

INDIA EMPLOYABILITY REPORT

# Reimagining Employability for the 21st-century

## 10 Million Apprentices in 10 Years

August 2022



## ACKNOWLEDGEMENTS

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### Cover photo

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## FOREWORD

The COVID-19 tragedy exposed the pre-existing conditions ailing the country. India is poor because it is not only inadequately formalized, financialized, urbanized, industrialized, but also inadequately skilled. At the same time, the pandemic is forcing policy into painful binaries: Us versus them; fight vs flight; and the most painful — lives versus livelihoods. The imperative to deliver economic opportunity could not be clearer even as uncertainty abounds.

Most people accept that they cannot buy a flight ticket from Bangalore to Delhi for the year 2031; there are too many variables to lock in a price and contract this far in advance. Yet predicting the *future of work* is a pervasive preoccupation in policy circles. In truth, it is impossible to know what work will look like a decade from now. We can't predict the future, but we can prepare for it.

One way to do this is by fixing our skills ecosystem to not only provide training opportunities to a large cohort of young people, but to be agile enough to allow for reskilling and upskilling as the world of work changes. This report outlines an initial step in this journey by proposing specific, finite, and actionable policy reforms that will increase the number of employers appointing apprentices and the number of apprentices from 5,00,000 to 10 million over the next ten years.

2047 will be India's 100<sup>th</sup> year of Independence. There is a difference between independence and freedom. Freedom affords an individual the ability to make choices. Skills aligned with market demand and work experience through apprenticeships offer better choices to India's large and growing youth population than the current supply-driven model.

More robust investments in human capital will enable India to position itself better vis-à-vis a changing global landscape. Over the next 25 years the ageing of the world offers us a unique opportunity. A fourth of the world's new workers will be Indian. This will help raise Gross Domestic Product (GDP) as India moves from its current fifth place to third worldwide. But the true measure of prosperity and inner strength is per capita GDP, where India ranks 142<sup>nd</sup> in the world. To be in the top 50, we must cultivate employability.

This report is first in a series that will offer a nuanced understanding of what employability means for India's labour market at an uncertain time when forces ranging from technology to pandemics keep changing the rules of the game.

Poet Ramdhari Singh Dinkar wrote *Kshma Shobti us Bhujang ko Jis ke paas Garal ho* ("only the strong and powerful can be benevolent, kind, or generous"). Understanding and effectively cultivating employability starting with 10 million apprentices will make India stronger. The time for action is now.

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## ABBREVIATIONS

<b>AASN</b>	Australian Apprenticeship Support Network
<b>AICTE</b>	All India Council for Technical Education
<b>AISHE</b>	All India Survey on Higher Education
<b>BoPT</b>	Boards of Practical Training
<b>DDUGKY</b>	Deen Dayal Upadhyay Grameen Kaushal Yojna
<b>DGT</b>	Directorate General of Training
<b>DST</b>	Dual System of Training
<b>ITI</b>	Industrial Training Institute
<b>GDP</b>	Gross Domestic Product
<b>GER</b>	Gross Enrollment Ratio
<b>MoE</b>	Ministry of Education
<b>MHRD</b>	Ministry of Human Resource Development
<b>MSDE</b>	Ministry of Skill Development and Entrepreneurship
<b>MSME</b>	Micro, Small, and Medium Enterprise
<b>MES</b>	Modular Employable Skill
<b>NAPS</b>	National Apprenticeship Promotion Scheme
<b>NATS</b>	National Apprenticeship Training Scheme
<b>NCVET</b>	National Council for Vocational Education and Training
<b>NEP</b>	National Education Policy
<b>NEEM</b>	National Employability Enhancement Scheme
<b>NSDC</b>	National Skill Development Corporation
<b>NSQF</b>	National Skills Qualifications Framework
<b>PLFS</b>	Periodic Labour Force Survey
<b>PMKVY</b>	Pradhan Mantri Kaushal Vikas Yojana
<b>RDAT</b>	Regional Directorate of Apprenticeship Training
<b>RoI</b>	Return on Investment
<b>RPL</b>	Recognition of Prior Learning
<b>SAA</b>	State Apprenticeship Advisers
<b>SC</b>	Scheduled Castes
<b>SDI</b>	Skill Development Initiative
<b>SSDM</b>	State Skill Development Mission
<b>SSC</b>	Sector Skill Councils
<b>ST</b>	Scheduled Tribes
<b>STEM</b>	Science, Technology, Engineering and Mathematics
<b>TPA</b>	Third Party Aggregator
<b>UGC</b>	University Grants Commission
<b>U.S.</b>	United States
<b>VET</b>	Vocational Education and Training
<b>VPET</b>	Vocational, Professional Education and Training

## EXECUTIVE SUMMARY

There is a widening chasm between education, training, and employment in India.<sup>1</sup> At the same time that India's larger youth population relative to its smaller dependent population offers the prospect of driving productivity, it also poses a formidable challenge. Providing quality education, training, and employment to this heterogenous youth cohort of 371 million<sup>2</sup> is a demanding task – one that we have been failing at. This is compounded by forces such as technology, and now the COVID-19 pandemic, that are altering the job market faster than the capacity of education and training institutions to keep up. In an era of continuous change, uncertainty is the only certainty.

This report, part of a series examining what it means to be employable in India today, starts by outlining the *inventory of employability*. That is, how education, skills and socio-economic backgrounds effect employability and the current state of affairs. The analysis suggests that the inadequacies of the current systems are obstructing the realization of our demographic advantage despite gains in enrollment, literacy, and basic learning outcomes. Those with higher levels of education comprise a greater share of the unemployed suggesting that education alone is no longer a guaranteed path to decent employment.

When it comes to skills, despite the complex web of government schemes and non-profit, for-profit, and public institutions that provide training, the incidence of formal training remains low. The supply-side focus of training does not align with the demands of the job market. Both workers and employers express a preference for on-the-job learning over just skills training.<sup>3</sup>

Finally, when it comes to the inventory of employability, household income matters. India has a heterogenous youth population. Variations in socio-economic backgrounds determine the opportunities a young person has available. Socio-economic differences effect participation in education and skills; the transition into the world of work; and the choice of occupation. Those with less are relegated to informal, short-term training. Those with a little more pursue the vocational track with longer training horizons. And those with enough tend to pursue education in institutions of higher education. But mismatches between education and skills on the one hand, and labour market demand on the other, mean that youth unemployment and underemployment continue to be a major challenge across all groups.

Apprenticeships can help bridge this gap. Section three of the report explores the *inventory of apprenticeships*. It provides an overview of The Apprentices Act, 1961 and subsequent reforms; the governance infrastructure for apprenticeships; and the stipend structures and online portals to administer them. Yet despite these, India has less than 5,00,000 apprenticeships. This section exposes the obstacles to realizing the potential of apprenticeships for India.

## Doubling the number of apprentices from 5,00,000 to 10,00,000 per year, and setting an initial target of 10 million apprentices in ten years, is not just a desirable goal, but an achievable one.

Section four of the report lays out a plan for expanding apprenticeships in an iterative way beginning with higher education institutions. As of 2019, according to the Ministry of Education, only 37 million were enrolled in universities, colleges, and stand-alone institutions of higher education that cannot offer degrees and therefore offer diploma certificate programs (Box 3).<sup>4</sup> Roughly one in ten of these students are distance learners.

The programs in universities – including Skills universities, colleges and stand-alone institutions that offer degrees are highly conducive to apprenticeships for the following reasons. First, the longer duration of training allows time for students to gain experience as apprentices. Second, students from these programs are more likely to be a fit for the requirements of bigger employers that are also more likely to engage apprentices. Third, that these young people are from households that are amenable to paying for degrees means that they are also more likely to have requisite levels of education and are in a better position to access technology and digital skills needed to engage in online education. For these reasons, these higher education institutions offer tremendous potential for promoting degree-linked apprenticeships.

Doubling the number of apprentices from 5,00,000 to 10,00,000 per year, setting an initial target of 10 million apprentices in ten years, is not just a desirable goal, but an achievable one. Degree-linked apprenticeships should be designed to enable (1) earning while learning, (2) learning by doing, (3) learning with flexibility, (4) learning with modularity, and (5) learning with signaling value.

International experience with apprenticeships, described in section five, substantiates the fact that an apprentice's entry into the world of work will be smoother than that of a non-apprentice.<sup>5</sup> Yet despite the long-standing tradition of apprenticeship in India, and The Apprentice Act that has been implemented in some form since 1961, apprenticeships have not gained traction.

Section six of the report provides a detailed set of recommendations to leverage the potential of apprenticeships, beginning by the iterative goal of creating 10 million degree-linked apprentices in ten years.

The following is a summary of the recommendations presented in section six.

1. All training should eventually be employer-led, as through apprenticeships. This must be an incremental process beginning with degree-linked apprenticeships.
2. The governance architecture of apprenticeships must be streamlined.
3. Mandate that universities, colleges, stand-alone institutions should make provisions for an apprenticeship program.
4. Apprenticeships should be a tripartite agreement between the university, the apprentice, and the industry partner. Associated changes should be made to reflect this in UGC regulations as well as the Apprenticeship Act.
5. Create a single portal for both National Apprenticeship Training Scheme (NATS) and National Apprenticeship Promotion Scheme (NAPS).
6. Embrace properly vetted Third Party Aggregators (TPAs) to serve as intermediaries between employers, potential apprentices, and government.
7. Adopt uniform stipend structures and government reimbursement across Ministry of Education (MoE), Directorate General of Training (DGT) and National Skill Development Corporation (NSDC).
8. Afford the same health and safety protections for apprentices as regular workers. Employer liability for compensation of injury to apprentices should be the same as for regular workers.
9. Build government capacity and Institute awareness campaigns at the Central and State levels as well as in companies.
10. Expand and prioritize Recognition of Prior Learning (RPL) certification and design processes by which employers or Third Party Aggregators (TPAs) can apply for RPL certification on behalf of an apprentice.
11. Ensure that Sector Skill Councils have state representatives.
12. Focus on enabling apprenticeships among smaller companies.

Ultimately, when it comes to education and skills training, the perceived value matters. To individuals and parents, whether they can leverage the education and training to find gainful employment matters. For employers, a productive workforce is key. For governments, building human capital for development and growth is important. All stand to gain with a well-functioning education and skills system; all stand to lose if the shortcomings are left unaddressed.

# 1.

## INTRODUCTION: THE CASE FOR APPRENTICESHIPS

There is a widening chasm between education, training, and employment in India.<sup>6</sup> At the same time that India's youth population relative to its smaller dependent population offers the prospect of driving productivity, it also poses a formidable challenge. Providing quality education, training, and employment to this heterogeneous youth cohort of 371 million<sup>7</sup> is a demanding task – one that we have been failing at. This is compounded by forces such as technology, and now the COVID-19 pandemic, that are altering the job market faster than the capacity of education and training institutions to keep up.

The result is, first, that the nation's education system is failing to deliver learning outcomes in schools and in higher education that underpin successful economic trajectories. Second, the National Education Policy 2020 underscores the fact that the education and skills systems are siloed to the detriment of our youth (**Box 1**). Skills are integral to education and vice versa. Third, faced with the pressure to productively engage the large youth cohort, policymakers have focused on the provision of training, but the connect to employers has been tenuous at best. Over time, this has fueled a gap between education and training on the one hand, and the

needs of the job market on the other. Neither the quality nor the content of education and training adequately cater to the demands of the job market. So, for the jobs that do exist, employers can't find the right employees; workers, despite training, often don't find jobs; and an already ailing labour market is getting worse.

Even before the pandemic, unemployment was rising. The unemployment rate went from 2.3 percent in 2009<sup>8</sup> to 5.8 percent in 2018.<sup>9</sup> The youth unemployment rate, at 17.8 percent in 2018, was three times the overall level.<sup>10</sup> Although unemployment has gone up, the bigger challenge in India is underemployment – that is, a large share of individuals are employed in low-productivity jobs with poor wages. 83.3 percent of non-agricultural employment was informal in 2017-18.<sup>11</sup>

Apprenticeships, the practice of embedding on-the-job training in academic degrees programs or vocational study, can help rebuild the education, skills, to employment continuum. Apprenticeships not only promise better outcomes for youth, but they also offer the prospect of a good return on investment (ROI) for employers.

### Box 1

#### National Education Policy 2020: Breaking Down Education and Skills Silos

The National Education Policy 2020 (NEP), when implemented, will be transformational for India. Among other reforms, it provides a pragmatic path to promote convergence between the education and skills systems. It does so by addressing the issue of the disconnect from 'demand' by proposing ways to ground education — its curriculum and pedagogy — in the world and its challenges. The NEP is designed to integrate development of skills in the education system, and to integrate knowledge in the skills system. The NEP empowers institutions to enable this by developing and running their own programs with academic and operational autonomy, which also to the provision of online education, for instance.

The NEP sets a target so that at least 50 percent of learners should be introduced to vocational education across both school and higher education systems by 2025. Focus areas for vocational training will be identified on the basis of expertise gaps identified in demands by the market, and rooted in local opportunity mapping. Apprenticeships are an enabler of this convergence between education and skills. Ultimately, this will lead to better employment outcomes for individuals; higher returns on investment for employers; and higher productivity in the economy.

Source: National Education Policy, 2020

Taking each in turn.

**Earning while learning:** When it comes to advantages for youth, apprenticeships are a way to connect young people to potential employers. Youth from socio-economically disadvantaged backgrounds face pressure to earn as they learn. Apprenticeships can help address this need.

**Learning while doing:** Apprenticeship enabled on-the-job training not only serves a practical purpose, but it also establishes a real-time feedback loop between employers and potential hires. This ensures that youth are skilled in tasks and techniques that are in demand.

**Learning with flexibility:** Forces like technology and the pandemic are disrupting labour markets. This means that youth need flexibility in when, where, and how they access training. Allowing for different methods of skills acquisition through on-campus, on-site, online, and on-the-job training allows for flexibility in a constantly changing labour market.

**Learning with modularity:** In addition to disrupting labour markets, these major forces are also altering education and skill requirements. This means that the incidence of 'employed-learners' will rise. Individuals will need to enter and re-enter the education and skills ecosystems to constantly reskill and upskill themselves. Organizing training in modules that allows for lateral entry<sup>1</sup> and multiple entry and exit<sup>2</sup> will enable this.

**Learning with signaling value:** Finally, supplementing classroom education with on-the-job experience provides important signaling value to employers that the person is job-ready and that s/he is attuned to professional life. Moreover, when vocational education degrees translate into jobs through apprenticeship linkages, this will help counter the commonly bias that favors academia and cognitive occupations over vocational education and manual occupations.

1 Lateral entry refers to the ability of a student to be admitted into a program during any semester subject to fulfillment of qualifying criteria.

2 Multiple entry and exit refer to the option for a student to exit the system at any level with skill certification and then seek credit exemptions for this certification should they re-enter the system at a later date.

# BENEFITS

## of a Successful Apprenticeship Program

REDUCED COST  
of HIRING



EARNING while  
LEARNING



LEARNING with  
SIGNALING  
VALUE

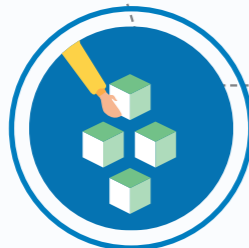


LEARNING  
by DOING

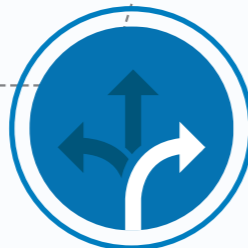


for  
EMPLOYERS

LEARNING with  
MODULARITY



LEARNING with  
FLEXIBILITY



for  
EMPLOYERS

LARGER POOL of  
CANDIDATES to  
choose from



INCREASE in  
PRODUCTIVITY



For employers, apprenticeships provide a way to measure how effective their training is by establishing a direct feedback loop. This enables employers to optimize their training. Moreover apprenticeships, relative to traditional hiring and training of full-time employees, can deliver a positive ROI<sup>3</sup> for employers based on three main factors:<sup>12</sup>

- First, they significantly reduce the cost of hiring. Transitioning an apprentice into full-time employment is more cost-effective for employers.
- Second, apprentices acquire job-specific skills that enable them to be immediately productive saving on the time it would take for a new employee to get acclimated.
- Third, the more apprentices a company takes on, the larger their potential pool of candidates to hire and choose from to enable a better fit.

International experience substantiates the fact that an apprentice's entry into the world of work will be smoother than that of a non-apprentice.<sup>13</sup> Yet despite the long-standing tradition of apprenticeship in India, and the Apprentice Act that has been implemented in some form since 1961, apprenticeships have not gained traction. With a labour force of just under 500 million,<sup>14</sup> less than 5,00,000 youth sign apprenticeship contracts each year.<sup>15</sup>

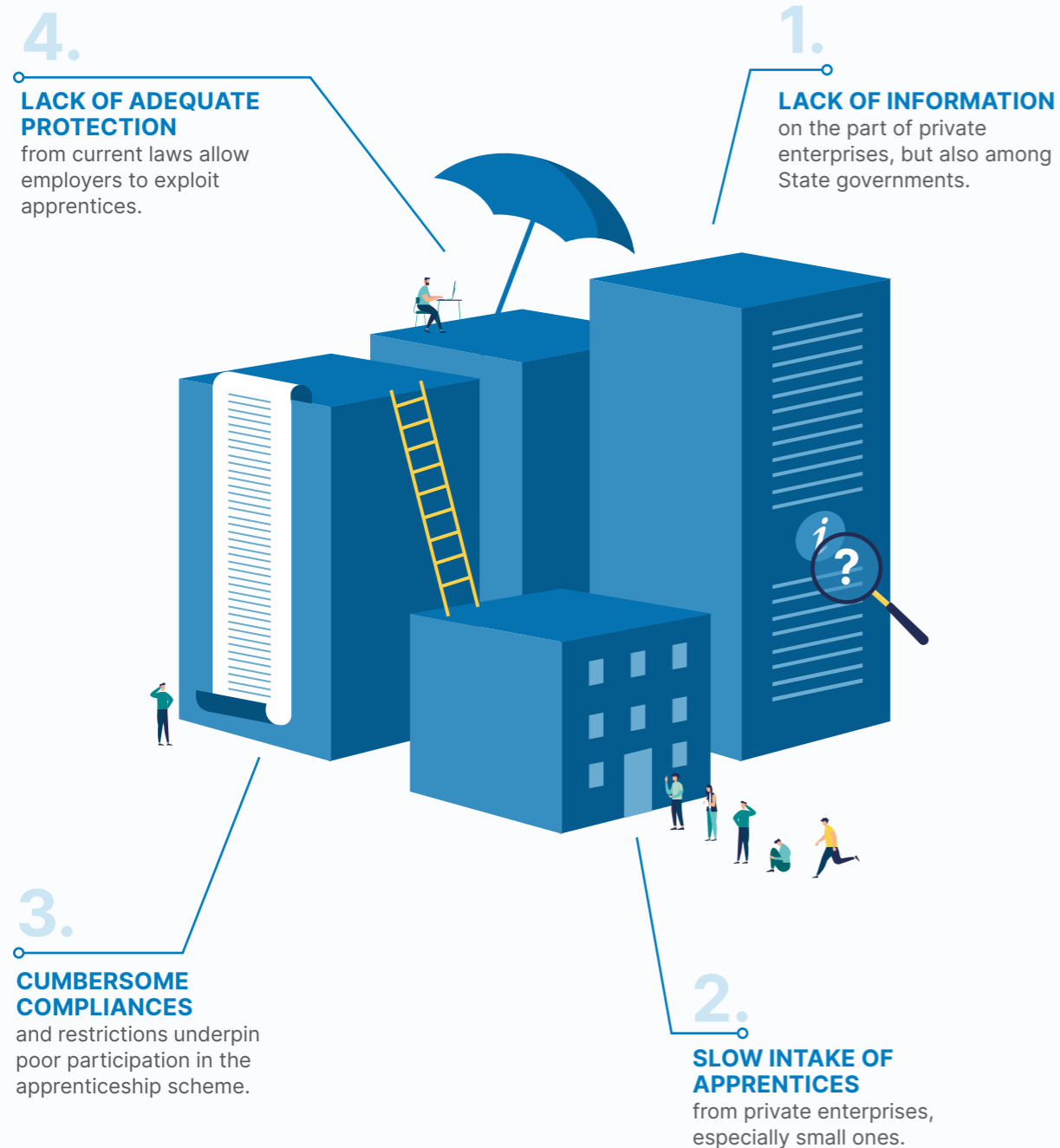
<sup>3</sup> The ROI of offering apprenticeships can be calculated for a business based on certain quantifiable characteristics through the following formula:  $ROI = [(Monetary\ Benefits - Training\ Cost) / Training\ Cost] \times 100$ . This formula also makes the case for channeling apprentices into full-time employment so that their productive potential can be realized rather than constantly bringing in new apprentices as a replacement for full-time employees. The latter not only has ethical misgivings, but also consistently leads to a loss of institutional knowledge, and decreases the productivity that comes with being on the job for longer periods of time.

**International experience substantiates the fact that an apprentice's entry into the world of work will be smoother than that of a non-apprentice.**

There are many reasons for why apprenticeships have not gained traction in India. Perhaps the leading one is that private enterprises, especially small ones, have been slow to take on apprentices. A general lack of information on the part of private enterprises, but also among State governments, is pervasive. Cumbersome compliances and restrictions underpin poor participation in the apprenticeship scheme. At the same time, current laws do not provide adequate protection to apprentices and there is evidence that some employers exploit apprentices as cheap labour; don't provide the mandated training; and use apprentices as a substitute for full-time labor. This undermines the apprenticeship program and rightly garners opposition from groups representing workers. Overcoming these challenges to expand the number of apprentices in India is vital to rectifying mismatches in the labour market and to delivering on the aspirations of our youth.



## Why haven't apprenticeships gained traction in India?



# 2.

## INVENTORY OF EMPLOYABILITY

### 2.1 EDUCATION

**Despite gains in enrollment, literacy and basic learning outcomes lag.** India has made important gains in raising enrollment rates.<sup>16</sup> 97 percent of Indian children are now enrolled in school. This is up from 93 percent in 2005.<sup>17</sup> Yet, despite rising enrollment rates, 29 million youth do not have basic literacy, with more girls

(19 million) than boys (10 million) being illiterate. Girls have higher enrollment rates than boys at the primary level, but gender parity in enrollment declines at higher levels of education, except in postgraduate education where girls' enrollment slightly exceeds that of boys.<sup>18</sup> Overall, learning outcomes remain weak<sup>19</sup> and enrollment in higher levels of education taper significantly after middle school (**Table 1**).

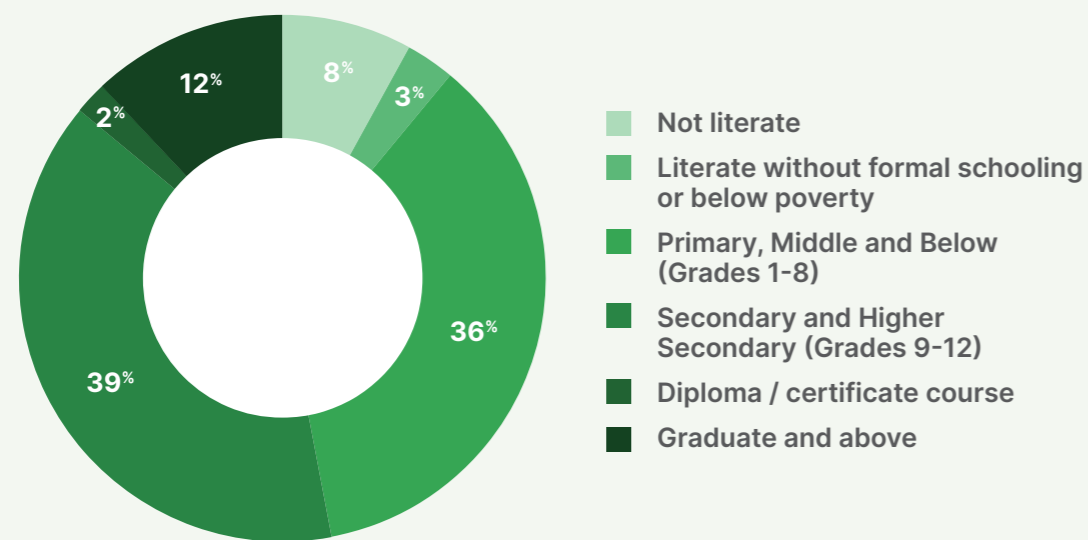
Table 1  
Breakdown of Youth Population (15 to 29 years) by General Education Level<sup>20</sup>

Education Level	Male		Female		Both Sexes	
	Numbers (millions)	Share (percent)	Numbers (millions)	Share (percent)	Numbers (millions)	Share (percent)
Not literate	10	5	19	11	29	8
Literate without formal schooling or below primary	5.3	3.2	6.3	3.2	12	3.2
Primary, Middle and Below (Grades 1-8)	68	35	61	35	128	36
Secondary and Higher Secondary (Grades 9-12)	80	42	62	37	142	39
Diploma/certificate course	4	2	2	1	6	2
Graduate and above	24	13	22	13	45	12
Total	191.3	100	172.3	100	362	100

Source: Author's Calculation based on UN Population Division, 2018 and PLFS 2017/18



Figure 1  
General Education Level of Youth (15 - 29), Both Sexes



Source: Author's Calculation based on UN Population Division, 2018 and PLFS 2017/18

Just under half of the youth population have less than a secondary education, or no education at all (Figure 1). This suggests that either necessity drives the children from less economically privileged households into activities other than school, and/or that the perceived return on investment to school education is lowest among the poorest households, disincentivizing school attendance. This is especially true when it comes to girls' education. If education and training were linked to income generation and better prospects for future employment — as with apprenticeships - school attendance would likely improve.

India has about 39 million (roughly 20 million male; 19 million female) students enrolled in 1,043 universities, 42,343 colleges, and 11,779 stand-alone institutions of higher education.<sup>21</sup> The Gross Enrollment Ratio (GER) for higher education for all social groups is 27 percent; it is 23 percent for Scheduled Castes; and 18 percent for Scheduled Tribes.

### Misalignments between what youth are learning and the requirements of the job, both in terms of hard and soft skills, also means that many are unemployed despite higher levels of education.

Interestingly, overall gross enrollment in higher education has also been stagnant around 26 percent for the last three years.<sup>22</sup> This fact supports the contention that there is a growing schism between education and the world of work.

Education no longer secures the path to decent employment. Those with higher levels of education constitute a greater share of the unemployed (Figure 2). Of those that are unemployed, 16 percent have a graduate degree. Those with a post graduate degree or above constitute a 14 percent share of the unemployed. This also indicates that the less educated find work because they have to make ends meet.

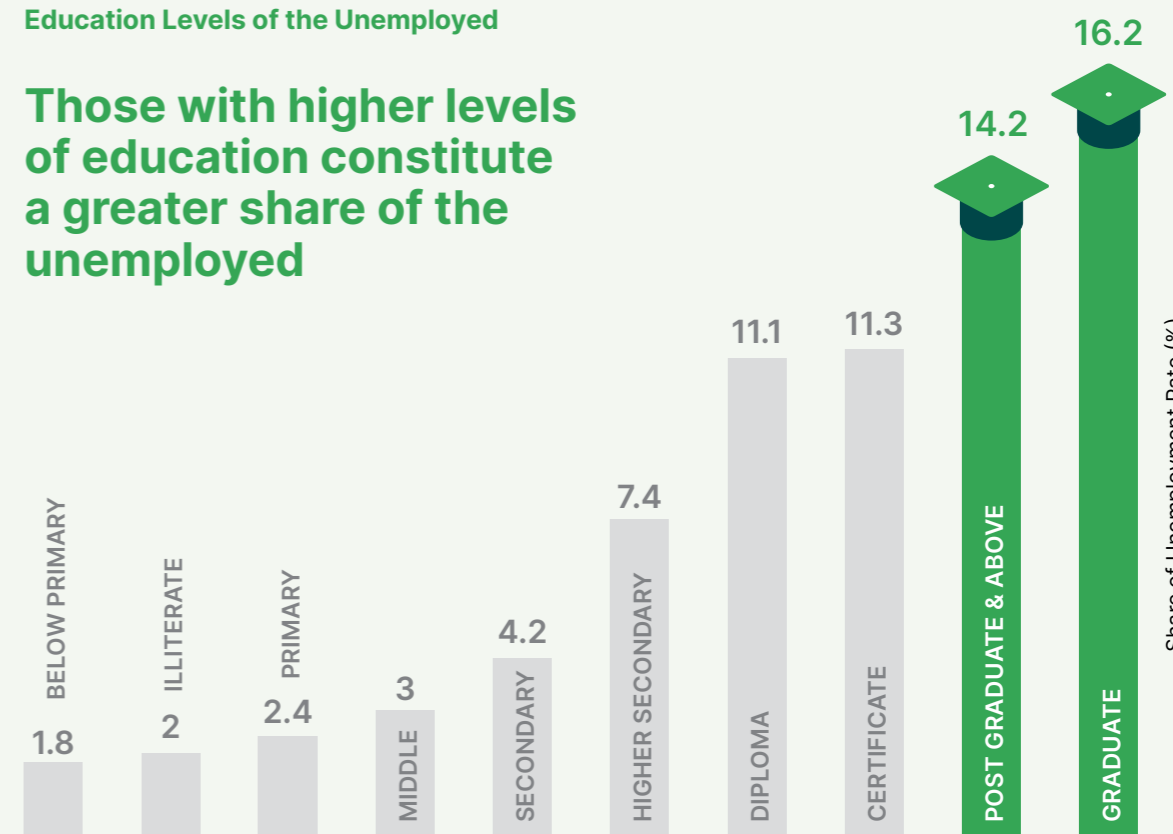
Why do those with more education constitute a greater share of the unemployed? There are several explanations. Youth with higher levels of education also tend to be from more privileged socio-economic backgrounds and have expectations of a return on investment through a better job; they can afford to wait for the right job to come along. Moreover, not only

is there a bias toward cognitive (over manual) professions in India, but there is also traditionally a preference for certain kinds of white-collar occupations such as engineering. A proliferation of schools to cater to this demand has not only fueled an excess of youth in occupations like engineering without enough jobs to absorb them, but has also led to a decline in quality so even those that have a degree cannot find jobs.<sup>23</sup>

Misalignments between what youth are learning and the requirements of the job, both in terms of hard and soft skills,<sup>24</sup> also means that many are unemployed despite higher levels of education. 39 percent of employers believe that the non-technical skill deficit is the major contributor to graduate unemployment.<sup>25</sup>

Figure 2  
Education Levels of the Unemployed

### Those with higher levels of education constitute a greater share of the unemployed



Source: Statista Research Department, Statista

## 2.2 SKILLS TRAINING

Inspired by visible progress since the 1990's economic reforms, the nation's youth have rising aspirations. But in the absence of enough jobs to absorb new labour market entrants, policymakers face an uphill battle to productively engage India's large and growing youth population in the economy. This has driven them to promote vocational training, and has fostered the supply-side bias prevalent in India's skills ecosystem.

The National Skill Development Corporation (NSDC) was set up as a Public-Private-Partnership in 2008 to establish channels for firms to provide input into government training programs. Established in 2014, the Ministry of Skill Development and Entrepreneurship (MSDE) directs the Skill India Mission (2015).<sup>26</sup> MSDE was intended to be a hub for coordinating across the skills, vocational, technical education, and apprenticeship schemes run by different ministries. As part of the National Policy on Skill Development and Entrepreneurship (2015) that launched the Skill India Mission, the policy also set up a structure for subsidized Sector Skills Councils to further connect skills training to the demands of industry.

There are two major short-term Central government sponsored schemes for skill development in India – Pradhan Mantri Kaushal Vikas Yojana (PMKVY) and Deen Dayal Upadhyay Grameen Kaushal Yojna (DDUGKY). In addition to these schemes, there are various State sponsored programs.

PMKVY, implemented by NSDC, is a skill certification scheme for short-term training comprising of 150 to 300 hours under the purview of the MSDE. The Recognition of Prior Learning is an instrument that is part of PMKVY to assess and certify prior learning experience. NSDC works with State governments and State Skill Development Missions to execute the Centrally Sponsored State Managed portion of skill development.

In addition, the Ministry of Rural Development sponsors the DDUGKY, which is implemented by the State government rural development departments. Training under DDUGKY ranges from short-term, 576 hours or three months, to long-term, 2,304 hours or one year.

### With a large share of youth lacking requisite levels of basic education, skills training has quickly become a Band-Aid for a lack or poor quality of education.

Beyond these two schemes, there are nearly 16,000 Industrial Training Institutes (ITIs) in India with a capacity of almost three million trainees.<sup>27</sup> These ITIs administer technical skills training that ranges one to three years in duration – what is considered long-term training. In 2017, 1.2 million individuals completed training across government and private sector ITIs.<sup>28</sup> Although ITIs and other such long-term training skills institutions also offer degrees similar to academic track institutions of higher education, they charge a lower fee.<sup>29</sup> The target population for such training institutions is youth who can afford to pay for a training course and/or invest the time to complete a technical/vocational education degree.<sup>30</sup>

MSDE's Directorate General of Training is responsible for the regulation of ITIs, that is setting common standards, guidelines, rules, policies, and procedures. DGT is also spearheading the promotion of the Dual System of Training (DST) in ITIs to engage firms in providing trainees exposure to actual work in their field of training (Box 2). The financial and administrative control of ITIs rests with State Governments or Union Territory Administrations.

#### Box 2

##### Dual System of Training Versus Apprenticeships

Some States are piloting a Dual System of Training (DST) that exposes trainees to actual shop floors so that they may get hands-on experience. DST training does not entail a work arrangement with an employer in the same way that apprenticeship does. DST doesn't require a stipend or clearances and is therefore more convenient than apprenticeships. But hands-on experience cannot substitute for on-the-job experience that apprenticeships have to offer. Apprenticeships go beyond technical knowledge to enable a young person to gain valuable work experience, and get a foot in the door to prospective employment. Although easier to execute, choosing DST over apprenticeships short-changes our youth and their livelihoods.

Unfortunately, the vocational training and education ecosystem has been rife with problems.

**Despite the complex web of government schemes and non-profit, for-profit, and public institutions that provide skills training the incidence of formal training remains low.** Data indicate that the percentage of persons in age group 15-59 that acquire formal training is only 3.2 percent.<sup>31</sup> However, this number jumps to 10.7 percent, according to the same Periodic Labour Force Survey 2019-20 (PLFS), when non-formal training is included. The PLFS makes a distinction between non-formal and informally acquired training.<sup>32</sup>

The actual proportion of informally trained workers is likely higher, since India has a long tradition of informal training and apprenticeship that isn't captured by data because it is invisible and unassessed. Effective implementation of the Recognition of Prior Learning scheme and certification of young people would likely lead to a far higher share of the youth workforce possessing skills that the private sector can recognize and reward.

**The supply-side focus of training does not align with the demands of the job market.** Though the plan in building a skills training ecosystem has always been to mobilize business participation and resources through the Sector Skills Councils, this approach has

seen limited success so far. As a result, either the content of skills training doesn't match what employers want, or these systems are churning out more individuals with a certain vocation than the market has jobs for.<sup>33</sup> Ultimately, the result has been a skewed training system with limited industry ownership and engagement.

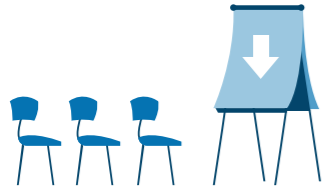
**Both workers and employers express a preference for on-the-job learning rather than skills training.**<sup>34</sup> In addition to technical skills, there are several traits that employers look for, sometimes called "soft-skills" – for instance hygiene, punctuality, or confidence – that are neither imparted in most training institutions nor in informal arrangements.

With a large share of youth lacking requisite levels of basic education, skills training has quickly become a Band-Aid for a lack of education, or for years of poor-quality education. Many of the trades from carpentry to beauty or tailoring are geared toward self-employment rather than formal, waged work.

## 2.3 SOCIO-ECONOMICS

Youth constitute over a quarter of India's population. It is an indisputable aspiration that all young people should have equal opportunities and economic outcomes. But the reality confronting the country today is that youth come from varying socio-economic

## Issues with current education and training



### LOW INCIDENCE OF FORMAL TRAINING

despite a complex web of government schemes, and non-profit, for-profit, and public institutions that aim to provide skills training.



### MISALIGNMENT BETWEEN SUPPLY-SIDE FOCUS OF TRAINING AND THE DEMANDS OF THE JOB MARKET

resulting in a skewed training system with limited industry ownership and engagement.

# 3.

## INVENTORY OF APPRENTICESHIPS

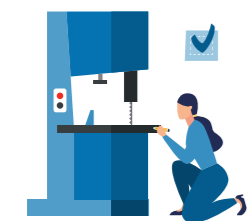
### 3.1 THE BASICS OF THE ACT AND THE RULES

The historical tradition of imparting knowledge and training to new generations of workers — the *guru-shishya* tradition — has underpinned India's labour market for centuries. Many learn the craft of their elders, assisting them on the job, but this process is neither as formally codified as an apprenticeship, nor is the worker seen as 'skilled'. The Apprentices Act, 1961 sought to regulate this traditional system of training apprentices and to engage businesses and their facilities to meet the country's demand for skilled manpower.<sup>36</sup>

After several amendments (Figure 3), the law today mandates that all employers with more than 30 employees, contractual or otherwise, must engage apprentices constituting a minimum of 2.5 percent of their total manpower strength up to a maximum of 15 percent.<sup>37</sup> Five percent of the apprentices must be non-graduate apprentices without prior institutional or other skill training, or those who have a certificate for training of less than one year.

**India has a long tradition of imparting knowledge and training to new generations of workers - the guru-shishya tradition - an active form of apprenticeships.**

The current apprenticeship model (Figure 4), as codified in law, applies to organized enterprises<sup>38</sup> and is - as with other regulations - enforceable among registered companies. For establishments with less than 30 employees, participation in the apprenticeship program is voluntary. Establishments with less than four employees<sup>39</sup> are not allowed to engage apprentices. Employers that do not meet regulatory requirements; that violate the terms of the individual contract with a given apprentice; or that fail to file compliances and the required paperwork, are subject to a fine.



### PREFERENCE FOR ON-THE-JOB LEARNING OVER SKILLS TRAINING

by both workers and employers.



### LACK FOR RECOGNITION OF PRIOR LEARNING SCHEME AND CERTIFICATIONS

for informally trained workers that leaves informal training and apprenticeship invisible and unassessed.

backgrounds that determine the opportunities they have available to them. Socio-economic differences effect participation in education and skills; the transition into the world of work; and the choice of occupation.<sup>35</sup>

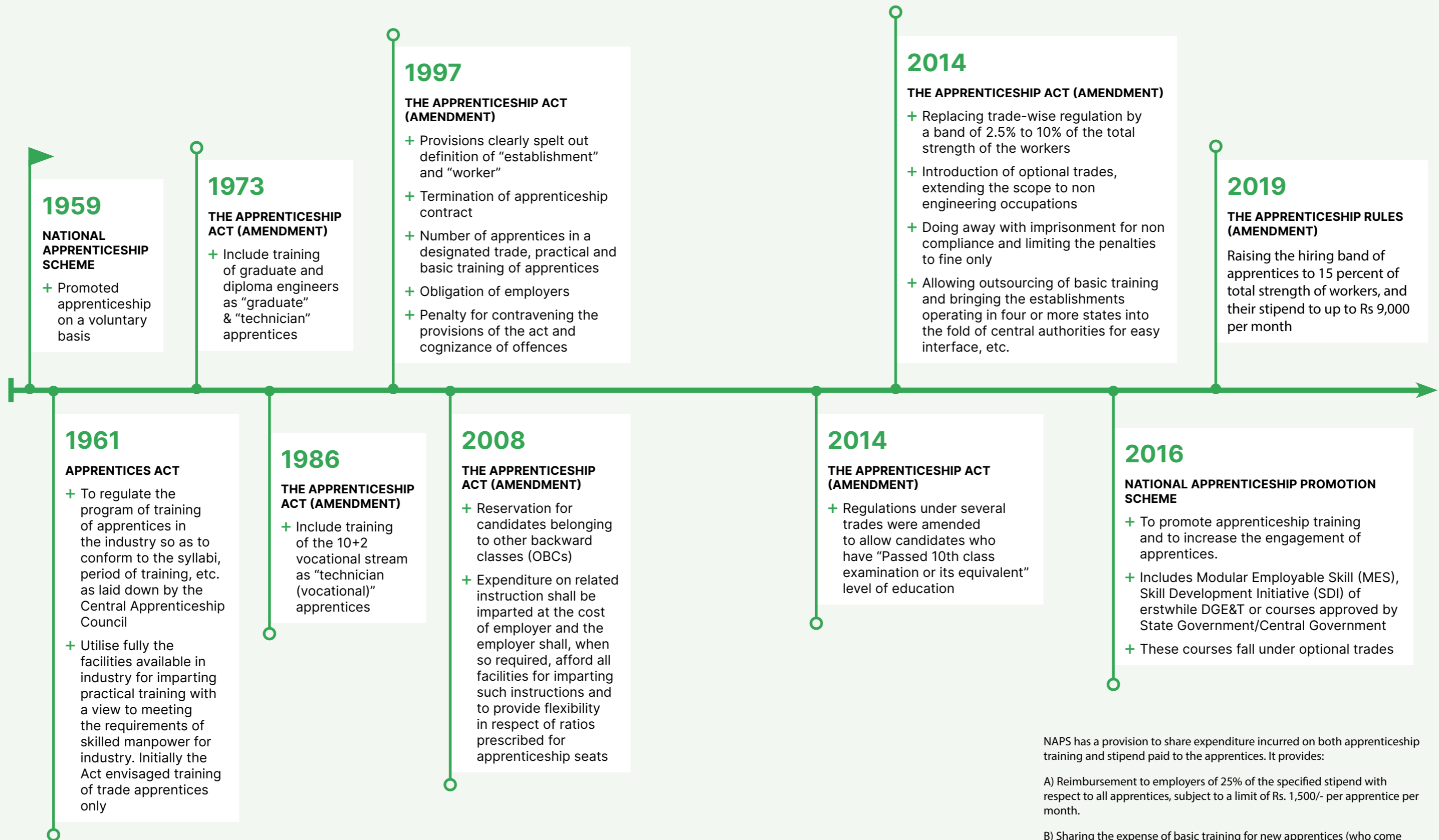
Youth from socio-economically disadvantaged backgrounds tend to acquire less education, pursue occupations that demand manual skill, and many enter informal employment. This is because the barriers to entry are lower than in formal work, even though productivity, wages, and opportunities for upward mobility in informal work are limited. For this cohort, apprenticeships

linked to vocational training can help provide practical experience to enable youth to eke out a living, and for some, apprenticeships can help chart a path to a formal job.

Youth from more socio-economically privileged households tend to progress to higher levels of education; they obtain skills that call for higher cognitive inputs as opposed to manual inputs; and they tend to seek entry into formal employment. For this cohort, apprenticeships linked to higher-education degrees can smooth their entry into the professional world.

Figure 3

# Evolution of Apprenticeship Laws



NAPS has a provision to share expenditure incurred on both apprenticeship training and stipend paid to the apprentices. It provides:

A) Reimbursement to employers of 25% of the specified stipend with respect to all apprentices, subject to a limit of Rs. 1,500/- per apprentice per month.

B) Sharing the expense of basic training for new apprentices (who come directly for apprenticeship training without formal training) for a maximum period of 500 hours/3 months, limited to Rs. 7,500/- per apprentice.

Source: Document: "Broad Guidelines for integrating Short-Term Courses with National Apprenticeship Promotion Scheme (NAPS) through National Skill Development Corporation (NSDC)"



Figure 4

# Apprenticeships: The Basics Explained

For more than 30 employees,



For 4-29 employees,  
**OPTIONAL**

For less than 4 employees,  
**NOT APPLICABLE**

## Who is required to engage apprenticeships?

All establishments with more than 30 employees, contractual or otherwise, must engage apprentices constituting a minimum of 2.5 percent of their total manpower strength up to maximum of 15 percent. Optional for Establishments with employee strength 4-29; establishments with fewer than 4 employees cannot hire apprentices.

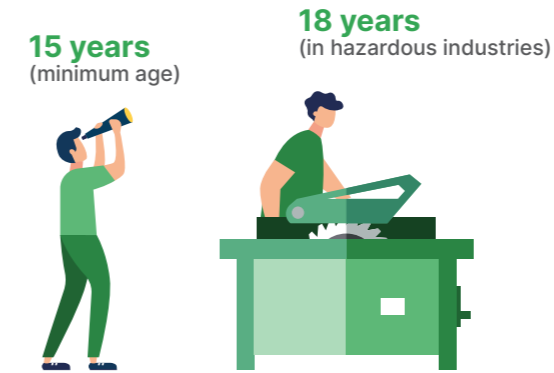


## Which labour protections are applicable?

Apprentices are considered to be trainees and not workers and are therefore not to be treated as workers; however, the responsibility for the health and security of apprentices rests with the establishments.

## Who provides the training and when?

Any institute with adequate facilities can provide basic training to apprentices. Employers can also provide theoretical training together, or through an approved agency. Apprentices must receive basic training (or quality for exemption from it in terms of notified requirement of the concerned job role), before they are allowed to engage into practical training. For the practical component of training, all employers must make suitable arrangements in their workshop.



## What is the minimum age for an apprentice?

The minimum age to be employed as an apprentice is 15 years or 18 years in case of hazardous industries.



## What is the duration of an apprenticeship program?

6- 36 months including basic and on-the-job training.



## What are the working hours for apprentices?

Employers can engage apprentices over the age of 18 during normal working hours but younger workers may only be engaged between the hour of 8AM and 6PM.



## What reservations does the Act provide?

The Act (or Rules) requires that employer reserve a certain number of seats for individuals from Scheduled Castes (SC) and Scheduled Tribes (ST) based on prescribed ratio of SC or ST individuals to total number of apprentices.

Until recently, apprenticeships were limited to designated trades or occupations as notified by the government with specific regulations governing implementation. Significant reforms undertaken in 2014 and 2019 gave discretion to businesses to design and implement apprenticeships to suit their needs; these are called optional trades. The introduction of optional trades has contributed to an uptick in employer engagement of apprentices. Optional trades have allowed employers to hire apprentices based on their needs rather than being restricted to job roles notified by the government under designated trades. Optional trade apprenticeship contracts now constitute a third of all contracted apprenticeships.<sup>40</sup>

Reforms enacted in 2014 and 2019 have not only allowed apprenticeships to be instituted in sectors beyond manufacturing, but they have also made apprenticeship laws industry friendly.

In addition to optional trades, employers have discretion to decide what the educational background of the apprentice should be. These benefits, coupled with the fact that the National Apprenticeship Promotion Scheme (NAPS) partially reimburses the cost of the stipend that employers have to pay, make apprentices highly lucrative for employers.

The States in the west and south dominate in terms of number of apprentices in optional trades. Maharashtra (22.8 percent), Gujarat (14.7 percent), Karnataka (9.7 percent), Tamil Nadu (9.3 percent) and Telangana (7.4 percent) account for 63.9 percent of apprentices engaged under optional trades (Table 2).

Those employers that do know and understand the benefits of apprenticeships are starting to take advantage of these opportunities. The number of apprenticeship contracts exceeded 3,00,000 in 2019-20.<sup>41</sup>

Table 2  
Top 10 states by Number of Apprentices

States	Number of Optional Trade Contracts	Share (percent)
Maharashtra	31,942	22.8
Gujarat	20,592	14.7
Karnataka	13,641	9.7
Tamil Nadu	12,976	9.3
Telangana	10,311	7.4
Haryana	8,988	6.4
West Bengal	6,187	4.4
Uttar Pradesh	5,940	4.2
Delhi	5,515	3.9
Madhya Pradesh	3,824	2.7

Source: Optional Trade Contracts Report 2020

### 3.2 GOVERNANCE ARCHITECTURE OF APPRENTICESHIPS

The governance architecture for apprenticeships is complex (Figure 5). Prior to 2014, skill development and technical training was the remit of the Ministry of Human Resource Development and the Ministry of Employment. In 2014, the Ministry of Skill Development and Entrepreneurship was created to provide focus and greater impetus to skill development, technical and vocational education. The National Skill Development Corporation was set up based on a public-private model to enable a closer connection between skill development and the private sector. Unfortunately, the evolution of the government architecture was not accompanied by a streamlining of responsibilities.

Apprenticeships fall under the mandate of the Ministry of Skill Development and Entrepreneurship but are implemented through the Ministry of Education, Director General of Training and the National Skill Development Corporation. Each running different training and apprenticeship schemes.

The variation in apprenticeship schemes also evolved to reflect the country's heterogeneity in socio-economic and educational backgrounds, with MoE taking on the graduate apprentices, technician and technical (vocational) apprenticeships with more than a 10+2 qualification, and DGT taking on those that enter public or private ITIs, or training through other providers, and NSDC taking on those that are enrolled in optional trades (Table 3).

Figure 5  
Top Ten Sectors by Number of Apprentices in Optional Trades

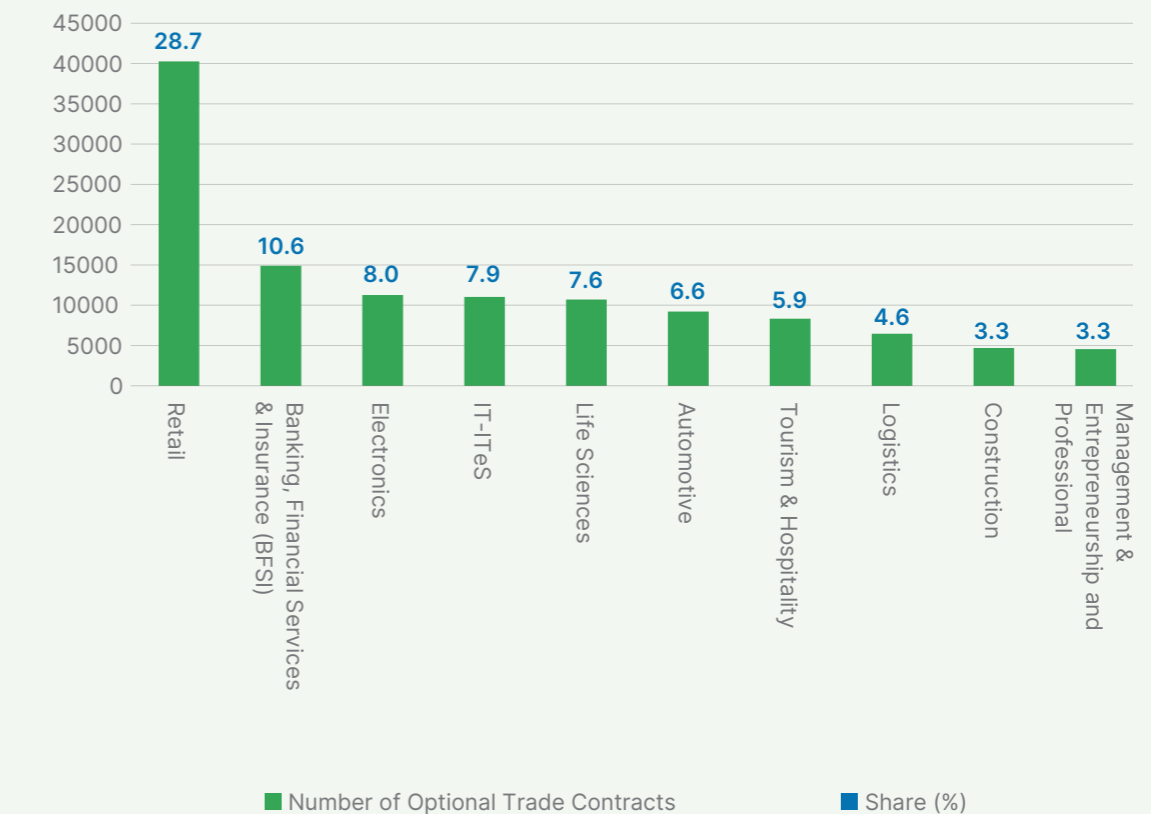
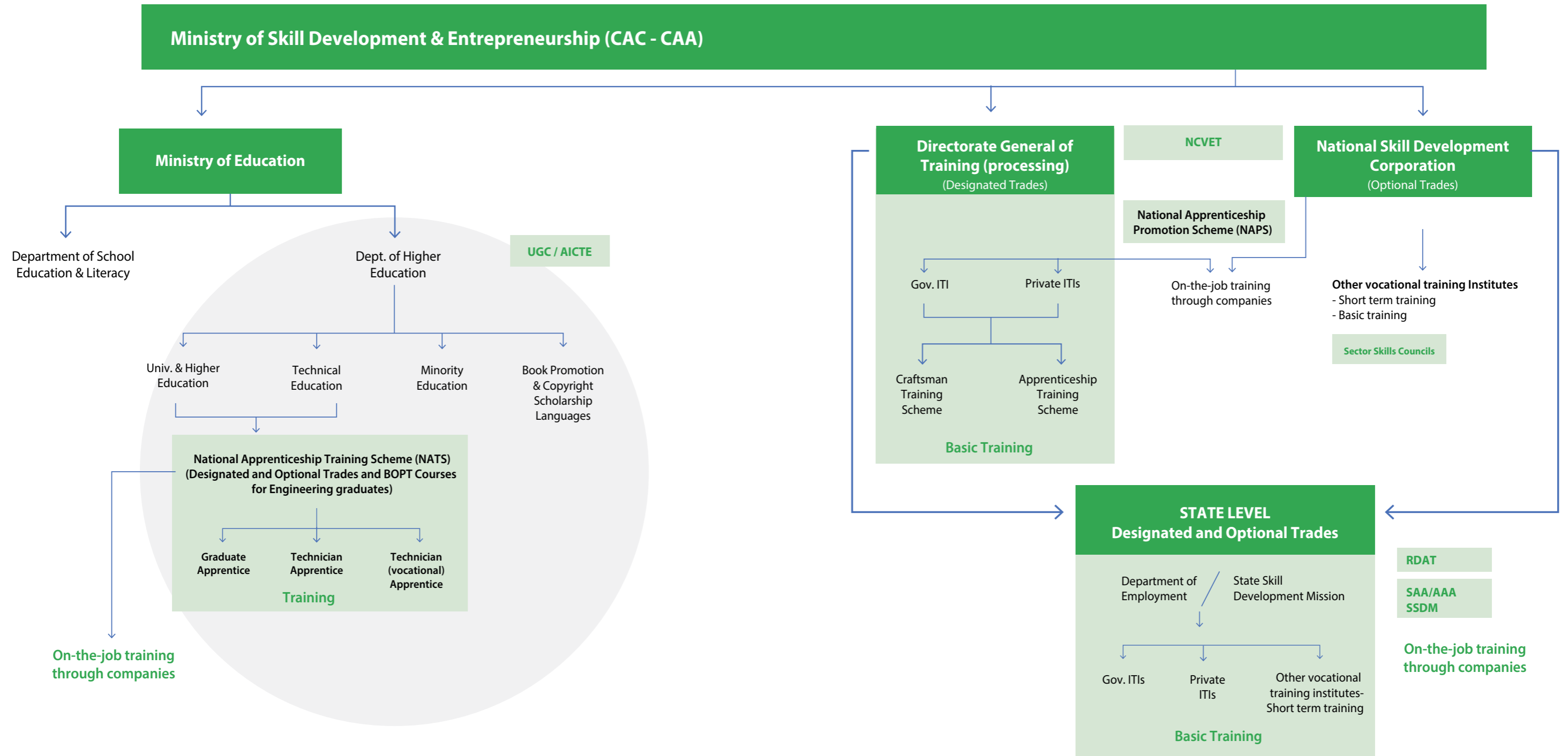


Figure 5  
Governance Architecture of Apprenticeships



**Table 3**  
**Type and Distribution of Apprentices**

Type of Apprentice	Definition	Entry-level Qualification	MoE/DGT/ NSDC	NAPS or NATS
Trade	A person undergoing apprenticeship training in any designated trade	8 <sup>th</sup> , 10 <sup>th</sup> , 12 <sup>th</sup> , and ITI pass-outs	MoE & DGT	MSDE – NAPS MoE - NATS
Graduate	A degree in engineering/ non-engineering and undergoing apprenticeship training in a designated trade	Degree in engineering/ non-engineering. Sandwich course student undergoing training to obtain an engineering or technology degree	MoE	NATS
Technician	A diploma in engineering/ non-engineering undergoing training in a designated trade	Polytechnics, Diploma in engineering/ non-engineering	MoE	NATS
Technical (Vocational)	Certificate in vocational course after the completion of the secondary stage of school education recognized by the All India Council for Technical Education (AICTE)	10+2 vocational course, certificate in vocational course or a sandwich course student undergoing training in order than s/he may hold a certificate	MoE	NATS
Optional Trade	Any trade or occupation in any subject, engineering or non-engineering or technology any vocational course may be determined by the employer	5 <sup>th</sup> class and above	NSDC	NAPS

Source: JustJobs Network’s adaptation of Implementation of Apprenticeship in India: A Study by FICCI, 2019.<sup>42</sup>

The Ministry of Education manages the implementation of the Apprenticeship Act with respect to graduate, technician & technician (vocational) apprentices through four Boards of Practical Training (BOPT)<sup>43</sup> located in Chennai, Kanpur, Kolkata and Mumbai. These are subsidized through the National Apprenticeship Training Scheme (NATS) portal. The University Grants Commission and the All-India Council for Technical Education are the standard setting bodies for the apprenticeship schemes run through MoE.

Training for designated trades, mostly through ITIs, is followed with on-the-job training managed by the DGT under MSDE. This is the program for Central Government Undertakings & Departments and for establishments that operate in a minimum of four states. Six Regional Directorates of Apprenticeship Training (RDAT)

located at Chennai, Faridabad, Hyderabad, Kanpur, Kolkata, & Mumbai manage these programs for DGT under MSDE. The National Skill Development Corporation, through the SSCs, oversees optional trade apprenticeships. The National Council for Vocational Education and Training (NCVET) is the standard setting body for DGT and NSDC.

Finally, States vary in whether the state level institution of the apprenticeship program is under the mandate of the Department of Employment or the State Skill Development Mission (SSDM). States oversee basic training provision through public and private ITIs as well as other vocational training institutions. They also then deal with smaller state-based companies that undertake apprentices providing on-the-job training. State Apprenticeship Advisers (SAAs) are in-charge of implementing the Apprenticeship Act

for Trade Apprentices at the state level. SSCs are technically responsible for overseeing the implementation of the designated trades at the State level as well.

### 3.3 STIPENDS & PORTALS

Under the Apprenticeship Act, employers are required to pay a minimum stipend to their apprentices determined based on their entry-level qualifications. The National Apprenticeship Promotion Scheme (NAPS), introduced in 2016, reimburses employers for up to a fourth of the mandated monthly stipend to a maximum of INR 1,500 per apprentice (Table 4). These reimbursements are to be processed through an online apprenticeship portal managed by NSDC.

In the spring of 2021, a notification was issued to amend the Apprenticeship Act to make apprenticeships stipend free for cases in which apprenticeship is part of an academic program and it accrues credits that count toward an academic degree. This proposed amendment, if implemented, would diminish perhaps the

most important benefit of apprenticeship – the ability to earn while learning. It must be noted that countries with successful apprenticeship programs such as Germany and Switzerland have stipends.

### 3.4 DEFICIENT OUTCOMES, ONGOING CHALLENGES

A law, several amendments, and much debate have now led to a point where apprenticeships are growing, but this is a fraction of the untapped potential of India’s apprenticeship program.

To date, there are less than 5,00,000 formally recognized apprentices in the nation. About 2,30,000 trade apprentices were undergoing apprenticeship training in 30,165 establishments across the country in 2019. Of these, 36,000 apprentices are in Central Public Sector Undertakings/ Central Government and 1,94,000 apprentices are in the State Public Sector Undertaking/State Government. This leaves approximately 1,94,000 apprentices in the private sector.<sup>45</sup>

**Table 4**  
**Stipend Rates as per Apprenticeship Rules (amended 2019)**

Category	Prescribed minimum amount of stipend (Rs.)
School pass-outs (class 5 <sup>th</sup> - class 9 <sup>th</sup> )	5,000 per month
School pass-outs (class 10 <sup>th</sup> )	6,000 per month
School pass-outs (class 12 <sup>th</sup> )	7,000 per month
National or State Certificate holder	7,000 per month
Technician (vocational) apprentice or Vocational Certificate holder or Sandwich Course (Students from Diploma Institutions)	7,000 per month
Technician apprentices or diploma holder in any stream or sandwich course (students from degree institutions)	8,000 per month
Graduate apprentices or degree apprentices or degree in any stream	9,000 per month

Source: National Skill Development Corporation<sup>44</sup>



The problem today is less about the Act itself and more about effective implementation of the existing provisions.

Data from the Department of Public Enterprise indicates that there are 339 Central Public Sector Undertakings (CPSUs), out of which only 150 engage apprentices. These CPSUs have over approximately five million employees. According to the provisions of the Apprenticeship Act whereby enterprises with a strength of more than 30 must engage apprentices constituting a minimum of two and a half percent of their workforce, these enterprises should engage a minimum of 1,25,000 apprentices. The law also caps the maximum share of apprentices an enterprise can engage at 15 percent, or, in this case, that would translate into 7,50,000 apprentices.<sup>46</sup>

Currently, only 41,250 (one third of the desired minimum engagement) of the total potential in CPSUs is utilized and that too when only top 100 enterprises are participating in engaging apprentices.

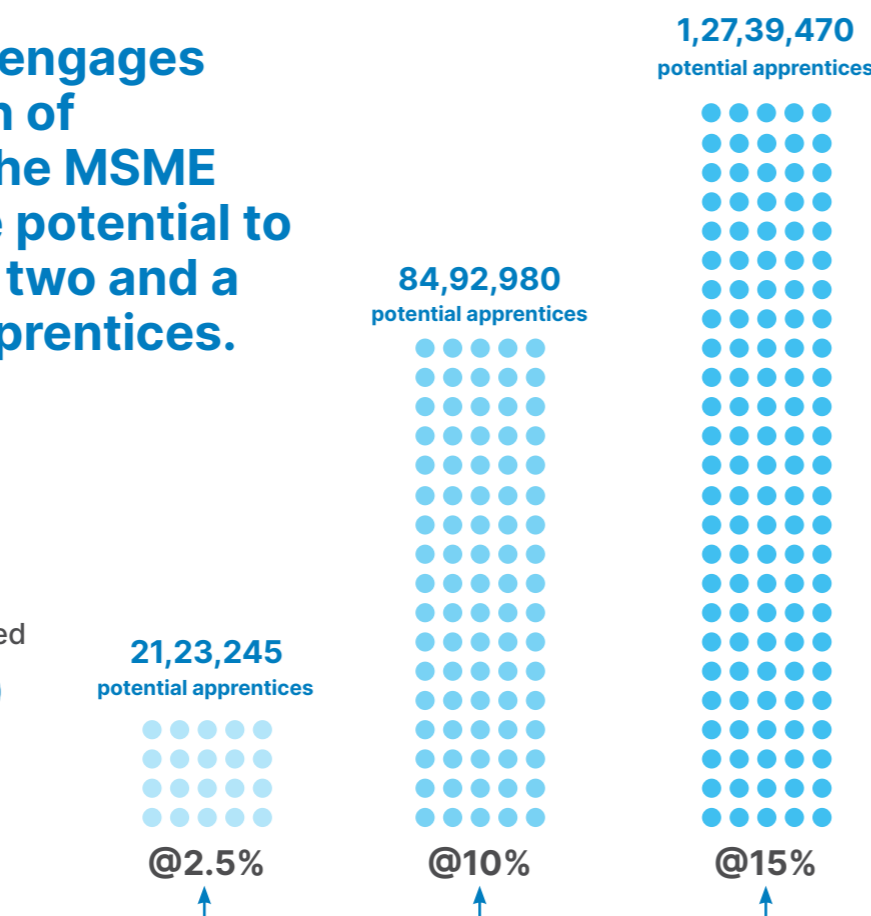
There is a huge untapped potential for apprenticeships. 99 percent of India's firms are unorganized<sup>47</sup> – meaning – while the Apprenticeship Act speaks to firms with more than 30 employees — the larger share of Micro, Small, and Medium Enterprises (MSMEs) in the nation are not included. The Sixth Economic Census estimates that there are approximately 26,30,000 MSMEs in the country with five or more workers.<sup>48</sup> If each establishment engages even one apprentice, the MSME sector can generate over two and a half million apprentices. The total potential for engagement of apprentices in these industries at different percentages of intake is indicated in the figure below:

## If each MSME engages a small portion of apprentices, the MSME sector has the potential to generate over two and a half million apprentices.

No. of establishments  
**~26,30,000**

No. of employees engaged  
**8,49,29,800**

Engagement potential of 8,49,29,800 employees



Source: Calculation based on Sixth Economic Census

What reasons underpin these deficient outcomes?

1. **There is a deep aspirational bias toward academic education over vocational training accompanied by the pervasive view that students should finish their academic pursuits and then enter the labour market in white collar occupations.** Even the Mahatma's message of *Nayi Taalim* was not embedded into the 1948 Radhakrishnan report or the 1968 Kothari Committee report. Today, however, a growing employment crisis has re-focused attention on the importance of cultivating employability by bridging on-the-job training and learning. The National Education Policy 2020 acknowledges this fact.

The aspects of the NEP that speak to earning while learning must be operationalized, however. There is an urgent need to promote degree-linked apprenticeships so that students in institutions of higher learning are also gaining valuable work experience. There is also a need to demonstrate how economically lucrative apprenticeships can be both in the short-term through sufficient stipends, and, in the long-term, by enabling youth to make better occupational choices and get a shoe-in to well-paying jobs that offer potential for progress.

2. **The structure for rolling out education, especially higher education, that includes on-the-job training through degree-linked apprenticeships is currently missing in the education and training ecosystem, despite the renewed importance highlighted in the NEP.** It will take sustained effort to ensure that this happens. Unless this happens, the GER is unlikely to improve. Moreover, there is a large population for whom learning without earning is not an option. There is a need for programmatic focus on promoting earning while learning and work-integrated learning.

3. **The deeply complicated governance architecture of the apprenticeship program and all the regulatory changes made through the restructuring of Ministries as well as the tinkering with the Act and**

**subsequent Rules has generated a great deal of ambiguity among states, employers, and the public. Figure 5 reflects the complex administrative structure for implementing the apprenticeship program in India.**

Furthermore, as Figure 5 indicates, under the Apprenticeship Act, employers are required to pay a minimum stipend to their apprentices. This is determined on the basis of their entry-level qualifications. Based on the assumption that MoE is responsible for more skilled apprentices, it has its own stipend structure through NATS and it allows employers to be reimbursed for up to 50 percent of the stipend with INR 4,894 (USD 67) per month for graduate engineers and INR 3,542 (USD 48) per month for diploma.<sup>49</sup>

There has been a discussion over aligning the stipend rates between MoE on the one hand and DGT and NSDC on the other. Nonetheless, in June 2020, MHRD issued a notification stating that the reimbursement of the stipend to training establishments by BOPT must, for now, adhere to the old rates until further order by the Ministry.

State-level understanding of how apprenticeships work and the delineation of responsibilities between them and the Centre is lacking. Complications arise when companies operate across state borders and have to either notify MoE, RDAT, or the SAA, SSDM, or SSCs. In theory, the NAPs portal should simply guide the employer through the process, notifying the relevant agencies, but in practice this doesn't work as seamlessly as it should. Moreover, with different types of apprenticeships and varying stipend schemes spread across different Ministries and departments, apprenticeships are difficult for parents and students to navigate.

4. **The real and perceived regulatory and administrative burden of engaging in the apprenticeship program is a deterrent for companies, especially small ones.** And government investment in public awareness campaigns to explain the provisions of the

amended laws and the set up to industry, and to youth and their families, have been deficient.

Though the reforms have introduced significant discretion for companies, anecdotal evidence suggests that regulators are reluctant to relinquish control. Moreover, the administrative burden of availing government subsidies to help offset the cost of apprenticeship stipends is too high, especially for small businesses.

There is also a great deal of confusion on the part of stakeholders between how apprenticeship schemes are different from other state-level schemes. For example, some states, like Haryana, offer a Dual System of Training program that competes with the apprenticeship scheme. DST in such states is offered through Haryana's ITIs. It includes basic training and on-the-job training, but the student is not considered an apprentice and is not given a stipend.

5. **Third party aggregators play an important role of connecting apprentices to employers, as well as assisting employers with compliance for a fee. But they are unable to receive and disburse the stipends on behalf of the employer, leaving this cumbersome process to the companies.**
6. **Although NAPS is meant to be administered through an online portal — a modern, streamlined attempt to expand apprenticeships — frequent problems with the technology make it frustrating to use.**

Problems with the portal are partially to blame for companies that register but then don't follow through. In the 2019 Parliamentary session, the Minister noted that a total of 67,249 industrial units across the country are registered and active with the portal, but of these registered industrial units, only 24,498 are actually engaging apprentices. In Maharashtra 8,368 industrial units and in Madhya Pradesh 5,083 industrial units are registered with the portal for providing apprenticeship training. However, out of these registered units only 4,433 industrial

units in Maharashtra and 276 industrial units in Madhya Pradesh are providing apprenticeship training.<sup>50</sup> Cumbersome compliances are another reason.

7. **The number of registered firms with more than 30 employees is small.** The data suggests that well under ten thousand of India's medium and large firms fall under the purview of the Apprentices Act 1961, because they have more than 30 employees. The larger a firm, the greater the likelihood of registration. But over 99 percent of India's firms are micro or small. Small firms are less likely to have the kind of facilities needed to engage apprentices.
8. **Employers have to have the appropriate physical, technical and intellectual infrastructure** to successfully impart training in addition to work. This is particularly hard for small businesses.
9. **Over 80 percent of the apprentices today are from the Industrial Training Institutes (ITIs).** This is also one of the central bottlenecks of the apprenticeship system. Not only do ITIs suffer from problems with quality but their own connection to industry is weak.
10. **It is unclear what labour protections are afforded to apprentices.** Chapter III, provision 14 of the Act notes that the provisions of the Factories Act, 1948 and the Mines Act, 1952 shall apply to protect the health and safety of apprentices. Similarly, Chapter III, provision 15 says that if an apprentice is injured, the employer shall be liable for compensation in accordance with the Workmen's Compensation Act, 1923. Yet in provision 18b, the Act also goes on to say, "the provisions of any law with respect to labour shall not apply to or in relation to such apprentice." Moreover, with the simplification of labour provisions into the four labour codes, that do not cover apprentices, it is unclear whether employers bear any liability at all for the health, welfare, safety and compensation for injury for their workers.

# 4.

## APPRENTICESHIPS EMBEDDED IN HIGHER EDUCATION: 10 MILLION NEW DEGREE APPRENTICES IN TEN YEARS

### 4.1 VARYING APPRENTICESHIP SOLUTIONS FOR DIFFERENT YOUTH COHORTS

India's 371 million youth population is larger than the entire population of every other industrialized country in the world. This is a heterogenous group comprised of youth from different socio-economic and social groups.

Apprenticeship solutions for youth from under-privileged socio-economic households that comprise a larger proportion of 15-29 age group will be different than for those that are from households that are, even slightly, better off. Building economic trajectories for these young people begins with acknowledging that many of them are actually skilled, albeit through informal channels. Recognizing their skills through RPL programs and certification is the first step toward enabling better employment opportunities for them. Supporting those that do not have 10<sup>th</sup> or 12<sup>th</sup> standard degrees to acquire them through the National Institute of Open Schooling and enabling models for earning while learning, as with apprenticeships, will encourage young people to enroll in longer-term degree or diploma programs and get a foot in the door to better employment opportunities. The need to cater to this group of youth makes a strong case for a stipend-based

apprenticeship program. Finally, exploring cluster-based or value-chain based approaches where big companies can support smaller ones in instituting apprenticeship programs and implement the associated training requirements will create opportunities for these youth as well.

But the viability and desirability of apprenticeships for youth in higher education is different than for the cohort described above. If one takes education as a proxy for income, students in higher education tend to be from better socio-economic groups than the larger proportion of youth that are not in higher education and/or are in short-term training programs such as PMKVY, DDUGKY or other State sponsored schemes.

Several reasons underpin why the higher education institutions that fall under the purview of the Ministry of Education are a good place to start in promoting apprenticeships. First, the longer duration of training allows time for students to gain experience as apprentices. Second, students from these programs are more likely to be a fit for the requirements of bigger employers that are also more likely to engage apprentices. Third, that these young people are from households that are amenable to paying for degrees means that they are also more likely to have requisite levels of education and are in a better position to access technology and digital

## Four sites for learning offered by Skills Universities



ON-CAMPUS



ONLINE



ON-SITE



ON-THE-JOB

skills needed to engage in online education. For these reasons, these higher education institutions offer tremendous potential for promoting degree-linked apprenticeships.

In 2020, the University Grants Commission Guidelines for Higher Education Institutions to offer Apprenticeship/Internship embedded Degree Programs were announced. These guidelines sought to improve the employability of students pursuing undergraduate degrees by establishing a link between the higher education system and industry, non-commercial and commercial organizations.<sup>51</sup>

### 4.2 HIGHER EDUCATION

As of 2019, according to the MHRD only 37 million were enrolled in universities, colleges, and stand-alone institutions of higher education that cannot offer degrees and therefore offer diploma certificate programs (Box 3).<sup>52</sup>

#### 4.2 (a) Skills Universities

The Gross Enrollment Ratio of 27 percent in higher education is much lower than China's 57.8 percent,<sup>53</sup> with 44.3 million students on campus and South Korea's 95.9 percent.<sup>54</sup> This, as noted earlier, is largely because of a disconnect between what universities teach and what is in demand by the job market. Given this, the last few years have seen a growing number of Skills Universities, that are considered institutions of higher education, but that are squarely focused on connecting a degree to private sector demand.

Skills universities differ from regular universities in four ways. First, their faculty, curriculum, and pedagogy are driven by industry demand. Second, they offer on campus, online, on-site and on-the-job options for training. Third, instruction is organized in modules that allow students flexibility. Finally, skills universities enable students to tap into different sources of financing (self, loans/scholarships, and employers). In apprenticeship programs managed by Skills Universities, employers bear a majority of the cost; whereas in a regular university, the student bears a majority of the cost unless they are given a scholarship or fee waiver. The annexures accompanying this report discuss regulations for Skills Universities to leverage their potential to promote degree apprenticeships, potentially raise the GER in higher education, and improve employability.

#### 4.2 (b) Online Options in Higher Education

Roughly one in ten of the students enrolled in higher education are distance learners.<sup>55</sup> Online education, for students pursuing degrees in institutions of higher education, can help facilitate apprenticeships by enabling (i) earning while learning; (ii) learning by doing; (iii) learning with modularity; (iv) learning with flexibility; and (v) learning with signaling value.

Specifically, online education removes several location and time related barriers to enable individuals to better balance work and learning. It provides the necessary flexibility, opportunities for modularity that make lateral entry as well as multiple entry and exit possible.

## Why the higher education institutions are a good place to start in promoting apprenticeships



### LONGER DURATION OF TRAINING

allows time for students to gain experience as apprentices.



### BETTER FIT FOR BIGGER EMPLOYERS

Students from these programs are more likely to be a fit for the requirements of bigger employers



### ACCESS TO TECHNOLOGY AND DIGITAL SKILLS

Students are from households where they are in a better position to access technology and digital skills needed to engage.

#### Box 3

### What Constitutes a Higher Education Institution as per the MHRD's All India Survey of Higher Education

The AISHE report classifies institutions into three categories:

1. University and University Level Institutions; that is, institutions that can award degrees under some Act of Parliament or State Legislation.
2. Colleges/Institutions that are not empowered to provide degrees in its own name and therefore are affiliated/recognised with Universities.
3. Stand-alone Institutions that are not affiliated with Universities and cannot confer degrees and therefore run Diploma Level Programs. These include 7 types:
  - a. Technical Institutes such as Polytechnics recognized by AICTE/State Directorate of Technical Education
  - b. Post Graduate Diploma in Management recognized by AICTE
  - c. Teacher Training such as District Institute of Education and Training recognized by National Council for Teacher Education
  - d. Nursing Institutes recognized by Indian Nursing Council/State Nursing Council.
  - e. Institutes directly under the control of various Central Ministries
  - f. Paramedical Institutes as recognized by Paramedical Council
  - g. Hotel Management & Catering Institute recognized by National Council for Hotel Management & Catering Technology

Source: All India Survey of Higher Education (2018-2019)



#### Box 4

### Online Education in Institutions of Higher Learning: Enabling Degree-linked Apprenticeships

With direction from the NEP, the University Grants Commission (UGC) revised several regulations and guidelines. Specifically, the UGC regulations should:

- **Authorize universities and colleges to design, develop and deliver online programs** - Remove provisions that restrict licensing and prescribe a discretionary approval process, and replace them with a provision that authorizes accredited universities to design, develop and deliver their own online programs subject to certain quality standard as well as the capacity to provide such courses.
- **Allow innovation, flexibility, and relevance in an online curriculum** - Allow universities and colleges to work closely with industry on their list of courses. To remain relevant, institutions of higher learning need to continuously innovate and bring about modular, relevant courses that can be imparted through online channels, to build a contemporary workforce and help existing workers upskill and reskill themselves.
- **Promote partnerships** - Allow universities and colleges to work and partner with other accredited colleges, institutions and universities to scale the uptake of courses. This will allow students of these colleges to integrate modular courses and credits for online universities with their existing curriculum and reduce the pressure on college resources.
- **Expand the definition of faculty to deliver online instruction** - Permit universities to include industry professionals, trainers, and experts from other institutions that are capable of imparting online instruction, to help provide industry relevant training to students. Simply depending on their full-time academic faculty to meet the requirements of the employed learners does not allow for scaling up of training.
- **Improve level of services** - Permit universities and colleges to partner with service providers to create and manage smart, scalable and world-class service for their students. The online learner, exposed to various consumer portals, expects the same level of service delivery from their universities and colleges; and it would only be prudent for these universities and colleges to look for the right partner who can help them build and manage this capability.
- **Permit credit mobility** - Modify provisions to enable credit mobility so that learners move from one format of learning such as in the classroom, to online.
- **Permit institutions to embed apprenticeships** - Permit and enable universities to embed apprenticeships into their online courses to encourage blended (online + on-Job) learning experiences and improve employability.
- **Enable industry-academia collaboration** - Permit universities and colleges to offer apprenticeship embedded online degree programs with an option to the learner to select her/his on-the-job employer without any domain or territorial jurisdiction. This will help the employers select apprentices from various institutions across the country and will also provide a range of options to enrolled students.
- **Amend the UGC Act 1956 as follows:**
  - a. Include the availability of four classrooms - online, on-site, on-campus and on-job, and consider the associated investments required in campus, technology, content, people and industry relationships;

- b. Create specialized apprenticeship-linked degree programs as a category of courses that mandates apprenticeships and credit transfers.

- **Amend the UGC Regulations for Teachers of 2018 as follows:**

- a. Redefine the qualifications, the roles and the numbers of teachers required in the case of Skills Universities;
- b. Rewrite provisions to include relevant industry experience as an important qualification for teachers (instead of pure teaching experience) for a Skills University.

- **Amend the UGC Online Regulations 2018 as follows:**

- a. Allow universities to work with the best technology platforms without holding them hostage to a State sponsored system; and rewrite 7(2)(3) for skills universities to define their credit framework to include credits for online, onsite and apprenticeship-based learning.

As technology and other forces restructure the world of work and change skill requirements, there is a need on the part of students to constantly adapt by educating and reskilling themselves to remain employable. According to McKinsey, 87 percent of executives are experiencing a skills gap with over 50 percent of executives unsure about how to bridge this gap.<sup>56</sup> This further enhances the demand for online education. Based on these data, the government has adopted various digital friendly policies introducing initiatives to enhance connectivity and develop India's online education market.

As a part of its suggested regulatory reforms, the NEP is empowering institutions to run online programs, and where possible and relevant, hybrid programs. While these reforms are yet to be implemented, the NEP also lays out guidelines to maintain quality in online education.

#### 4.3 STRATEGY FOR 10 MILLION DEGREE APPRENTICES IN TEN YEARS

The NEP 2020 target of ensuring that at least 50 percent of learners should be introduced to vocational education across both school and higher education systems by 2025 sets the stage for promoting apprenticeships in the higher-education system.

Given that the existing number of apprentices is less than 5,00,000, growing this number to 10 million in ten years may seem like a lofty aspiration. After all, this calls for double existing number of apprentices. But a back of the envelope calculation suggests that this goal is not only desirable, but highly achievable.

The total number of universities, colleges, stand-alone institutions across India, under the purview of the Ministry of Education, adds up to 51,649 institutions that offer degree or diploma linked programs. If each of these institutions generated 194 apprentices over the next 10 years, India could realize the aspiration to create 10 million apprentices over the course of the next decade. Of course, the smaller an institution the greater the burden of generating apprentices than a larger one.

Of those enrolled in higher education, some may choose academic tracks or may not enter the labour market. This fact notwithstanding, one million new apprentices per year implies engaging less than 2.5 percent of the existing group of students in degree programs as apprentices.

This goal becomes even more achievable when it is facilitated by the availability of the four classrooms including online learning; the five design principles; and actively engaging Third Party Aggregators to support more companies – big and small – in engaging apprentices.



# 5.

## DRAWING ON INTERNATIONAL EXPERIENCE

Countries ranging from Germany to the United States acknowledge the intrinsic value of *learning by doing* and *earning while learning*. Historical traditions of imparting training and knowledge to new generations of workers have underpinned the labour markets in these countries for centuries, as it has in India through the *guru-shishya* relationship. Yet the success with apprenticeships in these countries varies, providing valuable lessons on what works and what does not.

### 5.1 GERMANY

Germany has one of the largest apprenticeship systems in the world, with approximately four percent of its labour force engaged as apprentices and 5,00,000 new apprentices acquiring contracts every year.<sup>57</sup> Youth that choose the vocational education path have a choice between apprenticeships and full-time vocational schools. For some occupations, obtaining a practitioner license is contingent on the completion of an apprenticeship.<sup>58</sup> The duration of the apprenticeship varies between two and three-and-a-half years, depending on the occupation.

Germany's federal states are responsible for implementing education and training. The initial and continuing vocational education and training is based on mixed financing by various public and private bodies. Public funds are allocated by the Federal Ministries of Education and Research, Economic Affairs and Energy,

Labour and Social Affairs, the German Federal Employment Agency and the federal states. Those funds are linked to the development, improvement, execution and promotion of apprenticeship—for example, support programs or measures for guidance and counselling. Total public expenditures for apprenticeship training amounted to EUR 6.84 billion in 2017.<sup>59</sup>

Companies finance on-the-job training, while federal states fund the vocational schools (mainly teaching staff salaries), and the local authorities fund equipment and infrastructure. There are 4,00,000 German companies that offer vocational training positions. Approximately two-thirds offer students employment contracts at the end of the apprenticeship. While some students choose to seek employment elsewhere, very few remain unemployed upon completion of their apprenticeship.<sup>60</sup>

### The German Model is working to increase of the attractiveness of initial and continuing apprenticeship programs.

The system is standardized throughout Germany so that a young person completing a placement in one state can ensure that its qualification will be recognized in another, also allowing young people to easily find employment in other countries as well. There are currently

330 occupations in Germany that require formal training, and with its standardized training and qualifications, this system allows many students to gain the correct training. Around half of all those who graduate from school go into the dual education system instead of choosing a full-time academic education. Because this system offers a mix of on-the job training combined with classroom learning, Germany enjoys a low youth unemployment rate of 3.1 percent.<sup>61</sup>

The German Model is working to increase of the attractiveness of initial and continuing apprenticeship programs. They declared 2019 as the year of vocational education and training to boost the awareness of Vocational Education and Training (VET) in the general population. A corresponding Federal VET Law was passed in January 2020 increasing the minimum wage of apprenticeship programs to EUR 515 per month for the first year.

Key differences between the German and Indian systems are:

- The German model requires a requisite level of education to be completed by everyone before they become an apprentice. German youth therefore have more of a foundation to build their work experience and economic trajectories on than Indian youth just under 50 percent of which have either less than a secondary education or no education at all.
- In the German system, the monetary compensation for apprentices increases every year as an incentive for apprentices to stay the course.<sup>62</sup>
- In Germany, unlike in India, education, training and employment are seen as a continuum where apprenticeships begin in

school. The fact that education is the remit of federal states, as it is in India, creates an opportunity for decentralised governance of apprenticeships at the state level in partnership with education.

### 5.2 UNITED STATES

The United States (U.S.) apprenticeship system has three stated goals: (1) to expand skills, (2) to raise productivity and earnings of American workers and (3) to enhance the country's economic competitiveness.<sup>63</sup> Around 82,000 apprentices graduated from this apprenticeship system in 2020. According to the U.S. government, the programs usually last for four years, though the length can vary.<sup>64</sup>

The program is implemented through various bodies: Office of Apprenticeships at the U.S. Department of Labor as well as state apprenticeship agencies. Employers that wish to have a registered apprenticeship program must have it approved by federal (central) or state agencies and the government provides various incentives and subsidies to encourage industry participation. To become an apprentice, candidates search using an online tool, Apprenticeship Job Finder and then apply directly to the employer or the program sponsor.<sup>65</sup>

### The U.S. government aims to expand access to apprenticeship programs as a way to improve the lives of millions of Americans.

The Employment and Training Administration of the U.S. Department of Labor made available approximately USD 40 million in grant funds authorized under the American Competitiveness and Workforce Improvement Act, including the rural healthcare grant program and the workforce grant program. The intent of the former program is to alleviate healthcare workforce shortages by creating sustainable employment and training programs in healthcare occupations (including behavioural and mental healthcare) that serve rural populations.<sup>66</sup> The apprentice programs offer a diverse range of skills catering to several business sectors such as information technology, healthcare, hospitality, cybersecurity, energy, advanced manufacturing, engineering, transportation, construction, and financial services.<sup>67</sup> Electrical power line installers and repairers had the highest median wage of the occupations.<sup>68</sup>

Despite increases in years of schooling, added government spending, and the build-up of mountains of student debt, U.S. employers report that they face a serious skills mismatch in various occupations, especially those in technical fields.<sup>69</sup> The government aims to expand access to apprenticeship programs as a way to improve the lives of millions of Americans. For hands-on and non-traditional learners, academic coursework completed in the context of an apprenticeship program has been seen to increase motivation and improve the efficacy of the delivery process.<sup>70</sup>

In the United States, like in India, the administrative burden of participating in a registered apprenticeship program serves as a deterrent for employers.<sup>71</sup> Unlike in India, American unions are heavily engaged with apprenticeship programs. The U.S. government only provides employers with small tax credits to offset apprentice compensation, as compared to the subsidies offered by the Indian government and the progressive monetary support offered by the German system. Perhaps the biggest distinguishing factor between India and the United States is that the latter does not have any legal differentiation between apprentices and employees.

### 5.3 AUSTRALIA

Apprenticeships in the Australian context are defined as a system of training which combines paid on-the-job training and work experience with formal training (usually off-the-job). The apprentice enters into a contract of training, or training agreement, with an employer, which imposes obligations on both parties. Apprenticeships are a crucial employment pathway for many Australians and have long been a feature of their national approach to skills development. Despite persistent efforts by government and industry, the number of people entering into apprenticeships has declined and completion rates remain lower than desirable.<sup>72</sup> There were around 2,76,250 apprentices in training as of 31 March 2019, a slight decline in the number of apprentices by just under a percent from March 2018.<sup>73</sup>

### The core of the Australian model is widely seen as valuable and having stood the test of time but the system and architecture surrounding it is complex, inconsistent and often confusing.

The Australian model of apprenticeships is governed by the Department of Skills, Education, and Employment but the Australian Apprenticeship Support Network (AASN) also plays an important part in this process. Unlike the Indian model, AASN makes it easier to find and complete an apprenticeship or suitable training pathway by providing two services: universal services for all clients, including administrative support, payment processing and regular contact; and targeted services, such as mentoring, for employers and individuals assessed as needing additional support.<sup>74</sup> The Boosting Apprenticeship Commencements wage subsidy supports employers to employ new apprentices and trainees.<sup>75</sup> Most employers

and employees (including apprentices and interns) in Australia are legally protected by the National Employment Standards, which set out minimum pay rates, leave entitlements and conditions. Thus, the apprentices are essentially given welfare benefits and legal protection as employees. This has been highlighted by National Code of Good Practice for Australian Apprenticeship as well.<sup>76</sup>

The program is regulated by three entities:

- The National Code of Good Practice for Australian Apprenticeships, which outlines the code of conduct between the employer and apprentices;
- The Fair Work Ombudsman, which can provide advice for employers and apprentices for entitlements such as wages, benefits, allowances, subsidies, award requirements, employment conditions;<sup>77</sup>
- The State and Territory Training Authorities, which are government departments that regulate the apprenticeship system in each state or territory<sup>78</sup>

The program allows apprentices to apply for Trade Support Loans to assist with everyday costs while completing the apprenticeship. The lifetime limit over the life of the apprenticeship, as of 2020-21, is AUD 21,542.<sup>79</sup> The program offers a wide range of skills and provides continuous support to the employer, the apprentice and the traineeship officer. These apprenticeships are offered in more than 500 careers and jobs and can be done full-time, part-time or while at school.<sup>80</sup> Established across more than 50 industries, the sectors of carpentry, plumbing, automotive mechanics and electrical wiring are the most popular.<sup>81</sup>

There has, however, been some discrepancy between the apprenticeship model and implementation. The core of the apprenticeship model is widely seen as valuable and having stood the test of time. But the system and architecture surrounding it have been described as complex, inconsistent and often confusing. India can learn from the Australian apprenticeship model's focus on creating an

integration of on- and off-the-job training whilst giving support to the main actors: the employer, the apprentice and the training provider. Like the Australian apprentice program, India can also start focusing on its efforts on providing support for apprentices by providing trade loans,<sup>82</sup> and emulate the Australian model of supporting MSMEs and prioritizing the STEM sector (Science, Technology, Engineering and Maths).

### 5.4 SWITZERLAND

The Swiss apprenticeship program is also known as the VPET system (Vocational, Professional Education and Training). It enables young people to enter the labour market and ensures that there are enough skilled workers and managers to meet future demand by offering a mixture of on-the-job training and classroom training. With 65,872 apprentices as of 2020-21, it has a high labour market relevance and is an integral part of the education system.<sup>83</sup>

### The Swiss system is characterised by a high degree of permeability—the ability to pursue subsequent education and training opportunities and switch between vocational and general education pathways.

The VPET system is divided into two sectors: upper-secondary level VET and tertiary-level professional education. The programs are two-year VET programs for the Federal VET Certificate and 4 years for the diploma certificate. According to a 2020 study by the Swiss Coordination Centre for research in education, 5.5 percent of apprenticeships were expected to be cut in fall 2020 due to the ongoing impacts of COVID-19, on top of 2.8 percent that had already been cut at the start of the pandemic. The study further

asserted that the effects could be longer-term, with Switzerland short of 14,000-23,000 apprenticeship placements until 2025.<sup>84</sup>

The Swiss VPET is governed by three partners: (1) The Confederation, which promotes strategic management and development; (2) Professional organisations for training content and apprenticeship, and (3) The Cantons, for implementation and supervision. The Confederation and the Cantons jointly ensure high quality and accessibility of education and equal recognition of general and vocational courses of study across the country. The Confederation, with the help of the Cantons, implements the Federal Vocational and Professional Education and Training Act—supervising apprenticeships, vocational schools and professional education institutions in their provision of vocational, educational and career guidance services. They issue permits authorising host companies to take on apprentices and/or trainees, and finally provide training to workplace trainers at host companies.<sup>85</sup>

The program’s legislation comes from the first Federal Vocational Education and Training Act which came into force in 1933 and in 2004, a new legislation, the Federal Vocational and Professional Education and Training Act, was enacted. The VPET sector is funded by the Confederation, the Cantons and professional organisations. According to the apprenticeship toolbox, the salaries along with various costs depend on national labour market regulations. The Confederation contributes one quarter of the total costs of the VPET system. Up to 10 percent of federal funding is earmarked to promote VPET development projects and specific activities that serve the public interest. All companies within a given economic branch are required to contribute to a corresponding VPET fund, which is used to cover the costs of activities within the VET sector and professional educational sector like development of training programs, organising courses and qualification procedures, promotion of specific occupations.<sup>86</sup> The Employment Act is a central

to the protection of employees, including apprentices, due to regulation regarding the protection of youth and adults, and health and working hours.<sup>87</sup>

The Swiss apprenticeship model caters towards industry, transport, energy and water supply, construction, trade, repairs, hotel, restaurant and catering, information & communication, arts & entertainment, financial services, land and housing, the self-employed, scientific and technical services, health and social care.<sup>88</sup> The Confederation has been working towards strengthening the VPET system within an international context, supporting socio-economic development in partner countries and successfully positioning Switzerland at the international level.<sup>89</sup> This model is grounded in partnerships between the schools and the companies so that the apprentices can easily find jobs once.

Unlike Germany, the United States, India and Australia, the Swiss VPET system is also characterised by a high degree of permeability—the ability to pursue subsequent education and training opportunities and switch between vocational/professional pathways and general education/university pathways. The Swiss VPET system offers a broad selection of available training options, including courses catering to different abilities, and is geared to the needs of different age groups. Similar to Germany, the dual-track VET programs in Switzerland are by far the most prevalent form of vocational education and training. The vast majority of young people coming out of compulsory education enroll in either a vocational school (VET sector), a baccalaureate school, or a specialised school (general education sector). The Swiss model is more federalised than the Indian system. India can learn from the apprenticeship model in Switzerland by focusing more on integration between schools, government structures and private companies, and by working with other countries in the area of vocational education and training.

**Table 5**  
**Comparison between Germany, USA, Switzerland and Australia**

Parameters	Germany	U.S.A	Switzerland	Australia
Responsible Ministry	Federal Ministries of Education and Research	Office of Apprenticeships at the US Department of Labour as well as State Apprenticeships agencies	Federal Department of Economic Affairs, Education and Research	Department of skills, education, employment.
Number of Apprentices	5,00,000	82,000	65,872	2,76,250
Government Subsidies	Data Not available	Yes	Yes	Yes
Regulated and legislated by	Federal Ministries of Education and Research German Federal Employment Agency	Labour Bureau	The Federal Vocational Education and Training Act	The National Code of Good Practice The Fair Work Ombudsman State and Territory Training Authorities
Focus sectors and occupations	500 occupations across various business sectors	Information technology; healthcare; hospitality; cybersecurity; energy; advanced manufacturing; engineering; transportation; construction; financial services	Industry; transport; energy and water supply; construction; trade; repairs; hotel, restaurant and catering; information & communication; art & entertainment; financial services; land and housing; services; self-employed; scientific and technical services; health and social care.	Carpentry; plumbing; automotive mechanics; electrical wiring
Other characteristics	The system is standardized throughout Germany so that a young person completing a placement in one state can use his or her qualification in another.	The Apprentice Job Finder, an online entity that helps one find an apprenticeship	High degree of permeability: the ability to pursue subsequent education and training opportunities and switch between vocational/professional pathways and general education/university pathways	The Australian Apprentice Support Network connects the apprentice to the right job based on their skillset.
Duration	2 -3.5 Years	4 Years	1-4 Years	2-4 Years
Legislative protections under labour laws	The youth employment law applies to apprentices as well as the Youth Labour Protection law applies for apprentices under 18. <sup>90</sup>	The Fair Labour Standards Act applies to Apprentices. <sup>91</sup>	The Employment Act highlights employment standards and applies to apprentices as well. <sup>92</sup>	The National Code of Good Practice underlines that any apprentice should be treated the same way as any other employee in the work place. This is also highlighted in the training contract. <sup>93</sup>



# 6.

## POLICY RECOMMENDATIONS

Apprenticeships offer a way to connect education, skills, and employment. A well-designed apprenticeship system can mobilize employer engagement and finance, alleviating the pressure felt by an already cash-strapped government and students trying to break into the labour market. Apprenticeships enable employees and employers to find the best match, and they provide important experience and employability signaling value for youth in the job market.

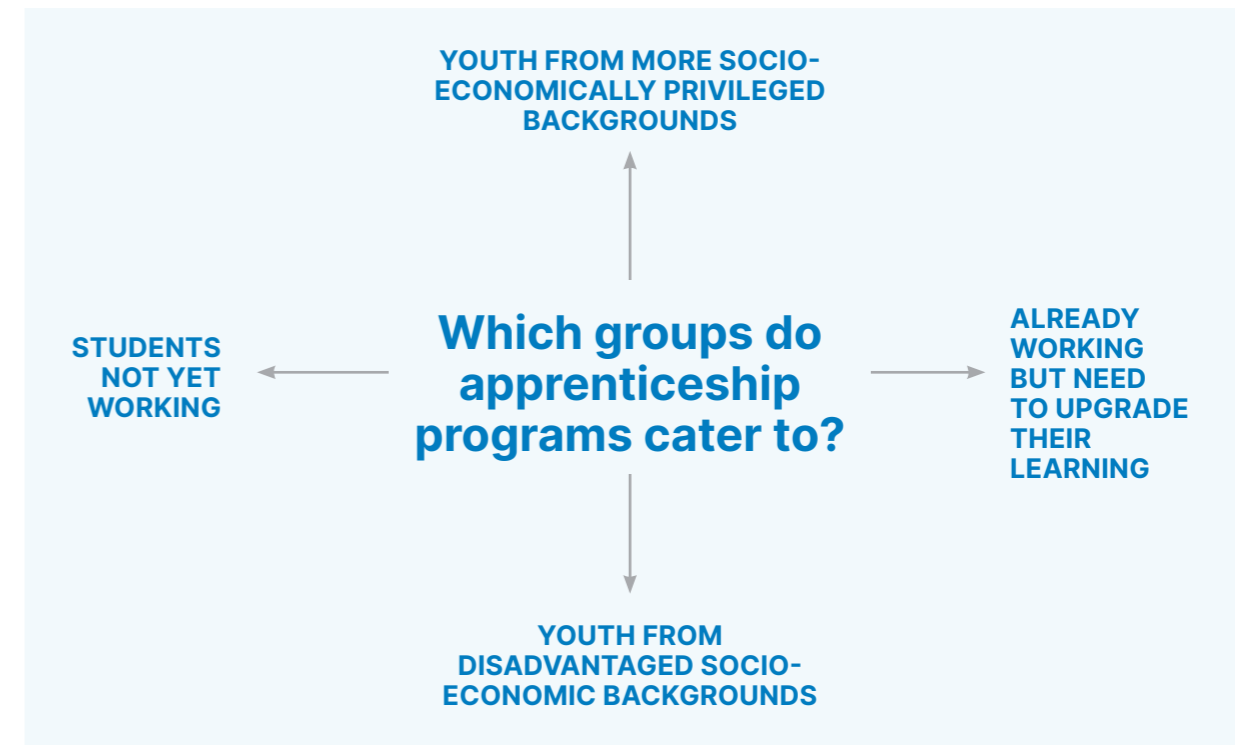
Given the heterogeneous nature of our labour market and workforce, the apprenticeship program needs to cater to three distinct groups:

1. A large and growing population of youth from disadvantaged socio-economic backgrounds that tend to have lower levels of education and tend to have more manual skills. For these youth, the ability to earn while learning is important.
2. Youth from more socio-economically privileged backgrounds who tend to have higher-levels of education and are often willing to wait for a suitable opportunity in a white-collar profession.
3. The third category is students who are not yet working, but aim to join the workforce upon completion of their courses.

4. A fourth category of individuals that are already working but need to upgrade their learning so as to keep up with the changing needs of the market.

Yet India's apprenticeship system is falling short on results if not potential. The following recommendations begin by laying out a path to reform the apprenticeship program and chart a path toward creating 10 million apprentices in ten years, starting with students in higher education that are pursuing degrees, especially those in Skills Universities.

1. **All training should eventually be employer-led, as through apprenticeships.** This must be an incremental process beginning with degree-linked apprenticeships.
2. **The governance architecture of apprenticeships must be streamlined.** The number of government ministries, departments, and regulators, as well as the confusion between Central and State directives make the apprenticeship program hard to understand and even harder to effectively implement. Streamlining this structure will make it easier for all stakeholders, especially employers, to navigate the system. This is why this report hones in on creating 10 million degree-linked apprentices over the next ten years through the higher education system first.



3. **Mandate that universities, colleges, stand-alone institutions should make provisions for an apprenticeship program.** Apprenticeship rules already introduced the definition of degree (and diploma) apprenticeship in 2019. Rule 2 of the Apprentices Act should specify that universities, colleges, stand-alone institutions can execute the apprenticeship program. Aligned with this, institutions of higher education should:
  - Run apprenticeship embedded degree/diploma programs in accordance with the overall guidelines issued by the relevant regulatory body — UGC, AICTE, and DGT and enroll students in these program.
  - Issue one set of guidelines on how degree-programs should be linked to on-the-job training. The guidelines should be consistent whether for a Bachelor of Vocational Education and administered through the Technical Education stream of the Department of Higher Learning, or for other degrees conferred by the universities, colleges and higher education stream. Discontinue the National Employability Enhancement Mission to avoid confusion.

- Work with industry to aggregate open positions for on-job training of the students
- Administer registration and documentation on the apprenticeship portal as per requirements defined under the Apprentices Act
- Create the curriculum as per NSQF framework for job roles (in consultation with industry, Sector Skill Councils and other concerned departments, wherever required) and provide requisite credits for every module
- All blended and flexible learning arrangements through the four classrooms including online options; modularity; lateral entry; and opportunities for multiple entry and exit into the system.
- Define a credit-based system where on-the-job training provides credits toward the completion of a degree.
- Conduct the assessments, and subsequent certification, jointly with the employer.



- Manage the payment of stipend to the students, as prescribed under the Rules of Apprentices Act, so as to ensure due stipend is being paid on time.
  - Submit the stipulated monthly reports on the apprenticeship portal as prescribed under the Apprentices Act on behalf of the industry partner.
  - Assist the student apprentice to maintain a work diary per The Apprenticeship Rules.
4. Apprenticeships should be a tripartite agreement between the university, the apprentice, and the industry partner. Associated changes should be made to reflect this in UGC regulations as well as the Apprenticeship Act.
  5. **Create a single portal for both NATS and NAPS** for all designated and optional trades that automatically supplies the relevant information to the appropriate authorities, thus reducing the burden for companies to navigate the system. Also, simplify the process by which a firm can exit from providing apprenticeships. Ensure that the portal is simple to use and functional.
  6. **Embrace properly vetted Third Party Aggregators to serve as intermediaries between employers, potential apprentices, and government** and to serve the range of functions that are otherwise the responsibility of the employer. The role of TPAs is critical to enabling apprenticeships. They can mobilize apprentices and connect them to opportunities on the portal. They can help broker the contract — as required by Chapter II, Provision 4 under “Contract of apprenticeship” — between companies and apprentices. TPAs can encourage establishments that are off the portal to sign up and gain access to a pool of ready apprentices. The TPAs can help set up access to training on behalf of the companies and help with other compliances. This is particularly helpful for small businesses.
  7. **Adopt uniform stipend structures and government reimbursement across MoE, DGT and NSDC** based on apprentice qualification levels and not on the agency implementing them. An apprentices’ stipend should be increased by a reasonable increment on an annual basis, with the government’s reimbursement also rising accordingly.
  8. **Afford the same health and safety protections for apprentices** as regular workers. Employer liability for compensation of injury to apprentices should be the same as for regular workers.
  9. **Institute awareness campaigns.** Successful execution of the apprenticeship program depends on building government capacity.
    - *State level institutions* and administrators need help in rolling out an effective strategy for expanding apprenticeships from educating state-level administrators on the benefits of apprenticeships, to connecting students to potential employers. Such capacity building to help States set up such structures can happen through workshops and consultations led by relevant Central government departments and/or through experts and consultants.
    - *Companies* need better means of accessing information on candidates available for training. There is also a need to disseminate information to promote awareness of the benefits of apprenticeships among state-

level policymakers, employers, students in secondary schools, colleges and training institutions. Rooting out societal biases against vocational over academic learning, or the pre-disposition toward finishing education before entering the labour market, will take time and persistence. Such campaigns must demonstrate how economically lucrative apprenticeships can be both in the short- term, through sufficient stipends, and in the long-term by enabling youth to make better occupational choices and get a shoe-in to well-paying jobs that offer potential for progress.

10. **Expand and prioritize Recognition of Prior Learning certification** and design processes by which employers or TPAs can apply for RPL certification on behalf of an apprentice.
11. **Ensure that Sector Skill Councils have state representatives** that can work with the state governments to promote the industry connection.
12. **Focus on enabling apprenticeships among smaller companies.**
  - Design incentive structures to reward larger companies that help smaller upstream and

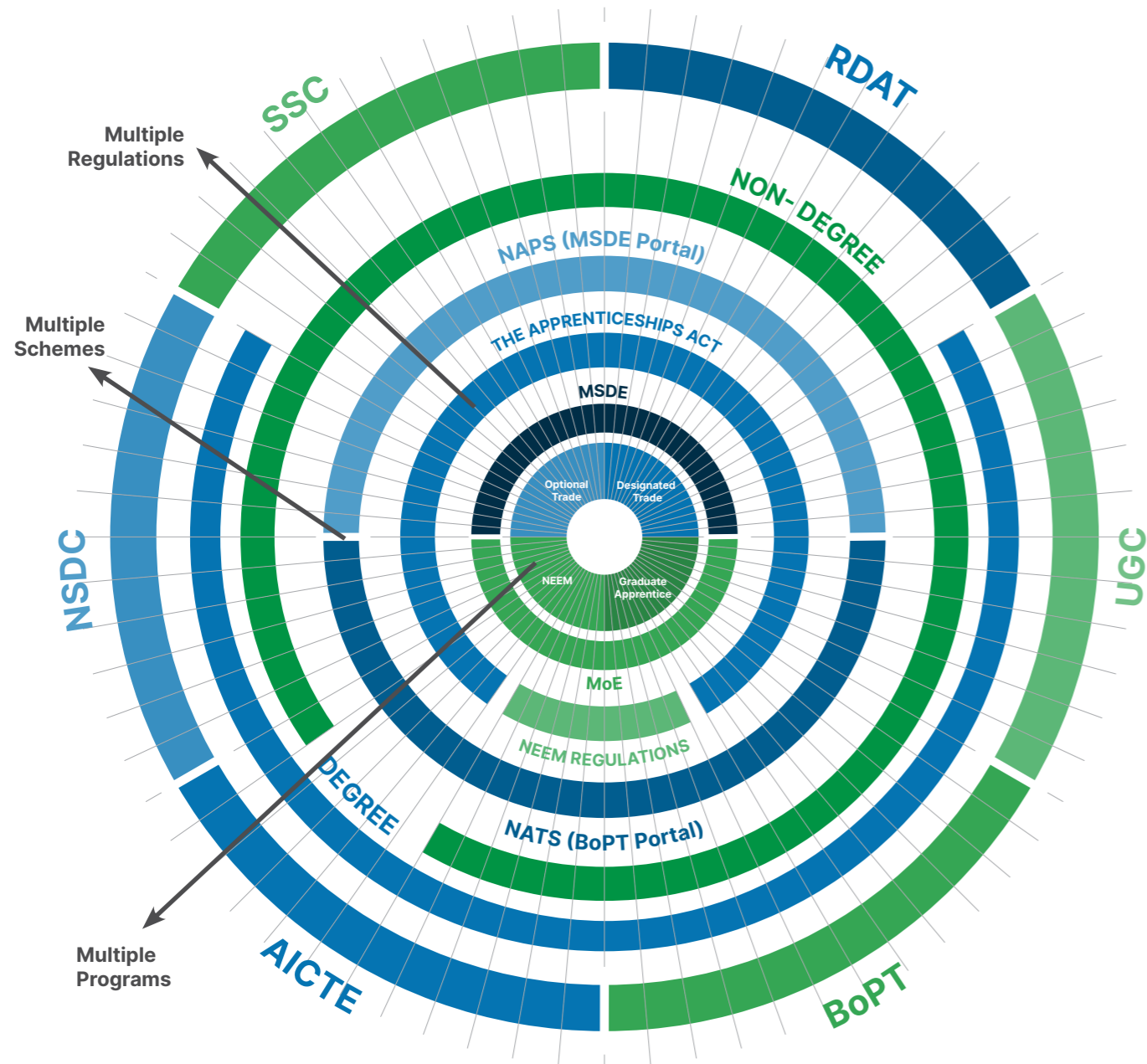
downstream companies in their supply chains participate in the apprenticeship programs. Big companies, can for example allow smaller companies to avail their training facilities. They can help supply trainers or even provide the basic training, but then send the apprentice to the smaller company for the on-the-job portion of the training.

- Training in industrial clusters, in which employers pool resources to set-up common training facilities, should be linked to apprenticeships.
- Ensure there are safeguards to protect the proprietary information, intellectual property and physical infrastructure of firms.

Ultimately, when it comes to education and skills training, the perceived value matters. To individuals and parents, whether they can leverage the education and training to find gainful employment matters. For employers, a productive workforce is key. For governments, building human capital for development and growth is important. All stand to gain with a well-functioning education and skills system; all stand to lose if the shortcomings are left unaddressed.

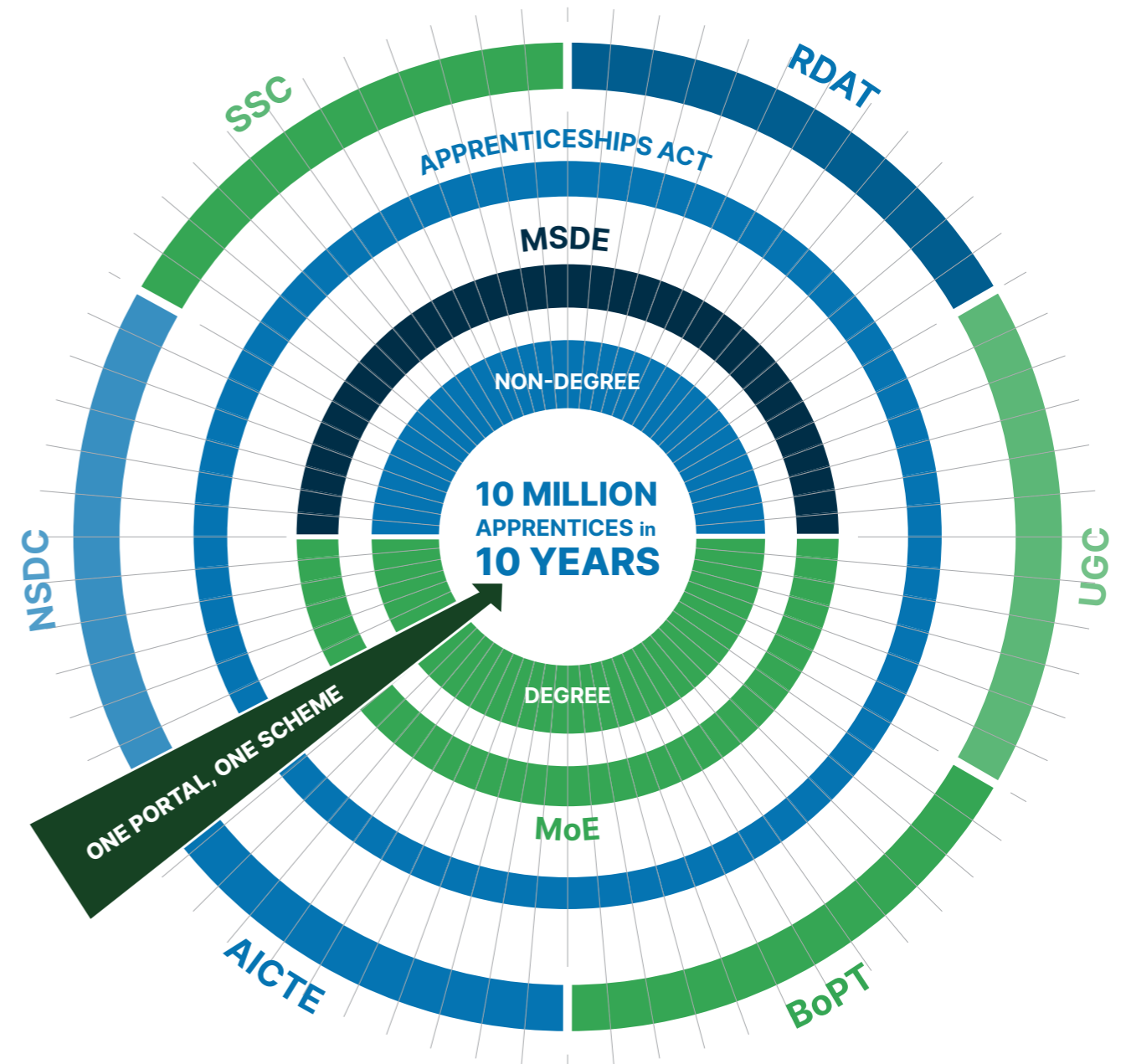
# Simplifying a Complex System of Apprenticeships

**Current system**



- AICTE** All India Council for Technical Education
- BoPT** Boards of Practical Training (formerly BoAT)
- MoE** Ministry of Education
- MSDE** Ministry of Skill Development and Entrepreneurship
- NAPS** National Apprenticeship Promotion Scheme
- NATS** National Apprenticeship Training Scheme

**Proposed system**



- NEEM** National Employability Enhancement Mission
- NSDC** National Skill Development Corporation
- RDAT** Regional Directorate of Apprenticeship Training
- SSC** Sectors Skill Councils
- UGC** University Grants Commission

# ENDNOTES

- 1 Dewan, S., & Sarkar, U. (2017). *From Education to Employability: Preparing South Asian Youth for the World of Work*. JustJobs Network & UNICEF South Asia. <https://www.justjobsnetwork.org/wp-content/uploads/2017/12/from-education-to-employability-Dec-2017-web.pdf>
- 2 National Statistical Office (2022). *Youth in India 2022*. Ministry of Statistics and Programme Implementation, Government of India, New Delhi. <https://www.mospi.gov.in/web/mospi/reports-publications/-/reports/view/templateFive/29601?q=RPCAT>
- 3 JustJobs Network & Michael & Susan Dell Foundation. (2019). *The Jobs Imperative: Improving employment outcomes for India's Youth*. <https://www.justjobsnetwork.org/wp-content/uploads/2019/09/JJN-MSDF-web-final.pdf>
- 4 Ministry of Education, Government of India. (2019). *All India Survey on Higher Education 2018-19*. <https://aishe.gov.in/aishe/viewDocument.action?documentId=262>
- 5 Smith, E., & Kemmis, R. B. (2014). *Towards a model apprenticeship framework: a comparative analysis of national apprenticeship systems*. International Labour Organisation. [https://www.ilo.org/wcmsp5/groups/public/---asia/---ro-bangkok/---sro-new-delhi/documents/publication/wcms\\_234728.pdf](https://www.ilo.org/wcmsp5/groups/public/---asia/---ro-bangkok/---sro-new-delhi/documents/publication/wcms_234728.pdf)
- 6 Dewan, S., & Sarkar, U. (2017). *From Education to Employability: Preparing South Asian Youth for the World of Work*. JustJobs Network & UNICEF South Asia. <https://www.justjobsnetwork.org/wp-content/uploads/2017/12/from-education-to-employability-Dec-2017-web.pdf>
- 7 United Nations Population Division (2019). *World Population Prospects 2019*. Retrieved July 31, 2021, from <https://population.un.org/wpp/>
- 8 Ministry of Statistics and Programme Implementation. (2012, September). *Employment and Unemployment Situation Among Social Groups in India, 2009-10*. Retrieved from [http://mospi.nic.in/sites/default/files/publication\\_reports/nss\\_Report-543.pdf](http://mospi.nic.in/sites/default/files/publication_reports/nss_Report-543.pdf)
- 9 Ministry of Statistics and Programme Implementation. (2020, June 5). *Periodic Labour Force Survey (PLFS) – Annual Report [July, 2018 – June, 2019]*. Retrieved from <https://pib.gov.in/PressReleasePage.aspx?PRID=1629366>
- 10 Ministry of Statistics and Programme Implementation. (2020, June 5). *Periodic Labour Force Survey (PLFS) – Annual Report [July, 2018 – June, 2019]*. Retrieved from <https://pib.gov.in/PressReleasePage.aspx?PRID=1629366>
- 11 Informal employment is identified by jobs classified by the status of employment of the workers and the types of production units in which they were employed. The different types of production units are: (a) formal sector enterprises, (b) informal sector enterprises, and (c) households that produce goods for their own final use and/or those employing domestic workers. The status of employment of the workers performing the jobs may be (a) own account workers, (b) employers, (c) contributing family workers, (d) employees, or (e) members of informal producers' co-operatives.  
See Ministry of Statistics and Programme Implementation. (2020, June 5). *Periodic Labour Force Survey (PLFS) – Annual Report [July, 2018 – June, 2019]*. Retrieved from <https://pib.gov.in/PressReleasePage.aspx?PRID=1629366>  
Or  
Informal employment refers to workers who are employed in jobs where they do not have access to social security benefits under existing labor legislation. This can be either because of the informal nature of the enterprise where a person is employed, or due to the nature of the work itself, which can be casual, part-time, or home-based self-employment.  
See Accountability Initiative. (2020, December 30). *A Comprehensive Overview: Defining and Measuring Informality in India's Labour Market*. Retrieved from <https://cprindia.org/research/reports/comprehensive-overview-defining-and-measuring-informality-india%E2%80%99s-labour-market>
- 12 TeamLease Degree Apprenticeship Program (2021). *Apprenticeship Outlook Report – January – June 2021*. TeamLease Skills University. <https://degreeapprenticeship.teamlease.com/report/apprenticeship-outlook-report-january-june-2021>
- 13 Smith, E., & Kemmis, R. B. (2014). *Towards a model apprenticeship framework: a comparative analysis of national apprenticeship systems*. International Labour Organisation. [https://www.ilo.org/wcmsp5/groups/public/---asia/---ro-bangkok/---sro-new-delhi/documents/publication/wcms\\_234728.pdf](https://www.ilo.org/wcmsp5/groups/public/---asia/---ro-bangkok/---sro-new-delhi/documents/publication/wcms_234728.pdf)
- 14 The World Bank. (2021). *Labour Force Total – India*. Retrieved from <https://data.worldbank.org/indicator/SL.TLF.TOTL.IN?locations=IN>
- 15 Federation of Indian Chambers of Commerce & Industry. (2019). *Implementation of Apprenticeship in India: A Study by FICCI*. <http://ficci.in/spdocument/23143/Implementation-of-Apprenticeship-in-India.pdf>
- 16 National Institute of Educational Planning and Administration. (2018). *School Education in India: U-Dise Flash Statistics 2016-2017*. Retrieved from [http://udise.in/Downloads/Publications/Documents/Flash\\_Statistics\\_on\\_School\\_Education-2016-17.pdf](http://udise.in/Downloads/Publications/Documents/Flash_Statistics_on_School_Education-2016-17.pdf)
- 17 Ministry of Education, Government of India. (2019). *All India Survey on Higher Education 2018-19*. <https://aishe.gov.in/aishe/viewDocument.action?documentId=262>
- 18 Ministry of Statistics and Programme Implementation. (2019). *Annual Report, Periodic Labour Force Survey 2017-18*. Retrieved from [http://mospi.nic.in/sites/default/files/publication\\_reports/Annual%20Report%2C%20PLFS%202017-18\\_31052019.pdf?download=1](http://mospi.nic.in/sites/default/files/publication_reports/Annual%20Report%2C%20PLFS%202017-18_31052019.pdf?download=1)
- 19 National Institute of Educational Planning and Administration. (2018). *School Education in India: U-Dise Flash Statistics 2016-2017*. Retrieved from [http://udise.in/Downloads/Publications/Documents/Flash\\_Statistics\\_on\\_School\\_Education-2016-17.pdf](http://udise.in/Downloads/Publications/Documents/Flash_Statistics_on_School_Education-2016-17.pdf)
- 20 The number is the breakdown of youth population by the completion of general education level
- 21 Ministry of Education, Government of India. (2019). *All India Survey on Higher Education 2019-20*. [https://www.education.gov.in/sites/upload\\_files/mhrd/files/statistics-new/aishe\\_eng.pdf](https://www.education.gov.in/sites/upload_files/mhrd/files/statistics-new/aishe_eng.pdf)
- 22 Ministry of Education, Government of India. (2019). *All India Survey on Higher Education 2018-19*. <https://aishe.gov.in/aishe/viewDocument.action?documentId=262>
- 23 Aspiring Minds. (2019). *National Employability Report Engineers, 2019*. <https://www.shl.com/en/india/employability-reports/>
- 24 Hard skills center around practical capacities and abilities, though soft skills focus on behaviours and characters. Hard skills are quantifiable for instance, technical skills, computer application skills, where soft skills are less tangible and harder to teach.
- 25 India Today Web Desk. (2020). *Soft Skills or Hard Skills: Which will take you up career ladder?*. *India Today*. Retrieved from <https://www.indiatoday.in/education-today/jobs-and-careers/story/soft-skills-or-hard-skills-what-will-take-you-up-your-career-ladder-1664405-2020-04-07>
- 26 Ministry of Skill Development and Entrepreneurship. (2018, December 26). *Skill India—Highlights 2018*. Retrieved from <https://pib.gov.in/PressReleasePage.aspx?PRID=1557375>
- 27 National Council of Vocational and Research Training. (n.d.). Retrieved August 10, 2021, <https://www.ncvtindia.org>
- 28 Ministry of Skill Development and Entrepreneurship. (2018, January 3). *Year End Review, 2017, Ministry of Skill Development & Entrepreneurship*. Retrieved from <https://pib.gov.in/PressReleasePage.aspx?PRID=1515326>
- 29 Rohit, P. S. (2011). *Armed with technical edge, poor students land a job*. *The Times of India*. Retrieved July 25, 2016, from <http://timesofindia.indiatimes.com/city/Hyderabad/Armed-with-technical-edge-poor-students-land-a-job/article-show/9951411.cms>
- 30 Kumar, A. (2016). *Supplying Skills for Jobs: A State-level Analysis of Training Across India*. JustJobs Network. [https://www.justjobsnetwork.org/wp-content/pubs/reports/Supplying\\_Skills\\_for\\_Job.pdf](https://www.justjobsnetwork.org/wp-content/pubs/reports/Supplying_Skills_for_Job.pdf)
- 31 Ministry of Statistics and Programme Implementation. (2020). *Annual Report, Periodic Labour Force Survey 2019-20*. [http://mospi.nic.in/sites/default/files/publication\\_reports/Annual\\_Report\\_PLFS\\_2018\\_19\\_HL.pdf](http://mospi.nic.in/sites/default/files/publication_reports/Annual_Report_PLFS_2018_19_HL.pdf)
- 32 The PLFS distinguishes between formal, non-formal, and informal training. Formal training is imparted through institutions/ organisations and is structured based on a set curricula, teaching/learning requirements and assessments. It is recognised by national certifying bodies leading to a diploma, certificate, and qualification is considered formal. Non-formal Training can be acquired in addition to, or as an alternative to, formal learning. It is somewhat structured, but has greater flexibility than formal training. It is imparted through community-based settings, the workplace, or civil society and other organisations. Non-formal training does not have the level of curriculum, syllabus, or accreditation and certification associated with formal learning but it is more structured as compared to informal learning. Informal training, on the other hand, is that which is not-structured, does not lead to a certification or recognized qualification. It occurs in daily life, imparted through family, or in the workplace or communities. It is unstructured in terms of learning objectives, learning time, or support.
- 33 Dewan, S., & Khan, L. (2019). *Breaking the Cycle of Vulnerability Education, Skills and Employability for Indian Youth*. JustJobs Network & UNICEF India. <https://www.unicef.org/rosa/media/3926/file/Breaking%20the%20Cycle%20of%20Vulnerability.pdf>
- 34 JustJobs Network & Michael & Susan Dell Foundation. (2019). *The Jobs Imperative: Improving employment outcomes for India's Youth*. <https://www.justjobsnetwork.org/wp-content/uploads/2019/09/JJN-MSDF-web-final.pdf>
- 35 Dewan, S., & Khan, L. (2019). *Breaking the Cycle of Vulnerability Education, Skills and Employability for Indian Youth*. JustJobs Network & UNICEF India. <https://www.unicef.org/rosa/media/3926/file/Breaking%20the%20Cycle%20of%20Vulnerability.pdf>
- 36 The Apprentices Act, 1961 (India). Retrieved from <https://www.apprenticeship.gov.in/Material/ApprenticesAct1961.pdf>
- 37 The Apprenticeship (Amendment Rules), 2019 (India). Retrieved from [https://naps-cdn.s3.ap-south-1.amazonaws.com/Apprenticeship\\_Rules\\_%28Amendment%29-2019.pdf](https://naps-cdn.s3.ap-south-1.amazonaws.com/Apprenticeship_Rules_%28Amendment%29-2019.pdf)
- 38 Organized enterprises are defined as those with 20 or more employees operating with electricity or those with 10 or less operating without electricity
- 39 The Apprenticeship (Amendment Rules), 2019 (India). Retrieved from [https://naps-cdn.s3.ap-south-1.amazonaws.com/Apprenticeship\\_Rules\\_%28Amendment%29-2019.pdf](https://naps-cdn.s3.ap-south-1.amazonaws.com/Apprenticeship_Rules_%28Amendment%29-2019.pdf)



- 40 Ministry of Skill Development and Entrepreneurship. (n.d.). *Guidelines for Implementation of National Apprenticeship Promotion Scheme*. Retrieved from [http://www.apprenticeship.gov.in/Material/NAPS\\_Guidelines.pdf](http://www.apprenticeship.gov.in/Material/NAPS_Guidelines.pdf)
- 41 Skill India. (n.d.). Retrieved August 10, 2021 from <https://apprenticeshipindia.org>
- 42 Federation of Indian Chambers of Commerce & Industry. (2019). *Implementation of Apprenticeship in India: A Study by FICCI*. <http://ficci.in/spdocument/23143/Implementation-of-Apprenticeship-in-India.pdf>
- 43 Now BOAT
- 44 National Skill Development Corporation. (n.d.). *FAQs – Apprenticeship under the Apprentices Act, 1961*. Retrieved from <https://nsdcindia.org/sites/all/themes/ibeas/pdf/apprenticeship-faqs.pdf>
- 45 Ministry of Skill Development and Entrepreneurship. (2018, November). *Guidelines for Basic Training Providers, Third Party Aggregators and Courses*. Retrieved from <https://s3.ap-south-1.amazonaws.com/naps-cdn/guidelines-tpa.pdf>
- 46 National Institute of Labour Economics Research and Development. (2019, December). *Efficacy & Effectiveness of National Apprenticeship Training (NATS): All India Study*. Retrieved from [https://www.bopter.gov.in/assets/pdf/NATS\\_REPORT.pdf](https://www.bopter.gov.in/assets/pdf/NATS_REPORT.pdf)
- 47 Unorganized firms are the one who employs less than 20 workers and do not uses electricity
- 48 Ministry of Statistics and Programme Implementation. (2013). *All India Report of Sixth Economic Census*. <http://mospi.nic.in/all-india-report-sixth-economic-census>
- 49 Ministry of Skill Development and Entrepreneurship (n.d.). NCVT MIS. Retrieved from <https://www.ncvtmis.gov.in/pages/faq>
- 50 Ministry of Skill Development and Entrepreneurship. (2019, June 24). "Apprenticeship." New Delhi. Lok Sabha. Starred Question No 40. <http://loksabhapah.nic.in/Questions/QResult15.aspx?qref=382&lsno=17>
- 51 Ministry Education. (2020, August 7). *Union HRD Minister addresses at the concluding session of 'Conclave on Transformational Reforms in Higher Education'*. Retrieved from <https://pib.gov.in/PressReleasePage.aspx?PRID=1644182>
- 52 Ministry of Education, Government of India. (2019). *All India Survey on Higher Education 2018-19*. <https://aishe.gov.in/aishe/viewDocument.action?documentId=262>
- 53 The State Council. (2021). *China's higher education enrollment rate reaches 57.8%*. Government of China. Retrieved from [https://english.www.gov.cn/statecouncil/ministries/202205/17/content\\_WS62833890c6d02e533532aca9.html](https://english.www.gov.cn/statecouncil/ministries/202205/17/content_WS62833890c6d02e533532aca9.html)
- 54 World Bank. (2018). *School enrollment, tertiary (% gross) - Korea, Rep.* Retrieved from <https://data.worldbank.org/indicator/SE.TER.ENRR?end=2018&locations=KR>
- 55 Distance Education Bureau. (n.d.). *Open and Distance Learning Trends*. Retrieved from <https://deb.uqc.ac.in/DEB/LearningTrends>
- 56 McKinsey & Company. (2020). *Beyond hiring: How companies are reskilling to address talent gaps*. <https://www.mckinsey.com/business-functions/organization/our-insights/beyond-hiring-how-companies-are-reskilling-to-address-talent-gaps>
- 57 Smith, E., & Kemmis, R. B. (2014). *Towards a model apprenticeship framework: a comparative analysis of national apprenticeship systems*. International Labour Organisation. [https://www.ilo.org/wcmsp5/groups/public/---asia/---ro-bangkok/---sro-new-delhi/documents/publication/wcms\\_234728.pdf](https://www.ilo.org/wcmsp5/groups/public/---asia/---ro-bangkok/---sro-new-delhi/documents/publication/wcms_234728.pdf)
- 58 Germany. (n.d.). Apprenticeship Toolbox. <https://www.apprenticeship-toolbox.eu/germany>
- 59 *Funding Arrangements in Germany*. (n.d.). Apprenticeship Toolbox. <https://www.apprenticeship-toolbox.eu/financing/funding-arrangements/47-funding-arrangements-in-germany>
- 60 *German dual apprenticeship system*. (n.d.). Expatrio. <https://www.expatrio.com/studying-germany/german-education-system/german-dual-apprenticeship-system>
- 61 Eurostat. (2021). *Youth unemployment ratio by sex, age and NUTS 2 regions*. [https://ec.europa.eu/eurostat/databrowser/view/YTH\\_EMPL\\_140\\_\\_custom\\_1164543/default/table](https://ec.europa.eu/eurostat/databrowser/view/YTH_EMPL_140__custom_1164543/default/table)
- 62 Smith, E., & Kemmis, R. B. (2014). *Towards a model apprenticeship framework: a comparative analysis of national apprenticeship systems*. International Labour Organisation. [https://www.ilo.org/wcmsp5/groups/public/---asia/---ro-bangkok/---sro-new-delhi/documents/publication/wcms\\_234728.pdf](https://www.ilo.org/wcmsp5/groups/public/---asia/---ro-bangkok/---sro-new-delhi/documents/publication/wcms_234728.pdf)
- 63 Smith, E., & Kemmis, R. B. (2014). *Towards a model apprenticeship framework: a comparative analysis of national apprenticeship systems*. International Labour Organisation. [https://www.ilo.org/wcmsp5/groups/public/---asia/---ro-bangkok/---sro-new-delhi/documents/publication/wcms\\_234728.pdf](https://www.ilo.org/wcmsp5/groups/public/---asia/---ro-bangkok/---sro-new-delhi/documents/publication/wcms_234728.pdf)
- 64 US Department Of LABOR. (2020). *Registered Apprenticeship National Results Fiscal Year 2020*. <https://www.dol.gov/agencies/eta/apprenticeship/about/statistics/2020>
- 65 *Apprenticeship Job Finder*. (n.d.). Apprenticeship. Gov. <https://www.apprenticeship.gov/apprenticeship-job-finder>
- 66 *Active Grants And Contracts*. (n.d.). Apprenticeship. Gov. <https://www.apprenticeship.gov/investments-tax-credits-and-tuition-support/active-grants-and-contracts>
- 67 *Career Seekers*. (n.d.). Apprenticeship.Gov. [https://www.apprenticeship.gov/sites/default/files/Career\\_Seeker\\_Fact\\_Sheet.pf](https://www.apprenticeship.gov/sites/default/files/Career_Seeker_Fact_Sheet.pf)
- 68 Torpey, E. (2017). *Apprenticeships: Occupations and Outlook*. US Bureau of Labor Statistics. <https://www.bls.gov/careeroutlook/2017/article/apprenticeships-occupations-and-outlook.htm>
- 69 Giffi, C., Dollar, B., Gangula, B., & Rodriguez, M. (2015). *Help Wanted American Manufacturing Competitiveness and The Looming Skills Gap*. Deloitte Review. [https://www2.deloitte.com/content/dam/insights/us/articles/manufacturing-skills-gap-america/DR16\\_help\\_wanted.pdf](https://www2.deloitte.com/content/dam/insights/us/articles/manufacturing-skills-gap-america/DR16_help_wanted.pdf)
- 70 International Labour Organization (ILO). (2017). *ILO Toolkit for Quality Apprenticeships, Volume 1: Guide for Policy Makers*. [https://www.ilo.org/skills/pubs/WCMS\\_607466/lang--en/index.htm](https://www.ilo.org/skills/pubs/WCMS_607466/lang--en/index.htm)
- 71 Organisation for Economic Co-operation and Development. (2017). *Engaging Employers in Apprenticeship Opportunities: Making It Happen Locally*. OECD Publishing. <https://www.oecd.org/industry/engaging-employers-in-apprenticeship-opportunities-9789264266681-en.htm>
- 72 Couldrey, M., & Loveder, P. (2017). *The Future Of Australian Apprenticeships*. National Centre for Vocational Education Research (NCVER). <https://files.eric.ed.gov/fulltext/ED573530.pdf>
- 73 National Centre for Vocational Education Research (NCVER). (2019). *Apprentices and Trainees 2019: March Quarter: Australia*. <http://hdl.voced.edu.au/10707/519513>
- 74 Australian Government. (n.d.). *I Want To Be An Apprentice*. Retrieved from <https://www.australianapprenticeships.gov.au/apprentices>
- 75 Department of Education, Skills and Employment, Australian Government. (2021, March). *Boosting Apprenticeship Commencements And Completing Apprenticeship Commencements*. Retrieved from <https://www.employment.gov.au/boosting-apprenticeship-commencements>
- 76 Fair Work Ombudsman, Australian Government. (n.d.). *Apprentice Entitlements*. Retrieved from <https://www.fairwork.gov.au/find-help-for/apprentices-and-trainees/apprentice-entitlements#2751-2753>
- 77 Australian Government. (n.d.). *I Want To Be An Apprentice*. Retrieved from <https://www.australianapprenticeships.gov.au/apprentices>
- 78 Australian Government. (n.d.). *I Want To Be An Apprentice*. Retrieved from <https://www.australianapprenticeships.gov.au/apprentices>
- 79 Australian Government. (n.d.). *Financial Support for Australian Apprentices*. Retrieved from <https://www.australianapprenticeships.gov.au/aus-apprenticeships-incentives>
- 80 Australian Government. (n.d.). *I Want To Be An Apprentice*. Retrieved from <https://www.australianapprenticeships.gov.au/apprentices>
- 81 Couldrey, M., & Loveder, P. (2017). *The Future Of Australian Apprenticeships*. National Centre for Vocational Education Research (NCVER). <https://files.eric.ed.gov/fulltext/ED573530.pdf>
- 82 Australian Government. (n.d.). *Financial Support for Australian Apprentices*. Retrieved from <https://www.australianapprenticeships.gov.au/aus-apprenticeships-incentives>
- 83 LeyBold-Johnson, I. (2020, May 15). Are apprenticeships undergoing a 'corona shock'?. *SwissInfo*. <https://www.swissinfo.ch/eng/education-are-apprenticeships-undergoing-a-corona-shock--/45760184>
- 84 The State Secretariat for Education, Research and Innovation (SERI). (2019). *Vocational and Professional Education and Training in Switzerland. Facts and Figures 2019*. [https://issuu.com/sbfi\\_sefri\\_ser/docs/fakten\\_zahlen\\_bb2019\\_en](https://issuu.com/sbfi_sefri_ser/docs/fakten_zahlen_bb2019_en)
- 85 The State Secretariat for Education, Research and Innovation (SERI). (2019). *Vocational and Professional Education and Training in Switzerland. Facts and Figures 2019*. [https://issuu.com/sbfi\\_sefri\\_ser/docs/fakten\\_zahlen\\_bb2019\\_en](https://issuu.com/sbfi_sefri_ser/docs/fakten_zahlen_bb2019_en)
- 86 *Funding Arrangements In Switzerland*. (n.d.). Apprenticeship Toolbox. Retrieved from <https://www.apprenticeship-toolbox.eu/financing/funding-arrangements/46-funding-arrangements-in-switzerland>
- 87 *Legal Framework in Switzerland*. (n.d.). Apprenticeship Toolbox. Retrieved from <https://www.apprenticeship-toolbox.eu/governance-regulatory-framework/legal-framework/31-legal-framework-in-switzerland>
- 88 The State Secretariat for Education, Research and Innovation (SERI). (2019). *Vocational and Professional Education and Training in Switzerland. Facts and Figures 2019*. [https://issuu.com/sbfi\\_sefri\\_ser/docs/fakten\\_zahlen\\_bb2019\\_en](https://issuu.com/sbfi_sefri_ser/docs/fakten_zahlen_bb2019_en)
- 89 The State Secretariat for Education, Research and Innovation (SERI). (2019). *Vocational and Professional Education and Training in Switzerland. Facts and Figures 2019*. [https://issuu.com/sbfi\\_sefri\\_ser/docs/fakten\\_zahlen\\_bb2019\\_en](https://issuu.com/sbfi_sefri_ser/docs/fakten_zahlen_bb2019_en)
- 90 *Legal Framework in Germany*. (n.d.). Apprenticeship Toolbox. Retrieved from <https://www.apprenticeship-toolbox.eu/governance-regulatory-framework/legal-framework/20-legal-framework-in-germany>
- 91 *Our Rights: Apprenticeship Programs*. *WorkPlace Fairness*. Retrieved from <https://www.workplacefairness.org/apprenticeship-programs>
- 92 *Legal Framework in Switzerland*. (n.d.). Apprenticeship Toolbox. Retrieved from <https://www.apprenticeship-toolbox.eu/governance-regulatory-framework/legal-framework/31-legal-framework-in-switzerland>
- 93 *MEGT, Australia* (n.d.). *Legal Rights and Obligations*. Retrieved from <https://www.megt.com.au/apprentices-and-trainees/find-out-more-or-get-in-touch/legal-rights-and-obligations>



## ABOUT THE PARTNER



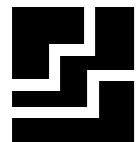
TeamLease Degree Apprenticeship is India's fastest growing blended apprenticeship training program. The program aims to help organizations develop a qualified, robust and sustainable workforce and a productive human supply chain. TeamLease Degree Apprenticeship was set up as a 100% employer-funded Public-Private Partnership (PPP). Its stakeholders currently include TeamLease Skills University, TeamLease Edtech, CII and Ministry of Skill Development.

TeamLease Skills University launched Degree Apprenticeship program in 2014 and has since enrolled over 2,00,000 apprentices with over 700 employers in 40 sectors and 150 job roles. All apprentices have transition to formal employment with a 45% wage premium. The program recently launched [www.apprentices.in](http://www.apprentices.in) (a web portal for matching employers and apprenticeship seekers)

The program has opened new channels for the employer-people supply chain in creating a talent pipeline, improving productivity, and ensuring a lower attrition rate. Since then TeamLease Degree Apprenticeship has successfully empowered youth by enabling earning-while-learning and learning-by-doing. India's current penetration of apprentices is very weak and only 35,000 employers create positions equalling 0.01% of the workforce. The scenario is changing rapidly, and TeamLease believes that India can reach the short term goal of 1 million employers creating apprenticeship positions equal to 1% of our labour force.

TeamLease's value proposition to three stakeholders is simple; return on investment to employers (via lower attrition, higher productivity, and faster hiring), signalling value to youth (apprenticeship improve resumes more than courses) and demand driven financing for government (more than 97% of TeamLease Skill's University 700 crore in costs are met by employers). Our future strategy involves integrating four classrooms (online, onsite, on-campus and on-the job), four qualifications (certificate, diploma, advanced diploma and degree) and four financing sources (CSR, loans, fees, and employers).

### Report design and layout



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# JustJobs

WORKING FOR SHARED PROSPERITY

JustJobs Network is an applied research institute finding evidence-based solutions to one of the most pressing challenges of our time: How to create more and better jobs and improve the employability of India's large and growing population. We produce research on good job creation and workforce development, focusing our work on the critical knowledge gaps in the employment landscape.

JJN convenes a network of diverse stakeholders — including policy shapers, private sector players, academics, and grassroots leaders — to deepen the practical implications of our research and amplify its impact. Through the combination of cutting-edge research and global knowledge sharing, JJN aims to forge a fresh, dynamic channel for policy dialogue and instigate practical change to improve employment opportunities and outcomes for more people. Our team members are based in New Delhi and Washington, D.C.

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For more information visit  
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