

A Developed India@2047:
Charting the Future of Skilling and Resilient
Livelihoods

About The/Nudge Forum:

The/Nudge Forum is a platform for conversations, bringing together the best minds in Government, markets and civil society to accelerate progress towards our developmental goals. The/Nudge Forum is committed to building a thriving livelihood ecosystem in pursuit of a vision of a poverty-free India within our lifetime.

Executive Summary:

India stands at a crossroad. Poised to become a US\$ 10 trillion economy by 2035, with aspirations to be a developed nation by 2047, India has evolved from being a regional superpower to becoming a global advocate for democracy and a champion for the Global South. Not only do many in global tech leadership call India home, the homegrown 'India Stack' is also one of the most advanced and comprehensive 'digital public infrastructure' available – a model against which many developed countries are benchmarking their tech stacks.

Yet, the fact remains that a lot has to be done for India to truly become a developed economy and country. Several surprising discrepancies are yet to be resolved:

- We are the 5th largest economy, and yet we rank 143rd in per capita income.
- We have the largest workforce, and yet our LFPR (labour force participation rates) hovers at ~50% overall and ~ 25% for females (as compared to LFPR of ~75% and FLFPR of ~60% for China).
- We aspire for a poverty-free India, and yet we are one of the least productive nations (ranking 158th amongst 195 countries on the productivity index).

In a changing world order, with an increasingly inward-looking US and an increasingly outward-looking China, India has an opportunity to position itself as a forward-thinking leader of the Global South. For that to happen, India must break from its past, with structural changes to its education and skill development ecosystems - ones that align to what the world will look like in 2047.

On 1st February 2024 at the Bangalore International Centre, a gathering of eminent experts cutting across industries, technology, policy and civil society, each with substantive bodies of work in building and unlocking human capital, came together and underscored the need for immediate, disruptive and focused action along the following lines:

- Build human capital as defined by the demand side, i.e. industry; acknowledging the contributions of the informal and gig economy, and the shift in job creation towards the private sector. This is characterised by value for achievement credentials (the ability to do) as against the traditionally valued academic credentials.
- As the world foresees large-scale automation of manual work, India should leapfrog from job-work (eg: garment manufacturing, BPOs, etc.) and aspire for high-value IP creation, hi-tech manufacturing and data offerings (eg: production of robotic equipment for garment manufacturing) as well as skilled services in an AI-powered world.

- Gender responsive Hire-Train-Deploy models are key to increasing female representation at entry levels. Gender-aware work environments that take into account the unique challenges women face can improve women's participation in the workforce.
- Creating formal migration corridors for the blue collar workforce, at scale, and enabling access to employment with a premium for skills, which, in turn, will spur market innovation in skill development.
- Mobility between vocational and academic certification programs and the emergence of Skilling Universities offering Bachelors' certification will be key to incentivising youth to take up employment-enabling education that makes them more easily and widely employable.
- Personalised, learner-centric education and skills training systems and spaces leveraging generative AI at a fraction of today's cost, supported by efficient platforms for discovery will be key to improving workforce productivity.

The roles of Government and Markets:

In independent India in the 1950s, the Government played a central role in planning for development. The earliest five-year plans devised job creation strategies to support the economy, which relied heavily on the public sector. Higher educational systems to build human capital led to the establishment of national level institutions such as IITs, IIMs and ITIs.

With the passage of time, and particularly post liberalisation, the ecosystem evolved with centralised skill demand-supply forecasting, the creation of an independent skill ministry (MSDE), the formation of NSDC (2008), the establishment of Sector Skill Councils or SSCs (currently 38), the introduction of innovative financing instruments (eg: skill vouchers, central and state-sponsored schemes) and concerted efforts by Government to include markets in skill development initiatives.

Whilst these have resulted in large numbers of youth getting skilled, upskilled and reskilled, India has had mixed success in creating human capital aligned to industry needs. It is estimated that only 4-5% of its workers receive formal vocational training, thus falling short in ensuring a large, highly skilled workforce which is fundamental to ensuring sustained high economic growth. The supply of skilled human resources has not kept pace with changes in demand.

Way forward: *We need to critically assess the role of the state vs. markets. Government can best serve the agenda of welfare, sustainability and inclusion by creating public goods (both physical and digital) and incentivising industry to activate economic activity in underserved, homogenous eco-zones. The growth of investment, innovation and global competitiveness is best served by industry, which values achievement credentials (as against academic credentials). It is imperative that universally accepted, globally-competitive definitions for skilling become the basis of higher education and skill development.*

The shift in 'Where India Will Work':

The population engaged in agriculture has fallen from 67.5% in 1950 to ~60% today. We continue to retain a large percentage of our population in this sector, with poor levels of productivity and widespread poverty amongst the small and marginal farmers.

Having missed the initial wave of large-scale, low-cost manufacturing catering to the domestic and global markets, the manufacturing sector in India is currently witnessing modest growth at low levels of productivity. For example, 80% of our manufacturing units employ 20 people or less, which points to the small scale and under utilisation of world-class manufacturing methods.

Driven by post-liberalisation economic growth, the services sector as a whole, has evolved into the largest contributor of India's growth engine, with sub-sectors such as retail, banking and insurance, IT and ITeS, travel and tourism, health, education, communication and transportation, and entertainment, to name a few, creating large-scale employment and income opportunities for India's young workforce.

The IT and ITeS sectors, in particular, have been key drivers of India's economic growth through creation of direct and derivative economic value. The factors behind the success in IT include strong Governmental support, an English-based educational system feeding a large talent pool, and global outsourcing opportunities. The sector also benefited from the establishment of software technology parks and special economic zones, and entrepreneurship of Indian IT firms.

Way forward: *We are likely to be faced with acute, large-scale displacement of our workforce, particularly grey-collared and white-collared workers, on account of AI and automation. Acute shifts require breakaway solutions. Riding on the availability of tech talent at scale, India must aspire to leapfrog from the job-work economy into one of creation of IP, data and capital goods through hi-tech manufacturing, value-added services as well as catering to future demand for highly skilled services in an AI-powered world. For the blue-collar workforce, we need to create migration corridors at scale, and enable access to employment with a premium for skills, which, in turn, will spur market innovation in skill development.*

Women in the Workforce:

Historically opportunities in sectors like manufacturing have been out-of-reach for women in India. It is not the lack of willingness, but rather social and cultural norms and often exclusion, that has prevented women from entering into sectors like manufacturing, transportation, etc., thus contributing to low female LFPR rates.

Even newly developing fields, like AI, are already witnessing low representation of women – currently less than 30%. In mature job roles, like systems engineering, women account for only 15% of all professionals.

A root cause for this pattern is the social norm of women's disproportionate share of social and domestic responsibilities, including unpaid care work. Current participation of women in the workforce is skewed towards low-wage roles. Also, investment in women's education and gender-responsive curriculum in skilling for lucrative roles is sub-par. Lack of basic amenities, such as toilets or street lights, continue to pose a barrier to women in both, rural and urban India, in accessing work outside of home.

Way forward: *India has a real opportunity to unlock the productive potential of young women coming out of our educational institutions. Models of Hire-Train-Deploy are critical to increasing gender representation at entry levels and, over time, gender-aware work environments will be key to unlocking the value of diversity in leadership roles. Governments also have the imperative to improve safety, sanitation and mobility solutions as a means to improve womens' participation in the workforce.*

Cultural Factors:

Traditionally vocational skill training programs have fared as well, if not better, than formal education degrees in improving direct employability and access to jobs. Yet a strong preference for formal degrees remains, closely tied to the aspiration for government jobs or on account of social appeal (such as improved matrimonial prospects).

Globally, aspiration for skill development (whether vocational, technical or entrepreneurial) is determined by what markets (and not society) value, signalled by factors such as wage premiums, role models, etc. Unfortunately in India differential skill levels do not fetch a wage premium or vertical growth, discouraging many from pursuing such pathways.

Way forward: *Recognizing this aspect, the New Education Policy (NEP 2020) has enabled mobility across vocational and academic certification. We are seeing the emergence of Skilling Universities offering Bachelors' certification to develop skills aligned to industry needs. Skilling Universities should aim to provide learners with hands-on experience, industry connect and exposure as well as employability skills. They should also offer flexible learning pathways, credit transfer and recognition of prior learning. By doing so, Skilling Universities can bridge the gap between education and employment and better prepare the youth for the future of work.*

Productivity of the Informal Sector:

Unlike nations that developed a strong manufacturing base as a means for population exiting agriculture to access formal employment, India has sustained its growth through services, both primary and derivative. This has resulted in large numbers of unskilled or semi-skilled youth stumbling into what now constitutes the informal sector. The absence of adequate skill training in the informal sector by Governments and markets has led to low skills, low innovation and, as a result, low productivity at large scale.

Beyond the imbalance of demand and supply of formal employment opportunities, the growth of the informal sector, driven by cultural elements, has made India 'a country of free agents'. Young Indians are increasingly valuing autonomy and opting to do 'gig' work or

becoming micro entrepreneurs over 'working for someone else'.

The informal sector, however, does not play by the rules all the time (partly because complex systems leave no choice) and hence does not get the required support from Government and/or markets, which makes centralised skilling programs in the informal sector less likely to be successful.

Way forward: *Technology offers a unique opportunity to achieve learning outcomes for the solopreneur/informal worker. Online skill development leveraging generative AI offers a safe and personalised space for learners at a fraction of the cost. A learner-centric upskilling/reskilling system, coupled with efficient platforms for discovery will be key to improving productivity of the informal sector. Technology can also foster peer-to-peer learning, networking and collaboration in the informal sector, where workers often lack support systems.*

Conclusion:

There is no denying the need and urgency to create large-scale economic opportunities for Indians, and the profound and far reaching social and economic impact of collective action (or inaction) of our society as a whole. Unless structural and future-positive changes are implemented, India runs the risk of the 'middle income trap' happening at lower per capita levels. India **'must turn rich before it turns old'**.

A new economic order is upon us. An economic order in which the 'tool creators' (i.e. product-led nations) will capture disproportionate value. We have to shed the low-cost, back-office legacy and mindset and transcend from operating in data, robotics, AI, etc. towards becoming an IP-led, product-first creator in data, robotics, AI, etc. With this fundamental shift in the economic system, we need a ground-up rethink of our education and skilling ecosystems.

We must prepare for a hybrid future over the next 10-15-20 years, where jobs executed by humans will become automated or, in many cases, aided by AI. The good news, for the time being, is that automation and AI will cause minimal disruption to India's formal and informal blue-collar workforce and, if anything, could enhance the mass employment base we need.

To address the gender gap in India, we need to use technology to empower women's participation in the workforce and productivity. As generative AI advances, we must acknowledge and overcome the digital divide that adversely affects women, and which is critical for inclusive development.

To change in proportion to the challenges that lie ahead, we need to deploy a future-back thinking approach, which envisions a prosperous and inclusive India in 2035-2047, and then work backwards from there. This approach should be informed by multi-year journeys which reimagine fundamental building blocks (eg: aadhaar, e-kyc, UPI, etc.). Given India's heterogeneity, different segments of the workforce will need different solutions - a one-size-fits-all solution will not work. Importantly, we will need to leverage our digital public infrastructure for wider and more equitable access.

Next Steps at The/Nudge Forum:

At The/Nudge Forum, we will continue to delve deeper into envisioning a thriving future for India through upcoming convenings.

The subsequent engagements in this 'Skills Ecosystem' series will explore the various frameworks and approaches that would be instrumental in facilitating this thinking, including:

- Addressing the gender LFPR challenge by exploring solutions such as Hire-Train-Deploy and other models for scale employment/entrepreneurship.
- Rethinking the approach towards education and upskilling as we transition from academic credentials to achievement credentials.
- Skill Passport: skill standards to transform India into a global human capital provider.
- Entrepreneurial Mindset - growing from solopreneurship and self-employment to decipreneurship and beyond.

About the Roundtable:

The roundtable was conducted by The/Nudge Forum on 1st February 2024 at the Bangalore International Centre, and comprised participants from policy, industry, technology and civil society.



Roundtable Participants: Dr. K P Krishnan (*Honorary Research Professor, CPR | Fmr Secy MSDE - GOI*), Dr. Sharad Sharma (*Co-founder, iSPRIT Foundation*), Ms. Kanta Singh (*Dy Country Representative for India, UN Women*), Mr. Ashutosh Gupta (*CEO, LinkedIn India*), Mr. Anand Rangarajan (*VP, Engineering and Google Bangalore Site Lead*), Mr. Mekin Maheshwari (*Founder, Udhyan Learning Foundation & Co-founder, GAME*), Ms. Rituparna Chakraborty (*Co-founder & Exec Director, Teamlease*), Mr. RCM Reddy (*MD & CEO, Schoolnet India*).

The discussion was moderated by Ms. Sudha Srinivasan, CEO, Centre for Social Innovation at The/Nudge Institute.

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