

Re-engineering the skill ecosystem

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Foreword - KPMG

With a favourable demographic dividend of India, there comes a big responsibility of providing employability to millions of youth from this country. Two reasons why this looks possible is that India is a consumption-driven economy with an average growth of more than 7 per cent Gross Domestic Product (GDP) in the last few quarters, which would support employment in a big way. Secondly, with the ageing world population, young India has an opportunity to become the global supplier of manpower. But the main factor that can threaten this opportunity is not having the capability and capacity to cater to this burgeoning demand, and skilling is the only answer to this.

The government recognises this fact, and hence has created a separate ministry for skilling and entrepreneurship in order to usher India in the new era but nothing short of a revolution is required in skilling and the vocational education space in India, which in my view has assumed critical proposition and might well determine the future growth of this country.

This white paper traces the Indian growth story by tracking the Indian Gross Domestic product (GDP) and Gross State Domestic Product (GSDP) of the states along with the evolution of Indian workforce over the years. It captures the growth of formal employment in India and its significance detailing the factors that affect the stock of skill in India.

The paper also has some important suggestions and recommendations for all stakeholders concerned to accelerate the pace of skill education in India. I truly believe that this paper would help understand the magnitude of the skilling agenda, the journey till date and big task ahead.



Narayanan Ramaswamy

Partner and Head

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Foreword - FICCI

Prime Minister Modi shares the dream and aspirations of a billion plus people of India, which is "to make India a global economic leader". To achieve this dream, government has initiated a number of flagship initiatives, including 'Skill India'. We at FICCI believe that it is time to evaluate the steps taken and come up with new measures to strengthen the Skill and Training ecosystem in the country.

India today is grappling with twin challenge of skilling millions of youth and employment generation for engaging them in gainful employment. As per projections, over 109 million incremental people will be required in India alone, across 24 key sectors by the year 2022. Yet, only 4.69 per cent of the Indian population has undergone formal skill training. India still has the age old tradition of learning on the job through informal networks and needs to gravitate towards a formal system for rapid improvement in productivity through use of latest technology.

We have to interlink skills, training and job creation gaps in order to accommodate the annual 18 million Indian youth entering the workforce for the first time during the next decade and a half. Against this need, at present only 5.5 million additional organised sector jobs a year are being created which is certainly not enough. Unless the skill program of the country is based on the demography, geography, migration of labour within the country and outside, industry growth, reliable and relevant data and training needs, India's demographic dividend would certainly become a demographic nightmare. This indeed calls for an urgent re-engineering of the skill ecosystem!

The FICCI-KPMG report, examines some of the above aspects in detail and recommends the way forward. The report identifies how data from provident fund schemes can help us answer the biggest questions – where are the jobs? There is need to identify regional growth engines, create linkages between feeder regions for labour & economic pockets. Besides present triggers that will impact the industry & jobs, we need to identify the drivers which will impact Indian economy, technology being the key driver. Besides, domestic requirements, with demographic shifts and an ageing population across key markets, can India be the skill partner for the world at a time of extreme technological disruption? What would be key skills in demand & what are the reskilling imperatives? Do we have the right institutional framework to identify them?

India cannot risk making inadequate investment and needs correct strategies so as to not lose out on this critical time. While there is always a space for learning, there is a greater need to collaborate, complement and customise quickly. There is an urgent need to rise above the limitations and aggregate the efforts in mission mode to make the skill vision a success. We need to move away from incremental reforms and leap forward with generational transformation. The question is – how fast we can be ready for this?



TV Mohan Das Pai

Chairman

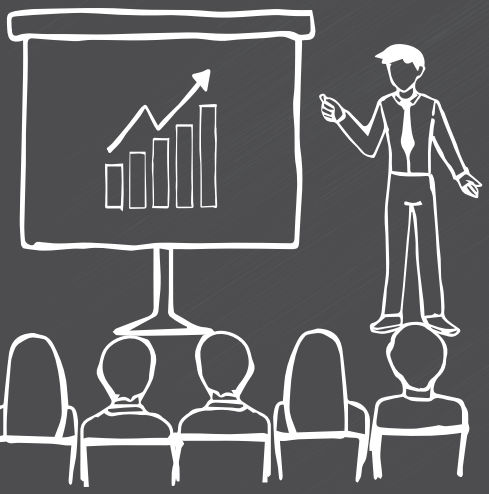
FICCI Skill Development Committee

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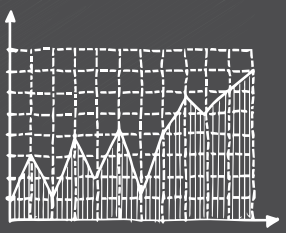




















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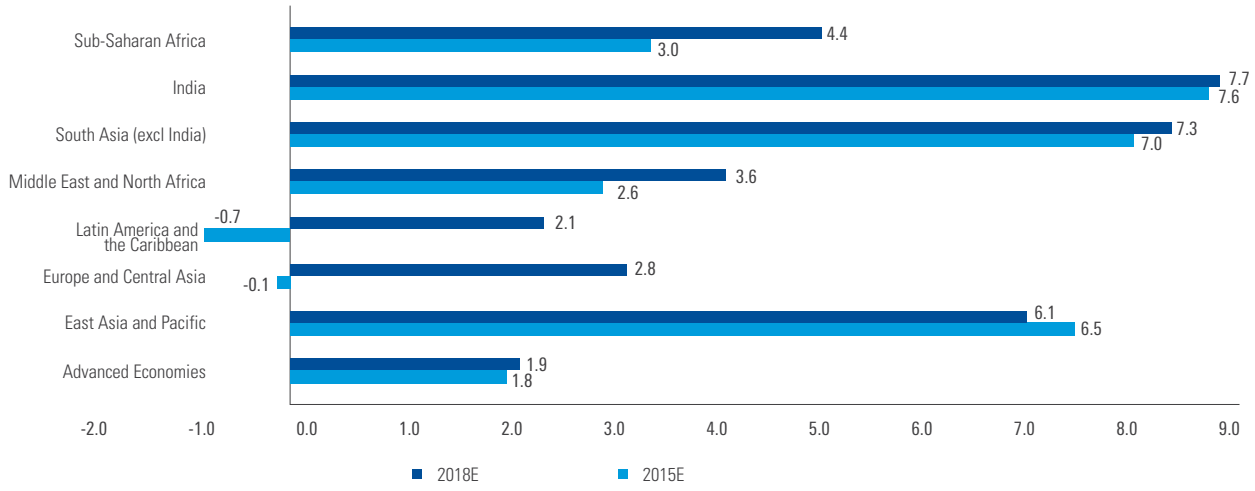
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Engines of growth

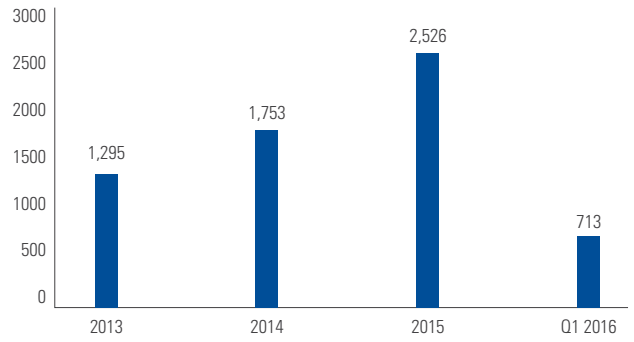
The Indian growth story is a remarkable one – possibly a bright spot in today's otherwise subdued global economy. Predicted to grow at 7.5 per cent – 7.7 per cent, per annum , India is expected to sustain its position as the world's fastest growing economy till 2018 (Figure 1.0).

Figure 1 Global GDP growth rates; in per cent



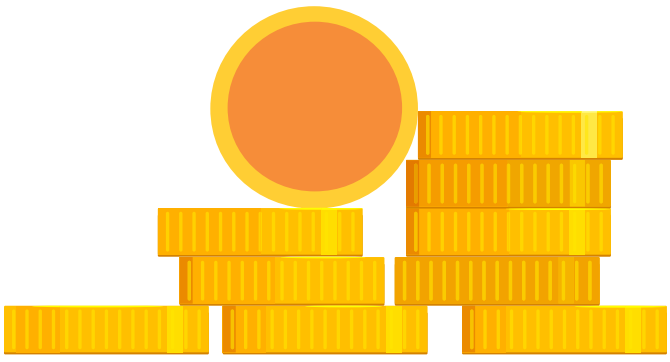
Source: World Bank Statistics

Figure 2 FDI inflow; in INR billion



Source: Department of Industrial Policy and Promotion statistics

The FY 2015-16 growth in real GDP is attributed mainly to the uptick in domestic household consumption. Going by the trend, the future Indian consumer will reside in Tier 2 and Tier 3 cities. Hence predictably, this market is likely to be the centre of attraction for global and Indian consumer-focussed industries. The evidence of global investor interest is reflected in the growing FDI inflow over the past few years (Figure 2)



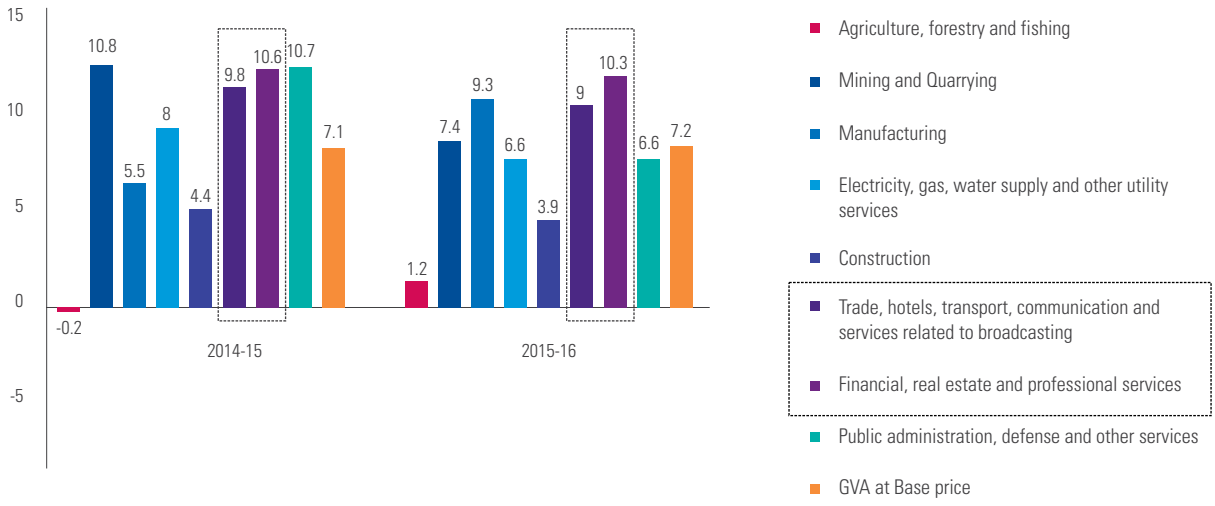
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Growth propellers – sources of growth in the Indian economy

Key sectors of growth

It is widely acknowledged that a strong domestic market has buttressed the Indian economy from global shocks. A burgeoning middle class population and rapid urbanisation have contributed to the growth in services such as retail, tourism and travel, communication, financial services, real estate, etc. Government of India's official estimates show strong growth performance of services and related sectors (Figure 3).

Figure 3 Percentage change in gross value added by economic activity; year by year on change



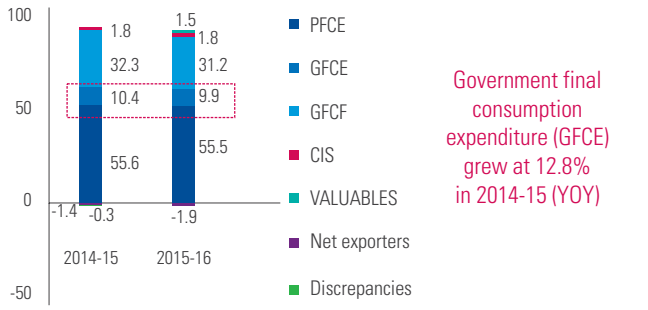
Source: Ministry of Statistics and Programme Implementation



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Declining crude oil prices benefitted both private households and industry as the low cost of oil eased spending capacity and improved margins, respectively. Interestingly, a closer look also highlights the role of government spending in boosting economic growth (Figure 4) .

Figure 4 Share of GDP, by expenditure method



Source: World Bank Statistics

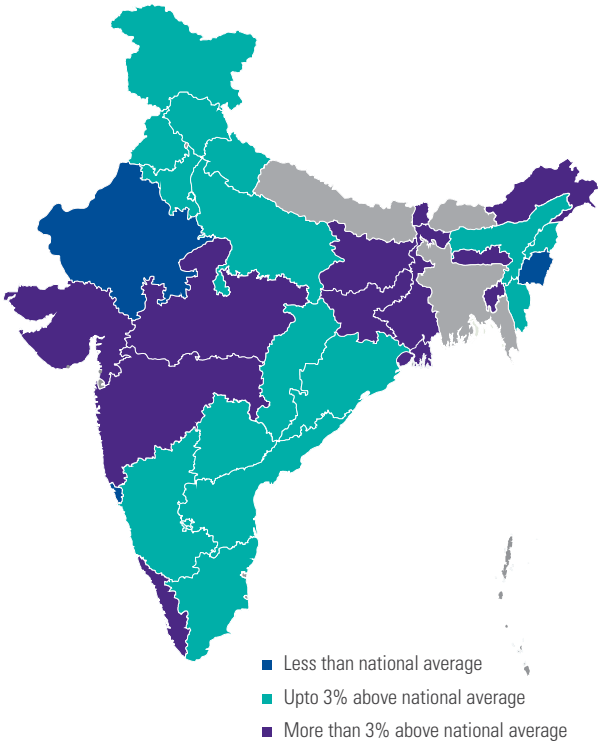
Another important factor that likely to influence growth sectors is Industry 4.0. This refers to the fourth industrial revolution. The disruptive changes expected are linked to the growing technological proliferation in consumption patterns and in turn, in how businesses are run. Technology is changing consumption behaviour and hence the nature of final goods and services being consumed. More importantly, it is also influencing business operations across sectors. The growing use of industrial robots in manufacturing tasks, big data for business operations and consumer services and the internet as the medium to purchase are indicative of the role of technology to improve operational efficiency and topline growth.

Sectors such as retail, logistics and transportation, financial services, telecom, professional services, etc. will likely witness the impact of disruptive technology. The growing participation and success of technology start-ups offering new products and services or reducing business inefficiencies also corroborate this trend.

Key regions witnessing growth

India's economic growth story is not uniformly distributed across India. Maharashtra, Tamil Nadu, Uttar Pradesh, Andhra Pradesh and Gujarat have largest state economies. Across the country, states/UTs such as Meghalaya, Madhya Pradesh, Bihar, Jharkhand, Maharashtra, West Bengal, Sikkim, and Arunachal Pradesh posted high GSDP growth rates in 2013-14 . Bihar, Madhya Pradesh, Jharkhand, Meghalaya, Delhi and Sikkim have exhibited consistent and high growth rate (measured by five-year year CAGR). (Figure 5)

Figure 5 GSDP growth; 2013-14

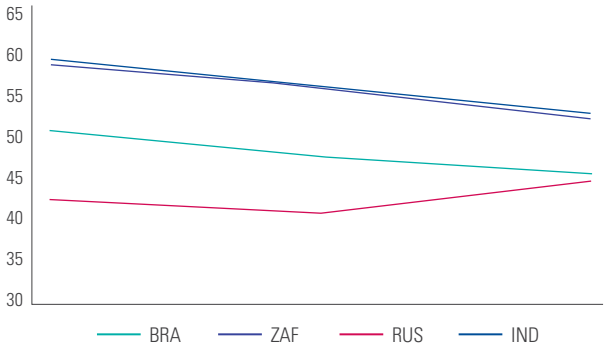


Source: Niti Ayog

The attractive Indian consumer – domestic market driven growth story

It is well-recognised that in a young and increasingly urbanising nation, private household consumption expenditure has offered a stable source of economic growth. A large and growing workforce can prove to be the biggest driver of growth. A favourable and improving age dependency ratio is indicative of India's future domestic consumption potential (Figure 6) as well.

Figure 6 Age dependency ratio (on working age population) (%)

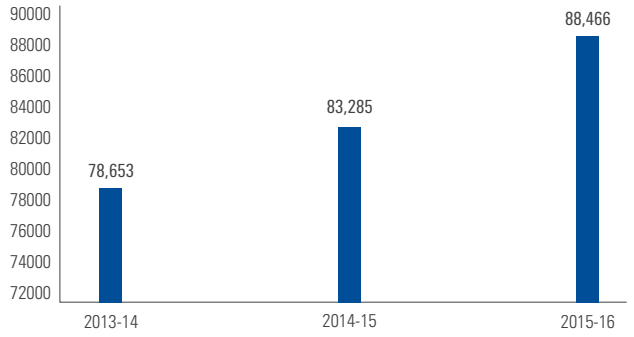


Source: World Bank Statistics

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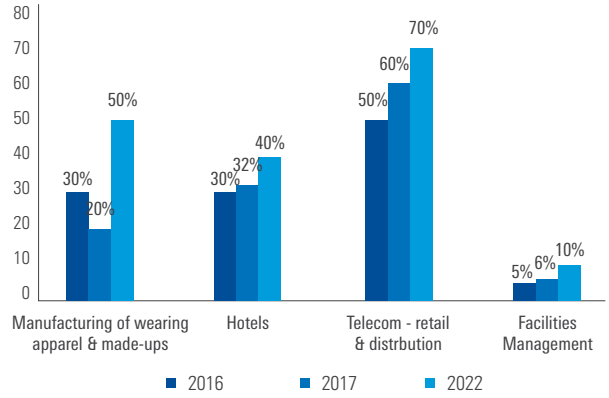
The expanding middle class population and per capita income growing at 5.9 per cent (2014-15) and 6.2 per cent (2015-16), have ensured a domestic demand-driven growth story for India (Figure7).

Figure 7 Per Capita GDP; in INR



Source: Ministry of Statistics and Programme Implementation

Figure 8 Share of organised play in each sector; in per cent



Source: KPMG in India analysis

The rapid pace of urbanisation has led to the emergence of the discerning Indian consumer. This is clearly visible with the high growth of organised enterprise especially in sectors such as retail, telecommunications, financial services, real estate, other professional services. The maturing of the Indian economy is evidenced in the growth sectors and expected future (Figure 3 and Figure 8) .

Outside the metropolitan cities, India's Tier 2 and Tier 3 cities present a large and underpenetrated demand opportunity and will fuel the next phase of growth. Sectors such as retail (brick and mortar and ecommerce), telecommunication, Information Technology (hardware and software), construction, travel and tourism etc. are likely to witness increased investments focussing on tapping these markets.

Hence, the attractiveness of the Indian consumer wallet will continue to prove to be a primary driver of domestic and international investments, especially in organised consumer facing sector.

The other dimension of this GDP growth is the high public spending on infrastructural development and policy reform propelling future growth in fixed capital or investments. The investor sentiment in such economy is influenced not just by the growth in domestic market but also favourable government policies attracting international investment dollars to India. In order to fully realise the growth potential, enabling initiatives such as investments in infrastructure, improving business climate, labour productivity enhancement and strengthening efficacy of public spending are important. The government has undertaken multiple measures in this direction through flagship initiatives and policy reform, to propel economic growth – elaborated in the following section.

Government – policy reform as a driver of growth

India's initial impetus for growth was provided by the 1991 liberalisation policies, which opened the domestic market and reduced bureaucratic norms to improve the ability of Indian private enterprises to do business. A favourable investment and trade climate boosted domestic production, household consumption and pulled millions out of poverty. However, in the past decade the perceived slowdown of pace of reform over the past decade combined with the global financial market crisis affected inflow of international capital. Contracting consumption in some of the developed economies affected export-driven sectors.

Over the past two-three years, a renewed policy impetus for growth is creating visible signs of sustained economic strength. Job creation, effectiveness of public expenditure and reviving manufacturing and agriculture are economic priorities for the current government. Since 2014, a slew of policy measures have been announced and are in various stages of implementation. Importantly, there is a noticeable shift away from welfare policies towards economic enablement as an approach for economic growth.

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Recent government policies and flagship initiatives can be broadly classified into five themes (Table 1):

- Infrastructural investment
- Labour productivity
- Creating a business-friendly environment
- Agricultural productivity
- Strengthening efficacy of public spending

Table 1 List of new initiatives

Infrastructural investment	Labour productivity	Creating a business-friendly environment	Agricultural productivity	Strengthening efficacy of public spending
Focus on transportation, logistics, electricity, etc.	Focus on education, health and financial inclusion	Ease of doing business measures		
Sagar Mala	Skill India initiative	Easing of FDI norms	Soil Health card	Direct Benefit Transfer – Aadhar-linked
Bharat Mala	Swachh Bharat	Make in India initiatives	E-NAM	Digitisation of Fair Price Shops
Digital India	Rashtriya Swasthya Bima Yojana	Bankruptcy Bill	Pradhan Mantri Krishi Sinchai Yojana	Aadhar
Ujwal Distribution companies (DISCOMs) Assurance Yojana	Jan Dhan Yojana	National Infrastructure Investment Fund	Pradhan Mantri Fasal Bima Yojana	Atal Awas Yojana
	Atal Pension Yojana	Goods and Services Tax *		
	Smart Cities			
		Start-up India initiatives		Atal Mission for Rejuvenation and Urban Transformation (AMRUT)
		MUDRA		

The list of initiatives are indicative of the forward-looking approach of the current government. Its success lies in the ability of the government to efficiently and effectively implement the initiatives or changes. The direction and nature of transformation are reassuring. Indications of investor and/or business sentiment are positive and the hitherto investment slowdown is showing signs of reversal. As per the 2016 Economic Survey Report, "tentative signs that the worst is over are evident for example in data that shows that the rate of stalled projects has begun to decline and that the rate of their revival is inching up".

Easing of FDI norms in certain sectors has led to international investments across consumer-facing sectors such as IKEA (Sweden), Hennes & Mauritz AB (Sweden), Adidas AG (Germany), Ford Motors (USA), Suzuki Motors (Japan), Isuzu Motors Ltd (Japan), Bosch (Germany) etc.

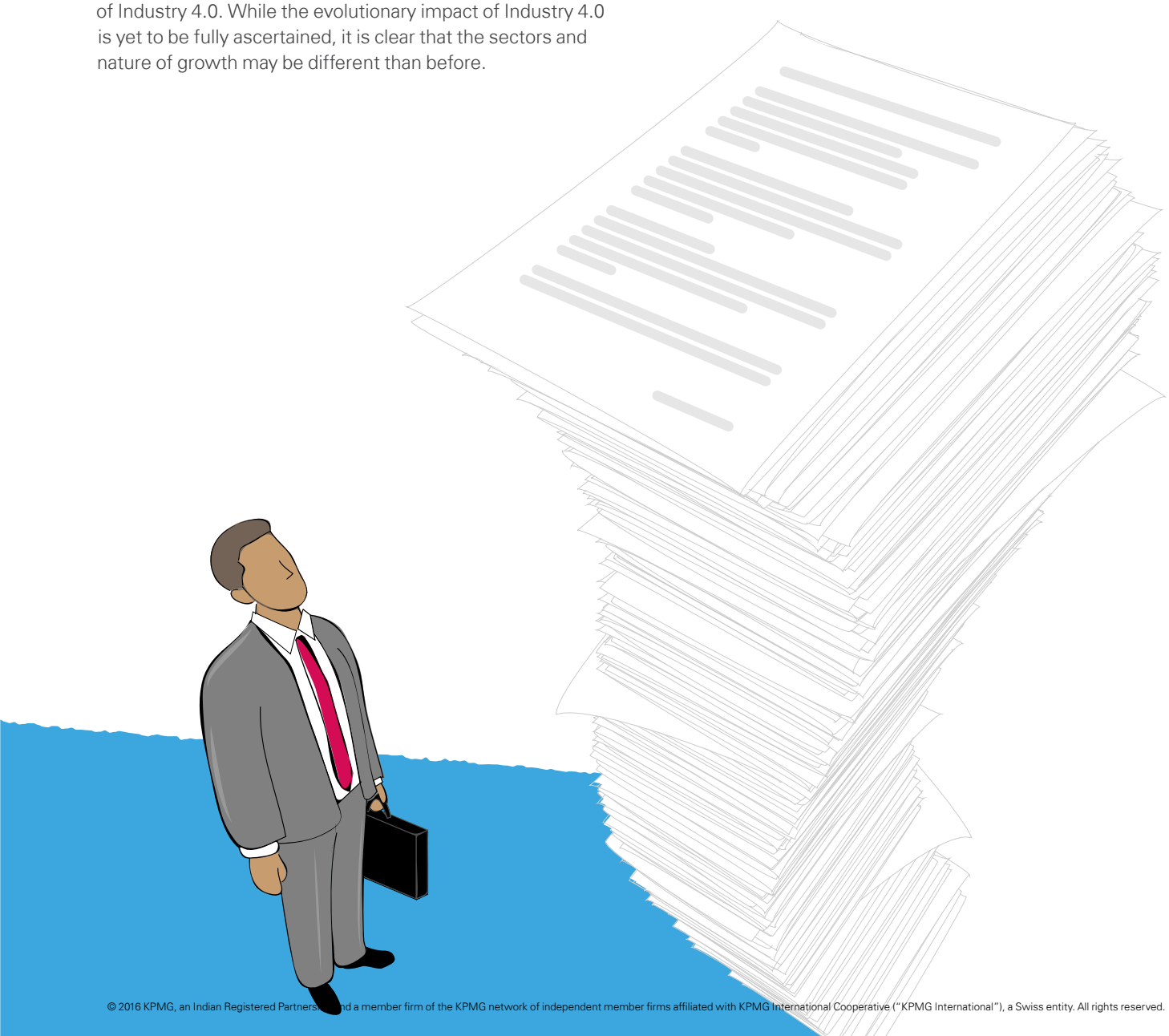
Further investments from players such as Apple Inc. (USA), Xiaomi Inc. (China) and LeEco (China), Foxconn Technology Group (Taiwan) can be expected under the Make in India initiative of the Indian government fostering tremendous demand for skilled manpower.

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In summary, the immediate benefit due to such flagship initiatives and policy reforms by the government will be large scale employment opportunities across sectors in India. Now, unless we have skilled manpower, we will not be in a position to take advantage of this opportunity. Skilled manpower will provide the critical impetus for the growth and sustainability of the industry. So it is timely that the government has created the Ministry of Skill Development and Entrepreneurship (MSDE) in 2014 to spearhead this agenda.

As per the current forecast by MSDE, there would be an incremental requirement of skilling 110 million additional workers by 2022 and to achieve this and to reskill the existing workforce the ministry has embarked on a herculean task of skilling 400 million workforce by 2022 .

Let us delve deeper into the potential employment generation prospects of the Indian economy and corresponding skill requirements. This will help us in the context of understanding how and where the current skill ecosystem needs to re-engineered to cater to the evolving growth story and demands of Industry 4.0. While the evolutionary impact of Industry 4.0 is yet to be fully ascertained, it is clear that the sectors and nature of growth may be different than before.



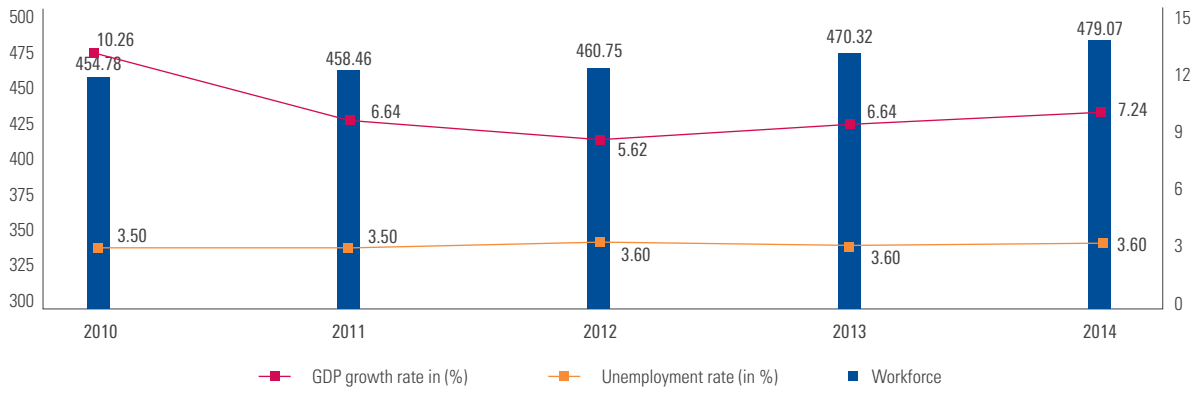
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Employment generation

The Indian labour force is half a billion strong (507 million) and growing. Standing at the cusp of realising its demographic dividend, what matters most is the 'labour-readiness'. A skilled labour force is key to improving labour productivity and in turn, economic growth. Before delving into the current availability of skilled labour force and the corresponding gaps, it is important to understand the future sources (sectors) of employment generation.

A major challenge for India's economic growth has been the employment generation ability of various sectors. Studies reveal that the 2000s was a period of jobless growth. Post 2010, with the GDP growth rate ranging between 5.6 per cent and 10.2 per cent per annum, the impact on the rate of unemployment has been minimal. In absolute terms, from 2010 to 2012, the annual addition to the workforce fell to a low of 2.2 million. However, the data for 2013 and 2014 reveal an uptick in employment generation. The workforce expanded by 9.7 million and 8.5 million, respectively (Figure 9). Hence, it is important to understand the employment generation trends and capacity of the economy.

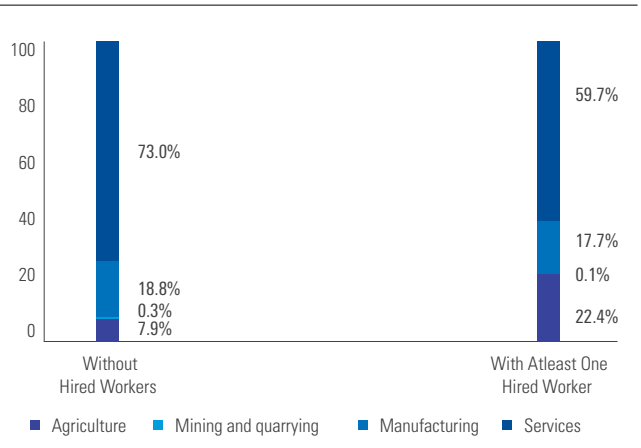
Figure 9 Major economic indicators



Source: World Bank, KPMG India analysis

With more than 200 million persons engaged in agricultural activities, the sector employs the largest number of people in India. However, a closer look reveals the lower per capita gross value add compared to other sectors. Additionally, the number of agricultural establishments that would hire labour, hence provide additional employment opportunities, are lower in comparison (Figure 10). Hence, a large number of agricultural workers are self-employed and do not generate significant wage employment opportunities. In contrast, the establishments in the services sector generate more employment opportunities.

Figure 10 Share of all establishments in India



Source: Ministry of Statistics and Programme Implementation

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Under the Make in India banner, with the new push to boost manufacturing sector's contribution to GDP, it can be expected that it will strengthen the demand for jobs in the manufacturing sector.

Hence, in the coming years, services and manufacturing are likely to create employment opportunities. An important factor will be the employment generation capacity of sub sectors within services and manufacturing i.e. employment elasticity. As per the 2015-16 Economic Survey of India, aggregate employment growth slowed to 1.4 per cent - 1.8 per cent in the 2000s in comparison to 2+ per cent in 1990s . With a higher GDP and low aggregate employment elasticity, the ability of the economy as a whole to absorb labour has been a challenge. Hence, government measures to boost employment generation will be a key driver of employment growth in the future.

A sound understanding and periodic analysis of employment trends will be critical sources of information for policy-related decision making.

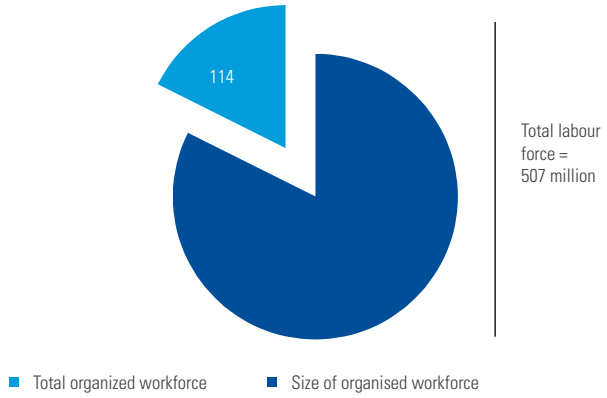
Growth of formal employment roles

An interesting characteristic of the employment growth story has been the growth in formal workforce. While estimates may vary, an indication of the size and trends of the workforce engaged in formal employment roles can be seen below. The data represents the number of individuals receiving social security benefits and will provide a clear indication of the formal employment opportunities. Figure 11 and Figure 12.

In the case of India, social security benefit is extended in the form of Employees' Provident Fund Organisation (EPFO), General Provident Fund (GPF), National Pension Scheme (NPS) and Employees State Insurance Corporation (ESIC). The estimation of number of employees in the above scheme indicates that nearly 114 million employees or 22 per cent (2014-15) are in formal employment. This number has been steadily rising. In fact, the growth of formal employment far exceeds that of aggregate employment and labour force.

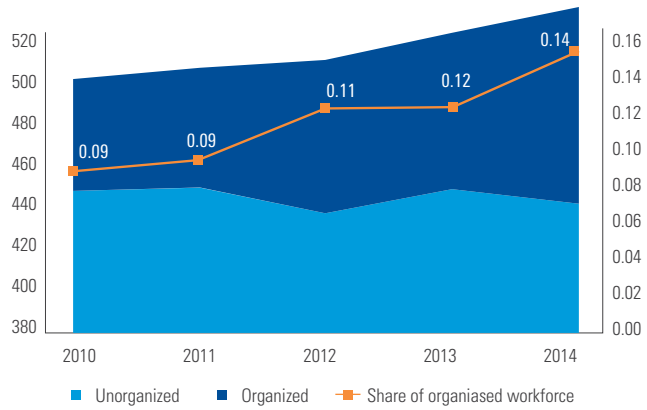
Hence, an evolving Indian economy is clearly creating more formal employment opportunities.

Figure 11 Size of formal workforce; in million persons



Source: World Bank, EPFO annual reports, ESIC annual reports, KPMG in India estimates

Figure 12 Growth of formal labour force



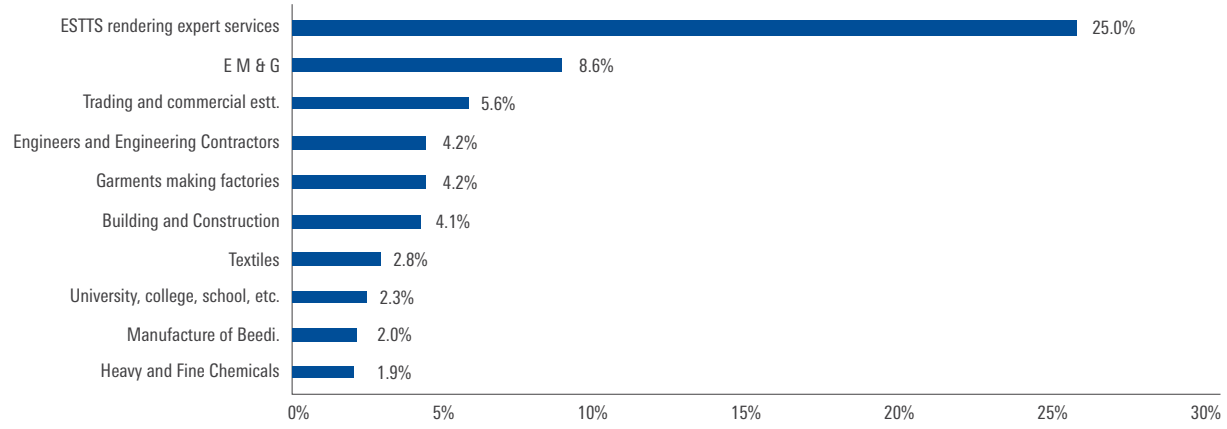
Source: World Bank, EPFO annual reports, ESIC annual reports, KPMG in India estimates



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An analysis of the top 10 industries with the largest formal workforce reveals that expert services, electrical, mechanical or general engineering products, trading, garment manufacturing, construction, etc. are industries that provide a large number of formal employment opportunities (Figure 14). In fact, several industries have witnessed formal employment growth greater than 25 per cent per annum (three-year CAGR).

Figure 13 Split of EPFO members, by industry (estimates)



Source: EPFO annual reports, KPMG in India estimates

Tracking such data will inform policymakers at central and state level to direct policy action towards the aforementioned high-potential industries. Further detailed analysis of the employment generation capacity (employment elasticity) of various industries is also an area that needs attention. Mapping the two will inform us on the size of employment potential and the growth potential.

Employment clusters – identifying regions and pace of growth

While we speak of a growing formally employed workforce, it is important to note that this is not a nationwide phenomenon. Looking at the country as a whole and analysing formal employment opportunities masks the concentrated nature of employment creation. In India, the ten states provide 85 per cent of formal employment opportunities (Figure 15). Six out of ten states witnessed more than 20 per cent per annum (3 year CAGR) growth in employment. These states also contribute to nearly 76 per cent of the nation's GDP. Hence larger state economies are able to generate more formal employment jobs.

States such as Maharashtra, Tamil Nadu, Karnataka, Andhra Pradesh and Delhi together provided employment to 57 per cent of the nation's formal workforce in 2014-15. This fact clearly indicates the high concentration of formal employment.

Interestingly, the region of Delhi alone generates more formal employment roles than states such as Gujarat, Punjab, Haryana and large labour-supplying states such as Uttar Pradesh and Bihar.

A large state such as Uttar Pradesh, with a high contribution to the nation's GDP and large labour force, lags in creating formal employment roles in comparison to smaller regions such as Delhi. Hence, states such as Uttar Pradesh and Bihar will continue to be important sources of labour supply for rest of the country. Rapid urbanisation has also led to more formal job creation. Please see figure on urbanisation of large states (above national average)

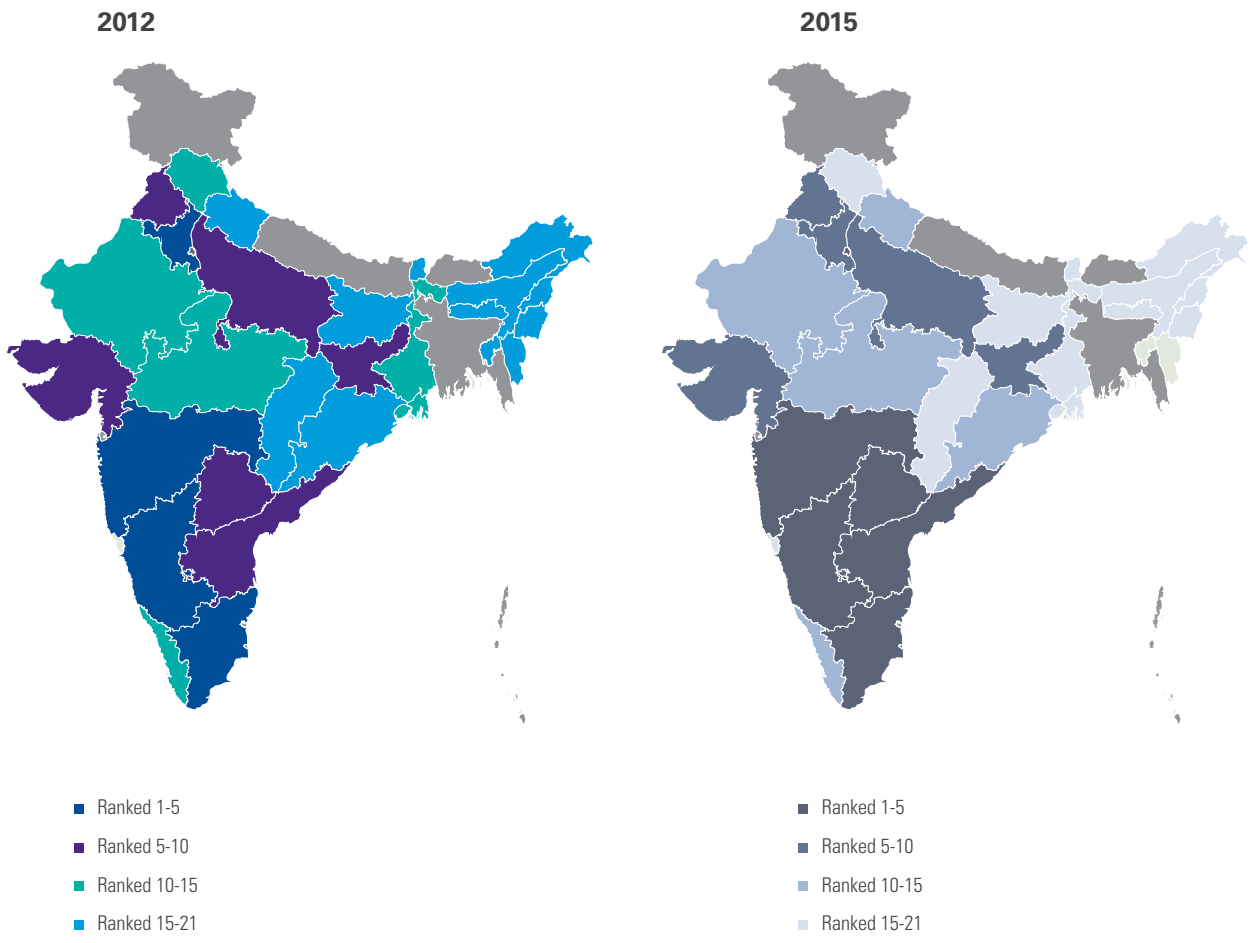
Table 2 Urbanisation ratio for a select few states

State/Union Territory	1971	1981	1991	2001	2011
Delhi	89.7	92.73	89.93	93.18	97.5
Tamil Nadu	30.26	32.95	34.15	44.04	48.45
Kerala	16.24	18.74	26.39	25.96	47.72
Maharashtra	31.17	35.03	38.69	42.43	45.23
Gujarat	28.08	31.1	34.49	37.36	42.58
Karnataka	24.31	28.89	30.92	33.99	38.57
India	**19.91**	**23.7**	**25.73**	**27.81**	**31.16**

Source: Office of registrar general India.

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Figure 14 Comparison of top 10 states generating formal workforce employment jobs



Source: EPFO annual reports, KPMG in India estimates

Industry 4.0 and its implications for employment

In the previous section, we briefly touched upon the phenomenon of Industry 4.0. While it remains uncertain how fast and which industries will ride the first wave of technological transformation, it is clear that the next phase of growth will be unlike ever before. Changes in business operations, the manufacturing shop floor, distribution strategy and nature of final products and services itself will lead to emergence of new kinds of jobs. It is premature to assess the net impact of creation of new jobs, transformation of existing ones and redundancy of any job.

However, what is clear is in order to meet the demand for new and transformed jobs, a new and transformed skilled workforce will be essential.

There are two important trends vis-à-vis the Indian workforce that requires attention and action. First, the scope of job creation in formal employment opportunities and secondly, the implications of Industry 4.0 on future jobs.

Both from the consumer pull perspective and the government push perspective — seem to indicate a growing demand for formal workforce and would lead to generation of future employment opportunities. Rapid urbanisation, which is a key driver for the growth of the formal workforce, has been clustered around certain states which generate high employment. Given the rapid increase in formal employment (16.2 per cent as against the ~2 per cent overall growth), it is essential to understand the evolution of the skills available.

Also, with Industry 4.0, the demand for new kinds of roles will require skilled manpower for these jobs. While it is premature to ascertain the net impact on job creation, it will definitely entail new kinds of skilled manpower requirement.

Having a large young population may prove advantageous in terms of availability of manpower. However, the availability of desired skill-sets to meet future job demands is a focus area for industry and government alike. Understanding the status quo is essential and has been dealt with in the next section.

The three key pillars of GDP have a disproportionate contribution to job creation – agriculture contributed 52 per cent in 2012 to employment, which has decreased from 60 per cent in 2002. On the contrary, the contribution of industry to employment has increased from 16 per cent in 2002 to 25 per cent in 2012. Lastly, the contribution of services has remained more or less same at approximately24 per cent.

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Understanding the availability of skill

With an increase in formal employment opportunities and robust growth of the country's GDP, the focus has now shifted to understanding the labour force. With flagship initiatives such as Make in India, Digital India, BharatMala, SagarMala and Industry 4.0 likely to affect the need for a skilled workforce. However, it is first important to understand the size of the labour force and the kind of skill available.

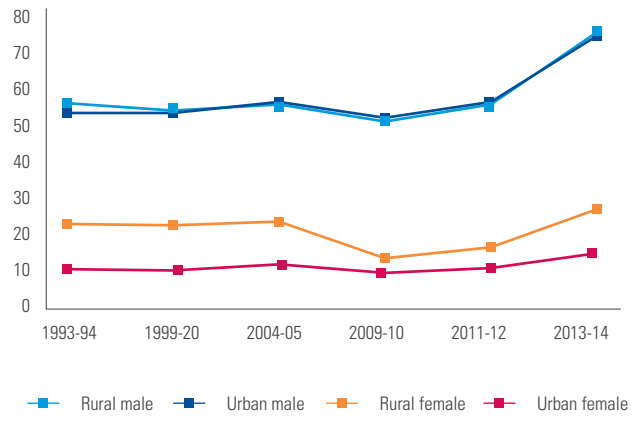
Standing at the cusp of reaping its demographic dividend, India has critical decisions to make in terms of improving access to formal training, especially for new skills. Training here does not necessarily refer to specific vocational skills only. It refers to the level of education and competency, acquired through formal education, or vocational training. It is also duly noted that a large proportion of the current workforce possesses necessary skills acquired through experience or on-the-job.

In order to understand the labour force better, we start with three main parameters –Labour Force Participation Rate (LFPR), Worker Population Ratio (WPR), and Unemployment Rate (UR). Of these, a high WPR is integral for economic growth. A higher WPR signifies that a large proportion of the working age population is employed.

Women in the workforce – the issue of low participation

The WPR for both men and women has shown an increasing trend over the years barring the year 2009-10 on account of the global economic slowdown . (Figure 16). India's WPR is about 50 per cent despite having a high male WPR of about 71 per cent in both urban and rural areas . This is because Indian women tend to not participate in wage employment. Female WPR is about one-third of that of male WPR. According to World Bank data, India ranks 10th from the bottom, globally, in terms of female labour participation.

Figure 15 WPR across urban and rural areas in India; (%)



Source: Ministry of Labour & Employment

Rising household incomes, stringent social norms, and seasonal employment are some of the factors that contribute to a low rate of female participation.

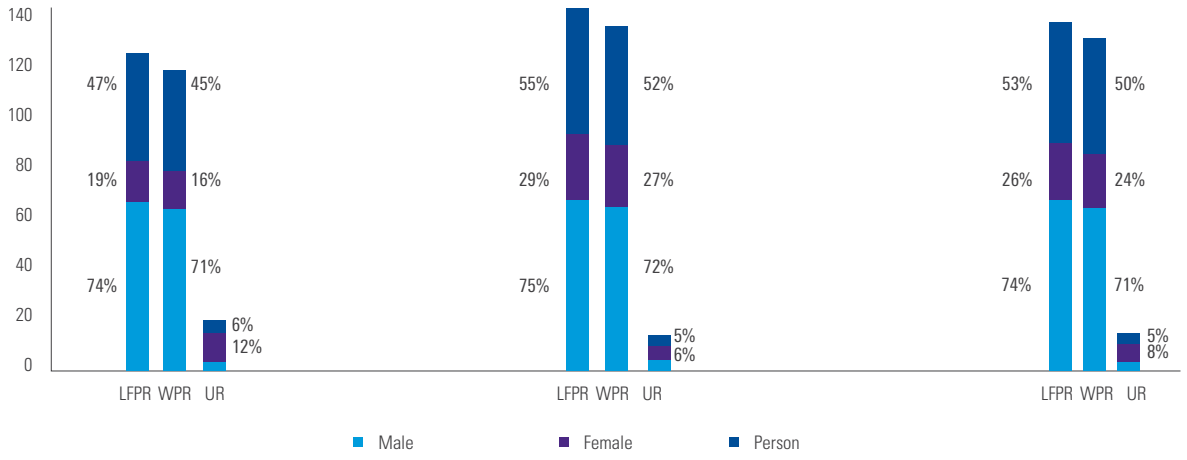
- Household incomes – The income effect causes women to change their preferences as their household income increases. As the men start earning more income, the women focus more on household activities and cut down on their formal work. This can be seen from the fact that the household income increased by almost 4.83 per cent from 2005 to 2014
- Social norms – A strong patriarchal society has resulted in a gender divide in labour force participation rates. It is also evident in the gender parity index of 0.9 across enrolments in higher education institutes.
- Seasonal employment - About 6 per cent of the female workers participate in seasonal employment i.e. they are employed for a few months during the peak season or at the time of availability of work

Interestingly, female LPR and WPR are higher in rural areas (Figure 17). This is most likely linked to employment in agriculture or related sectors in rural areas.



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Figure 16 India's labour force characteristics 2013-14



Source: Ministry of Labour & Employment

Measures to promote female participation in the workforce are the need of the hour. Hence, policy measures that improve access to employment opportunities to women, workplace security and targeted training efforts are necessary to boost female WPR. Insofar as facilitating growth of women leaders, the private sector also has an important role to play.

Quality of education – a key limitation for availability of skilled labour

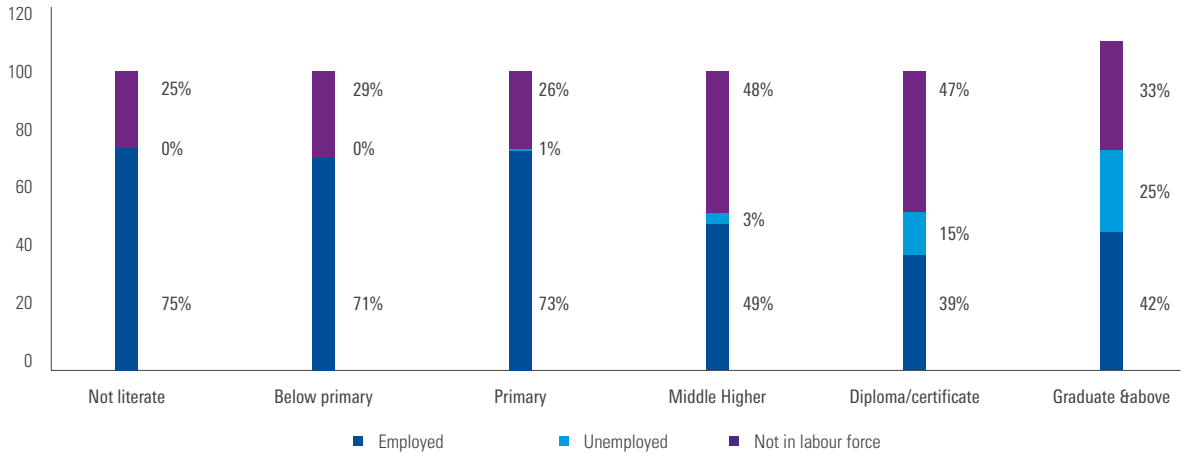
While there has been significant action on improving access to education and training in India, the quality gap persists.

In India, of those above 30 years of age and hold a graduate degree, around 77 per cent are employed. However, only 42 per cent of those in the age group 18-29 years are employed. The issue of unemployment among educated youth is disheartening and calls for immediate attention. There are two important issues that emerge upon analysing the rising number of unemployed graduates. (Figure 20) and (Figure 21)

- Poor quality of education – As educational qualification increases, unemployment also increases. Fifteen percent of those with a diploma or certificate are unemployed compared to 25 per cent of people with a graduate degree within the 18-29 year age group. A similar trend, but a muted phenomenon, is also observed with people above 30 years of age. This indicates a poor quality of education, which does not adequately prepare students or trainees to obtain meaningful employment.
- Demand vs supply mismatch – There appears to be an evidence of mismatch in the demand for and availability of education or skills. The availability of graduate and advanced degree holders are greater than those formally trained to perform lower skilled jobs. However, in terms of sheer numbers, there are far greater number of options available in lower skilled roles.

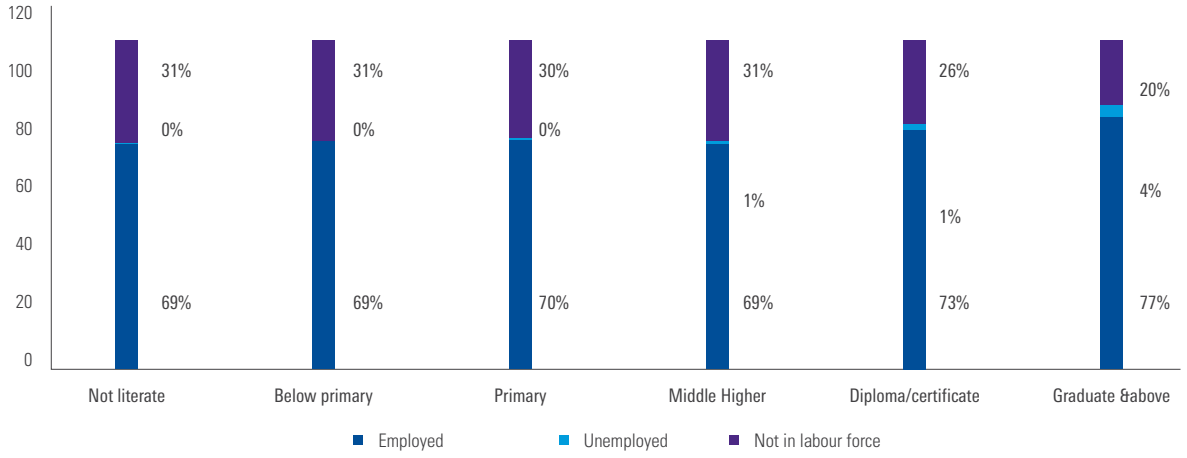
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Figure 17 Labour force characteristics by educational qualification for people between 18-29 years of age



Source: Ministry of Labour & Employment

Figure 18 Labour force characteristics by educational qualification for people 30 years and above



Source: Ministry of Labour & Employment

In order to address the qualitative and quantitative challenges of skilled labour availability, the government must adopt an integrated approach to education in India. There is a pressing need to develop seamless pathways for skill development through formal education, vocational education or both. Allowing the labour force to undertake relevant skill development (formal or vocational) measures and enter and exit the workforce seamlessly will be the key. In other words, a dynamic and integrated educational system will facilitate the development of a workforce that can be re-engineered at any juncture to meet evolving economic realities.

Regional disparities in the labour force

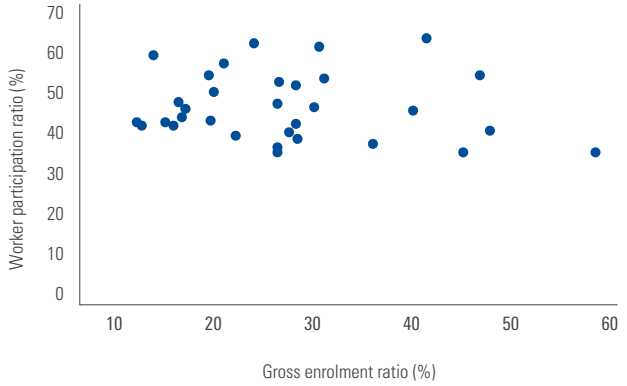
While we analysed poor female participation and challenges of skill availability, it is important to note that there is huge regional disparity across India. Each state will have its unique combination of challenges, and will require a tailored solution.

Only about 20 per cent of the states such as Telangana, Tamilnadu, Manipur, Uttarakhand, etc. as depicted in Figure 19 have both a high gross enrolment ratio in higher education institutes and a high workforce participation ratio. Clearly, the workforce in a majority of the states is either not enrolled in jobs that require higher levels of qualifications or the workforce has acquired the necessary skills on-the-job. (Figure 22).

Alternatively, limited availability of an educated workforce may be a restricting factor to attract industries requiring a skilled or trained workforce.

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Figure 19 State wise GER in higher education (%) vs. WPR (%)



Source: All India Higher Secondary

Gujarat emerges as one state that not only has the highest GER across different categories of educational qualification but also absolute number of enrolments. Other states that perform well across all qualifications are Arunachal Pradesh, Karnataka, and Uttarakhand as can be seen from the table below. (Table 3)

Table 3 Top five states having highest GER across educational qualifications

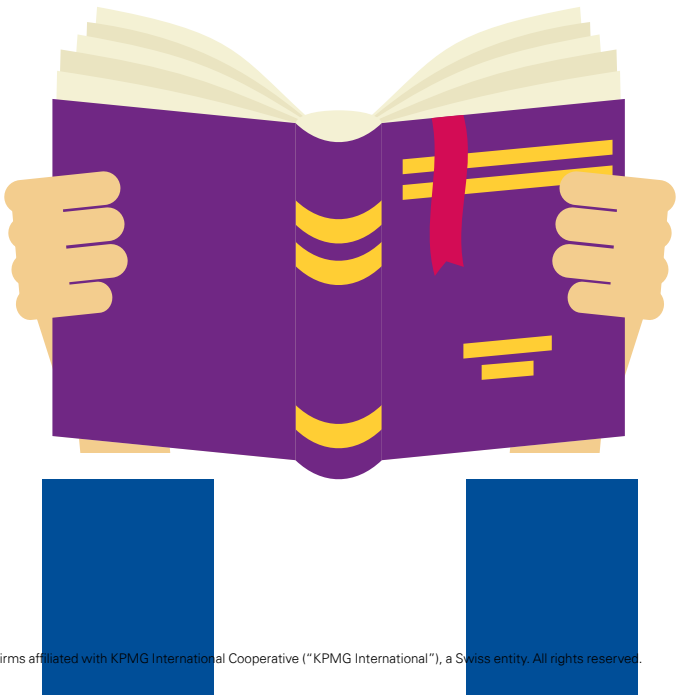
PhD	M Phil	PG	UG	PG diploma	Diploma	Certificate	Integrated
Arunachal Pradesh	Karnataka	Gujarat	Madhya Pradesh	Puducherry	Karnataka	Mizoram	Uttarakhand
Gujarat	Uttarakhand	Karnataka	Jammu and Kashmir	Odisha	Gujarat	Tamil Nadu	Gujarat
Madhya Pradesh	Arunachal Pradesh	Uttarakhand	Arunachal Pradesh	Arunachal Pradesh	West Bengal	Karnataka	Rajasthan
Telangana	Telangana	Jammu and Kashmir	Karnataka	Chhattisgarh	Rajasthan	Telangana	Arunachal Pradesh
Karnataka	Gujarat	Arunachal Pradesh	Gujarat	Karnataka	Assam	Kerala	Chhattisgarh

Source: All India Higher Secondary Education Survey, KPMG Analysis

The Indian labour force faces two major issues – low female WPR and poor quality of education. The former requires policy action combined with conscious efforts by the private sector to reduce impediments to equal access to jobs.

Improving the quality of education needs government action to develop an integrated and dynamic educational system. The aim should be to allow seamless mobility of the workforce between work and training (both formal and vocational). In the larger context of growing formal employment and Industry 4.0, it becomes more critical to focus on integrating the education system to meet new skill needs in a timely manner.

In order to understand how this seamless mobility can be facilitated and ecosystem strengthened, we will briefly touch upon the current skilling ecosystem – current stakeholders and quality assurance measures.



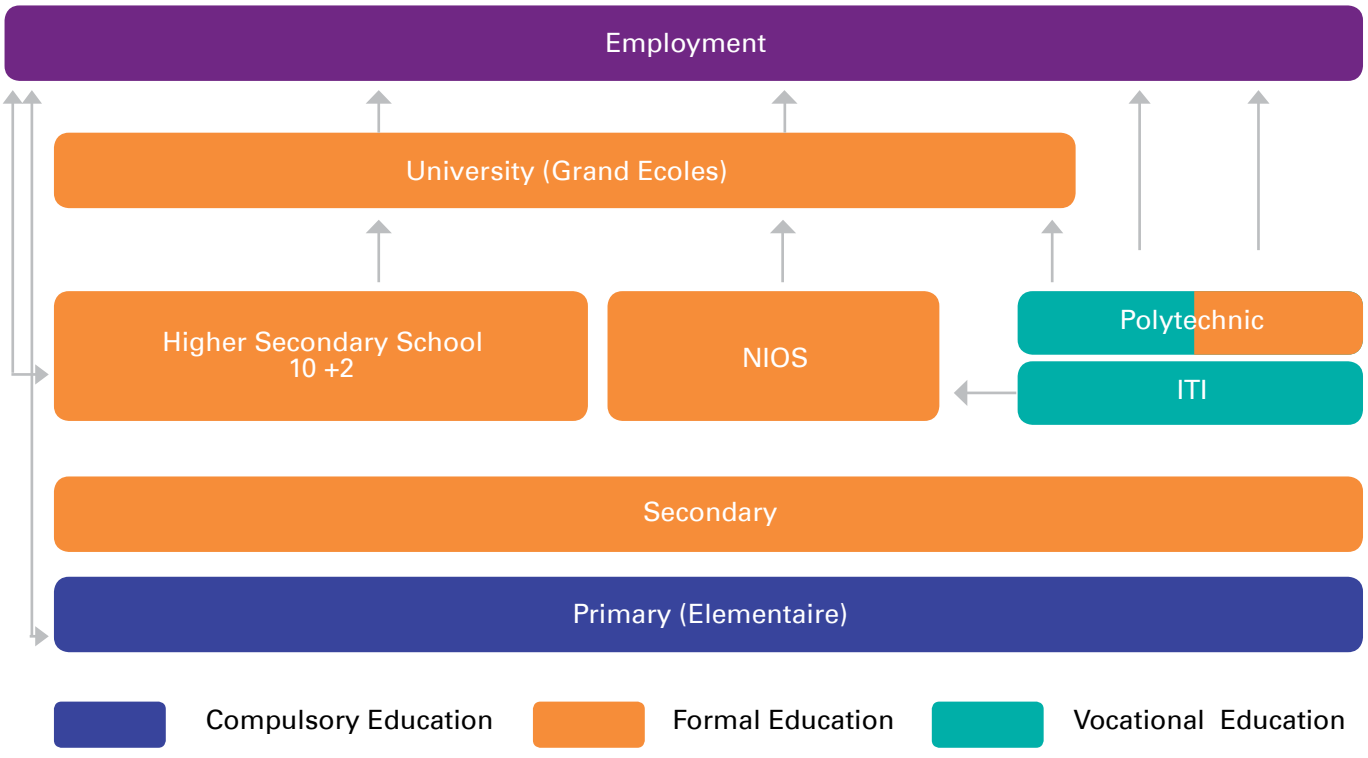
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The current skill development ecosystem in India

Education and skill training delivery model

In India, education and skill training are delivered in parallel, in a siloed manner. Formal education is delivered through traditional universities and polytechnics. Industrial Training Institutions (ITI) were set up as primary institutions to deliver skill training, focussing mostly on technical trades. However, these systems operate in siloes with limited options for vertical and horizontal mobility (Figure 20). Additionally, especially vis-à-vis skill training, the critical component of industry linkage is missing in the Indian ecosystem.

Figure 20 Indian educational and skill ecosystem

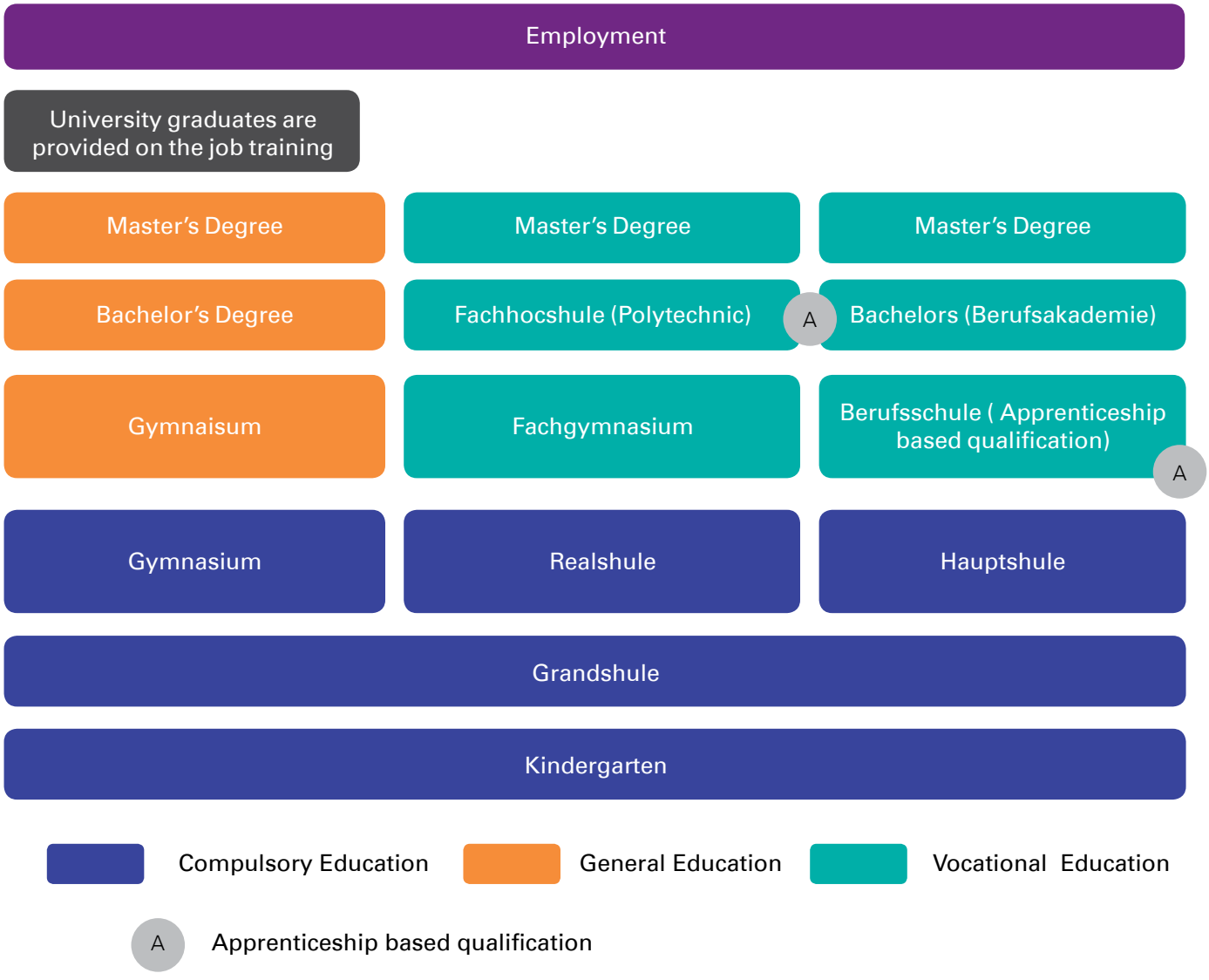


In contrast, German and British models provide insights on how to potentially integrate education and skill training through formal and vocational programmes.

The renowned German dual-system (Figure 21) offers well-integrated vocational training programmes that begin at the school level. A key differentiating factor that drives quality of education is the strong apprenticeship-linkage during training. A student opting for vocational education, spends approximately 3.5 days per week on on-the-job training and the rest at the vocational school. The result has been a well-integrated, industry-linked, high quality dual system of education.

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Figure 21: Germany's dual education system



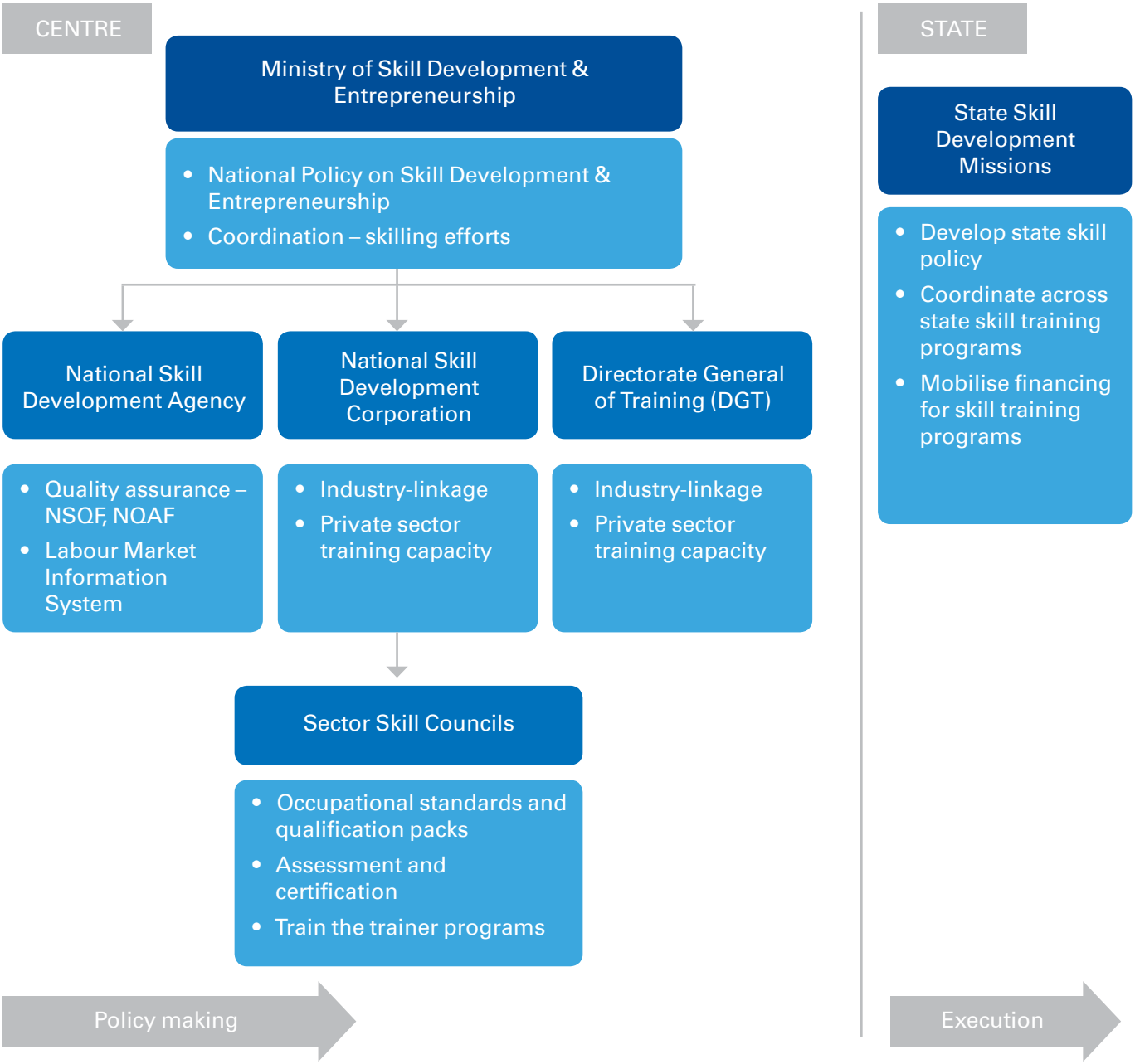
India should develop a well-integrated system of education and skill training that will produce high-quality manpower in relevant trades.

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Overview of the regulatory ecosystem

The Indian regulatory ecosystem comprises central and state government institutions responsible for policy-making and execution, respectively. Key bodies in the Indian context include the Ministry of Skill Development and Entrepreneurship (MSDE), National Skill Development Agency (NSDA), National Skill Development Corporation (NSDC), Sector Skill Councils (SSC), State Skill Development Missions (SSDMs), etc. MSDE is the apex central ministry tasked with coordinating and harmonising the fragmented approach to skilling, and NSDA is the central regulatory body in India (Figure 22).

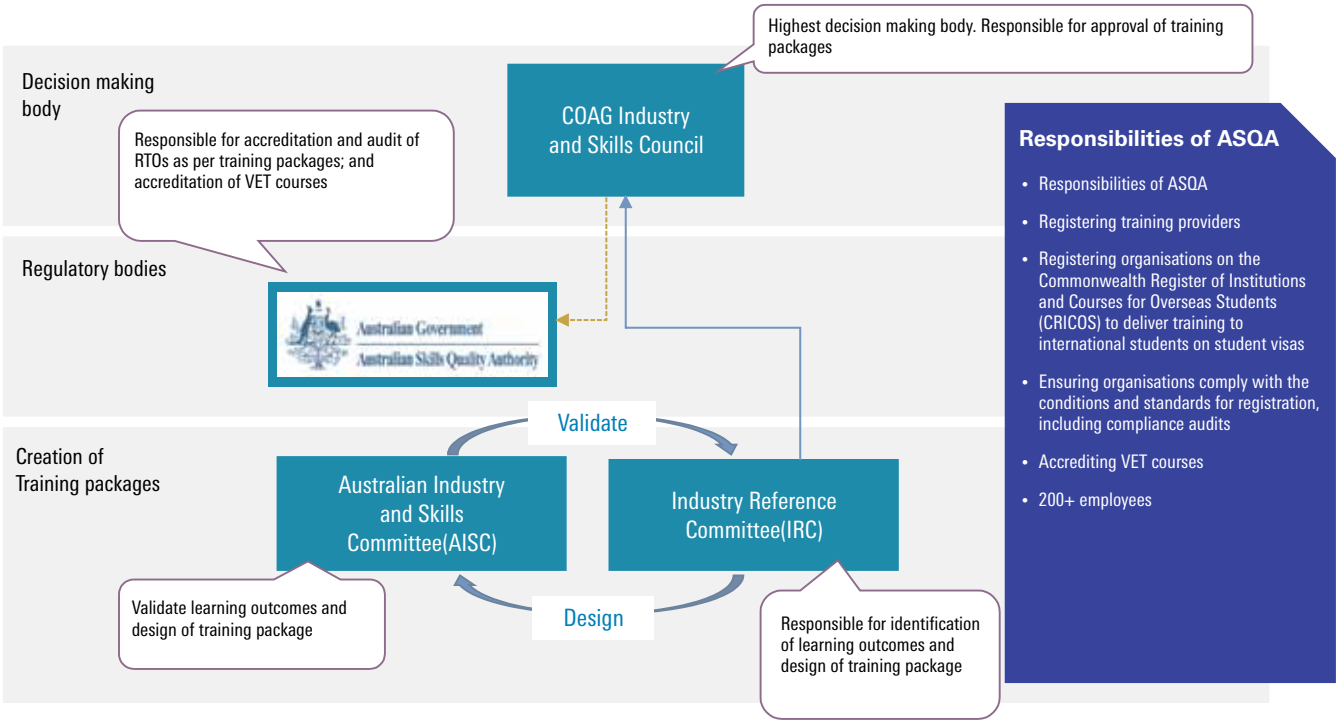
Figure 22: Key stakeholders in the Indian skilling ecosystem



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One of the key mandates of NSDA is to ensure quality assurance of the skill training ecosystem and anchor the National Skill Qualification Framework (NSQF). For further details please refer to the annexure.

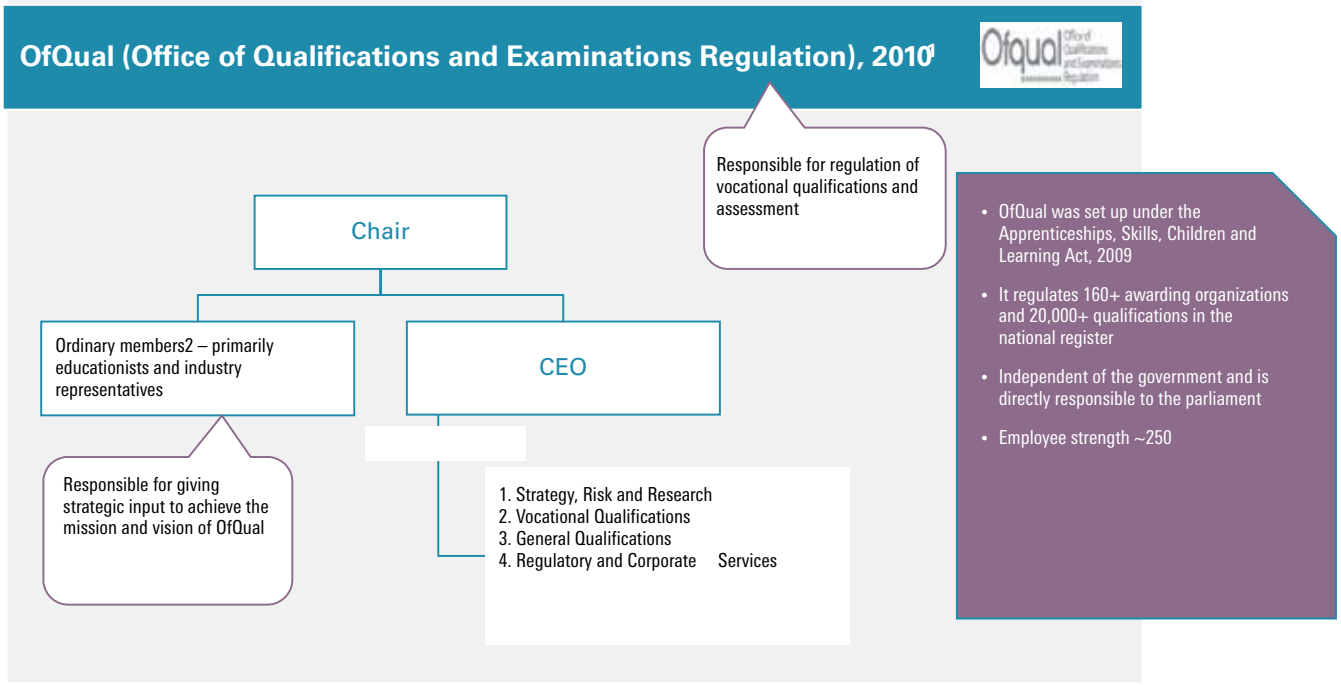
Figure 23: Overview of the Australian regulatory ecosystem for skilling



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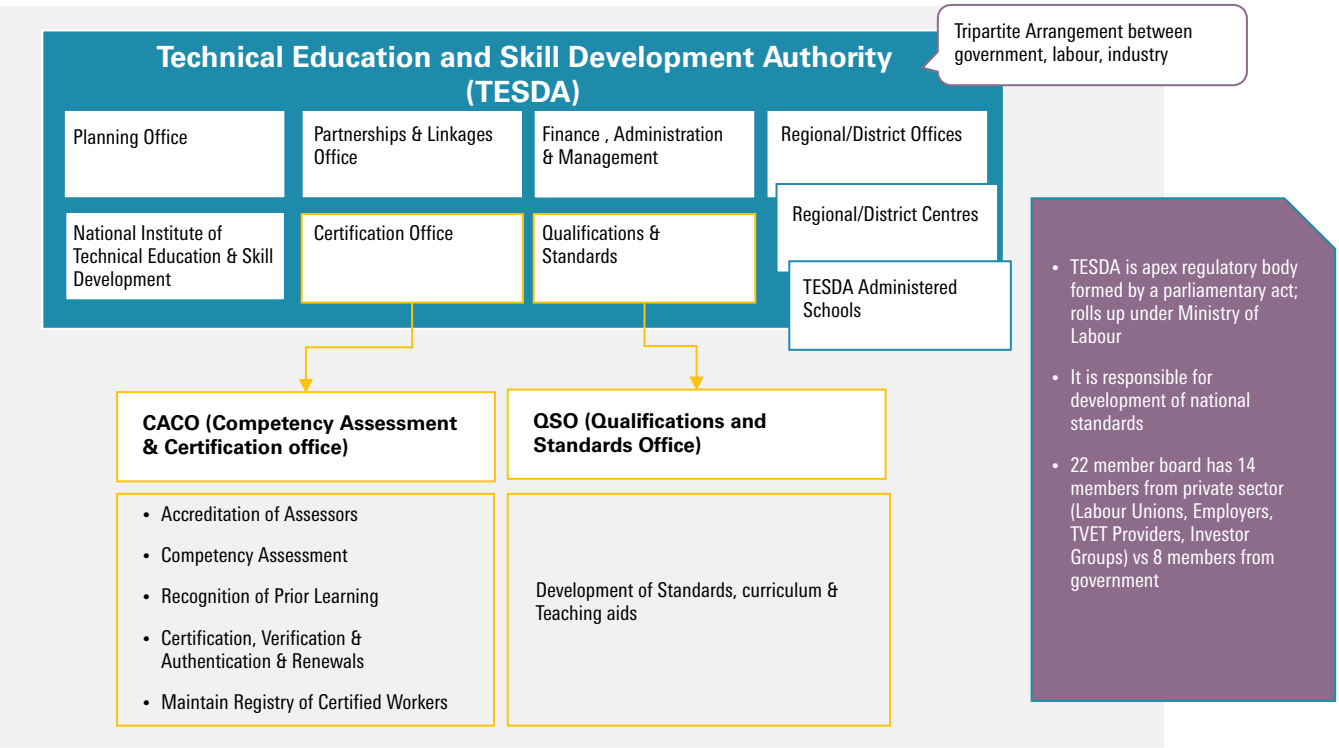
The Australian and the U.K. vocational education systems are clear examples of an excellent coordination between the industry and the vocational programme wherein the industry is involved at each stage from the curriculum design to its validation. This helps in designing the courses as per industry requirements and helps keep the student abreast with the latest concepts and thereby helps in ensuring higher placement ratios.

Figure 24: Overview of the UK model



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Figure 25: Overview of the key Filipino regulatory body



The Philippines Training and Vocational education system system is an excellent example, which demonstrates partnership between the government, industry and labour unions. This helps in ensuring the latest curriculum and addresses the larger aspect of bringing feedback from the workforce into the system and hence ensures in keeping it abreast.

The systems followed by Australia, the U.K., the Philippines and other aforementioned countries are great examples, which put the onus on the industry for sufficient feedback into the system, and also ensures in maintaining the acceptability and credibility of the course throughout. We would recommend to the Indian government to formulate a system, which ensures a regular feedback mechanism from the industry whilst designing and updating the TVET courses. This would go a long way in propelling the advent of vocational education and create its acceptability among the wider masses.

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Issues and suggestions

The biggest challenge for India is to provide the right opportunities for skill training to ensure timely availability of skilled manpower. Apart from addressing qualitative and quantitative issues associated with training infrastructure, there remains the challenge to recognise the skills acquired through experience or informal means. With greater formal employment opportunities being created, a wider understanding of the nature and sources of formal employment is necessary. Policy making and related decisions at central and state-level, must be based on a comprehensive understanding of growth sectors, employment generation potential of these sectors and labour supply in the state.

A balanced approach is essential to ensure the right quality and right numbers of skilled labour can be made available. Through this report, we have tried to highlight factors affecting quality and quantity of skilled labour. In this final section, we will touch upon strategic changes to re-engineer the eco-system that can facilitate the transformation.

We will focus on three kinds of action necessary to begin re-engineering the ecosystem

- Policy-level actions
- Quality enhancement actions
- Other systemic improvement actions

Policy-level actions

'Skill Development Plans' by states and central governments

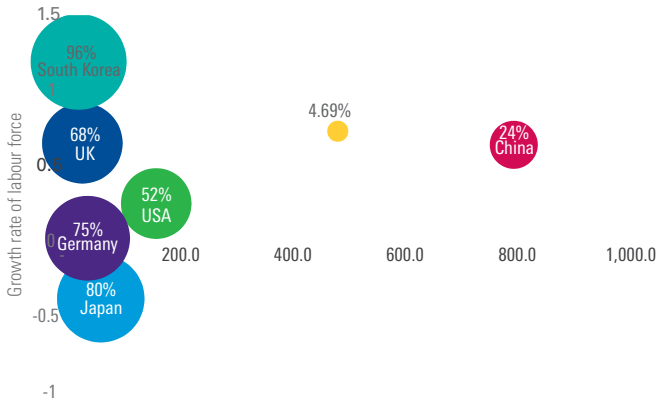
Developing skill development plans by states and central governments is essential. What is crucial is that these plans are based on state level analysis of the major industries driving economic growth and rising formal employment opportunities. Another important consideration is the ability of the state economies to provide employment opportunities to the local workforce versus supply skilled labour to the country.

EPFO, ESIC and other official statistics on government employees provide critical data on formal employment to identify industries to be prioritised for skill development. Skill gap studies for these growing sectors can provide additional information regarding skilling needs at an aggregate level.

Recognition of Prior learning (RPL)

India is faced with a peculiar problem wherein only 4.69 per cent (Figure 26) of Indian workforce is formally trained. However, a significant proportion of the existing workforce possess skills albeit acquired through experience or informally. With future growth coming from formal employment an intensive RPL exercise to certify available skills as per NSQF level becomes essential. The government should prioritise a combination of labour intensive industries and industries with rising formal employment to expedite RPL efforts.

Figure 26 Comparison of the level of skilled work force of large economies % of formally skilled labour force, 2013



Source: World Bank Statistics, National Policy for Skill development and Entrepreneurship (India), Centre on International Education Benchmarking

Quality enhancement actions

Targeted quality enhancement actions along the training delivery value chain are essential to ensure the right kind of skills can be made available. We will examine such measures at various stages of training delivery.

Stage 1: Mobilisation of trainees

Currently the mobilisation of the trainees is done primarily by training partners, ITI etc. but the system suffers from a high dropout rate of approx. 20 per cent . Poor aspirational value, expectation mismatch, lack of clarity on career prospects, location of employment etc are contributing factors.

Suggestion:

Hence there is an urgent need to strengthen industry linkage from the early stage itself. This could be achieved with a regular industry interaction whilst designing the NSQF compliant courses, curriculum design and mandated industry participation to ensure minimum number of hours for the Job training (OJT).

A well informed and well integrated industrial participation is the hallmark of the German and Japanese vocational education or skill training programmes. Active role of industry is key to improve aspirational value of skill training programmes in India.

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Stage 2: Training delivery

Ensuring the right quality of skill training is closely linked to the right form of training delivered. A well-integrated training and industry model can be developed by facilitating seamless movement of experienced practitioners to become trainers (teachers) and assessors.

Teachers and assessors - There is an urgent requirement for teachers or trainers in the skill institutes. The current projected demand is pegged at 20,000 teachers per annum against the current training capacity of 2,000 teachers been produced by DGE&T field institutes (most such institutes are running at 30-40 per cent of their total capacities).

Suggestion – A potential solution to this could be to design structured career paths whereby a worker post working for a minimum number of years can progress to become a certified teacher. A similar approach is followed in Australia through the (Registered Training Organisation) RTOs and has been a critical success factor to ensure high quality training delivery.

There is also an opportunity to upgrade the existing skillset of the teachers and this could be achieved by undertaking a formal train the teacher (TOT) program.

A similar approach to recruit experienced practitioners to evolve into assessor roles can be undertaken.

Funding - The current skill program is predominantly funded by the Indian Government which puts the burden on the exchequer.

Suggestion - Special incentive can be provided to the industry by the Government in order to invest their 2 per cent CSR funds towards skilling initiative in order to ensure adequate capitalisation. The Government can also look at making 50 per cent of CSR funds of corporates (1 per cent of total revenue of the corporates) is invested exclusively in skilling to sustain the funding required to meet the requirement for skilled workforce. For example: countries such as Brazil have witnessed industrial associations such as SENAI playing the role of aggregator of funds to manage and delivery industry relevant training. They are funded through a contribution of 1 per cent of net profits by participating industries.

Post placement monitoring - The current system is plagued with low absorption of the skilled manpower by the Industry which is as low as 36 per cent of skilled manpower . There have been issues wherein the placed candidates have dropped out of their employment due to expectation mismatch.

Suggestion - This calls for a regular industry, training institution and government interaction in order to identify the local skill gap requirement and fine tune the training been imparted to them. This is an important aspect for the success of any TVET program as a word of mouth publicity by successfully placed youth can ensure the success and efficacy of the program and would create the requisite buy-in among the wider diaspora. To prevent post placement drop-outs among the youths there can be regular monitoring of the following aspects undertaken by the institutes:

- Monitoring student's satisfaction with jobs attained.
- Post-placement counselling and guidance towards acclimatising to new locations.
- Performance tracking and life-cycle skilling

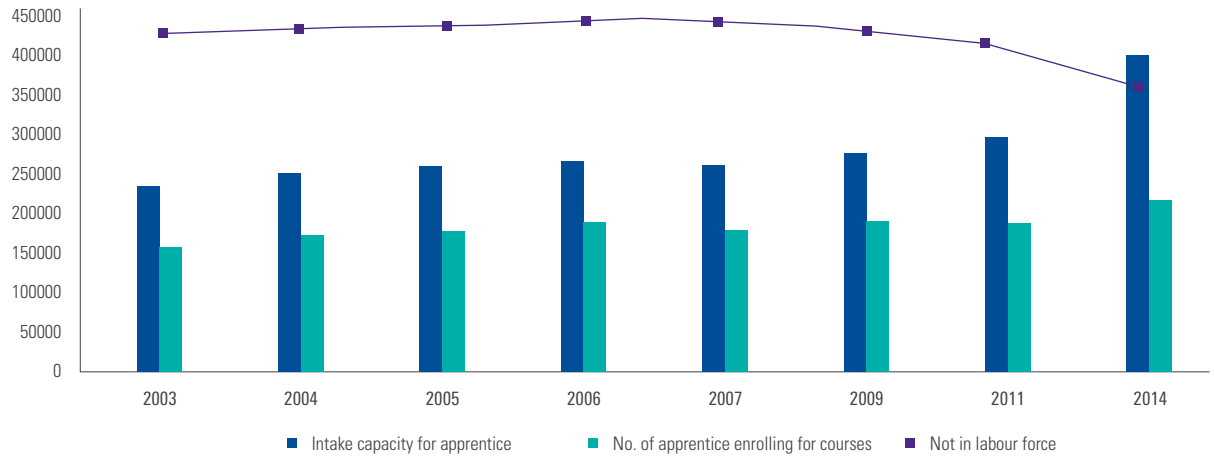
A regular labour market study could also be undertaken by the Government, at regular intervals of approximate 2-3 years to understand the change in industry requirement, change in skill set, job role proficiency required and if need be fine tune the trainings and the curriculum accordingly.

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Apprentice Program

Presently, there are 28,500 establishments throughout the country for trade apprentices and 2.20 lakh trade apprentices are undergoing apprenticeship training as against 3.95 lakh available apprenticeship seats.

Figure 27



Source: Niti Ayog report, September 2016 and Higher education report, MHRD

Suggestion - There must be an institutional mechanism designed to enforce on the job training in direct partnership with benefiting industries. In such a system training institutions can provide the theoretical input through classroom interactions. The practical component can be carried out with the benefitting industry through an apprentice model – funded by the industry. Similar methodology has been adopted in Germany and has been successful in achieving its outcome. Such a model would have three major benefits:

- Keep the cost of the overall education low - as training partners need not invest in expensive machinery
- Better industry interaction and hence meaningful content delivery
- Help the learner to understand the job role better leading to a lower probability of job dissatisfaction and hence lower attrition.

Subsidy may be provided to trained individuals to start entrepreneurial ventures. Gujarat has a policy to give capital subsidy of Rs. 40,000 to Rs.60,000 loan to individuals who have undergone skill training as apprenticeship. Such positive incentivisation models will facilitate organic growth and even address aspirational value.

The 6th July 2016 announcement of INR 10000 crore to provide apprenticeship training to five million youth by 2020 is positive step. With the government sharing the cost burden for academic costs and stipends there appears to be right action being undertaken. What is essential is ensuring enforcement and active industry role to timely implementation.

Other systemic improvement actions

Low female WPR

As discussed earlier, India suffers from a low female WPR which affects quantum of skilled labour available and the aggregate wealth generated in the economy.

Suggestion - To address this aspect the government could look at the following measures and develop positive incentivisation for public and private stakeholders:

- Identify sectors and regions with low female WPR
- Develop a targeted approach to improving access to formal education and vocational education programmes
- Include a mandatory women-centric component in Skill State Plans and annually monitor and recognise high performing states
- Strengthen anti-discrimination laws and promote policies that protect women against workplace discrimination – both in law and in practice
- Improve enforcement of work-place infrastructure in order to remove entry barriers and attrition. This includes the provision of toilets, a safe work environment and adherence to laws pertaining to provision of maternity support and crèche facilities. A potential approach could be to rate and recognise large employers on enforcement of such practices and in turn create role models for the industry

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Restrictive labor laws in India

The Industrial Disputes Act of 1947 has two provisions in the way of workforce adjustments.

Chapter VB of the Act requires prior approval of the appropriate government before resorting to any layoff, retrenchment or closure in establishments employing 100 or more workers.

Another major contentious provision is Section 9A of the Act which mandates 21 days' notice before affecting any change in established conditions of service of any employee, including any change necessitated by "rationalisation, standardisation or improvement of plant or technique".

The Contract Labour (Regulation and Abolition) Act, 1970, as the name suggests, is enforced to regulate the practice and abolish it in certain cases.

In other words, the practice is not prohibited. Engaging contract workers for temporary, intermittent or seasonal work is allowed but using them for work of perennial nature violates the letter and spirit of the law.

Suggestion - The draft Labour Code on Industrial Relations currently in circulation seeks to raise the threshold to establishments employing 300 or more workers, but it is still work in progress.

To meet surges in demand for goods and services requiring urgent workforce adjustments. Immediate deployment of regular workers is not always feasible and pruning them alongside falling demand often meets legal obstacles. Hence suitable amendments needs to be made in these laws in consultation with the industry in order to cater to their demands.

Skill Universities – India has been a late entrant with establishment of the first skilling university in 2015. This is a milestone in skill education in India and offers youth an opportunity to earn a degree and thereby a chance to undertake higher certification courses. This has also helped in easing the interoperability of the skilling ecosystem with the formal education system. Post this a number of industries have shown interest in establishing a Skill University which in times to come would help them in stemming the shortfall of adequately skilled youth whilst providing a ready talent pool towards their forthcoming requirements and helping them fructify their future expansion plans.

Some of the challenges towards the growth of Skill Universities in India:

- A robust credit framework needs to be formulated which would provide mobility in terms of multiple exit and entry points along with recognition of prior learning (RPL)
- The minimum requirements to qualify for a teaching post would have to be drafted to ensure emphasis is given to attracting people from the industry with experience rather than qualification (Example : PhD required for a "professor") This could also warrant renaming teaching posts for B.Voc so that a person with adequate skill and experience can also become a teacher.
- Set up skill universities in all the capital cities of India which would be attuned with the local demographic requirement from the perspective of youth aspiration and industry requirement. There should also be center of excellence established in all the four metros in order to cater to the demographic requirement of their geographies and champion research efforts focused on development of new methodology of imparting skill training, focus on advent of disruptive technology and skill youth to take a benefit of it etc.

Each of the suggestions above need to be studied in detailed an actionable plan needs to be developed. All the stakeholders - the Government, Industry, training partners, learners and other service providers need to work alongside to create a robust and resilient skilling ecosystem. This would ensure long term sustainability of the TVET system and would help in changing the perception of the labour populace at large towards skilling.

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Annexure

"National Skill Policy

The objective of the current National Policy on Skill Development and Entrepreneurship, 2015 is to meet the challenge of skilling at scales with speed and standard (quality). It aims to provide an umbrella framework to all skilling activities being carried out within the country and to align them to a common standards and link the skilling been undertaken with the demand centres. In addition to laying down the objectives and expected outcomes, the effort would also be to identify the various institutional frameworks, which can act as a vehicle to reach the expected outcomes. The national policy will also provide clarity and coherence on how skill development efforts across the country can be aligned within the existing institutional arrangements. This policy will link skill development to improved employability and productivity of the workforce.

Apprenticeship Act, 1961

This Act was sanctioned in order to regulate programmes of training of apprentices and make it obligatory for employers in both public and private sector establishments to have training infrastructure as detailed in the Act. This was undertaken to ensure trainees get optimum access to real working environment and the experience of on-the-job training. The objective of apprenticeship was also to ensure employers get skilled workforce with adequate exposure to a real working environment.

But this Act has not seen much success since out of total of 3.9 lakh seats available for apprenticeship, just about 2.1 lakh apprentices are being trained annually. This is largely due to inability of training providers to work together with employers as well as lack of participation from the industry and employers. It becomes even more critical in courses related to the manufacturing sector where the private sector has not been able to overcome challenges related to infrastructure and learning equipment costs.

Recently, the government has passed an amendment to the existing Act via the Apprentice Bill, 2014 in order to increase the participation of ITIs in the skilling ecosystem. The salient features of the revised Act are :

- Prescription of number of apprentices to be engaged at establishment level instead of trade-wise.
- Establishments can also engage apprentices in optional trades, which are not designated, with the discretion of entry-level qualification and syllabus.
- The scope has been extended to non-engineering occupations.
- The burden of compliance on industry has been reduced significantly through the following measures:
  - Submission of returns and other information through an online portal
  - Submission of apprenticeship contract through the portal and its time-bound approval
  - Penalties in the form of fines only
  - Establishments operating in four or more states would be interfacing with central authorities.
  - Establishments have been permitted to outsource basic training to an institute of their choice.

The minimum rate of stipend per month for trade apprentices has been indexed to minimum wage of semi-skilled worker of the respective state government, starting at 70 per cent of the minimum wage in the first year, 80 per cent in the second year and going up to 90 per cent in the third year. The stipend has almost doubled after this notification.

National Skill Qualification Framework (NSQF)

The introduction of NSQF has been a much-needed step in the right direction. With a mandate to standardise academic delivery across training institutions and provide career pathways and employment-oriented courses, NSQF's implementation would be crucial. The newly-formed Ministry of Skill Development and Entrepreneurship's ability to build consensus among all central and state government agencies, academic institutions and regulators, apart from aggregation of all enablers and implementation agencies, would be equally important for a successful adaptation. While complete integration with the formal education system may be a long-term process — as it would also require a great deal of capacity-building at implementing units and last mile level coordination — the government must initiate the process.

Recognition of Prior Learning (RPL) is another ambitious initiative, and is expected to contribute heavily to the existing workforce, especially in the informal sector. SSCs have a vital role to play here and their ability to mobilise and create assessment opportunities would be extremely important. With the current scarcity of qualified assessment providers, SSC's would need significant amount of industry support and capacity building.

Defining the ecosystem

The economic growth in the country, which has led to a huge requirement of skilled workforce, has ensured that the ecosystem has larger participation from all stakeholders, which include decision-making bodies, enablers, implementing agencies and beneficiaries.

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Key bodies of skilling

Ministry of Skill Development and Entrepreneurship

While a lot of initiatives have been undertaken, skill development in the country has been plagued by multiplicity of agencies and duplication of efforts. To address this problem, Prime Minister Narendra Modi in June 2014 announced the creation of a first-ever separate Ministry of Skill Development and Entrepreneurship to promote entrepreneurship and skill development.

The ministry has envisaged encompassing all other ministries to work in a unified way, set common standards, coordinate and streamline the functioning of different organisations working for skill development and, at the same time, in a cost-effective way. One of the aims of the new ministry is to ensure that India meets its target of skilling and up-skilling 500 million people in India by 2022 by integrating the government's efforts, which are currently been implemented by 21 different ministries.

Ministry of Human Resource Development (MHRD)

MHRD governs polytechnic institutions, imparting diploma level courses under various disciplines such as engineering and technology, pharmacy, architecture, applied arts and crafts, and hotel management. As per MHRD's Annual Report- 2014-15, 665 universities, 35,829 colleges and 11,443 stand-alone institutions exist in India . Another key initiative of MHRD is the scheme of Apprenticeship Training, which aims to provide practical experience to engineering graduates, diploma holders and students in 10+2, and make the trained candidates job-ready as per industry requirements.

Apart from this, MHRD has also introduced vocational education from class IX onwards, provision of financial cost for engaging with industry/SSCs for assessment, certification and training.

Ministry of Rural Development

'Aajeevika' is a skilling and placement initiative of Ministry of Rural Development (MoRD). The aim of the scheme is to impart a specific set of knowledge and skills to the rural youth and make them job-ready. The scheme caters to youth without a formal education.

The scheme is an important part of the Skill Development Policy and an integral part of the National Rural Livelihood Mission (NRLM). The scheme is implemented by Project Implementation Agencies (PIA) in the public, private or voluntary sector.

Central ministries

There are currently 21 ministries under the central government, which are also working for the purpose of skill development. There are two approaches that these ministries have, one approach is by setting up training centres of their own for specific sectors like (Ministry of Labour & Employment, Ministry of Agriculture, Ministry of Health & Family Welfare, etc.). The second approach is by PPP (Ministry of Rural Development, Ministry of Women and Child Development, etc.)

Some of the schemes under three such ministries are:

Ministry of Tourism - It launched a training programme called 'Hunar Se Rozgar Tak', to create employable skills among interested youth aged 18-25 years.

Ministry of Textiles - Textile is the second largest employer after agriculture in the country. The workforce will increase from 33-35 million in 2008 to 60-62 million by 2022 . The ministry has an Integrated Skill Development Scheme for the textiles and apparel sector, including jute and handicraft.

Ministry of Tribal Affairs – Scheduled tribes are categorised under most marginalised sections of the society, and are in need of overall social and economic development. The scheme aims at upgrading skills of tribal youths in modern or traditional vocations, and help them get suitable employment.

Enablers of the skilling ecosystem

State Skill Development Missions

Setting up of State Skill Development Mission (SSDM) at each state has been mandated to integrate and bring the required synergy among multiple state-run schemes. The body would act as a nodal agency to bring an institutional mechanism to work along with NSDC, SSCs, training partners and other stakeholders apart from different ministries. SSDMs have a mandate to drive ground-level implementation and achieve economies of scale. SSDMs are expected to lead mobilisation campaigns, awareness about skilling, engaging with private sectors and employers, and focus on optimum capacity creation for state-specific requirements.

National Skill Development Corporation (NSDC)

NSDC, a public-private partnership organisation (now under the Ministry of Skill Development and Entrepreneurship), was incorporated in 2009 under the National Skill Policy. Its main aim is to provide viability gap funding to the private sector in order to scale up training capacity. NSDC has more than 267 approved training projects across sectors, these sectors are monitored on their financial and social targets. This becomes important in sectors where financial viability of sustainable scaled-up training infrastructure becomes challenging due to the intrinsic nature of workforce and appeal-related issues.

NSDC is also responsible for managing the flagship schemes of the Indian government like Pradhan Mantri Kaushal Vikas Yojna (PMKVY), National Urban Livelihood Mission (NULM).

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Sector Skill Councils

At an annual addition of 9.25 million per year, approximately 37 million jobs are expected to be created between 2012-13 and 2016-17. Manufacturing would contribute approximately half of these additional jobs. A significant proportion of the jobs in these sectors would require a sector- and skill-specific trained workforce. These facts and figures are clearly indicative of the fact that India would need to revamp its current skill development strategies with a focus on the industry, and an attempt to balance labour force demand and supply.

As on date, NSDC has approved 40 SSCs. They are funded by NSDC for the initial few years, and are expected to become financially self-sustainable as they grow.

National Council for Vocational Training (NCVT) and State Council for Vocational Training (SCVT)

Established under the Ministry of Labour and Employment with a view to ensure and maintain uniformity in the standards of training all over the country, the National Council for Vocational Training was set up in the year 1956. This certifying body conducts All India Trade Tests for those who complete training in ITIs, and awards National Trade Certificates to successful candidates. The Council has representation from central and the state government departments, employers' and workers' organisations, professional. All India Council for Technical Education, scheduled castes and scheduled tribes, All India Women's Organisation, among others. The State Council for Vocational Training at the state levels and the sub-committees have been established to assist the National Council.

Quality Control of India (QCI)

QCI was set up jointly by the government of India and the Indian industry as an autonomous body to establish a national accreditation structure in the field of education, health and quality promotion.

All institutions (government and private ITIs) seeking formal affiliation from NCVT have to first get accreditation from QCI. The QCI team then makes formal criteria check with the institution to provide accreditation.

Directorate General of Employment & Training (DGE&T)

The DGE&T under the Ministry of Labour is the apex organisation for development and coordination at the national level for the programmes relating to vocational training, including Women's Vocational Training and Employment Services. Employment service is operated through a countrywide network of employment exchanges. Industrial Training Institutes (ITIs) are under the administrative and financial control of state governments or Union Territory Administrations. DGE&T also operates Vocational Training Schemes in some of the specialised areas through field institutes under its direct control. The development of these programmes at the national level, particularly in the area concerning common policies, common standards and procedures, training of instructors and trade testing is the responsibility of the DGE&T. But day-to-day administration of employment exchanges and ITIs rests with the state governments / Union Territories Administrations. Distribution of responsibilities between the central government, state governments and the industry has been shown in the table, Tasks and Responsibilities.

Implementing bodies

Industrial Training Institutes (ITIs)

DGE&T which governs Industrial Training Institutions (ITIs) have been recently aligned with the Ministry of Skill Development and Entrepreneurship. There are more than 11,500 ITIs with a capacity of approximately 17 lakh seats. DGE&T also governs Regional Vocational Training Institutions (RVTIs) and Advance Training Institutions (ATIs) focussing on specialised and high-end skill sets and trainers courses.

With the current seating capacity of 17 lakh for trainees at ITIs, there is a need of almost 75,000 trainers (considering 20:1 student/faculty ratio). DGE& T currently has a seating capacity of 4,328 for the trainers' programme, which hardly meets 20 per cent of the total demand. This is distributed among ATIs, CTI, Chennai and RVTIs. Earlier ATIs also offered ITI courses but recently, they have discontinued such courses, and are using the capacity for instructor training. While some ATIs have started working in double shifts to increase capacity, this still falls short of the total requirement. The current duration of a Trainer Course (one year) is again of shorter duration, considering the quality of intake coming from technical institutions, and needs to be revisited."

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Glossary

CAGR	Compound Annual Growth Rate
CSR	Corporate Social Responsibility
DGTE	Directorate General of Training And Employment
EPFO	Employees' Provident Fund Organisation
ESIC	Employee State Insurance Corporation
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
GER	Gross Enrolment Ratio
GFCE	Government Final Consumption Expenditure
GPF	General Provident Fund
GSDP	Gross State Domestic Product
GVA	Gross Value Added
ITCs	Industrial Training Councils
ITI	Industrial Training Institute
LFPR	Labour Force Participation Rate
MHRD	Ministry of Human Resource Development
MORD	Ministry of Rural Development
MSDE	Ministry of Skill Development And Entrepreneurship
MSME	Micro Small And Medium Enterprises
NCVT	National Council For Vocational Training
NGO	Non-Government Organisation
NOS	National Occupation Standards
NPS	National Pension Scheme
NSDA	National Skills Development Agency
NSDC	National Skill Development Corporation
NSQF	National Skills Qualification Framework
NSTFDC	National Schedule Tribe Finance Development Corporation
NVQF	National Vocational Qualification Framework
OJT	On The Job Training
PMKVY	Pradhan Mantri Kaushal Vikas Yojana
PPP	Public Private Partnership
QCI	Quality Control of India
QP	Qualification Pack
RPL	Recognition of Prior Learning
RVTI	Regional Vocational Training Institutes
SCVT	State Council Of Vocational Training
SME	Small And Medium Enterprises
SSC	Sector Skill Council
SSDM	State Skill Development Mission
TOT	Training Of Trainers
TVET	Technical Vocational Education And Training
UR	Unemployment Rate
WPR	Worker Population Ratio

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