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**International Best Practices  
of Apprenticeship System  
and Policy Options for India**

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# INTERNATIONAL BEST PRACTICES OF APPRENTICESHIP SYSTEM AND POLICY OPTIONS FOR INDIA

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## Abstract

*India's Apprenticeship Policy, conceived in 1961, has been evolved over the years to be customised to the changing requirements of industry. Despite this, India has accommodated a substantially far too lower number of apprentices in comparison to the large labour force and as compared with other countries. Among others, in the literature, it has been criticised for its complex bureaucratic proceedings and various flaws in the formulation and implementation of the Act in its true spirit. In this backdrop, learning from international best apprenticeship practices may help in addressing these barriers. While it is recognised that such practices cannot be completely emulated in our system, the key success features are certainly expected to help in expanding the apprenticeship programme in the country. The present paper is an attempt to discuss some key features that are worth emulating in scaling up the apprenticeship programme in India.*

## Background

Skill development has been placed at the centrestage in almost all countries of the world in the pursuit of tackling unemployment and enhancing productivity. In this context, the Apprenticeship Policy becomes a matter of great importance in the drive to enhance the skill sets of the young and old alike. As per the existing practices, the employer normally employs younger workers for a short duration of time and trains them to do their industry-specific work. The apprenticeship system can be broadly classified into formal and informal apprenticeship (ILO, 2013). Examples of formal apprenticeship are found in Germany, Australia, England and France. Under this, traditional trader job categories are covered for the apprenticeship programme and the system provides post-apprenticeship job guarantee. As against this, informal apprenticeship is seen in countries like India, Indonesia, and Egypt. The success rate of the apprenticeship system is seen higher among those countries that have not perceived it as a stand-alone policy of the apprenticeship cell/department of the government. Rather, efforts were made to integrate it with the broader policy of skill development and Vocational Education and Training (VET) programme.

In the Indian context, an Apprenticeship Policy was introduced in 1961 and over the years, it has been modified to match the changing requirements of industry. Despite this, the Apprenticeship Policy in India is subject to complex bureaucratic proceedings that complicate the smooth functioning of

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apprentice training (Saini, 2006). In fact, as per one estimation, a mere 0.1% of the formal labour force is involved in apprenticeship in India compared to 4% in other countries (ILO, 2013). In this context, a quick glance of studies on India's apprenticeship policy (see for detail: Saini, 2006; Gayithri *et al*, 2019) reveals that studies so far have largely focused on critically evaluating the age-old apprenticeship policy of India and completely neglected lessons that can be learnt from other countries' experiences. It is important to address these barriers in the governmental pursuits to expand the apprenticeship programme in India. While it is recognised that such pursuits cannot be transplanted as it is into our system, it will certainly help in designing a programme that helps to expand the apprenticeship programme in the country. What follows is an attempt to highlight some key features that are worth considering in expanding the apprenticeship programme in India. For this purpose, we have followed a descriptive approach. The rest of the paper is organised as follows: Section two deals with a comparative analysis of apprenticeship policy wherein the country context of a few leading economies is discussed. The third section highlights lessons that can be learnt from international best practices on apprenticeship policy while the last section summarises the paper.

## **Comparative Analysis of Apprenticeship Policy**

India's apprenticeship policy has great scope for future growth. However, when comparing the country's labour force population, we arrive at a dismal picture. A mere 0.1% of the formal labour force population is involved in apprenticeship compared to 4% in other countries (ILO, 2013). This is prevalent in an economy having 487.6 million workers that is considered the second largest in the world (Economist, 2011). This may be due to the existing skill gap in the country. The All India Council for Technical Education is the regulatory body for vocational education in the country, monitored by the respective institutions.

If India is at a disadvantage due to the observed skills gap that needs to be bridged, countries like Australia face high unemployment among the youth, i.e, 12.7% (Australian Bureau of Statistics, 2017). Apprenticeship training is undertaken to improve the skill sets of the youth. However, when unemployment rates are seemingly higher among the younger generation, it calls for serious measures. VET in Australia is overseen by the Commonwealth Department of Innovation, Industry, Science, Research and Tertiary Education (DIISRTE) with funding responsibilities being retained by the states, while in countries like Canada, the threat of unemployment is fairly minimal due to an increasing demand for college and university graduates. This has therefore led to some problems in recruiting workers for vocational training at a time when there is increasing demand for skilled labour. However, in Canada, there is no national apprenticeship policy.

In Germany, the dual education system is followed and its apprenticeship system is famous for creating and deploying a nationwide programme of apprenticeship. The apprenticeship system has proven to be a strong structural and social reform introduced in the beginning of the century that helped reduce unemployment in the last ten years from 9% to 6.6% (Federal Employment Agency, 2012).

The apprenticeship centres in France are regulated by the CFA. In France, the young people aged 15-24 years were the most affected by an unemployment rate of 26.4% (INSEE, 2011). This is

observed in the light of the realisation that the major aim of IVET is to enable young people aged 16-24 years to obtain certification-based professional qualification. Switzerland provides an interesting study on apprenticeship as it is the only European country where there exists reliable evidence showing that on average, firms incur no net costs on account of apprenticeship. The Swiss VET system lies in the hands of the Centre for Young Professionals that receives funding by the Association of Swiss Banking Industry.

With this background, this particular section analyses the individual **country context** for better understanding of apprenticeship policy in each that will enable us to adopt some of the best practices employed in each.

## **India**

The National Apprenticeship Scheme was framed in 1959 on a voluntary basis. However, it got statutory enforcement through the enacting of the Apprentices Act in 1961 and was implemented w.e.f. 1962. Over the years, there have been comprehensive amendments in the Act, each time to make it more attractive and adaptable to the changing requirements of both the industry and youth<sup>1</sup>. It is obligatory as per the Act for the establishments covered by the Act to appoint apprentices and impart theoretical as well as practical training to such apprentices. Exhaustive machinery i.e, a combination of the central government and the state government with multiple authorities under them has been established to ensure successful implementation of the Act. The Ministry of Skill Development and Entrepreneurship and the Ministry of HRD are the administrative ministries responsible for implementation of the Act by the state governments which are responsible for successful functioning of the Act and its policy mechanisms in each state.

The apprentices training in India consists of both on-the-job as well as basic training. Basic training is essential for those who have not undergone any kind of institutional training. On-the-job training takes place within the confines of the employer's establishment itself. In India, training is provided for four categories of apprentices, namely: trade apprentices, optional trade apprentices, technician (vocational) apprentices and graduate/technician apprentices.

Till date, 259 groups of industries have been covered under the Act, out of which 28,500 establishments engage apprentices. In that, 2.12 lakh training seats for the trade apprentices have been utilised against 3.92 lakh seats identified under the Act; 0.43 lakh training seats for graduate, technician and technician (vocational) apprentices have been utilised against 1.22 lakh seats identified for these categories (Regional Directorates of Apprenticeship Training, RDAT website). The duration of training for trade apprentices varies from six months to four years, depending upon the requirements of the specified trade. The syllabi for different trades are prepared and finalised by the respective trade committees comprising trade experts from industry. Apprentices are also awarded the National Apprentice Certificate after successful completion of apprenticeship training.

Meanwhile, the act and its subsequent amendments spell out the stipend/allowance to be paid to apprentices at various levels. Expenditure on stipends for trade apprentices is borne by the

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<sup>1</sup> For critical evaluation of Apprenticeship Act in India see Gaythri *et al*, 2019

employers. Expenditure on stipend for the categories of graduate, technician and technician (vocational) apprentices is shared equally between the employer and the central government. To make things easier for apprentices, an apprenticeship portal has been launched where employers may publish trade-wise requirement of apprentices. This is to help serve the need to match the demand and supply requirements of apprentices. Apprentices are now encouraged to apply online and apprenticeship contract approval would also be provided online. The main objective of the National Apprenticeship Scheme is to increase the engagement of apprentices to 50 lakh by 2020. To achieve this target, the government had introduced changes that mandate industrial establishments to appoint apprentices within a band of 2.5% to 10% of the total workforce. In addition, penalties involving imprisonment have been replaced with a penalty in the form of an initial fine of Rs 500, and for continued default, with a subsequent enhanced levy of Rs 1000. Despite this, the apprenticeship policy is not popular among industries or with skills aspirant youth. Among others it is attributed to: mismatch between demand and supply of skilled labour force, too many parallel schemes and lack of coordination; lack of synergy between monitoring and implementing authority (see for details: Gayithri *et al*, 2019).

## **Australia**

In Australia, an apprenticeship or traineeship is defined as "the existence of a regulated, employment-based training arrangement, and a registered legal training agreement (originally called an 'indenture', and more recently a 'contract of training')" (NCVER, 2011). The indentured training system of apprentices in Australia was imported from Britain in the late 18th century, and has evolved through numerous phases since then. The National Apprenticeship Assistance Scheme (NAAS) was launched in 1973, which marked the beginning of Australian government's payments to apprentices and their employers. The Special Youth Employment Training Programme (SYETP) and Extended SYETP paid subsidies to employers to provide jobs and on-the-job training to long-term unemployed youth, although there was no formal training component during the 1970s and 1980s. From the 1980s onwards, several industry groups adopted the competency-based training (CBT) model (NCVER, 2011).

Major training reform occurred during 1990-98, including the establishment of the Australian National Authority (ANTA), the Australian Vocational Training System, NETTFORCE traineeships, and the Australian Quality Training Framework. In 1998, school-based apprenticeships and traineeships were introduced as part of the New Apprenticeship package of reforms, which allowed a young person to start part-time apprenticeship or traineeship while still attending secondary school. The apprenticeship and traineeship commencements in Australia increased during the economic boom of 2008, and also expanded the capacity of the apprenticeship system to key industries such as mining, building and construction (NCVER, 2011).

The labour participation rate for 15-24 year old youth in Australia is about 66.5 per cent in February 2017 (Australian Bureau of Statistics, 2017). An Australian apprenticeship provides a nationally recognised qualification and on-the-job experience, which combines time at work with training and can be completed full-time, part-time or while still at school. Australian apprenticeships are available to anyone of working age, including school-leavers, those re-entering the workforce or adult workers wishing to change careers. The apprenticeships programme is available for various qualification levels in

more than 500 occupations across Australia, including traditional trades and emerging careers in business and industry.

Australian Apprenticeship support services are made accessible to apprentices and employers through the Australian Apprenticeship Support Network<sup>2</sup> providers, which are contracted by the Australian government. Eleven Apprenticeship Network providers aim to deliver support services to employers and Australian apprentices and trainees from around 400 locations nationally, including rural and remote areas. They aim to provide advice and support services tailored to the needs of employers and apprentices from pre-commencement to completion through *Universal Services* (providing essential administrative support, payment processing and regular contact) and *Targeted Services* (for employers and individuals needing additional support to complete the apprenticeship) (Australian Apprenticeships, 2015).

The duration for the completion of an Australian apprenticeship ranges from one to four years, depending on the type of apprenticeship and the qualification undertaken. Training pathways and durations are set by the state or territory governments in consultation with the industry. The apprentices might be granted course credits for skills they already have, and their prior experience in the workplace, potentially reducing their formal training time. Australian apprenticeships are 'competency based', implying that the completion of the training depends on the speed with which the required skill levels are acquired (Australian Apprenticeships, 2015).

The government gives incentives to the employers to hire apprentices. The eligibility for incentives is assessed by the Apprenticeship Network provider. Incentive payments are made when Australian apprentices commence, recommence and complete their training. Additional forms of support, subject to meeting specific eligibility criteria, could be obtained through: *Support for Adult Australian Apprentices* for adult workers aged 25 years or over, to upgrade their skills<sup>3</sup>), and *Australian Apprentices with Disability*<sup>4</sup> (Australian Apprenticeships, 2015). The status of training rate in Australia by 2010 is presented in Table 1:

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<sup>2</sup> AASN replaced Australian Apprenticeships Centres nationally on 1st July 2015

<sup>3</sup> at the Certificate III or IV level in an occupation listed on the National Skills Needs List

<sup>4</sup> Disabled Australian Apprentice Wage Support (DAAWS) provides additional assistance to employers who employ an eligible Australian apprentice with disability in a Certificate II or higher level qualification

**Table 1: Apprentice and Trainee Training Rates in Australia by Occupation and Age Group in 2010 (%)**

<b>Occupation (ANZSCO)</b>	<b>15–19 years</b>	<b>20–24 years</b>	<b>24–44 years</b>	<b>45 and above</b>	<b>All age groups</b>
Managers	16.0	5.9	1.3	0.5	
Professionals	1.2	0.2	0.1	0.1	
Technicians and Trades workers	71.1	30.3	5.2	1.8	
Community and Personal service workers	13.4	6.3	3.6	2.6	
Clerical Administrative workers	16.2	7.3	4.2	2.2	
Sales Workers	6.9	5.0	3.2	1.6	
Machinery Operators drivers	6.9	5.6	5.1	3.2	
Labourers	2.8	2.2	2.3	1.6	
<b>All Occupations</b>	<b>17.5</b>	<b>9.5</b>	<b>2.7</b>	<b>1.4</b>	<b>3.8</b>

Source: NCVET (2010a, table 17, 2011a, table 11).

## Germany

One of the largest apprenticeship systems as a proportion of the labour force is found in Germany (ILO, 2013). It covers a various range of jobs comprising 'traditional trades' as well as makes effort to expand the systems to include newly emerging jobs in a global market. The system is continuously evolving and occupational profiles are redefined every 10-15 years.

Although historically rooted between the ninth and thirteenth centuries, the first form of apprenticeship system in Germany is seen from 1925 onwards, when all the school-leavers aged 14, except the rural population, were offered alternatives of continuing education under Gymnasium or VET, which was extended to rural areas and other sectors as well after 1969, when the VET system was completely renewed and structured under the same principles (ILO, 2013). Berufsbildungsgesetz (BBiG) is the Federal Law of VET which was passed in 1969, which basically laid down the rules and roles of the apprentices and the employers. The unique feature of the German apprenticeship system is that an apprentice under contract is considered the same as an employee, with all rights of salary, protection, safety, and social insurance.

The highly recognised German vocational education and training system, known as the dual training system, is a combination of theory and training in a real-life work environment. The apprentice/trainees spend part of each week at the company and part at the vocational school (Berufsschule). The duration of the dual training varies from two to three-and-a-half years (Federal Ministry of Education and Research; ILO, 2013). The dual system is a part of secondary schooling.

Women's participation in apprentice commencements is high in Germany. There is a provision for the disadvantaged section of the population as well. For instance, there are 'apprentice mentors' to assist disadvantaged young people find apprenticeships (ILO, 2013). There is also extra funding for young apprentices with disabilities, both for training and employers. Due to its very old traditions of apprentice training and its substantial legislative protections of both the employers and the apprentices, Germany is regarded as offering attractive apprenticeships to its entrants, although the system is more complex, being heavily sector-dependent with large differences between industry, crafts and trade

apprenticeships. The differential in the ease of getting apprenticeships depend on the size of the company as well as geographical differences.

The national government and the federal states share the responsibility of apprenticeship. Apprenticeship in Germany is regulated by federal law which divides the responsibility between regional education authorities, employer and employee organisations (social partners) and the federal government (Steedman, 2010). The national body called the Kuratorium der DeutscherWirtschaft fur Berufsbildung and the trade unions are involved with the operation of the apprenticeship system at the national and local level (ILO, 2013). There is a strong integration of apprenticeship into the labour market.

With respect to funding, the regional education authority meets the cost of the one day a week full-time education and training provided for apprentices, as the recruiting firms do not receive direct subsidy from public funds (Steedman, 2010). Costs of external assessment and examinations are met by the chamber of commerce, or similar organisations, and a majority of the administrative costs of updating and developing new training occupations are met by the federally-funded Vocational Training Development Institute (BIBB).

The occupational coverage in the apprenticeship system of Germany is classified into three categories: Industry, crafts and trade. The system covers all of the 12 designated UNESCO-UNEVOC categories<sup>5</sup> (ILO, 2013). The social partners are strongly linked, which ensures a high level of responsiveness to changes in industry. In addition, there is close co-ordination between small and big companies in sharing apprentices for better training. The topmost frequently selected occupations for apprenticeship in Germany, which account for about one-third of all apprenticeships are presented in Table 2:

**Table 2: Top Ten Apprentice Occupations, Germany, 2006**

SI No	Apprentice Occupations	Per cent
1	HGV Mechanic	4.8
2	Retail Sales	4.8
3	Office Administration	3.8
4	Business Administration	3.3
5	Mechanical Engineering	3.3
6	Cook	2.7
7	Medical Administration	2.6
8	Hairdressing	2.5
9	Wholesale and Export Sales	2.5
10	Sales	2.5
	Top Ten Occupations as a % of all Apprenticeships	32.7

*Source:* Steedman (2010)

<sup>5</sup> 1) Business and Administration, 2) Production and Manufacturing, 3) Civil Engineering, 4) Electrical and Electronic Engineering and Information and Communication Technology, 5) Engineering and Energy Process, 6) Health Care and Social Care, 7) Education and Culture, 8) Leisure, Travel and Tourism, 9) Agriculture, Food and Nutrition, 10) Media and Information, 11)Textile and Design, and 12) Mining and Natural Resources.

## Canada

An apprenticeship is defined by the Canadian Apprenticeship Forum as 'an agreement that is signed by the apprentice, the employer, and the apprenticeship authority (office) of the province/territory where the apprentice and the employer work' (CAF, 2012). Apprentices should find employment as an apprentice and the employer acts as a 'sponsor'. In the Canadian apprenticeship system, like the British and American systems, the market mechanism determines the supply of apprenticeships rather than the industry consensus mechanism found in Northern European systems (Sharpe and Gibson, 2005). Thus, the educational system is oriented towards general rather than vocational education and firms do not have much commitment to supply apprenticeship opportunities. There are a number of provincial apprenticeship systems rather than a national system. Canadian apprenticeship, consisting of both periods of 'on-the-job' work and 'in class' instruction, could last for 2 to 5 years. They are entitled to employment insurance benefits during this training period (ILO, 2013).

The total registration in the Canadian apprenticeship programme was about 2.13 % of the labour force aged 15-44 in 2002, with registration growing at the annual rate of 6.3% from 1997-2002 (Sharpe and Gibson, 2005). Higher growth in registration was observed in smaller trade groups like food and services (6.7% p.a. during 1991-2002) and miscellaneous trades (7.7 %), and in terms of provinces, it was experienced in Newfoundland (12.3%), and Alberta (5.5%). Although the apprenticeship registration increased, the completion rate of apprentices actually declined from about 62.9% in 1982 to 46.9 % in 2001, owing to barriers like employment instability due to the economic downturn, negative perception of apprenticeship as being inferior to university, relatively old age of apprentices (Sharpe and Gibson, 2005). Many provincial governments undertook reforms to face such challenges by making the apprenticeship policy industry driven, shifting from legislative regulation to sectoral committees comprising employers and labour associations.

The number of apprentices has more than doubled since 2002, reaching about 426,000 in 2011. Apprentices form about 2.4 per cent of total employment in Canada and more than 20 per cent of post-secondary enrolment (Lerman, 2014).

**Table 3: Major Fields of Apprenticeship System in Canada**

Field	Share of apprentices (%)
Motor Vehicles and Heavy Equipment	20
Metal Fabricating	21
Industrial and Related Mechanical Fields	8
Food and Service	10
Electrical	17
Building and Construction	21
Others	3

*Source:* Centre for the Study of Living Standards (CSLS)

There is a standard trademark in the Canadian apprenticeship system called the Red Seal<sup>6</sup>, which functions under the responsibility of the Canadian Councils of Directors of Apprenticeship (CCDA) (Red Seal, 2018). After completing all the procedures ranging from registration to qualifying the exam, it becomes a passport that allows the holder to work anywhere in Canada without having to write further examinations. It assures and maintains a uniform level of quality across the apprentices while making it easier for the apprentices to pursue their desired work in multiple provinces.

Various financial supports are provided to both the apprentices and the employers in the form of loans, grants and insurance to apprentices, as well as a tax credit to employers (equal to about 10% of the salaries and wages payable to eligible apprentices) (Red Seal, 2017).

## France

In France, compulsory education begins at age 6 and lasts for ten years. The students moving from lower secondary education might choose general, technical or vocational education within upper secondary colleges called 'lycees', or opt for apprenticeship within apprenticeship centres called Centres de Formation d'Apprentis (CFA) (ILO, 2013). Apprenticeship is one of the main components of the Initial Vocational Education and Training (IVET) system in France, which aims to facilitate students' transition from school to work by allowing those aged between 16 to 26 years (and over 26 years for handicapped people) to obtain certification-based professional qualifications by continuing their IVET through a combination of on-the-job practical training within the enterprises (about 60-75% of the contractual time) and off-the-job training courses within accredited CFA.

The occupational coverage under apprenticeship extends beyond the 'traditional trades' and dominated by technico-professional fields in the production sectors and service sectors.

**Table 4: The Most Frequently Chosen Apprenticeship Sectors in France**

Sector	%
Construction	25
Process Industries	21
Engineering	18
Social Services	16
Business Services	11
<b>% of all sectors</b>	<b>92</b>

*Source:* Répères et Références 2009 5.5 [1] / A Report for the Apprenticeship Ambassadors Network - Hilary Steedman - Centre for Economic Performance, London School of Economics

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<sup>6</sup> Formally called the Interprovincial Standards Red Seal Program, it is a program that sets common standards to assess the skills of trades' people across Canada. It is a partnership between the federal government and provinces and territories, which are responsible for apprenticeship training and trade certification in their jurisdictions. (Red Seal, 2018)

There is a follow-up system of apprenticeship which is done by an apprenticeship master who meets certain qualifying requirements (could be the head of the company or a qualified worker) (ILO, 2013). There are many stakeholders involved, including the state institutions (The Ministry of National Education, The Ministry of Agriculture and Fisheries, The Ministry of Higher Education, etc), social partners (Vocational Consultative Commissions, The National Pedagogical Commission, The National Expertise Commission, etc), regional authorities and chambers.

In France, apprenticeship is one of the best performing components of the IVET system, as it offers a better access to employment than school-based IVET. As for the funding arrangement, apprentices are paid a salary by the employer, which varies largely depending on the length of the contract. Financial subsidies introduced to encourage apprenticeship contracts are of two main types: the apprenticeship allowance (a minimum of €1,000 paid by a local authority, the regional council) and the apprenticeship tax credit (€1,600 per apprentice per year paid by the central government) (Centre Inffo, 2014). In addition, apprenticeship contracts are fully or partially exempt from social security charges, which are funded by the central government, as well as specific subsidies, notably for apprentices with disabilities. Apprenticeship related laws are framed and passed at the national level, while their implementation is handled by the regional authorities. The training content is determined by the employers and employees represented at regional and national levels and also by the sector-based bodies. Decisions on numerous matters such as government funding, training and apprenticeship taxes are undertaken by The National Joint Committee for Vocational Training (Steedman, 2010).

## **Switzerland**

Switzerland is the only European country with relative evidence that apprenticeship firms do not incur any net costs by taking on apprentices (Steedman, 2010). In the dual, or sometimes called 'threel' system followed in Switzerland, apprentices learn in two or three locations, namely, the vocational school, off-the-job occupational training centres and the workplace. Apprentices attend the vocational school for theoretical grounding, and sign an apprenticeship agreement with the firm, which designates an employee responsible for the on-the-job training. The trainer ensures that the required skill is achieved, and maintains a log book which would be taken into account by the examiners in the future. There is a high involvement of employers in the planning and provision of apprenticeship, and the completion rates are also high. The apprenticeship period ranges between 3-4 years. After the completion of compulsory school age (15 or 16 years), about two-thirds of the young people choose vocational training, out of whom four-fifths enter an apprenticeship and the remaining enter full-time vocational school (Steedman, 2010). There are VET programmes for around 230 different occupations in Switzerland. The ten most popular occupations in 2014 account for over 50% of all newly signed apprenticeship contracts.

**Table 5: The Most popular Apprenticeship Sectors in Switzerland**

<b>Occupations</b>	<b>Total</b>
Commercial Employee	14637
Retail Clerk	5212
Healthcare Worker	4125
Social Care Worker	3061
Electrician	2168
IT Technician	1959
Cook	1772
Logistician	1649
Mechanical Engineer	1613
Draughtsman	1605

*Source:* Federal Statistical Office (2015e).

Careers guidance counselling in Switzerland begins as early as the sixth year of schooling (12 years old) by the school teaching staff, followed by various sessions with the parents, discussions about the parents' occupations and visits to apprenticeship places in the consecutive years, which is a remarkable feature of the education system in Switzerland.

The Vocational and Professional Education and Training (VPET) system in Switzerland is governed by the Confederation, the cantons, and professional organisations (trade associations, industry organisations, social partners, VET/PET providers, companies), which work together to maintain a high level of quality and to ensure sufficient supply of apprenticeship positions and training options. The apprenticeship market has two sides: The state plays a mediating role between the supply side (host companies offering apprenticeship positions) and the demand side (young people looking for apprenticeship positions) of the apprenticeship market by ensuring the best possible general conditions for host companies, encouraging the provision of apprenticeship positions and helping young people to choose an occupation company (State Secretariat for Education, Research and Innovation, SERI, 2016).

In terms of funding, there is no direct subsidy given to the Swiss firms for taking an apprentice; nonetheless, the costs of the required off-the-job training in the vocational college are covered by a mix of federal and cantonal funds (Steedman, 2010). For groups of small firms without the required training facilities for apprenticeship, group training facilities are set up with some federal funds. Apprentices are in high demand in Switzerland because of the way in which Swiss firms achieve a balance of training and productive work over the three or four year duration of the apprenticeships. The firms cover their training costs within the period of apprenticeship and manage to make a small profit, probably because the apprentice wages, which are an important component of apprentice cost to firms, are very low (Steedman, 2010).

**Table 6: Comparative Analysis across Countries**

Major heads	Australia	Germany	Canada	France	Switzerland	India
Availability of apprenticeships to adults	Both young people and adults	Predominantly young people. The dual system is part of secondary schooling	Predominantly adults	Predominantly young people	Predominantly young people	Predominantly young people
Education system	Years of schooling from year 1 (aged 6) to year 12 (aged 17). Secondary schooling from year 7 to 12. Vocational studies in schools are mostly related to the national VET system, resulting in Certificate level qualifications, assessed by a Registered Training Organisation. VET in schools, mostly confined to years 11 and 12, especially for at-risk students/ low socioeconomic status areas.	Compulsory education from age 6. The three pillars of the education system are : 'Hauptschule' (9 years), 'Realschule' (10 years) and 'Gymnasium' (12/13 years), all of which offer the way to the VET-system (the gymnasium offers access to higher education too)	In general, elementary school spans from age 6 to 12, junior high school runs from age 12 to 15 and high school ends in age 18, albeit there are large variations across the provinces in the terminologies and ages.	Compulsory education starts at the age of 6 which lasts for ten years. At 11/12 years old, the pupils move from primary school to comprehensive lower secondary colleges. After 4 years of lower secondary cycle, the students may choose 'general', 'technological', or 'vocational education' within upper secondary colleges called 'lycees', which lasts for 2-3 years. Another option is apprenticeship in the apprenticeship centres called CFA	The starting age for primary school is normally 6 years, although it varies by canton. Secondary education begins at ages 10-11. Some secondary schools prepare children for apprenticeship, while others enable them to continue with their studies at the next level.	The Indian education system consists of primary (8 years), secondary (2 years), senior secondary (2 years), and higher education. Graduation takes 3-5 years depending on the stream.
Nature of apprenticeship system	Dual system	Dual System: both training provided by firms to specifications agreed by sector employer and employee organisations and education provided in vocational schools.	An apprenticeship is defined by the Canadian Apprenticeship Forum as 'an agreement that is signed by the apprentice, the employer, and the apprenticeship authority of the province/ territory where the apprentice and the employer work'. It consists of both periods of work 'on-the-job' and periods of 'in class' instruction	Apprenticeship is the second basic component of the Initial Vocational Education and Training (IVET) system, which allows those aged between 16 and 26 years old (and over 26 years for handicapped people) to obtain certification-based professional qualifications by continuing their IVET through a combination of on-the-job practical training within the enterprises and off-the-job training courses	Dual, or, 'threel' system in which apprentices learn in two or three locations: the vocational school, off-the-job occupational training centres and the work place. Swiss apprenticeship system encourages young people aged 15 years onwards to adopt workplace training early on.	A system of training in which an employer trains an apprentice systematically in the designated trade for the respective period prescribed under the Apprentices Act

Apprenticeship Recruitment process	'Pre apprenticeship' programmes and off-the-job programmes to prepare people to enter into apprenticeship, after which the apprentice has to find an employer	'Pre apprenticeship' programmes and off-the-job programmes to prepare people to enter into apprenticeship, after which the apprentice has to find an employer	Apprentices are required to complete a probationary period. 'Pre apprenticeship' programmes and off-the-job programmes to prepare people to enter into apprenticeship, after which the apprentice has to find an employer	Apprentices could start enrolling in the upper secondary vocational education and training, or, in higher education	Parents and teachers guide the young people and each canton operates a network of community-based career centers specially organised and staffed to help young people in the transition from grade 9 to the next stage through consultations to students and families.	The employer advertises or uses references from other parties to recruit apprentices.
Training and assessment process	The apprentice's competence at work is assessed or assisted by a workplace supervisor, who will attest to the apprentice's theoretical competence. Apprentices usually need to complete a prescribed set of hours on the job.	The apprentice's competence at work is assessed or assisted by a workplace supervisor, who will attest to the apprentice's theoretical competence. Apprentices usually need to complete a prescribed set of hours on the job. Assessment is carried out by the chambers that develop the tasks, supervise the process and guarantee the quality standards.	The apprentice's competence at work is assessed or assisted by a workplace supervisor, who will attest to the apprentice's theoretical competence. Apprentices usually need to complete a prescribed set of hours on the job. Individual province issues the Certificate of Apprenticeship after which the candidate sits for an external examination. The national Red Seal Programs put forth countrywide standards that allow a journeyman to practise across provinces.	Follow-up of the apprentice in the workplace training is undertaken by a qualified apprenticeship master. The 'off-the-job training' is handled by the CFAs, which are generally run by private organisations (49.9%), the chambers (such as chambers of crafts and trades, chambers of commerce and industry and chambers of agriculture) (27.9%) and the public institutions (15.6%). A pedagogical-referent tutor is appointed for the apprentice for the whole duration of the contract. Continuous assessment and traditional punctual assessment are made.	An employee responsible for the on the job training of the apprentice in the firm is designated, who ensures that the training programme is covered and the required skills are achieved. A log book is maintained in detail by the apprentice which is taken into account by examiners in the final examination.	There is a Trade Test administered by the National Council for Vocational Training
Length of training contract	3-4 years	2-3 years		1-3 years	3-4 years	6 months - 4 years
Rate of completion	Low (about 50%)	High (80% plus)	Low (about 50%)	High (80% plus)	High (79% in 2008)	

Employment status of apprentices	Paid as employees	Paid as employees	Paid as employees	Paid as employees	Paid wages	Paid stipend/ allowance
Government regulation	No specific regulations on nature of the employers, but supervision by a qualified staff needs to be confirmed	Apprentices are trained by 'master trainers' who should have completed an apprenticeship, higher level vocational training and a course in pedagogy.	Certain criteria required for eligibility of an industry/enterprise to hire apprentices. The supervision of the apprentice is done by a qualified journeyman who is licensed to supervise.	The apprentice 'master' must hold a qualification and have at least three years' experience	Legal basis of each apprenticeship, including the occupational competences are outlined by the professional organisations, employers, and federal government. training regulations are adapted by a Commission for Quality and Development	Inadequate teaching workforce and no strict regulation
Stakeholders	Employers, employees, training provider (registered training organisation), state/territory training authority, federal government, group training organisations (GTOs) (act as employers of apprentices which lease them out to host companies), Australian Apprenticeship Centres (market apprenticeships to potential employers and apprentices, manage contract process, ensure incentive payments).	Apprenticeship is regulated by federal law. The responsibility is shared between regional education authorities, employer and employee organisations (social partners) and the federal government.	The ministries or departments responsible for education, labour and training have been responsible for administering apprenticeship programmes under a Director of Apprenticeship(except in Quebec). Apprenticeship system supported by a network of advisory committees comprising of employer and employee representatives from each skilled trade.	State institutions (The Ministry of National Education, The Ministry of Agriculture and Fisheries, The Ministry of Higher Education, etc), social partners (Vocational Consultative Commissions, The National Pedagogical Commission, The National Expertise Commission, etc), regional authorities and chambers.	Professional organisations, employer organisations, federal, regional and employee representatives decide on the legal basis of each apprenticeship. A Commission for Quality and Development adapts training regulations.	Ministry of Human Resource Development, University Grants Commission (UGC), All India Council for Technical Education (AICTE), Government Industrial Training Institutes (ITIs), private Industrial Training Centers (ITCs), Ministry of Labour and Employment's Directorate General of Employment and Training (DGET). The National Council on Vocational Training (NCVT), National Skill Development Corporation (NSDC)

Contract	Formal contracts are signed, after which the apprentices and employers are entitled to government subsidies and incentives	Contract between apprentice and the employers who are qualified to train.	Formal contracts are signed, after which the apprentices and employers are entitled to government subsidies and incentives. The apprentices may receive employment insurance benefits.	Formal contracts are signed, after which the apprentices and employers are entitled to government subsidies and incentives	Agreement signed between apprentice and firm.	Contract between the employer and apprentice registered by the apprenticeship Advisors.
Incentives	To employers, tax exemptions and payments for each apprentice recruited	No direct subsidy to firms from public funds. Cost of one-day a week full-time education and training given by regional education authority. Cost of external assessment and examinations met by chambers of commerce	Extremely high level of financial support (like, tax credits, a signing bonus, and subsidies for the wages of apprentices) to employers, albeit with variations across provinces and territories. Employment insurance also given to apprentices enrolled in the classroom portion.	To employers, tax exemptions and payments for each apprentice recruited. CFAs benefit from public funding which covers part of their teaching and training.	No direct subsidy for taking an apprentice but the costs of the required off-the-job training in the vocation is met out from federal and cantonal funds. Group training facilities are set up from some federal funds for groups of small firms with inadequate training requirements.	Meagre stipend for employees and no incentives for enterprise to hire apprentices

Source: Authors' compilation from ILO, 2013; Steedman, 2010; Sharpe and Gibson, 2005

## Lessons for India

The international experiences of the apprenticeship system help in understanding the different models followed and their outcomes. Such rich information could give directions for future pathways for India, albeit taking into account the particular social, cultural and educational practices. The introspection of the strengths and weaknesses of the apprenticeship system in India allows for avenues of learning from the best practices followed by other countries. There are several issues in the Indian apprenticeship system which need to be addressed with greater attention in order to develop the skillset of the youth as well as to reduce unemployment in the country. A few important issues and the recommended features/steps are presented in the following table:

**Table 7: Important Issues and Recommended Lessons for Indian Apprenticeship System**

Issues – Indian apprenticeship programme	Recommended features as prevailing in successful country cases
<p><b>Perception of apprenticeship</b> Apprenticeship is considered a low-status job and low priority is given to VET</p>	<p>It should not be perceived/carried forward as a standalone policy of the apprenticeship cell/department of the government. Rather, it should be integrated with the broader policy of skill development and VET programme. Apprenticeship is given high status, equivalent to other options of higher education in countries like Switzerland and Germany, where it is performing well.</p>
<p><b>Quality of apprenticeship</b> There are no strict quality controls or regulations during the training period</p>	<p>Setting a uniform standard and qualification, for example certification through strict examinations and assessment like the Red Seal, would improve the quality of the apprentices and allow them to work in any states if they achieve the standard. In addition, practices like a '<b>competency based</b>' system (like in Australia), where the apprentices can complete the training earlier if they get to the skill levels more quickly. Availability of apprenticeships <b>to anyone of any working age</b>, regardless of their level of education, whether a school-leaver, re-entering the workforce or an adult worker wishing to change careers would be helpful in reducing unemployment.</p>
<p><b>Occupational coverage</b> Very less</p>	<p>Availability of apprentices in a wide range of occupations, particularly those undertaken by women and men, including public service and government instrumentalities.</p>
<p><b>Participation</b> Participation rate low due to lack of awareness of its benefits and low status perception</p>	<p><b>Extensive Career Counselling</b> to the students and parents from an early stage of education, as early as the age of 12 in the case of Switzerland, regarding the different kinds of occupations and their suitability to their skill set. <b>Tailoring the course content</b> in line with industry requirements to spread awareness. The apprenticeship training can be considered as an additional training received rather than just on-the-job training, and VET and apprenticeship could be promoted as market driven (Switzerland). Make apprenticeship a part of educational curricula and promote it as a competency based (Australia).</p>
<p><b>Apprenticeship system</b> Low quality work curriculum Lack of off-the-job training Low status of apprentice training Lack of progression into higher qualifications</p>	<p><b>Role of government</b> as a facilitator and regulator rather than micromanaging the apprenticeship programme. Micro management can lead to the exclusion of employers from important decisions and the overload of form filling and bureaucratic controls in the process of complying with government regulations, like in England. Excessive rigidity and complex administrative requirements could act as a deterrent in the expansion of the apprenticeship programme. Trade union representatives in Indonesia emphasise that in relation to apprenticeship 'what needs to be addressed in this instance is actually not the fact that there is not enough legislation, but quite on the contrary too much of it" (ILO, 2012). The system where apprenticeship is made labour market-driven and is in line with the demands of the different industries (Switzerland) seem to function better.</p>
<p><b>Stakeholders</b> Lack of enterprise engagement in the system Limited occupational coverage Meagre employer and industry involvement Unclear responsibilities of parties</p>	<p>All major stakeholder groups (employers, training providers, employer groups and trade unions) should be involved in the development and maintenance of apprenticeship regulation and structures. High interest and involvement of employers in setting rules, training, or imparting skill (eg. Switzerland) would encourage the apprentices to improve their skill more effectively and efficiently. The cooperation between small and large industries in sharing apprentices could also be mutually beneficial in imparting the required skills. Employee organizations should play an important role to safeguard the rights of</p>

<p>Lack of more diverse participants</p>	<p>the apprentices. For instance, in USA, the unions work with employers to organise programmes and play a significant role in the governance of state apprenticeship agencies. <b>Safeguarding the interest of apprenticeship</b> by way of contract enforceable in law and taking into account the health and safety measures is important. An interesting feature is to provide for a trial period that extends into several weeks to enable either the apprentice or the employer to terminate the contract if they wish so without penalty. (ILO, 2012).</p>
<p><b>Incentives</b>  Meagre stipends inadequate to support the apprentices further discourage the young people from entering the apprenticeship system in India.  Limited/ no incentives to firms to hire apprentices worsen the situation</p>	<p>Large incentives to firms in the form of tax exemptions, or payment of cost of hiring apprentices are necessary to encourage the firms to enhance the quality of the apprenticeship system.</p> <p>The possibility that an employer's investment in training apprentices may be lost to a competitor who recruits already skilled workers is what is known as the 'poaching' problem. This market failure could be addressed by <b>incentivising the establishments</b> to accept the responsibility, like by having all the employers create a pool of fund with contributions (like in Denmark) called employers' reimbursement scheme, which could be allocated to the establishments that engage apprentices in order to make sure that the firms engaging apprentices do not bear all the costs while the services of trained apprentices are available to the entire market after the apprentices are trained.</p> <p>Incentives like a <i>vocational training bonus</i> (eg. Germany in 2008) for companies creating additional training place for apprentices whose training contract was prematurely terminated on account of the insolvency or closure of the training company, or, <i>partial reimbursement</i> of the labour costs of the trainees and the trainer (eg. Russia).</p> <p>With respect to funding and managing the apprenticeship program, the public private partnership model like in Australia, Canada, Egypt, England, France, Germany, Turkey, South Africa, is well performing, as it enhances accountability and effectiveness.</p> <p>With respect to <b>payment system to apprentice</b>, wage payment to employees, like in Australia, USA, Germany, France, England, Canada, and additional provisions like Employment Insurance serve as large incentives for the apprentices to perform better and minimise dropout rate.</p>

Source: Authors' suggestions based on a review of international best practices

The good practice principles for a model apprenticeship system, and the ideal provisions for employers and employees as listed by Erica Smith and Roslin Brenmann Kemmis's study (2013) presented in Table 8 and 9 are worth noting in this regard.

**Table 8: Underlying Principles for a Model Apprenticeship System**

SI No	Category	Detail
1	Occupational coverage	Apprenticeships available in all industries; Apprenticeships available in a range of occupations, particularly those that are typically undertaken by women as well as men.
2	Participation	Apprenticeships open to people of either gender and all ages; Apprenticeships available in rural and regional as well as urban areas; Clear pathways for school-leavers; Pathways for disadvantaged people and for people without necessary entry qualifications; Availability of off-the-job programmes to facilitate entry to an apprenticeship; Pathways into apprenticeship (and beyond) are clear and well-publicised in ways that reach all potential candidates.
3	National government structures	National policy emphasis is both on training aspects and on employment aspects of apprentice-ship; Good liaison between government agencies responsible for different aspects of the apprenticeship system; Where responsibilities lie with states and provinces as well as national governments, the relative responsibilities are well-defined and publicised; Rigorous qualifications that are regularly updated; Collection of appropriate data about apprenticeships; Systems make provision for apprenticeships in different geographical areas (e.g. rural as well as urban).
4	Stakeholders	All major stakeholder groups (employers, training providers, employer groups and employee associations/trade unions are involved in the development and maintenance of apprenticeship regulation and structures; A commitment to collaboration among the various stakeholders; System for adding new occupations to the apprenticeship system according to specified criteria. with specific stakeholder bodies having responsibilities to notify new occupations.

Source: Erica Smith and Roslin Brenmann Kemmis's Study (2013)

**Table 9: Good practice provisions for the apprentice and the employer**

Provisions for the apprentice	Provisions for the employer
Assistance in meeting entry requirements and/or learning support once employed.	Provision to enterprises of suggested workplace curriculum.
Employed status within an enterprise.	Cohort management systems within or across enterprises.
An increase in pay over the period of an apprenticeship and a higher rate of pay on completion.	Support for small and medium enterprises, through structured arrangements, by specified bodies.
A combination of on- and off-the-job learning with around 20% of time at a training provider.	Support for employers rather than punitive measures for non-compliance.
A chance to mix with apprentices from other enterprises.	Easily-available information about the system for would-be apprentices and employers (e.g. Ellis chart in Canada).
Attainment of a recognised qualification.	A Fallsback system for apprentices whose employer can no longer afford to employ them (e.g. Group Training Organisations in Australia or interim 'out of trade' arrangements).
A training plan within the company.	
Opportunities to experience different workplaces if in a limited environment.	
A 'case manager' to oversee progress in off and on the job training (e.g. 'pedagogical referent tutor' in France).	
Opportunities to switch employers for good reason.	
A chance to progress further to higher level employment or self-employment.	

Source: Erica Smith and Roslin Brenmann Kemmis's study (2013)

The exercise so carried out helps us to argue that though there are no uniform factors observed across countries that perhaps guarantee the successful functioning of the apprenticeship system, it definitely calls for serious introspection of the strengths and weaknesses of apprenticeship system prevailing in the country and based on the pointers of good practices we can undertake future policy corrections. In addition to these, there are some policy options for the improvement of the apprenticeship training system in India suggested by ILO in its report possible futures for the Indian Apprenticeship System Options Paper for India (2013) are quite noteworthy to explore:

### **Increased Coverage of Economy**

**Major change:** A permanent body functioning systematically should be assigned the responsibility with regard to scanning the environment with precision in a bid to ensure that the list of occupations included reflects the structure of the economy. This may be undertaken by any central or state ministry that is assigned the responsibility of successful apprenticeship training.

**Minor change:** Applications should be processed in a faster manner. Online portals have been introduced. However, there are problems with online portals of organisations such as the DGET. Hence, lessons should be adopted from organisations such as BOAT whose online portals have been widely appreciated.

### **Provision of Financial Incentives to Employers, Apprentices and Training Personnel**

#### **Major change:**

- Financial incentives should be introduced for employers who undertake apprentice training in their establishments. Such financial emoluments will incentivise them to continue the process subsequently.
- Additional funding should be made to employers in case they experience difficulty while undertaking apprentice training. The funding will help lessen the burden for employers who have to cater to the needs of other office staff as well as their own establishments.
- Concessions in tax payments should be made for all employers undertaking training activities.

#### **Minor change**

Financial incentives should be introduced for employers - eg. On employment and completion of an apprenticeship and employing disadvantaged apprentices.

### **Simplify the Apprenticeship System**

**Major change:** A single apprenticeship system should be introduced that will reduce complexities in all matters related to apprenticeship training both for employers as well as prospective applicants.

**Minor change:** Merge of Apprenticeship Training Scheme and Craftsman Training Scheme such that there will exist a single vocational training scheme for all who want to undertake it. Information should be made easily accessible and comprehensive for major companies to want to access a national system.

### **Enhance the Quality and Recognition of Apprentice Certification**

**Major change:** Apprentice certification should be nationally and internationally recognised that will enable apprentices to seek higher qualification.

**Minor change:** Ensure that the certification provided is aligned to the qualifications of respective trades as established by provisions of Apprentice Act 1961 such that it will facilitate apprentices in their process of job search.

### **Increased Stakeholder Participation**

**Major change:** There should be greater involvement of stakeholders. Stakeholders should have partnership with apprenticeship training organisation for the industrial environment and its changing trends are well adept to them.

**Minor change:** Funding should be provided to non-statutory organisations to enable efficient training of apprentices. Partnership with stakeholders also implies greater funding.

### **Introduction of Off-the-job Training Throughout the Period of an Apprenticeship**

**Major change:** Introduce mandated off – the – job training to all apprentices that will provide both theoretical and practical training. Allow both public and private training providers to deliver off – the – job training component.

**Minor change:** Allow employers to outsource the in-house off – the – job training to training providers.

## **Summary**

In an attempt to improve the apprenticeship system in India, it is helpful to learn the feasible best processes followed in other countries where apprenticeship training is a successful programme. To follow the principles of a model apprenticeship system means inclusion of factors such as incentivising the employers, tailoring the course content with help from stakeholders, etc. Merging apprentice training with the existing educational system is another necessary step towards enhancing the skill development of individuals that will facilitate a better future for our country and its economy. It is in particular very useful to draw lessons from within the country as in this particular case, the best practices adopted by Maharashtra are equally noteworthy. Maharashtra has not only followed the

bottoms-up approach, but many of the Apprenticeship Act provisions have been tailored to the requirement of the state. Instead of imposing an apprenticeship system as a mandate on a private entity, private actors are encouraged to participate in the development of apprenticeship and skill development initiatives of GoM. Specifically, private industries are encouraged to participate through Corporate Social responsibility (CSR) and also in deciding on the course content. The state has also been trying to reduce the minimum hours of work from 8 hours to 4 hours, and raise the maximum cap of the mandatory absorption from the existing 2-10 per cent band to 20 per cent. In streamlining the apprenticeship system and scaling it up swiftly and effectively, India can certainly avail the national and international expertise to prepare a blueprint, failing which the country may lose out on optimising the demographic dividend advantage and an effective mechanism to address the problem of unemployment.

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