

SUSTAINABLE TRANSFORMATIONS GIVING IMPETUS TO SKILL DEVELOPMENT IN INDIA: A GLOBAL RESERVOIR OF WORKFORCE

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Abstract:

This research paper explores the relationship between sustainable transformations and skill development in India, acknowledging the country's vast potential as a global reservoir of workforce. The paper adopts a comprehensive theoretical framework to understand the dynamics of sustainable development and its impact on enhancing skillsets among the Indian population. By utilizing mixed research methodologies, the study aims to address the need for an effective skill development ecosystem in India. The research questions centre around identifying the factors influencing sustainable skill development and the ways to optimize this vast workforce potential. Based on the findings and discussions, the paper presents recommendations to stakeholders and policymakers to strengthen skill development initiatives and create a sustainable workforce for a thriving economy. The paper also looks at the nexus of education, skilling and sustainable employment opportunities for reaping the benefits of the Demographic Dividend. According to the cross sectional study of the paper, respondents believe that they remained unemployed due to a mismatch of jobs and education. At this juncture, Education, skilling, and parallel creation of relevant employment and encouraging entrepreneurship must work in tandem to harness the exhausting Demographic Advantage. If not tapped rightly, this might turn into a demographic disaster to perpetuate inequality and poverty and suffer them a vicious cycle affecting the sustainable development goals.

Introduction

India's demographic dividend presents a significant opportunity to leverage its immense human capital for sustainable development. With a young and growing population, the country has the potential to become a global reservoir of skilled workforce. However, this potential can only be fully realized through effective skill development initiatives that align with the principles of sustainable development. Sustainable transformations refer to the process of fostering economic growth, social progress, and environmental stewardship in a balanced manner. Skill development plays a crucial role in nurturing a competent and versatile workforce capable of driving economic productivity, social inclusivity, and environmental responsibility. This paper aims to explore the relationship between sustainable transformations and skill development in India and analyse how the country can effectively harness its human capital to become a global workforce reservoir.

The prosperity of any country depends on how many of its people are in the workforce and how productive they are, which in turn depends on the skills they possess and how effectively

those skills are used. According to UN-DESA's Report, India is expected to be the most populated country by 2030, having about 1/5th of the world's youth population. India is blessed with demographic advantage, with 65.9% population bulging across working age; this ratio continues to grow to 68% before it starts declining from 2040. Turning this advantage into a demographic dividend is the need of the hour as this tremendous once-in-a-lifetime opportunity leaves the country with a narrow window of 2 decades. Where Industrialized Countries such as South Korea, Japan, Germany, and the UK possess about 65-96% formally skilled population, India stands at a meagre 2.3%. This is reflected by 93% of the economy being informal, mainly pursuing traditionally acquired skills from their previous generations stands as a challenge.

Covid shocks have completely altered the entire landscape of education, employment, and skilling. Few reasons are – low esteem regarded to vocational education in Indian Mindset, with a labour force participation of 47.3% - India is marathoning with one leg as female labour force participation is just 28.7%.¹ A lot of disguised unemployment is seen in agriculture and shift to other sectors is not rapid because of the skill gap. Companies demand multi skilled persons as to reduce costs and stay competitive. India needs to focus on implementing the right kind of training techniques and prepare its workforce for employment-both at home and across the world. Introduction of employer engagement through the development of Sector Skills Councils is a positive step. However, more needs to be done to incentivize vocational training and adequately reward workers who have undertaken skills development programs.¹

India can cater the global need of 56.5 million skilled manpower shortage with its 47 million surplus manpower. According to the World Economic Forum's report "The Future of Jobs", more than half of Indian workers require an extra 100 days of reskilling. The findings of the study focuses on these trends of employment with quantitative analysis and will be useful in informing policy decisions aimed at improving employment opportunities and sustainable skilling avenues for the labour force of the country.²

2. Theoretical Framework:

The theoretical framework of this study is based on the concept of sustainable development, which considers three interconnected dimensions: economic, social, and environmental. The Triple Bottom Line theory serves as the foundation, as it assesses sustainable development based on its impact on profits (economic), people (social), and the planet (environment). By integrating this framework, the paper aims to understand how sustainable skill development can contribute to each dimension.

Additionally, the Human Development Index (HDI) and the United Nations Sustainable Development Goals (SDGs) are key elements of the theoretical framework. The HDI measures human development based on factors such as life expectancy, education, and income, providing insights into the overall development of a nation's human capital. The SDGs, a set of 17 global goals, offer a comprehensive roadmap for achieving sustainable development by addressing various social, economic, and environmental challenges.

3. Need for the Study:

India's demographic advantage brings forth a unique opportunity for economic growth, social development, and environmental stewardship. To harness this potential, it is crucial to invest in skill development initiatives that cater to the needs of a rapidly evolving global economy. This section highlights the necessity of this research to create a well-informed policy framework for sustainable skill development in India.

¹ "Transforming India's skill development," Economic times website, http://articles.economictimes.indiatimes.com/2012-02-17/news/31071290_1_nsdcs-national-skill-development-corporation-sector-skills-councils, accessed on 25 July, 2023

² Ernst & Young, Knowledge paper on skill development in India, 2012, pp 3-12

The need for the study is underscored by the following aspects: The rising population of India's youth, estimated at approximately 65% of the total population, emphasizes the urgency of skill development to leverage the demographic dividend. The country faces challenges related to unemployment and underemployment, necessitating sustainable skill development to bridge the gap between available skills and market demands. Aligning skill development with sustainable development goals can ensure social inclusion, economic prosperity, and environmental responsibility for a sustainable future.

4. Research Methodologies:

The research incorporates quantitative data from various sources, including government reports, international organizations, and surveys, to assess the current status of skill development and sustainability indicators in India. Data related to GDP growth rate, employment-to-population ratio, sustainable employment opportunities, and education enrolment rates are collected and analysed. Statistical analyses, such as data projections and trend analysis, will be employed to identify correlations and patterns.

5. Research Questions and Objectives:

A. Research Questions:

- I. What are the key factors influencing sustainable skill development in India?
- II. How can India optimize its demographic dividend and create a global reservoir of skilled workforce?

B. Research Objectives:

- I. To explore the challenges and opportunities in creating a sustainable workforce in India.
- II. To propose strategies for enhancing skill development efforts in India, considering demographic dividend as a key element.

6. Findings and Discussion:

A. Boon of Indian Demographics: The demographic dividend, as defined by the United Nations Population Fund (UNFPA), refers to the potential for economic growth that arises from changes in the age distribution of a population, particularly when the proportion of the working-age population (aged 15 to 64) is larger than the proportion of the non-working-age population

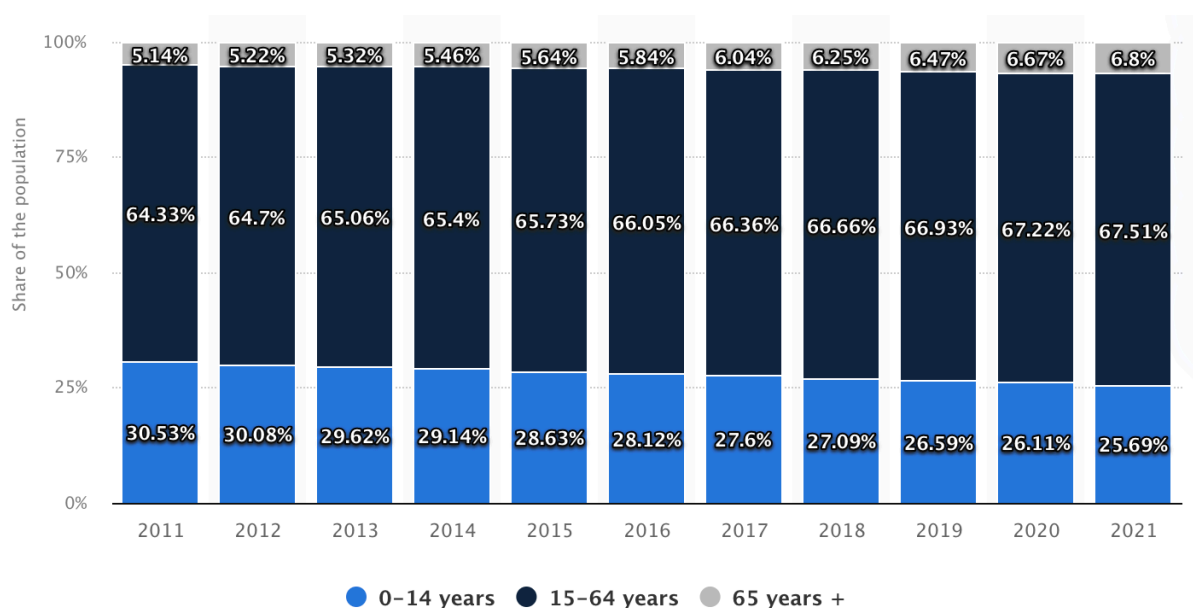


Fig. 1: Percentage distribution of population by broad age groups, 2011-2021
 Source: <https://www.statista.com/statistics/271315/age-distribution-in-india/>

(those aged 14 and younger, and 65 and older).³ Prior to experiencing the dividend, a country carries a heavy burden of a high dependency ratio due to a significant and increasing portion of the population being below the working age of 15. However, once the dividend period arrives, the percentage of elderly population increases, and as they are no longer part of the workforce, they require support in the form of pensions, healthcare benefits, and other social services.

India's demographics show that India is home to relatively the youngest population across the world. It can be seen from the Fig. 1, In India, the working-age population has gradually increased from 64.33 percent to 67.51 of the total population in a decade from 2011-2021. However, projections indicate that this figure is expected to increase to 68.3 percent by the year 2040. After reaching this peak, there will be a subsequent decline in the proportion of the working-age population.⁴

Compared to other developed and developing countries, India has a unique opportunity for the next 20-25 years known as the "demographic advantage." This advantage arises from a large and relatively young population, which can potentially become a productive workforce if properly skilled and empowered. If India can effectively provide its people with essential life skills, job skills, or entrepreneurial skills in the coming years, this demographic advantage can transform into a demographic dividend. This means that the individuals entering or already in the labour market would contribute significantly to economic growth both within India and on the global stage.

However, achieving this objective is an immense challenge as India's labour force largely consists of individuals who are illiterate, have education only up to the primary level, or lack necessary skills. Skill development and education on such a scale require comprehensive efforts and investments to uplift the workforce, providing them with the tools they need to participate productively in the economy. Nevertheless, if successfully accomplished, this demographic dividend can become a driving force for India's economic progress and development.

B. Employment Status

According to Table 1, the proportion of workers in regular wage/salary jobs was only 23 percent for males and 21 percent for females in 2017-18. However, this percentage has declined for both genders between 2017-18 and 2020-21. Conversely, the share of workers in self-employment has increased for all workers, with a slight increase for males from 52.3 percent to 53.9 percent and a substantial increase for females, rising by over 7 percentage points from 51.9 percent to 59.4 percent over the same period. However, the trend for casual labour shows a decline in their share. Nevertheless, more than three-fourths of male workers and over 80 percent of female workers are still in self-employed and casual employment. Most self-employed workers run their own businesses without hiring any workers. A majority of these self-employed individuals are in the agricultural sector and earn very low median monthly earnings, with women earning almost half of what men earn. Therefore, considering the overall employment scenario in the unorganized sector, casual, and self-employment categories, it can be inferred that the quality of employment in India remains quite poor.⁵

India's labour force has historically had low education levels, but there have been improvements in recent times due to initiatives like the Right to Education. Exhibit 2 illustrates that approximately 29% of the workforce is still not literate, and around 24% have received

³ <https://www.statista.com/statistics/271315/age-distribution-in-india/>

⁴ Government of India 2015. Seizing the Demographic Dividend- Chapter 2, Economic Survey of India 2014-15, Ministry of Finance, New Delhi.

⁵ Sanghi, S. and Srijia, A. 2015. 'Skill Development and Productivity of the Workforce', Economy Matters, Confederation of Indian Industry (CII), New Delhi, pp. 36-51.

education only up to the primary level. This leads to a vicious cycle of unemployment trends that poses potential threat to our demographic dividend. The structural transition in India from the agricultural to the non-agricultural sector has been characterized by a rapid decline in the farm sector's contribution to the GDP, which now stands at 16 percent. However, the workforce participation level in the agricultural sector has decreased much more slowly, currently at 48 percent. This slow decline in workforce participation has contributed to the low level of productivity in the agricultural sector. The majority of jobs created in India are informal, accounting for 91 percent of the workforce. Additionally, a significant proportion of the employed population is self-employed. The high prevalence of self-employment indicates that many individuals are operating their businesses or working independently, which often comes with a lack of job security and benefits.⁶

Furthermore, there is a considerable level of unemployment among the youth, which can be attributed to aspirational mismatch (when the aspirations of job seekers do not align with available opportunities) or skill mismatch (when the skills possessed by job seekers do not match the requirements of available jobs). The declining participation of females in the labour force is another concerning aspect. One of the challenges is that the economic growth has not been able to generate sufficient job opportunities, which results in a significant gap between job creation and the expansion of the economy.⁷

Table 1: Distribution of workers by nature of employment

Period	own account worker, employer	helper in household enterprises	all Self-employed#	regular wage/ salaried employees	casual labour	all workers
Total Persons						
PLFS (2020-21)	38.2	17.3	55.6	21.1	23.3	100
PLFS (2019-20)	37.6	15.9	53.5	22.9	23.6	100
PLFS (2018-19)	38.8	13.3	52.1	23.8	24.1	100
PLFS (2017-18)	38.6	13.6	52.2	22.8	24.9	100
Males						
PLFS (2020-21)	44.8	9.2	53.9	22.7	23.3	100
PLFS (2019-20)	43.9	8.5	52.4	24	23.6	100
PLFS (2018-19)	44	7.6	51.7	24.4	24	100
PLFS (2017-18)	44.1	8.2	52.3	23.4	24.3	100
Females						
PLFS (2020-21)	22.8	36.6	59.4	17.4	23.2	100
PLFS (2019-20)	21.3	35	56.3	20	23.7	100
PLFS (2018-19)	22.5	30.9	53.4	21.9	24.7	100
PLFS (2017-18)	20.2	31.7	51.9	21	27	100

Source: Statement 12: PLFS (2020-21)

C. Skill gap in India's labour market

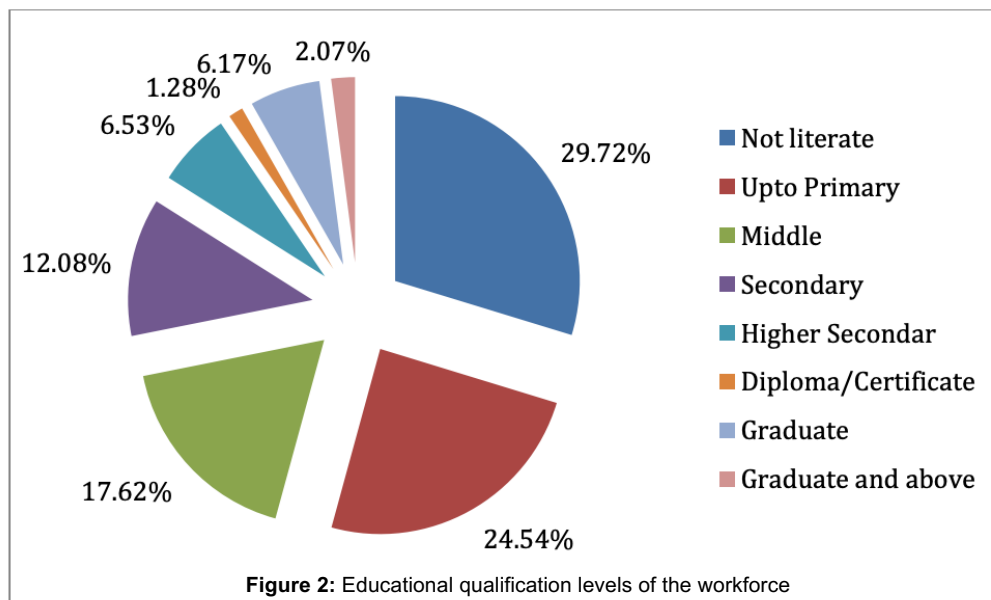
The labor market in India is facing a significant skill gap, both in terms of the quality and quantity of skills possessed by job seekers. According to the India Skills Report 2015, when students apply for roles in the labor market, only about one-third of them have the necessary skills that match the requirements of employers. This means that the majority of applicants

⁶ Basu, Deepankar. 2018. "An Approach to the Problem of Employment in India." SWI Background Paper 2018–1. Azim Premji University.

⁷ Government of India 2013. Twelfth Five Year Plan (2012- 2017), volume III, Social Sector, Planning Commission, New Delhi.

lack the appropriate skills needed to fulfill the demands of available jobs. The National Employability Report in 2014, conducted by Aspiring Minds, highlights the specific skill gap among engineers. Out of the approximately 600,000 engineers who graduate annually, only 18.43 percent are considered employable for the Software Engineer-IT services role. This means that a substantial majority of engineering graduates do not possess the required skills for this particular job profile.

Furthermore, the report reveals that an alarmingly low 3.95 percent of engineering graduates are adequately trained to be directly deployed on projects. This indicates a severe shortage of job-ready engineers who can immediately contribute to the workforce without requiring extensive additional training or upskilling. These findings underscore the pressing need for educational institutions and the labor market to bridge the gap between the skills being taught to students and the skills demanded by employers. Addressing this skill gap is crucial for enhancing employability, reducing unemployment, and fostering economic growth in India. It requires a concerted effort from various stakeholders, including educational institutions, industries, and policymakers, to align educational curricula with industry needs and provide opportunities for practical training and skill development.



Various studies have shed light on the quantitative aspects of skill gaps in different sectors of the Indian economy. On the demand side, a skill gap study conducted by the National Skill Development Corporation (NSDC) between 2010 and 2014 revealed that there is an estimated incremental human resource requirement of 109.73 million skilled manpower by 2022 in twenty-four key sectors. Another study conducted by Mehrotra et al. in 2013, titled 'Estimating Gap on a Realistic Basis for 2022,' arrives at a significantly higher estimate. According to this study, there would be an incremental skilled manpower requirement of 291 million by 2022.⁸

However, the authors of the latter study caution that the critical factor is not merely the number of individuals who would be skilled but rather the quality of skills that would be imparted to them. It is essential to focus not just on meeting the quantity of skilled workers demanded by the job market but also on ensuring that the skills are of high quality and relevant to the needs of the industries. In summary, these studies indicate a substantial demand for skilled manpower in various sectors of the Indian economy. To bridge the skill gap effectively, the focus should be on both the quantity and quality of skills imparted to the workforce. This

⁸ Bloom, D.E, Canning, D, and Sevilla, J. 2002. 'The Demographic Dividend: A New Perspective on the Economic Consequences of Population Change', Santa Monica, California: RAND, MR-1274.

requires targeted efforts in skill development and aligning educational and training programs with the evolving needs of the job market.

D. Nexus of education, skilling and sustainable employment opportunities

The government's policy places significant emphasis on skill development. This focus is essential for gaining entry into formal sector employment and enhancing productivity in the informal economy, thereby reducing poverty and the risk of underemployment. The National Policy on Skill Development sets the ambitious target of training approximately 104.62 million people from scratch, and an additional 460 million individuals are meant to be reskilled, up-skilled, and trained by 2022. It's important to note that a majority of these labor force members are either self-employed or engaged in casual employment.⁹

The challenge lies in improving the skill levels of this workforce. The individuals falling under these categories belong to various target groups and vulnerable sections of society. Moreover, these groups are not mutually exclusive, and there can be overlaps among them. For instance, the self-employed category comprises a diverse group of workers, while the casual employed individuals may be intermittently employed in various unskilled jobs. Addressing their skill development needs requires tailored approaches and initiatives that consider the unique characteristics of these diverse workforce segments. The absence of adequate access to quality education and training perpetuates a vicious cycle for vulnerable and marginalized sections of society. This cycle is characterized by low skill levels, resulting in limited opportunities for productive employment and ultimately leading to poverty. Among the marginalized groups are the rural poor, youth, persons with disabilities, migrant workers, and women, who collectively represent a significant portion of the impoverished population. These marginalized individuals often face significant barriers in accessing educational and training opportunities, which further exacerbates their lack of skills and hinders their chances of finding gainful and productive employment. As a consequence, they remain trapped in a cycle of low income and limited economic opportunities, making it challenging for them to break free from poverty.¹⁰

To address this issue, it is crucial to prioritize and implement targeted programs and policies that provide better access to quality education and skill development opportunities for the marginalized groups. By empowering them with the right skills and knowledge, they can break free from the cycle of poverty and secure better livelihoods, contributing to their personal growth and the overall development of society.

7. Recommendations:

A. Redefining skilling:

Globally, skill development typically involves undertaking targeted and intensive courses or apprenticeships that provide specialized skills not easily acquired elsewhere. These high-quality programs ensure employment opportunities and offer long-term career prospects. However, in India, skilling has been reduced to enrolling in short, three-month courses in limited fields such as carpentry, call centre services, or beauty and wellness. Due to this limited perspective, we have established substantial capacity for numerous short-term, basic courses. However, this focus has led to the neglect of building a robust ecosystem that can support longer and more advanced courses capable of delivering substantial benefits. Although the Industrial Training Institutes (ITIs) were intended to fulfil this role, they still suffer from deficiencies in both their reach and quality.¹¹ To unlock India's full economic potential and

⁹ FICCI- Konrad Adenauer Stiftung 2015. Skill Development in India, New Delhi.

¹⁰ Government of India 2015. Seizing the Demographic Dividend- Chapter 2, Economic Survey of India 2014-15, Ministry of Finance, New Delhi.

¹¹ Chandrasekhar, C., Ghosh, J. and Roychowdhury, A. 2006. 'The 'Demographic Dividend' and Young India's Economic Future', Economic and Political Weekly, 41(49): 5055-64.

enhance industrial productivity by providing companies with skilled workforce, it is imperative to adopt a comprehensive approach to skill development. We must move away from solely concentrating on training individuals for specific roles like plumbers, security agents, and beauty workers.

B. Identifying the jobs of the future:

In preparation for future opportunities, it is crucial to consider how we educate and equip our children with skills today. This requires the involvement of all stakeholders, such as the government, companies, educational and skilling institutions, the military, and the public, to implement significant changes in this domain. Moreover, economic and technological trends should be taken into consideration while making necessary adjustments. Numerous countries, including several South-East Asian nations, have already recognized the importance of this agenda and prioritized it accordingly.

C. Improving the Education level of the Labour Force:

The data from Fig 2 highlights the concerning state of education in the current labour market. Approximately 80 percent of the labour force has education only up to the secondary level, with about 29 percent being illiterate. While there has been progress in universalizing elementary education, resulting in improved enrolment and retention up to the upper primary level, there is a significant dropout rate thereafter. Estimates suggest that around 80% of people joining the workforce today are unemployable

This implies that higher education in India requires a significant rethink. India should have a far higher number of ITIs (public and private) or similar institutions, offering a wide range of high-end skilling courses, and fewer generic arts, science and commerce courses. Expanding access to secondary education is essential for equipping individuals with higher-level skills and knowledge, which are crucial for their personal development and for meeting the demands of a rapidly evolving job market. Quality secondary education can empower individuals to pursue diverse career paths, including agricultural employment and other industries, contributing to both personal growth and economic development. A strong and determined effort is required to push forward the experiment of vocationalizing school education. One potential approach is the establishment of specialized skills schools that students can join during their secondary education. These schools would offer a diverse range of courses, ensuring substantial learning and skill development over a period of three to four years. This initiative aims to equip students with the necessary skills and knowledge to pursue meaningful careers immediately after completing their high school education.¹²

We firmly believe that by undertaking this three-step fundamental reevaluation and complementing it with essential policy and budgetary measures, India can make significant strides towards achieving its vision for skill development.

8. Conclusion:

Currently, India stands at the threshold of capitalizing on the advantageous age structure of its population, presenting a unique opportunity. However, this endeavour poses a colossal challenge due to the widespread lack of skills and education among the majority of individuals entering the workforce, as well as the predominance of informal employment. Recognizing the significance of skill development in achieving national development and global competitiveness, the Government has established policy and institutional frameworks, along with allocated resources, to implement the national skilling agenda. However, to effectively accomplish this agenda, active participation and strong collaboration among all stakeholders,

¹² Mehrotra, S., Gandhi, A. and Sahoo, B.K. 2013. 'Estimating India's Skill Gap on a Realistic Basis for 2022', Economic and Political Weekly, XLVIII(13): 102-11.

including the government, educational service providers, industry, and civil society, are essential.

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