish collaborative governance frameworks involving multiple stakeholders, including government bodies, private sector, and civil society, to monitor and assess the effectiveness of policies related to demographic dividend, ensuring continuous adaptation to changing circumstances.

These policy implications are designed to address both the opportunities and challenges identified in the context of India's demographic dividend, fostering sustainable economic growth and improving the overall well-being of the population.



6. CONCLUSIONS

In the realm of India's demographic dividend, a nuanced tapestry of opportunities and challenges emerges from the analysis. The positive trajectory in the population of individuals aged 15-64 years signals the promise of a burgeoning working-age populace. This demographic bounty presents an auspicious opportunity for a demographic dividend, promising heightened productivity and economic growth. The period from 2019 to 2022, marked by stable demographics, offers a strategic window for economic planning and reaping the benefits of this demographic advantage. Crucially, the delicate balance between a growing workforce and healthcare expenditure unveils challenges in allocating resources. The informal employment sector's dominance raises concerns about job security and social security measures. Despite strides in formal sector employment, the contribution to overall employment remains modest, necessitating strategic interventions for stability. In this confluence of prospects and challenges, strategic policy implications are paramount. Initiatives spanning skill development, economic resilience, sustained educational investment, post-pandemic recovery strategies, healthcare reforms, and employment security are crucial. Additionally, policies encouraging formal sector employment, bolstering social security, and fostering collaborative governance can navigate India toward harnessing its demographic dividend while addressing the intricacies of its economic and social landscape. The confluence of thoughtful policies is imperative to steer the nation towards sustainable growth, leveraging the demographic dividend for the holistic well-being of its populace.

REFERENCES

1. Bhagat, R. B. (2014). The opportunities and challenges of demographic dividend in India. *Jharkhand Journal of Development and Management Studies*, 12(4), 6099-6113.
2. Bhattacharya, G., & Halder, S. K. (2015). Does demographic dividend yield economic dividend? India, a case study. *Economics Bulletin*, 35(2), 1274-1291.
3. Bloom, David E., Michael Kuhn, and Klaus Pretzner. "Africa's prospects for enjoying a demographic dividend." *Journal of Demographic Economics* 83.1 (2017): 63-76.
4. Cardona, Carolina, et al. "Generating and capitalizing on the demographic dividend potential in sub-Saharan Africa: a conceptual framework from a systematic literature review." *Gates Open Research* 4 (2020).
5. Chandrasekhar, C. P., Ghosh, J., & Roychowdhury, A. (2006). The 'demographic dividend' and young India's economic future. *Economic and Political Weekly*, 5055-5064.
6. Chaturvedi, S., & Saboo, A. (2019). Challenges faced by the Indian demographic dividend: Unemployment, poverty and mental health. *International Journal of Advanced Research in Commerce, Management & Social Science*, 2(4), 1-10.
7. Islam, M. Mazharul. "Demographic transition and the emerging windows of opportunities and challenges in Bangladesh." *Journal of Population Research* 33.3 (2016): 283-305.
8. Islam, M. Mazharul. "Demographic transition in Sultanate of Oman: emerging demographic dividend and challenges." *Middle East Fertility Society Journal* 25.1 (2020): 1-14.
9. Jain, N., & Goli, S. (2021). Demographic Change and Economic Growth in India. Available at SSRN 3916157.
10. Joe, W., Kumar, A., & Rajpal, S. (2018). Swimming against the tide: economic growth and demographic dividend in India. *Asian Population Studies*, 14(2), 211-227.
11. Juned, Mansur. "Demographic Dividend in Indonesia: Prospect for Economic Development and the Challenge Ahead." *Proceeding Of The International Seminar and Conference on Global Issues*. 2016.
12. Krishnamurthy, Jayasankar, and Abhay Kumar. "The demographic dividend: Challenges to employment and employability." *Indian Journal of Labour Economics* 58.1 (2015): 43-65.
13. Lonarkar, P. P. (2018). Demographic Scenario of India: Opportunities and Challenges. *Artha Journal of Social Sciences*, 17(2), 77-92.
14. Majumder, R. (2013). India's demographic dividend: opportunities and threats.
15. Mathur, P., & Agarwal, P. (2014). Attaining India's Demographic Dividend: A way forward. *International Journal*, 2(10).
16. May, John F., and Vincent Turbat. "The demographic dividend in sub-Saharan Africa: two issues that need more attention." *Journal of Demographic Economics* 83.1 (2017): 77-84.
17. May, John F., Jean-Pierre Guengant, and Vincent Barras. "Demographic challenges of the Sahel countries." *Africa's Population: In Search of a Demographic Dividend* (2017): 165-177.
18. Mayadas, D. T. India's Demographic Dividend and Future of the Indian Population.



19. Mishra, A. (2020). OPPORTUNITY OF DEMOGRAPHIC DIVIDEND WITH SKILL DEVELOPMENT. Editorial Board, 9(10).
20. Misra, Roli. "Impact of demographic dividend on economic growth: a study of BRICS and the EU." International Studies 52.1-4 (2015): 99-117.
21. Mustafi, A. (2020). ECONOMIC FORECASTING OF DEMOGRAPHIC DIVIDEND OF INDIA.
22. Nagar, P., & Dhawan, A. (2018). Economic advantages of demographic dividend: the case for India. International journal of basic and applied research, 8(6).
23. Navaneetham, Kannan, and Arunachalam Dharmalingam. "A review of age structural transition and demographic dividend in South Asia: Opportunities and challenges." Journal of Population Ageing 5 (2012): 281-298.
24. Omoju, Oluwasola E., and Terfa W. Abraham. "Youth bulge and demographic dividend in Nigeria." African Population Studies 27.2 (2014): 352-360.
25. Patel, B. Demographic Changes in Indian States: Measuring the Span of Demographic Dividend. UPUEA Economic Journal, 74.
26. Sarker, Tapan, Shristi Tandukar, and Sima Rani Dey. Promoting sustainable development through realizing the demographic dividend opportunity in the digital economy: A case study of Nepal. No. 1225. ADBI Working Paper Series, 2021.
27. Swami, M. (2016). Demographic dividend: Challenges and opportunities for India.
28. Talreja, C. (2014). India's demographic dividend: Realities and opportunities. Indian Journal of Labour Economics, 57(1), 139-155.
29. Uddin, Md Jalal, and M. R. Karim. "Harnessing the demographic dividend: Opportunities and challenges for Bangladesh." IOSR Journal of Humanities And Social Science (IOSR-JHSS) 21.8 (2016).
30. Varma, A. (2016). Demographic Dividend in India: A Conundrum. IOSR Journal of Humanities and Social Science, 6(4), 55-64.

Bibliography

1. (Demographic Dividend, UNFPA, <https://www.unfpa.org/demographic-dividend#0>)
2. (Dharmendra Pradhan, 2023), India's Minister of Education, Skill Development and Entrepreneurship, Interviewed by Sambit Mohanty, Editorial Lead, Petroleum News at S&P Global Commodity Insights.)
3. The Economic Survey 2018-19, Ministry of Finance, Government of India, <https://www.indiabudget.gov.in/budget2019-20/economicsurvey/doc/echapter.pdf>
4. World Bank(2021)
5. United Nations- World Population Prospects