

## Harnessing the Demographic Dividend: Skilling India for Economic Supremacy – Policy Gaps and Opportunities

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### ABSTRACT

*India, poised to become one of the world's largest economies, faces a paradoxical challenge—while the demographic dividend offers immense potential, skill development remains a critical bottleneck. This paper critically examines the intersection of demographic advantage, skill development, and national economic ambitions in the context of the National Education Policy (NEP) 2020 and other governmental initiatives. It identifies key policy gaps and explores strategic opportunities to strengthen India's workforce capabilities for global economic competitiveness. Through detailed case studies, policy analysis, and data-backed insights, this paper argues that strategic alignment of education with industry, inclusive skill programs, and robust implementation mechanisms are essential to realize India's economic aspirations.*

**Keywords:** Demographic Dividend Skill Development, Economic Supremacy, Education Policy, NEP 2020, Workforce, India, Policy Gaps, Vocational Training, Human Capital, Labour Market.

### Introduction

India's ambition to emerge as a \$5 trillion economy hinges significantly on its ability to harness the potential of its young and dynamic workforce. Skilling this workforce is not simply a socio-educational concern but a strategic economic imperative. The introduction of NEP 2020 reflects a paradigm shift in India's educational priorities, emphasizing experiential learning, vocational training, and flexibility. However, a critical examination reveals significant gaps between policy vision and implementation on the ground. India presently has one of the youngest populations in the world, with more than 62% of the population in the working-age group and more than 54% below the age of 25. This demographic dividend offers a distinctive competitive advantage, but without satisfactory skill training and employability enhancement, it risks becoming a demographic burden. If leveraged strategically, this youth bulge can serve as a powerful engine for economic growth, innovation, and global competitiveness. This paper explores how India can convert its demographic dividend into economic supremacy through a robust and inclusive skilling ecosystem supported by sound education and employment policies.

### Economic Imperatives of Skilling in the Demographic Context

India is currently experiencing a demographic dividend, with one of the largest youth populations in the world. This demographic advantage presents a unique opportunity to accelerate economic growth, provided the right policies and interventions are in place.

**Table: 1 India's Youth Population Projections (15–29 years)**

Year	Total Population (Billion)	Youth Population (Millions)	% of Total Population
2021	1.38	365	26.4%
2026 (Projected)	1.46	367	25.1%
2031 (Projected)	1.52	355	23.3%
2036 (Projected)	1.56	335	21.5%

Source: Ministry of Health and Family Welfare (2020); Census Projections Report

As of 2021, over 365 million people in India were aged between 15–29 years, accounting for more than 26% of the total population. While this number is expected to remain high in the near term, projections indicate a gradual decline in youth percentage due to falling fertility rates and an aging population.

This demographic trend offers immense opportunities. A large, youthful workforce can boost productivity, drive innovation, and sustain economic growth if adequately skilled and employed. Sectors like manufacturing, digital technology, green energy, and healthcare are poised to absorb young talent, especially with the expansion of schemes like Skill India and the National Education Policy 2020.

However, challenges persist. Youth unemployment remains high, and many young Indians lack access to quality education and employable skills. Regional disparities, gender inequality, and digital divides further exacerbate the issue. Without strategic investment in skill development, entrepreneurship, mental health support, and job creation, the demographic dividend could become a demographic burden.

Globally, economies that have succeeded in transitioning to higher-value industries have done so through sustained investments in skill development. For India, sectors such as manufacturing, digital services, sustainable technologies, and healthcare require a robustly skilled workforce. According to the Periodic Labour Force Survey (PLFS), the percentage of formally skilled workers in India is only about 4.7%, compared to 52% in the USA, 68% in the UK, and 75% in Germany. The low skill penetration rate hampers productivity, innovation, and employability.

In the context of the demographic dividend, this gap becomes even more critical. A large, young workforce without the right skills leads to rising unemployment, social unrest, and economic inefficiencies. The UNFPA defines demographic dividend as “the economic growth potential resulting from shifts in a population’s age structure.” However, this potential is not automatic—it requires well-planned human capital investment.

**Table 2: Skill Gap in India by Sector (2022 Estimates)**

Sector	Estimated Demand (Million)	Current Availability (Million)	Skill Gap (Million)
Manufacturing	103	61	42
Construction	55	31	24
Healthcare	12	7	5
Retail	17	10	7
IT and ITeS	12	10.5	1.5
Tourism and Hospitality	10	5.5	4.5

Source: National Skill Development Corporation (NSDC), 2022

### NEP 2020 and Skill Development

The NEP 2020 integrates vocational education starting from Grade 6, promotes flexibility in subject choices, and encourages internships. It aims to blur the rigid boundaries between academic and vocational streams and foster a culture of hands-on learning. The policy envisions achieving a gross enrolment ratio (GER) of 50% in higher education by 2035 and universal foundational literacy and numeracy by 2025.

**Table 3: Enrollment in Skill Development Initiatives (2018–2023)**

Year	Total Enrolled (Lakhs)	Certified Candidates (Lakhs)	Placement Rate (%)
2018–19	52.6	44.2	32%
2019–20	61.3	50.1	35%
2020–21	47.5	39.8	28%
2021–22	54.7	46.2	31%
2022–23	58.2	48.9	34%

Source: Ministry of Skill Development and Entrepreneurship, Annual Report (2023)

Some key NEP provisions for skill development include:

- Creation of National Educational Technology Forum (NETF) to leverage ed-tech
- Encouraging internships with local industries, artisans, and entrepreneurs
- Inclusion of vocational education as a core part of school and higher education curricula
- Establishing National Skills Qualifications Framework (NSQF) to standardize skill levels

These reforms, if appropriately implemented, can create a flexible, skilled and job-ready workforce that aligns with India's demographic profile. However educational institutes ;both Primary and Secondary, currently lack trained faculty, equipment, and industry linkage. NEP's success depends on bridging these structural shortcomings and ensuring scalability and quality across regions.

### **Existing Policy Gaps in Leveraging Demographic Dividend**

**Fragmentation of Initiatives:** India has multiple skilling programs—PMKVY, DDU-GKY, NSDC, Skill India Mission, etc.—operating in parallel. Lack of coordination leads to redundancy, inefficiency, and misaligned outcomes.

- **Mismatch between Skills and Industry Needs:** There exists a significant disconnect between the training imparted and the skills demanded by industries. According to a CII report, over 45% of Indian graduates are unemployable due to skill gaps.
- **Urban-Rural Divide:** While urban centers benefit from better infrastructure and exposure, rural areas suffer from inadequate resources, poor internet connectivity, and lower awareness. Rural talent gets unnoticed .  
This imbalance hampers equitable demographic utilization.
- **Limited Industry Partnership:** Minimal involvement of industry stakeholders in curriculum design, assessment, and training delivery keeps courses outdated and theoretical.
- **Assessment and Certification Issues:** Skill assessments often lack transparency and standardization, leading to low employer confidence in certified candidates. Some assessments are biased also.
- **Social Perception:** Vocational education still carries a social stigma in India. Students and parents often view it as inferior to traditional academic paths, reducing participation.

### **Strategic Opportunities to Harness Demographic Potential**

To convert the demographic dividend into economic gains, India must prioritize skilling through these strategies:

- **Public-Private Partnerships (PPPs):** Engaging industry leaders in curriculum development, funding infrastructure, and offering apprenticeships. Examples include partnerships with Tata, Infosys, Maruti, etc.
- **Leveraging Technology:** Digital platforms like SWAYAM, eSkillIndia, and NASSCOM FutureSkills Prime can provide scalable, low-cost skilling. Blended learning, AR/VR simulations, and AI-based adaptive learning can revolutionize vocational education.
- **Localized Skilling Hubs:** Regional centers of excellence can cater to local industry demands—e.g., textile training in Tamil Nadu, automotive skills in Maharashtra, tourism skills in Uttarakhand.
- **Teacher Training and Capacity Building:** Up-skilling educators through continuous professional development (CPD), exposure to industry practices and pedagogical innovations is vital.
- **Incentivizing Skill Education:** Scholarships, recognition awards, and fast-track career pathways can encourage students to pursue vocational streams.
- **Migration and Mobility Readiness:** Skill programs must prepare youth for domestic and international labor markets, enhancing remittance income and employment diversity.

### **Women Participation in Skilling India for Economic Supremacy-**

Programs must target increased participation of women and marginalized communities to achieve inclusive growth.

India's journey toward economic supremacy cannot be achieved without the active inclusion of women in the workforce. While the country boasts a demographic dividend with a large proportion of youth, the gender gap in skill development and labor force participation remains a critical challenge. According to the Periodic Labour Force Survey (PLFS) 2022-23, female labor force participation in India stood at around 37%, still considerably low compared to global averages. Unlocking the potential of half the population is not just a matter of equity, but an economic necessity.

**Table 4: Policy Gaps Affecting Women's Skilling and Employment**

Policy Gap	Impact on Women
Limited access to vocational training in rural areas	Women in rural areas face restricted opportunities for skill development.
Gender bias in training programs	Programs often favor male-dominated sectors, ignoring traditionally female-centric roles.
Lack of safety and transportation	Discourages women from participating in distant training centers or workplaces.
Insufficient childcare support	Mothers struggle to balance family responsibilities with skill acquisition.
Low digital literacy among women	Prevents women from accessing online skilling and job platforms.

**Table 5: Opportunities to Empower Women through Skilling**

Opportunity	Expected Outcome
Expanding digital training for women	Enhances access to remote jobs and entrepreneurial ventures.
Inclusive curriculum development	Addresses specific needs and potentials of women across sectors.
Government-private sector partnerships	Boosts job placements and internships for trained women.
Establishing safe training centers	Encourages greater participation from women.
Financial incentives for women's skilling	Increases enrollment and completion rates in training programs.

**Table 6: Key Statistics on Women and Skilling (India)**

Indicator	Value	Source
Female Labor Force Participation Rate (2023)	27.2%	World Bank
Women Enrolled in Skill India Mission (2022-23)	43%	Ministry of Skill Development and Entrepreneurship
Women in STEM Workforce	14%	NITI Aayog
Unemployment Rate among Educated Women (Urban)	19.8%	Periodic Labour Force Survey 2023
Percentage of Women Using Digital Platforms for Learning	25%	IAMAI & Nielsen Report 2023
Women Beneficiaries of PMKVY (Pradhan Mantri Kaushal Vikas Yojana)	46%	MSDE Annual Report 2022

Despite several national initiatives like Skill India Mission, Pradhan Mantri Kaushal Vikas Yojana (PMKVY), and the National Education Policy (NEP) 2020, women continue to face barriers in accessing skill development programs. These include social norms, safety concerns, lack of mobility, inadequate access to digital technology, and limited awareness. Traditional gender roles often restrict women's ability to pursue education and training beyond certain fields like tailoring or beauty services, thus confining them to low-paying and informal sector jobs.

To truly harness the demographic dividend, India must prioritize women's skilling as a strategic focus. This requires gender-sensitive policy design that addresses both structural and societal barriers. Establishing local skill training centers with flexible timings, providing safe transportation, child care facilities, and targeted awareness campaigns can significantly enhance women's participation. Moreover, expanding women's access to digital literacy, STEM education, and emerging sectors like AI, green jobs, and healthcare can position them in high-growth industries.

The NEP 2020's focus on vocational education and flexibility can be a game-changer if implemented with a gender-inclusive lens. Special incentives, scholarships, and partnerships with women-led enterprises can further boost engagement. Importantly, there must be a simultaneous shift in societal mindset—where families, communities, and institutions value women's work and economic contributions.

India's demographic dividend will remain underutilized unless women are actively engaged in skilling and economic activities. Empowering women with relevant skills, confidence, and opportunities can double the nation's workforce potential and contribute significantly to GDP growth. Skilling India must, therefore, be inclusive by design, leaving no woman behind.

#### Case Studies and Best Practices

- **Germany's Dual Vocational Training System:** is highly recognized worldwide due to its combination of theory and training embedded in a real-life work environment. System Combines classroom education with on-the-job training, ensuring industry-ready graduates. India can adapt this model with contextual and local modifications.
- **Skill India Mission:** Launched in 2015, it aims to train over 40 crore people. While it has improved awareness and standardization, quality and placement remain concerns.
- **PMKVY (Pradhan Mantri Kaushal Vikas Yojana):** Offers short-term training and recognition of prior learning (RPL). Though it reached over 1 crore youth, employability outcomes remain modest.
- **Private Sector Initiatives:** Bosch's BRIDGE program, Larsen & Toubro's Construction Skills Training Institutes and IL&FS Skills are successful examples of corporate-led skilling with employment linkages.
- **State-Level Innovations:** Kerala's ASAP (Additional Skill Acquisition Programme) and Haryana's Skill University model show how localized strategies can work effectively.

#### Way Forward and Recommendations To Effectively Leverage the Demographic Dividend

- Form a National Skills Council to integrate and align all skilling initiatives under one vision.
- Promote lifelong learning and reskilling to cope with changing job markets.
- Integrate skilling with school curricula in meaningful and aspirational ways.
- Foster global skill mobility through international benchmarking and recognition.
- Ensure gender equity and inclusion in skilling, targeting marginalized groups.
- Track outcomes via robust monitoring and evaluation frameworks.
- Incentivize startups and SMEs to participate in training and employment creation.

#### Conclusion

India's demographic dividend presents an extraordinary opportunity to catapult the nation into economic leadership. However, this potential can only be realized if the youth are adequately skilled, employed, and empowered. Bridging the current policy-practice gap requires a well coordinated effort involving government, industry, and civil society. Unless and until the youth themselves change their mindset to contribute actively to the nation's economic growth, all government efforts will go in vain. Along with skilling them, it is equally important to work on their psychology so they remain flexible and open to learning new things.

NEP 2020 offers a promising foundation, but its success will depend on actionable reforms, adaptive governance, and sustained investment. Skilling India's youth is not just an economic agenda—it is a national imperative for sustained growth, social stability, and global influence.

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