CHANGING SKILL SCENARIO IN INDIA: EMERGING POLICY CONCERNS

Pradeep Kumar Saxena and Abhay Kumar[1]

ABSTRACT

The rapid growth and structural transformation of the Indian economy have led to an increased demand for skilled manpower, particularly from the industrial and services sectors. This paper attempts to study the changing needs of skill development in India and flags up some important policy concerns. An analysis of the demographic dividend suggests that in addition to the new entrants, the existing labour force too needs to be skilled. Together with the quantitative challenges, there is a serious concern with regard to the quality of skill training in the country. Apprenticeship training remains an underutilised option and needs to be harnessed optimally. Over the years, the central government and state governments have been implementing skill development programmes without robust coordination or monitoring mechanisms to ensure convergence. All efforts including those of the private sector need to be synchronised in order to meet the skill needs of the labour force and the economy.

Keywords: Skill Development, Structural Transformation, Demographic Dividend, Skill Composition, PMKVY, DDU-GKY

JEL Classification Code: J24

---

1 Dr. Pradeep Kumar Saxena retired as Joint Director, National Institute of Labour Economics Research and Development (Formerly Institute of Applied Manpower Research), Delhi. He is currently Visiting Fellow at Lokashraya Foundation, New Delhi.

2 Dr. Abhay Kumar works with the Lokashraya Foundation, New Delhi.
E-mail of corresponding Author: abhayjnu@gmail.com/abhaykumar@lokashraya.org.

This paper is an abridged version of a Working Paper published by Lokashraya Foundation (Working Paper Series No. 4, 2017), New Delhi.

1. Skill Development: A Prelude

Skill development is quite a comprehensive term and as a result there is no universally accepted definition of the term.[1] Skill development leading to enhanced capability and competence has emerged as the most effective driving force for economic development. The socio-economic development of any country largely depends on its capacity to enhance the skill development system available to its existing and future labour force. Countries with higher levels of education and a highly skilled labour force are not only more competitive in the global economy, but also they respond more quickly to challenges and opportunities for development. Skills play a critical role in improving individuals' work performance and raising the country's overall productivity and growth. Of late, it has assumed even greater importance since the developing and emerging economies are striving to achieve higher and more sustainable growth rates (World Bank, 2010).

Rapid economic growth has resulted in an increased demand for skilled worker, from entry point to specialised skills levels. The National Policy for Skill Development and Entrepreneurship (2015) estimated that by 2022 there will be a need for approximately 402.9 million skilled workers. In addition to this quantitative challenge, there is a serious problem with the current quality of skill training programmes. Since the early 1990s, the relative wages of workers with technical/vocational attainments have also declined, primarily because workers with technical/vocational qualifications do not have the skills that are in high demand in the labour market—often because they have not received good quality training (World Bank, 2008). A study conducted by the World Bank has estimated the employability of Industrial Training Institute (ITI) graduates to be approximately 30 per cent (World Bank, 2007). A major study conducted by the Institute of Applied Manpower Research found that about 56 per cent of ITI graduates were employable (IAMR, 2011a), while the employability of apprenticeship graduates was comparatively higher at 65 per cent, the reason being that graduates of apprenticeship programmes have more industry exposure and practical training (IAMR, 2011b).

In comparison to the employability of persons with low-end skills, the employability of those with professional and technical education shows a more distressing trend. The first National Employability Report—Diploma, 2016 showed that almost 20 per cent of India's diploma holders are employable but unable to find jobs (The Economic Times, 2016). A study by the Associated Chambers of Commerce and Industry of India (ASSOCHAM) Education Committee (AEC) revealed that, with the exception of IIM graduates, only 7 per cent of MBA graduates were found to be employable. Moreover, these inadequately trained graduates could earn less than Rs.10,000 a month (ASSOCHAM, 2016).

Currently, in India, skill development has assumed great importance from both socio-economic and demographic points of view. For the economy to grow at a higher pace and reap its demographic dividend, a multi-faceted and highly effective skill development mechanism needs to be implemented. With a population of about 1.4 billion by 2020, India is likely to become the most populous nation of the world. By then, with an average age of 29 years, the country is also expected to be the youngest country in the world and could constitute about 28 per cent of the world's workforce. By comparison, the average age in China and USA is likely to be around 37 years, while in Western Europe it could be about 45 years. Moreover, while China's demographic dividend has been tapering off, India is likely to reap the benefits of its demographic dividend until 2040 (FICCI, 2014).

It is estimated that only about 40 per cent of workers entering the labour market fulfil the criteria of employers (Wheebox, 2017). Discussions on India's demographic dividend tend to concentrate on the broad age group of 15-59 years, however, it is estimated that between 2012 and 2026, the proportion of the population that is of working age is likely to increase from 62.6 per cent to 66.3 per cent, driven by an increase in the 45-59 years age group.

However, the breakdown of the 15-59 years age group into further sub-groups reveals that during this period, the proportion of the population aged 15-29 years is likely to fall marginally—from 28.7 per cent to 27.4 per cent—leading to an increase in the share of those aged 30–59 years from 34 per cent to 38.8 per cent. Moreover, within that sub-group, growth will be more pronounced in the 45–59 years age group, as compared to the 30–44 years age group. This suggests that the demographic bulge is hovering around the older working population (Krishnamurty and Kumar, 2015). A similar story is revealed by official projections (Planning Commission, 2008b).

It is these changing needs and the subsequent need for skill development that this paper addresses. Its key objectives are to examine emerging skill needs during the current phase of rapid economic growth and structural transformation; to assess the current education and skill composition of the country and future skill requirements; to examine the existing facilities for skill development and assess the recent expansion of skill training; and to highlight the key emerging concerns and suggest policy measures.

This paper is based on secondary data drawn from various government sources such as NSS, Central Statistical Organisation (CSO), Ministry of Skill Development and Entrepreneurship (MSDE), National Skill Development Agency (NSDA), Ministry of Rural Development (MoRD), NITI Aayog, Ministry of Labour and Employment (MoLE), and National Institute of Labour Economic Research and Development (NILERD, formerly Institute of Applied Manpower Research).

This paper is organised into five sections: Section 1 introduces the paper. Section 2 discusses emerging skill needs considering the recent spurt in the growth rate and the structural transformation of the economy; Section 3 presents the skill and educational composition, current skill deficit, and future skill requirements; Section 4 discusses the existing facilities and recent expansion of training for skill development; and Section 5 highlights the key emerging concerns and suggests policy measures.

2. Changing Skill Needs in India

During the last two and half decades, the Indian economy has witnessed two significant features. Firstly, there has been a consistent increase in the growth rate of India's gross domestic product (GDP). From an average of 3.5 per cent per annum between 1950 and 1980, and 5.4 per cent per annum during the 1980s, India's GDP has witnessed a growth rate of more than 6 per cent per annum since 1990. During the Eleventh Five Year Plan (2007–12), the GDP grew at an average of about 8 per cent per annum. The augmentation in savings and investment ratios drove a significant increase in the average annual GDP growth rate, to 8.4 per cent between 2003–04 and 2010–11. Although in the early period of the Twelfth Plan (2012–17) the growth rate decelerated, it recovered to over 7 per cent during 2014–15 and 2015–16 (this data are drawn from economic surveys of various years by the Ministry of Finance).

Secondly, together with the impressive increase in the GDP growth rate, the Indian economy has witnessed significant structural transformations. The Central Statistical Organization (CSO) and National Sample Survey (NSS) data for different points of time shows that the share of employment in the primary sector in total employment declined from 64.0 per cent in 1993–94 to 56.3 per cent in 2004–05. Furthermore, between 2004–05 and 2011–12, it further declined to 48.9 per cent. During the same period, however, its relative share in GDP declined drastically from 28.4 per cent in 1993–94 to 14.1 per cent in 2011–12. The decline in employment in the primary sector paved the way for an increase in the share of the secondary and tertiary sectors in total employment, but the rise seems to be more pronounced in the secondary sector than in the tertiary sector. This could be attributed to the enormous rise of employment opportunities in the real estate and construction sectors. It is worth mentioning here that although the share of the secondary sector in total employment increased substantially, its share in GDP increased only marginally, while the tertiary sector's share in GDP rose significantly. Additionally, between 1999–2000 and 2011–12, employment in the organised sector increased substantially from 9.3 per cent to 16.4 per cent, while employment in the unorganised sector decreased accordingly, from 90.7 per cent to 83.6 per cent.

Independent India inherited a shattered economy, widespread illiteracy, and abject poverty. In order to address widespread illiteracy, India's most

predominant concern, India prioritised raising the educational profile of its masses, focusing on primary and elementary education, with programmes and initiatives geared towards skill development which was lagging far behind. Significant initiatives included District Primary Education Programme, Sarva Shiksha Abhiyan, and making education a fundamental right by passing the 86th Amendment to the Constitution (2002). The literacy rate rose from a paltry 12.2 per cent at the time of Independence to 74.0 per cent by 2011 (Census of India 2011). Until the mid-1980s, the only form of vocational and technical training available was craftsmen training at ITIs, and apprenticeship training in industries. The secondary school system offered only general and academic education, and there was no option for vocational education. It was only in 1976–77 that vocational education (VE) was introduced as an option at the higher secondary level (Classes XI and XII). The National Policy on Education (1986) aimed to vocationalise secondary education, by introducing agriculture, pisciculture, dairy and poultry farming, electronics work, mechanical work, and carpentry into the higher secondary curriculum.

The demand for skilled worker was increasing with the rising growth rate and structural transformation of the economy. With the phase of growth that began with the year 2000, the demand for skilled human resources in the industrial and service sectors increased dramatically. Despite these significant transformations, there was limited discussion in academic or policy circles about skill shortages in quantitative terms, or supply–demand mismatches in the labour market for specific skills/trades. During the Tenth Five Year Plan (2002–07) period, as the GDP growth rate increased rapidly (by around 7.7 per cent), policy shifted swiftly towards skill development.[2]

Introducing a chapter on skill challenges facing the nation in the Eleventh Five Year Plan (2007–12) paved the way for enhancing the skill development process in the country (Planning Commission, 2008b). Building on this, the National Policy on Skill Development in 2009 established new institutional mechanisms in the form of the Prime Minister's Council on Skill Development, National Skill Development Corporation (NSDC), and other networks, as well as expanded and modified on-going programmes and public–private partnerships in skill development. Skill development is also important for taking advantage of the demographic dividend that will be available in the country only until 2040 (MoLE, 2009). The National Policy on Skill Development undertook the herculean task of creating a pool of 500 million skilled people by 2022; however, this target appears to have been overestimated and difficult to achieve, and it has raised a number of concerns (Mehrotra et al., 2013). It merits mention here that to align the policy framework with emerging trends in the national and international arena, the 2009 National Policy on Skill Development was to be reviewed every five years. This policy was superseded by the National Policy for Skill

Development and Entrepreneurship 2015 (MSDE, 2015). The main objective of the new policy was to meet the challenge of expanding skill development at a rapid pace, while ensuring standards of quality and sustainability.

3. Skill Composition and Future Skill Requirements

As discussed earlier, the educational profile and skill composition of the labour force and of the population in general is still quite low. As Figure 1 shows, females were at a disadvantage as compared to their male counterparts. Female illiteracy (39.1 per cent) was found to be significantly higher than that of males (24.7 per cent). Among males, 15.2 per cent were educated to the higher secondary level and above, while just 10.2 per cent of females had acquired education to, or above, the higher secondary level. The proportion of females who had completed primary, middle, and secondary education was also lower than that of males.

Figures 1 and 1a also show significant disparities between rural and urban members of the population. Among the rural labour force, as many as 36.3 per cent were illiterate, while among the urban labour force, this proportion was lower, at 31.7 per cent. There were marginal variations between rural and urban populations with regard to the proportion of those who had completed primary, middle, and secondary education; however, in terms of the proportion of the labour force educated up to higher secondary level and above, the rural labour force (7.6 per cent) lagged far behind the urban labour force (12.6 per cent). Multiple factors could explain these differences, including the lack of educational facilities in rural areas, lack of awareness among rural populations of the benefits of education and skill training, affordability, and social impediments. Most formal skill training institutes are located in urban areas. Even private sector educational institutions show a reluctance to operate in rural areas, with the result that a large share of the rural population continues to have limited access to quality educational facilities.

Figure 1: Education Level of Labour Force (15–59 years) by Gender during 2011–2012 (in per cent)

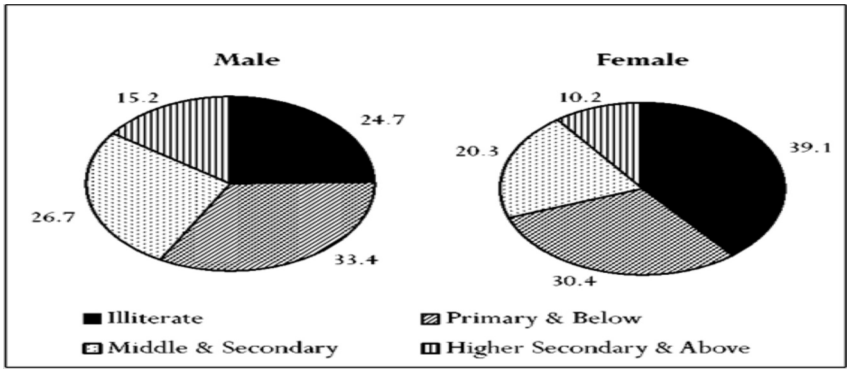
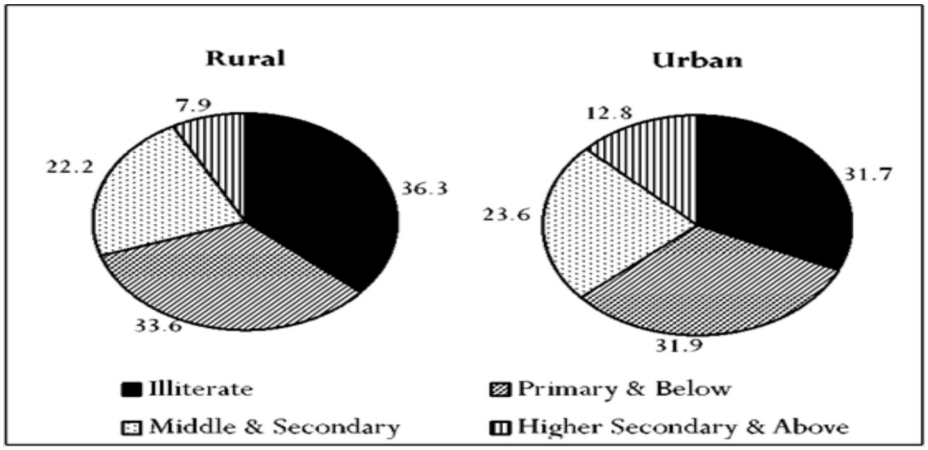


Figure 1a: Education Level of Labour Force (15–59 years) by Residence during 2011–2012 (in per cent)



Source: Computed from Unit Level Data of NSS 68th round (2011–12), Schedule 1.0, Employment and Unemployment, National Sample Survey Office, Ministry of Statistics & Programme Implementation, Government of India

In NSS surveys, a degree in professional/technical education such as engineering, medicine, or agriculture, and a diploma or certificate in agriculture, engineering/technology, medicines, crafts, etc., was included under "technical education". The data in Table 1 show that as per the NSS 68th Round (2011–12), only 2.4 per cent of persons above 15 years of age have received technical training—by gender, 3.5 per cent of males and 2.4 per cent of females have received training. The table further shows, of those who had received a technical education, only 16.2 per cent had a degree, 58.6 per cent had a diploma/certificate below the graduate level, and 25.2 per cent had a diploma/certificate at the graduate level and above. Approximately similar trends are evident for both males and females.

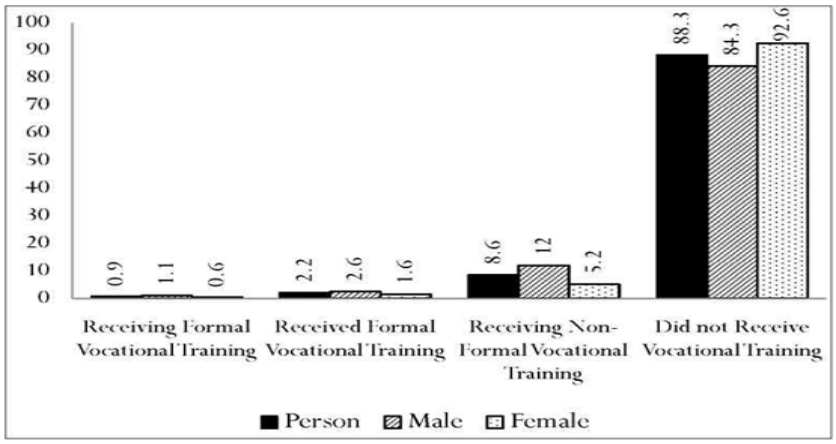
Table 1: Percentage Distribution of Persons Aged 15 years and above having Technical Education in India, 2011–12

Level of Technical Education	Person	Male	Female
Percentage of persons having Technical Education	2.4	3.5	1.4
Percentage Distribution of Persons having Technical Education by different Education Levels			
Degree in technical education	16.2	16.5	15.4
Diploma/certificate below graduate level	58.6	59.9	55
Diploma/certificate graduate level and above	25.2	23.6	29.6
Total	100	100	100

Source: National Sample Survey Office (2015), "Status of Education and Vocational Training in India", NSS 68th Round (2011–12), Ministry of Statistics and Programme Implementation, Government of India

The skill deficit of the labour force is further evident from Figure 2, which reveals that 88.3 per cent of the age cohort of 15 years and above did not have any vocational training, and that during the period 2011–2012, only 11.7 per cent had received/were receiving vocational training. Among vocationally trained individuals, a large majority had received only informal training. The situation was more distressing in the case of females, with 92.6 per cent not having received any vocational training, as compared to the relatively better situation of males, with 84.3 per cent.

Figure 2: Percentage Distribution of Labour Force (15–59 years) by Status of Vocational Training received/being received, 2011–12



Note: Non-formal vocational training includes hereditary training, self-learning, learning on the job and the likes.

Source: Compiled from Unit Level Data of NSS 68th round (2011–12), Schedule 1.0, Employment and Unemployment, National Sample Survey Office, Ministry of Statistics and Programme Implementation, Government of India

Table 2 presents data on the skill needs in the farm and non-farm sectors, compiled for the National Policy for Skill Development and Entrepreneurship, 2015. The data excludes technical education in calculation of vocational education and training (VET). As shown in the table, the workforce for all age groups except higher education without VET in the farm and non-farm sectors was 193.7 million (43 per cent) and 256.7 million (57 per cent) respectively. Of these, the number of those who attained VET is estimated to be 10.5 million for the farm sector (5.4 per cent) and 13.9 million for the non-farm sector (5.4 per cent). The number of workers remaining to be trained in the farm sector, therefore, is 183.2 million, and in the non-farm sector it is 242.9 million. Training the workforce below 45 years of age—around 70 per cent—through recognition of prior learning (RPL), re-skilling, and up-skilling is a gigantic task, as there are a total of 298.3 million workers, of whom 128.3 million are in the farm sector and 170.0 million are in the non-farm sector. Besides training this huge existing workforce which lacks

VET, fresh entrants to the labour force between 2015 and 2022 also need to be trained. The total number of entrants to the workforce during this period who require skilling/VET is estimated to be 104.6 million (MSDE 2015). Thus, the total need for skilling by the year 2022 will be approximately 402.9 million—a huge task for the government.

Table 2: Skill Requirements for the Workforce, 2015

(in million)

Sector	Total Workforce (WF) for all Age Groups (excluding those with higher education without VET)		Workforce with VET		WF without VET	WF in the age group 15–45 years without VET	
	2014–15		2014–15				
	Number (in million)	% of WF	Number (in million)	% of WF		Number (in million)	% of WF
Farm	193.7	43	10.5	5.4	183.2	128.2	70.0
Non-farm	256.7	57	13.9	5.4	242.9	170.0	70.0
Total Workforce for all age groups (except higher education without VET (in million))							450.4
Total need for skilling, re-skilling and up-skilling of existing workforce							298.2

Source: National Policy for Skill Development and Entrepreneurship 2015, Ministry of Skill Development and Entrepreneurship, Government of India, New Delhi.

The National Policy for Skill Development and Entrepreneurship 2015 has estimated that across the 24 sectors, the human resource requirement will increase from 450.7 million in 2013 to 560.5 million by 2022, leading to an increase of 109.7 million (Table 3). Interestingly, in the farm sector (agriculture), it will decline from 240.4 million to 215.6 million, a fall of 24.9 million. On the other hand, in the non-farm sector it will increase from 210.3 million to 344.5 million, showing an increase of 64.0 per cent. Among the non-farm sectors, major employers appear to be building, construction, and real estate; retail; transportation and logistics; textiles and clothing; handloom and handicrafts; and education/skill development. However, between 2013 and 2022 the most pronounced incremental demand for workers will come from the following sectors: beauty and wellness (239.0 per cent); furniture and furnishings (174.7 per cent); tourism, hospitality, and travel (92.8 per cent); transportation and logistics (69.7 per cent); building, construction, and real estate (68.5 per cent); and food processing (63.0 per cent). Interestingly, 12 non-farm sectors combined will account for an incremental growth of 78.4 per cent. To this end, the setting up of Sector Skill Councils (SSCs) by the NSDC has been a great effort.

Table 3: Incremental Human Resource Requirements across Sectors, 2013–2022

Sl. No.	Sector	Employment base in 2013 (Million)	Projected Employment by 2022 (Million)	Incremental Human Resource Requirements, 2013–22 (Million)	Percentage Change, 2013–2022
I	Farm Sector (Agriculture)	240.4	215.6	-24.8	-10.3
II	Non-farm Sector	210.3	344.9	134.5	64.0
1	Building, Construction and Real Estate	45.4	76.5	31.1	68.5
2	Retail	28.2	34.5	6.3	22.3
3	Transportation and Logistics	16.7	28.4	11.7	69.7
4	Textile and Clothing	15.2	21.5	6.3	41.4
5	Handloom and Handicrafts	11.6	17.8	6.1	52.7
6	Education/Skill Development	13.0	17.3	4.3	32.9
7	Auto and Auto Components	11.0	14.9	3.9	35.5
8	Beauty and Wellness	4.2	14.3	10.1	239.0
9	Tourism, Hospitality and Travel	7.0	13.4	6.5	92.8
10	Food Processing	7.0	11.4	4.4	63.0
11	Furniture and Furnishing	4.1	11.3	7.2	174.7
12	Other Sectors*	46.8	83.5	36.7	78.4
III	Grand Total (24 Sectors)	450.7	560.5	109.7	24.3

* Other Sectors include Construction Material and building hardware, Electronic and IT Hardware, Gems and Jewellery, Leather and Leather Goods, Security, Domestic Help, Healthcare, IT and ITES, Telecommunication, BFSI, etc.

Source: National Policy for Skill Development and Entrepreneurship, 2015, Ministry of Skill Development and Entrepreneurship, Government of India, New Delhi.

4. Facilities for Skill Development: Existing Status and Recent Initiatives

In India, training for trades and other occupations is offered in a number of forms and for varying durations by a variety of stakeholders. Skill development programmes are being run by more than 20 ministries and government organisations at the central and state levels, as well as by a number of private institutions and non-governmental organisations. The skill training system in the country consists primarily of the Craftsmen Training Scheme (CTS) and National Apprenticeship Promotion Scheme (formerly the Apprenticeship Training Scheme), both under the purview of the Ministry of Skill Development & Entrepreneurship. This paper discusses these two schemes in detail. The recent expansion in the skill training offered by number of ministries and organisations is also examined.

4.1 Craftsmen Training Scheme (CTS)

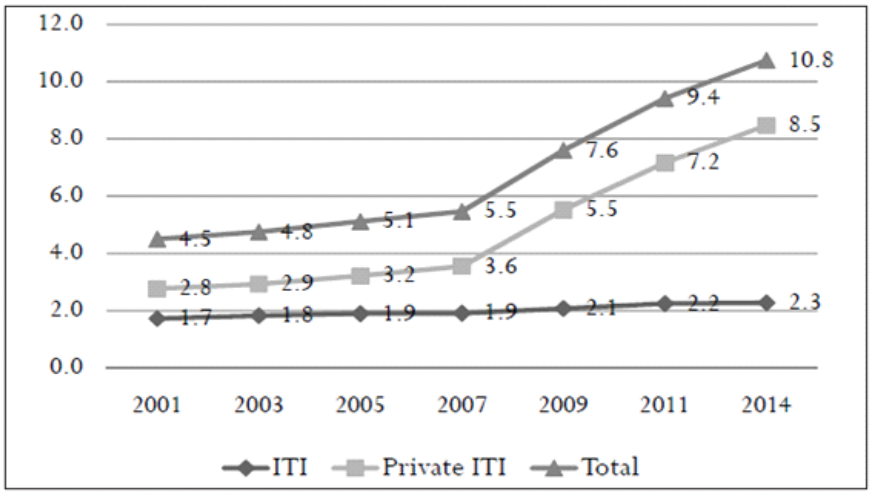
To meet India's skilled workers' requirements for technological and industrial growth, the CTS was introduced in 1950 by the Directorate General of Employment & Training (DGE&T) under the aegis of the MoLE. It has the objectives to impart skills in various vocational trades (DGE&T, 2008). Now, the scheme is implemented by the newly created Ministry of Skill Development and Entrepreneurship. In the 1980s, several new private ITIs—Industrial Training Centres (ITCs)—were established in the southern states of Andhra Pradesh, Karnataka, and Kerala.[3] Many trained craftsmen who graduated from these ITCs found employment in the Gulf countries.

Figure 3 shows that between 2001 and 2014, the number of ITIs increased very marginally, from 1,727 to 2,275, accounting for an annual growth rate of 2.1 per cent. By contrast, the growth of private ITIs has been very steep and can be divided into two distinct periods: from 2001 to 2007, and from 2007 to 2014. During the first period, the number of private ITIs increased steadily from 2,772 to 3,552 (an annual growth rate of 4.2 per cent), while in the later period it increased dramatically, from 3,552 to 8,475, realising an annual growth rate of 13.1 per cent. Similar growth trends are discernible in the increase in number of seats available in ITIs and private ITIs (Figure 4). As per the latest available data, there are a total of 13,300 government/private ITIs in the country (2,100 government ITIs and 11,200 private ITIs) with 2.85 million seats, offering training in 126 trades (MSDE, 2017).

Although ITCs have been mushrooming across the country in the recent years, these ITCs are typically small-scale operations. Moreover, ITCs lag far behind ITIs in terms of number of trades, classrooms, and workshops. An all-India study (2011) conducted by the Institute of Applied

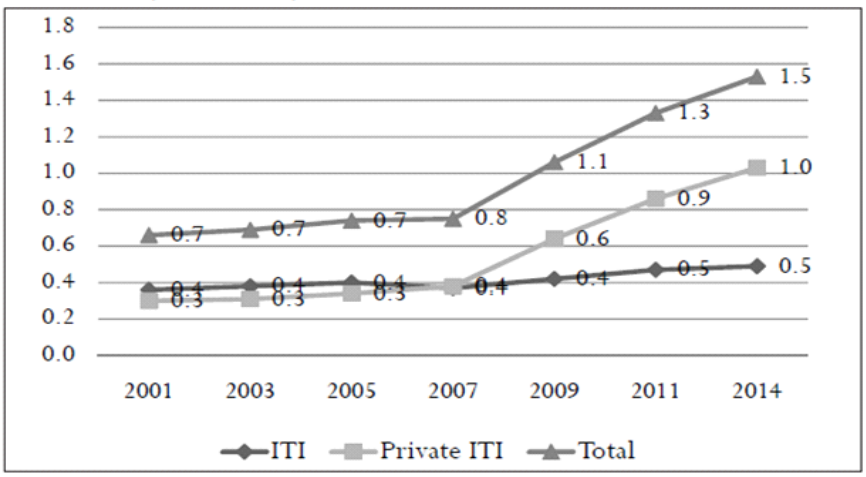
Manpower Research (now renamed as the National Institute of Labour Economics Research and Development) highlighted these differences. For instance, 55.5 per cent of ITIs were providing training in more than ten trades as compared to only 2.9 per cent of ITCs. Moreover, 16.8 per cent of ITIs (as compared to 58.8 per cent of ITCs) provided training in fewer than five trades. A large majority of ITIs (48.7 per cent) were found to have more than 11 classrooms, while only 17.6 per cent of ITCs had more than 11 classrooms.

Figure 3: Growth of ITIs and Private ITIs, 2001–2014 (in Thousands)



Source: Ministry of Labour and Employment, Annual Reports for various years

Figure 4: Growth of Seating Capacity in ITIs and Private ITIs, 2001–2014 (in Millions)



Source: Ministry of Labour and Employment, Annual Reports for various years

Furthermore, 52.9 per cent of ITCs had fewer than six classrooms, while only 26.1 per cent of ITIs had fewer than six classrooms. The number of classrooms is directly related to the number of trades being offered. It is noteworthy that only 16.2 per cent of ITCs had more than seven workshops as compared to 47.1 per cent of ITIs. A large proportion of ITCs (41.2 per cent) managed with less than three workshops, while only 27.7 per cent of ITIs operated with less than three workshops. Moreover, the use of obsolete equipments in laboratories and workshops is producing poorly skilled workers (IAMR, 2011a).

4.2 National Apprenticeship Promotion Scheme (NAPS)

In a number of countries, apprenticeship training has become a core component of skill development, though administrative control, operational mechanisms, and funding patterns vary from country to country. In India, the National Apprenticeship Scheme (1959) began enrolling students on a voluntary basis. The Apprentices Act, 1961, was enacted with the twin objectives of (i) regulating apprentice training programmes in the industry to ensure conformity with the syllabi and compliance with Central Apprenticeship Council regulations; and (ii) adequately utilising the facilities available in the industry for providing practical training, in order to meet the industry requirement for skilled workers (DGE&T, 1992). Since then, a number of amendments have been made to make the scheme more effective.

The National Policy for Skill Development and Entrepreneurship, 2015 has laid great emphasis on apprenticeships for creating a pool of skilled workers in the country. Apprenticeship training is regarded as the most efficient mechanism for achieving this goal. Its main strength is that it is led by industry, is practice oriented, and imparts the most effective and efficient mode of formal training. The total outlay of the scheme is Rs.100 billion, with a target of five million trained apprentices by 2019–20. The policy envisages that the industry, including micro, small, and medium enterprises (MSMEs), will work proactively to facilitate a tenfold increase in opportunities in the country by 2020 (Press Information Bureau, 2016).

About 20 per cent of the total annual target is expected to comprise new enrolments. The scheme is effective from the date of notification, 19 August, 2016, and is being implemented by the Directorate General of Training under the aegis of the MSDE. At present, there are 259 trades in 39 trade groups that have been designated for apprenticeship training. The number of seats for apprentices is fixed at 2.5 per cent to 10 per cent of the total number of workers. The stipend paid by the establishments providing the apprenticeship training acts as an incentive for learning the skills.

As compared to the size and rate of growth of the economy of the country, the performance of apprenticeship training is not satisfactory,

and a large number of training facilities are un-utilised, preventing unemployed youth from availing the benefits of apprenticeship training. The combined strength of the workforce in central public sector undertakings (CPSUs), the central government, and the banking sector is five million. If these establishments engage even the mandatory minimum number of apprentices (2.5 per cent of the total workforce), then the number of apprenticeship positions could be as many as 1,25,000. According to the Fifth Economic Census (2005), there were about 2.1 million MSMEs with six or more workers. If each establishment engages even one apprentice, the total number of apprenticeships available could be about two million (MSDE). Clearly, there is a huge potential for apprenticeship training that needs to be tapped.

Besides the two existing skill development facilities, there have been some recent ambitious initiatives for mass skilling of unemployed youth. Those deserving discussion include Pradhan Mantri Kaushal Vikas Yojana (PMKVY), Deen Dayal Upadhyaya Grameen Kaushalya Yojana (DDU-GKY), as well as initiatives undertaken by the Ministries of Electronics and Information Technology, Rural Development, MSME, Housing and Urban Poverty Alleviation, Social Justice and Empowerment, and Women and Child Development. There are some exemplary private initiatives as well which are also contributing to skilling the masses. These initiatives will be discussed in the section below.

4.3 Pradhan Mantri Kaushal Vikas Yojana (PMKVY)

The PMKVY 2016–2020 is a modified and improved version of PMKVY 2015–2016. It is an outcome-based flagship programme for skill development undertaken by the MSDE, and is aimed at enabling a large number of Indian youth to take up industry-relevant skill training that will help them to secure better livelihoods. Individuals with prior learning experience or skills will also be assessed and awarded certificates of Recognition of Prior Learning (NSDC, 2016). The NSDC, SSCs, Assessment Agencies (AAs), and Training Partners (TPs) together form the implementation mechanism of the scheme. Training would be imparted as per the National Skills Qualifications Framework (NSQF).[4] At present, it is at a nascent stage, hence, its impact on skill development and the enhanced employability of youth is not yet to be seen.

4.4 Deen Dayal Upadhyaya Grameen Kaushalya Yojana (DDU-GKY)

On 25th September 2014, the Ministry of Rural Development launched the most ambitious and comprehensive skill development programme for rural poor youth in India, known as the Deen Dayal Upadhyaya Grameen Kaushalya Yojana (DDU-GKY). It is a nation-wide placement-linked programme with a unique focus on rural youth of 15–35 years of age.

DDU-GKY follows a three-tier implementation model. The DDU-GKY National Unit (NU) at MoRD functions as the policy-making, technical support, and funding-facilitation agency. The DDU-GKY State Skill Missions (DDU-GKY SSMs) provide co-funding and implementation support. Various Project Implementing Agencies (PIAs), set up using public–private partnerships (PPPs), implement programmes by undertaking skilling and placement projects. The scheme has been in operation for about two years and is likely to play an important role in facilitating skill formation among the rural population and reducing unemployment. However, its impact on skill formation and enhanced employability among rural folk is yet to be seen.

4.5 Training for Skill Development by various Ministries and Government Organisations

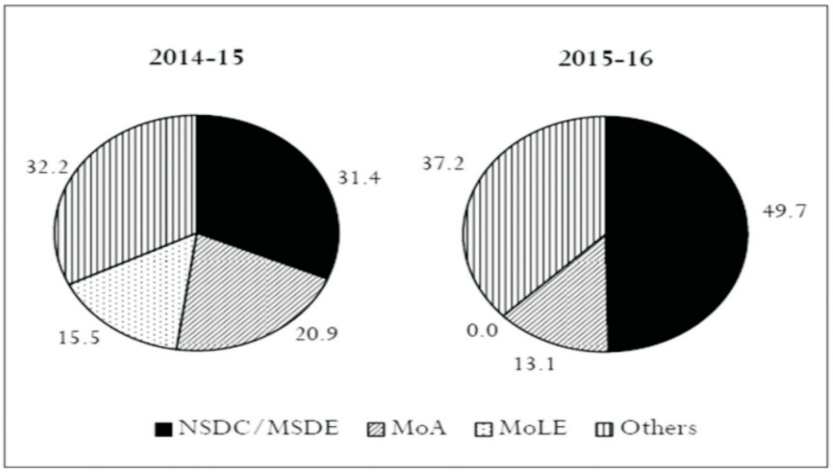
As mentioned earlier, a number of ministries and organisations provide training for skill development. Among the 21 ministries/organisations, two ministries—the MoLE and the Ministry of Agriculture (MoA)—provide the bulk of the training. Other ministries/organizations that have a significant stake in training are the Ministries of Electronics and Information Technology, Rural Development, MSME, Housing and Urban Poverty Alleviation, Social Justice and Empowerment, and Women and Child Development. Since 2014, the newly created MSDE has taken the lead and has become the largest training provider. Since 2014-15, the target for providing training has increased phenomenally.

Figure 5 presents the share of training provided by different ministries/ organisations during 2014–15 and 2015–16. In the year 2014–15, NSDC accounted for the highest share (31.4 per cent) followed by MoA and MoLE, while the remaining ministries/organizations together contributed 32.2 per cent of the target. During 2015–16, the skill development schemes implemented by the MoLE were transferred to the newly created MSDE within which the NSDC is a main implementing agency. As a result of this shift, MSDE's contribution to the target rose to almost half of the total, nullifying MoLE's share. The MoA's share declined sharply from 20.9 per cent to 13.1 per cent, while the share contributed by other ministries and organizations increased moderately from 32.2 to 37.2 per cent.

Among the ministries/organisations, the extent to which targets were achieved varies (Figure 6). During 2014–15, the achievement of both NSDC and MoLE exceeded the target, while the MoA achieved only 52 per cent of its target. Others' achievement was even lower, at 39.6 per cent of the target. The overall achievement was 72.4 per cent.

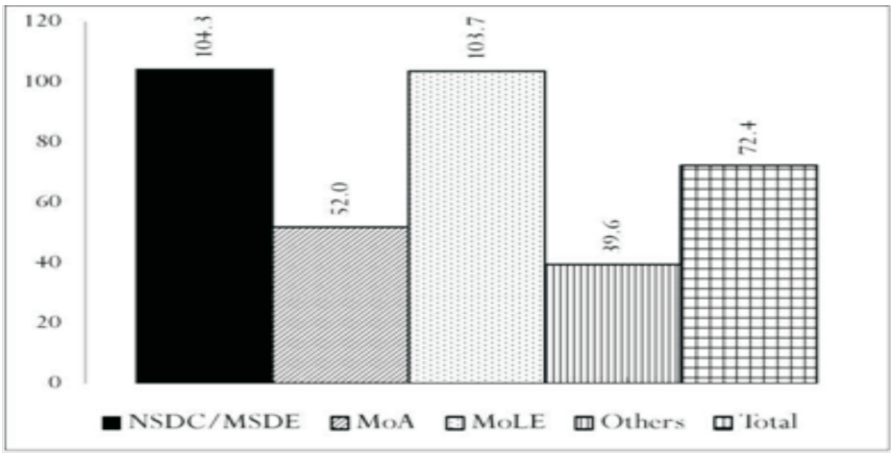
Over the years, the skill development programmes undertaken by the central government through various ministries/departments have been

Figure 5: Percentage Distribution of Persons Targeted for Training among various Ministries/Organisations, 2014–15 and 2015–16



Source: National Skill Development Agency, Government of India

Figure 6: Extent of Achievement of Targets among various Ministries, 2014–15 (Figures in Percentage)



Source: National Skill Development Agency, Government of India

implemented without the robust coordination and monitoring mechanisms that would ensure convergence. This is the scenario in most states, with the exception of a few which have moved towards functional convergence through the creation of State Missions. This legacy has resulted in a multiplicity of norms, procedures, curricula, and certifications. Furthermore, many of these skill development initiatives often remain unaligned with market demand, thus defeating their entire objective (MSDE, 2015).

4.6 Private Sector Initiatives for Skill Development

Despite 12.8 million new entrants into the country's workforce every year, the capacity for skill development in India is only about 3.1 million. To meet this challenge, engagement of both the public and private sector stakeholders was felt to be necessary. The NSDC was set up to encourage and synchronise private sector initiatives in skill development. It was felt that the skills of a large number of young people from the unorganised sector who lack formal certification could be utilised under umbrella initiatives recognised by the government. The immediate need is to bring the private sector into the mainstream of skill development initiatives by evolving appropriate mechanisms. A number of private sector organisations and non-governmental organisations (NGOs) organise skill development programmes in various trades and with varying durations. Some of these organisations include the Construction Skills Training Institutes (CSTIs) of Larsen and Toubro, Infrastructure Leasing and Financial Services Skills Development Corporation (IL&FS Skills), and TeamLease. Besides these, a number of other private sector organisations and NGOs, either in partnership with the government or on their own, organise skill development programmes.

5. Emerging Policy Concerns

Based upon the preceding analysis, some of the emerging concerns and their policy measures are discussed below.

(i) Economic Growth and Structural Transformation

During the past three decades, the Indian economy has witnessed a consistent increase in the growth rate of its gross domestic product (GDP). The rising GDP growth rate has been accompanied by a sharp decline in the primary sector's share of employment and GDP, which has led to an increase in the share of the secondary and tertiary sectors. Furthermore, employment in the organised sector has increased significantly. The demand for skilled worker has increased with the rising growth rate and the structural transformation of the economy, particularly in the industrial and service sectors. Thus, there is a need to focus on the skills that are in demand in these sectors.

(ii) Impact of Demographic Dividend

Since the demographic dividend is expected to last until about 2040, India has the opportunity to supply workers to economies where the labour force is ageing. It is estimated that between 2012 and 2026, the share of the 15–29 years population will decline marginally in India, while the share of the 30–59 years age group will increase significantly. But, unfortunately, countries with higher population growth rates have very little technical and vocational education. It presents the great challenge of providing on-the-job

training to members of the workforce who are already in the 30–59 years age group. The concern, therefore, is twofold. Firstly, the new entrants belonging to the 15–29 years age group need to be trained and skilled. Secondly—and importantly—the bigger challenge is to cater to the needs of workers who are 30 to 59 years old but have little or no skill training.

(iii) Quantitative and Qualitative Issues of Private ITIs

Although a large number of private ITIs have been established over the last 10 years, they lag behind government ITIs in terms of providing sufficient numbers of trades, classrooms, and workshops. Moreover, ill-equipped ITIs with obsolete workshops and laboratories do not produce adequately trained skilled workers. ITIs—particularly private ITIs—need to be strengthened in terms of laboratories and workshops in order to provide a strong, practical interface between the institutions and industry.

(iv) Issues of Apprenticeship

As compared to the size and rate of growth of India's economy, the performance of apprenticeship training is unsatisfactory. Many training facilities are going unutilised, depriving unemployed youth of the benefits of apprenticeship training. CPSUs, central government, and banking sector establishments should evolve mechanisms to engage apprentices at least up to the mandatory minimum of 2.5 per cent of total workers' strength. Moreover, MSMEs having six or more workers need to engage at least one apprentice each. Clearly, there is a huge untapped potential for apprenticeship training which needs to be utilised.

(v) Recent Initiatives and Targets versus Achievement

PMKVY and DDU-GKY are flagship programmes for skill development in terms of geographical coverage, number of trainees, coverage of sectors, and outlay. Although they are at a nascent stage, there is an urgent need for concurrent evaluation in terms of implementation mechanisms, impact on skill development, and employability of beneficiaries, in order to make them more effective. Skill development programmes undertaken by various ministries and central government departments over the years have been implemented without robust coordination and monitoring mechanisms to ensure convergence. Therefore, the programmes and schemes run by various ministries and departments need to be implemented in a more coordinated manner and be followed up with an effective monitoring and evaluation mechanism. The aspect of convergence should be of immediate concern. NSQF needs to establish strong protocols for uniformity of skill development programmes with regard to procedure, curricula, and certification.

(vi) Current Skill Scenario and Future Skill Requirements

A number of important sectors in the Indian economy are hampered by low productivity because of the shortage of skilled labour. A large percentage of the 15–59 years age group has no vocational training, with only 11.7 per cent of workers having received, or currently receiving, vocational training. For a large proportion of trained workers, training has been only informal and on-the-job. Besides training the current labour force of 298.3 million workers who have no vocational training, approximately 104.62 million workers who will enter the labour force between 2015 and 2022 will additionally be trained. By 2022, therefore, a total of 402.87 workers will need skill training.

Between 2013 and 2022, in the non-farm sector, the incremental demand for human resources will increase very significantly. Among these sectors, the major employers are projected to be: building, construction, and real estate; retail; transportation and logistics; textiles and clothing; handloom and handicrafts; and education/skill development. During this period, however, the sectors projected to experience the greatest increase in demand for labour are: beauty and wellness; furniture and furnishings; tourism, hospitality, and travel; transportation and logistics; building, construction, and real estate; and food processing. In light of these projections, Sector Skill Councils will be able to play a key role in bridging the gap between industry needs and appropriate curricula.

(vii) Private Sector Initiatives

A number of private sector organisations and NGOs have organised skill development programmes in various trades and of varying durations. The NSDC encourages and synchronises private sector initiatives in skill development. The private sector has the potential to supplement the national effort to meet growing skill needs. There is an urgent need for synchronization of private sector initiatives with government efforts through effective public–private partnerships. The skill development mechanisms at the disaggregated level—at the level of state and union territories—should be strengthened. Skill-mapping surveys should be conducted, and demand-driven courses should be evolved to meet the emerging skill requirements. The placement of skilled youth should remain a necessary component of public–private partnerships.

Notes

1. However, there are a number of concepts which are widely accepted. The general conviction among the various stakeholders is that skill development could be a mix of various skills. These may include managerial skill, entrepreneurial skill, problem-solving skill, and social skill.

2. In this context, the issue was raised by the then Prime Minister Dr. Manmohan Singh in his Independence Day speech in 2006. He said that as our economy grows rapidly, and

the industrial growth being at a large scale, there are severe complaints about an impending shortage of skilled worker. It cannot be taken as an impediment in a country blessed with a large human resource reservoir. To tackle the problem of skill shortage, the launch of a Mission on Vocational Education is planned (Planning Commission, 2007).

3. By recent amendment, ITIs and ITCs are uniformly known as ITIs, adding "Government" and "Private" to clarify.

4. The NSQF is composed of ten levels, each representing the different level of complexity, knowledge, and autonomy required to demonstrate the competence commensurate for that level. The system would permit vocational pass-outs of Class X-XII, ITIs and polytechnics to gain entry into higher education programmes in vocational/technical/ general education courses, including degree-level courses such as Bachelor of Vocational Studies (B.Voc.). The NSQF will provide a means of articulation and alignment of the Indian Skill Qualification levels with those of other countries and regions. This will help in the mobility of Indian NSQF-aligned qualification holders to work in and/or relocated to other parts of the world (Ministry of Finance, 2013*).*

References

ASSOCHAM (2016), B and C Category B-Schools Producing Un-Employable Pass-outs, 27th April, ASSOCHAM Education Committee,www.assocham.org/ newsdetail.php?id=565.

Department of Economic Affairs (2013), The Gazette of India, Extraordinary, Part 1 - Section 2, Ministry of Finance, Government of India, New Delhi.

Directorate General of Employment & Training (1961), The Apprentices Act, 1961, Ministry of Labour and Employment, Government of India, New Delhi.

___ (1992),The Apprenticeship Rules, 1992, Ministry of Labour and Employment, Government of India, New Delhi.

___ (2008), Craftsmen Training in India, Ministry of Labour & Employment, Government of India, New Delhi.

___ (2011), Performance Evaluation of Industrial Training Institutes/Industrial Training Centres (ITIs/ITCs), Ministry of Labour and Employment, Government of India, New Delhi.

Federation of Indian Chambers of Commerce & Industry (2014), Reaping India's Promised Demographic Dividend—Industry in Driving Seat, FICCI, Ernst &Young Pvt. Ltd., New Delhi.

Institute of Applied Manpower Research (2011a), Tracer Study on the Outcome/ Placement of ITI Pass-Outs, IAMR, Delhi.

___ (2011b), An Evaluation of Apprenticeship Training Scheme of MoLE (Draft Report)", IAMR, Delhi.

Krishnamurty, J. and Abhay Kumar (2015), The Demographic Dividend: Challenges to Employment and Employability, Indian Journal of Labour Economics, Vol. 58, No. 1, March, Springer Publications, New Delhi, pp. 43–65.

Mehrotra, S., A. Gandhi, and B.K. Sahoo (2013), Estimating the Skill Gap on a Realistic Basis for 2022", IAMR Occasional Paper No. 1/2013, New Delhi.

Ministry of Finance (Various years), Economic Surveys, Government of India, New Delhi.

Ministry of Human Resource Development (1998),National Policy on Education 1986 (as modified in 1992), MHRD, Government of India, New Delhi.

Ministry of Labour and Employment (2009), National Policy on Skill Development, MoLE, Government of India, New Delhi.

___ (2014), Annual Report, 2013–14, MoLE, Government of India, New Delhi.

Ministry of Rural Development (2017), Annual Report 2016–17, MoRD, Government of India, New Delhi.

Ministry of Skill Development and Entrepreneurship (2015), National Policy for Skill Development and Entrepreneurship 2015, MSDE, Government of India, New Delhi.

___ (2017), Annual Report 2016–17, MSDE, Government of India, New Delhi.

National Sample Survey Office (2015), Status of Education and Vocational Training in India, NSS 68th Round (2011–12), Ministry of Statistics and Programme Implementation, Government of India, New Delhi.

___ (various years), Employment and Unemployment Situation in India, Ministry of Statistics and Programme Implementation, Government of India, New Delhi.

National Skill Development Corporation (2015), Pradhan Mantri Kaushal Vikas Yojana (PMKVY), Ministry of Skill Development and Entrepreneurship, Government of India, New Delhi.

___ (2016): Pradhan Mantri Kaushal Vikas Yojana (PMKVY), Guidelines (2016–2020), Ministry of Skill Development and Entrepreneurship, Government of India, New Delhi.

Planning Commission (2007), Report of The Task Force on Skill Development, Planning Commission, Government of India, New Delhi.

___ (2008a), Report of the Working Group on Labour Force & Employment Projections constituted for the Eleventh Five Year Plan (2007–2012), Planning Commission, Government of India, New Delhi.

___(2008b): Eleventh Five Year Plan, Planning Commission, Government of India, New Delhi.

Press Information Bureau (2016), Government Notifies National Apprenticeship Promotion Scheme, 1st September, Ministry of Skill Development and Entrepreneurship, Government of India, New Delhi.

Tan, Hong W., Sangeeta Goyal and Yevgeniya Savchenko (2007), 2006 Baseline Study of India's Industrial Training Institutes: Institutional Performance and Employment of ITI Graduates (English),World Bank, Washington DC.

The Economic Times (2016), 20 Per Cent of Diploma Holders Employable: Report 26th August, New Delhi, https://economictimes.indiatimes.com/jobs/20-per-cent-of-engineering-diploma-holders-employable-report/articleshow/53866016.cms.

Wheebox (2017), India Skills Report 2017, Gurugram, Haryana, https://wheebox.com/static/wheebox_pdf/india-skills-report-2017.pdf.

World Bank (2008), Skill Development in India: The Vocational Education and Training System, South Asia Human Development Sector Series, No. 22, Washington DC.

World Bank (2010), Third Joint Review and Learning Mission (JRM), January, 2010, Aide-Memoire, available at: http://dget.nic.in/WorldBank/VTIP_Aide_Memoire-3rd-JRM.pdf.