

Vocational Skills Development and Vocational Training

The Dual System of Vocational Training: A Model for India?

Introduction

By 2020, India will have one of the youngest populations in the world, with the average age expected to be 29 years.¹ This "youth dividend" is a potential source of growth and prosperity. But in order to capitalize on it, India must ensure that young people entering the labour market have the skills needed to succeed.

Currently, there is a strong mismatch in India between the skills acquired by young people in the education system and the skills demanded by companies from their employees. Although nearly 12 million young people currently enter the labour market each year, many companies complain of not being able to find enough skilled workers. For example, some 48% of companies in India reported difficulties in filling positions for 2012.² This results in a situation in which high youth unemployment is paradoxically associated with skills shortages.

The Indian government has therefore identified skills development as a priority for action. Indeed, shortly after taking office, Prime Minister Narendra Modi announced plans to create a Ministry for Entrepreneurship and Skills Development. The government's stated goal is to provide skills training for up to 500 million people by 2022. More conservative calculations estimate that around 291 million people need to be skilled until 2022.³ Either way, the task is enormous.

Numbers to be skilled by education level by 2022	
	millions
Formal vocational training	136
Vocational training for those informally trained	55
General education higher secondary & beyond	100
Total	291

Source: Mehrotra et al. 2013

Vocational education and training (VET) must play a major role in India's skills development effort, particularly if India hopes to become a leading manufacturing economy. According to the World Bank, only 829,377 pupils were enrolled in technical/vocational programmes in India for the year 2008 (the last year data is available for India). By contrast, some 18.9 million pupils in China were enrolled in such programmes for the same year.⁴ In addition to very low enrolment rates, technical/vocational training in India suffers from the poor quality of its training

institutions. There is wide agreement that the system of vocational training in India needs to be expanded and overhauled. Industrial Training Institutes (ITIs), which deliver the majority of vocational training, often operate with outdated equipment, feature curricula that do not match industry requirements and provide students with little practical work experience. Employers are therefore reluctant to hire ITI graduates, and vocational training suffers from a poor image among the population and employers alike. This skills mismatch poses a tremendous challenge to India's future growth.

In 2014, the Bertelsmann Stiftung published the study "Vocational education and training reform in India" (Mehrotra et al 2014).⁵ It contains a skills demand survey of Indian firms and German firms operating in India as well as a detailed look at Germany's dual vocational training system.⁶ The study points to the need for considerable reforms in India's system of VET if the country is to provide adequate skills for its youth. This article outlines the study's key findings and shows how elements of the German system could serve as a useful model for such reforms.

Skills demand in India for German and Indian firms

To assess the skills demand in India for German and Indian firms, 43 companies from the states of Maharashtra, Tamil Nadu, Karnataka and the National Capital Region⁷ were interviewed for the study. The survey included 12 German firms, 20 Indian firms, seven joint ventures and four joint ventures with firms from third countries. The firms surveyed are in four different sectors: electronics, chemicals, auto/auto components and IT. 32 of the firms are large and employ more than 100 employees; 11 are small- to medium-sized enterprises.

Distribution of firms according to ownership						
		German	Indian	Joint Ventures	Others	Total
Large	Manufacturing	8	12	4	4	28
	Services	2	2	0	0	4
Small & medium	Manufacturing	2	5	3	0	10
	Services	0	1	0	0	1
Total		12	20	7	4	43

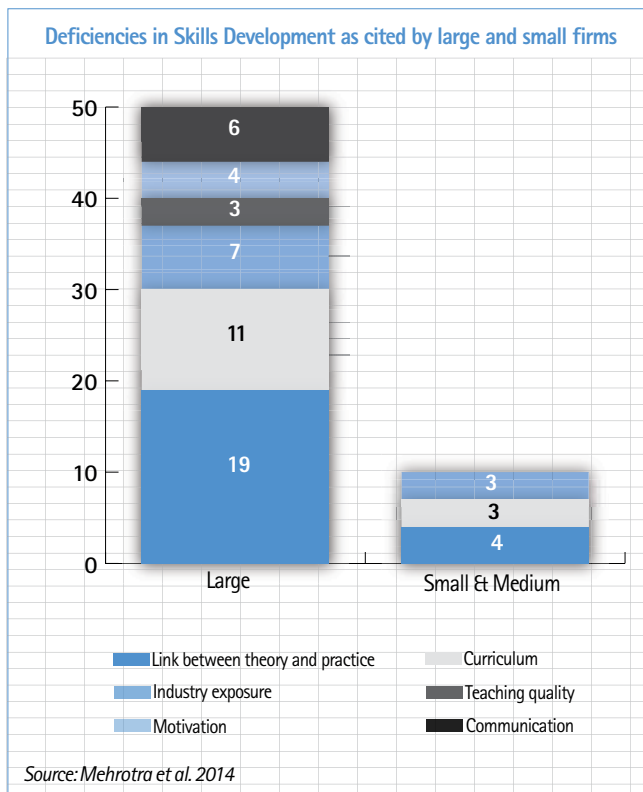
Source: Mehrotra et al. 2014

¹Indian Ministry of Finance 2014, p. 230 ²Manpower Group 2012, p. 5. ³Mehrotra et al. 2013 ⁴World Bank statistics available at: <http://data.worldbank.org> ⁵Mehrotra et al. 2014 ⁶The study is available at: http://chance-ausbildung.de/uploads/tx_itao_download/VocationalEducationIndia_final_6_2014.pdf ⁷The metropolitan area, which encompasses New Delhi and urban areas surrounding it in the neighbouring states of Haryana, Uttar Pradesh and Rajasthan.

Distribution of firms by sector						
	Electricals Et Electronics	Chemicals	Auto Et Auto components	IT	Others	Total
Maharashtra	3	2	16	1	1	23
Tamil Nadu	3	2	5	0	0	10
Karnataka	2	1	1	4	1	9
National Capital Region	1	0	0	0	0	1
Total	9	5	22	5	2	43

Source: Mehrotra et al. 2014

The survey revealed that most of these firms (36 out of 43) face some sort of skills-related problem. Small firms reported difficulties in finding skilled personnel at all, a problem attributed primarily to competition. Large firms, on the other hand, expressed dissatisfaction with the quality of skills held by graduates of the Indian education system. The biggest problem seems to be the insufficient link between theory and practice in VET. Most firms complained that both ITI and polytechnic graduates lack application-oriented knowledge and problem-solving skills. Furthermore, almost all of the firms stated that they need to train new recruits further on the job before they can put them to productive use. The same is true for college graduates.



Firms' strategies in addressing skills-related problems vary, depending on their size. A majority of large firms resort to some form of in-house training, whereas only very few small firms can afford such measures. However, even firms equipped with in-house facilities often lack up-to-date technical equipment. Cooperation among firms and between firms and ITIs is needed in order to effectively address the lack of skilled personnel. Most of the companies surveyed in this study expressed their willingness to engage in cooperation. Some firms, for example, adopt ITIs, equip

them with state-of-the-art machines and take part in designing the curriculum. However, the survey yielded no concrete examples of inter-firm cooperation.

The survey points out that if India wants to improve its population's skills level and reduce the skills mismatch, it must resolve the largest problem within its educational training system: the lack of cooperation between government and industry. Firms have little influence on the design of courses and curriculum in government-run vocational schools. Curricula in these institutions are often outdated, and companies see little value in hiring graduates of such schools. Firms with adequate resources often run their own training facilities, which allow them to tailor courses according to their specific skill-requirements. Any reform of the vocational training system in India needs to bring the government and industry closer together in designing and administering vocational training.

Elements of the dual system and their application for India

Germany's dual system has drawn increasing attention in recent years. The system is credited with producing highly skilled workers that generate innovation in German manufacturing and with keeping youth unemployment at low levels compared to European and international averages. German expertise on vocational training is in high demand as many countries, particularly in Europe, are drawing on the German model for their own vocational training reform plans. The governments of India and Germany, for example agreed to collaborate on India's efforts to reform its VET system already in 2007. However, given the very different education system and labour market conditions in both countries, questions must be posed as to what extent the German system can serve as a model for India.

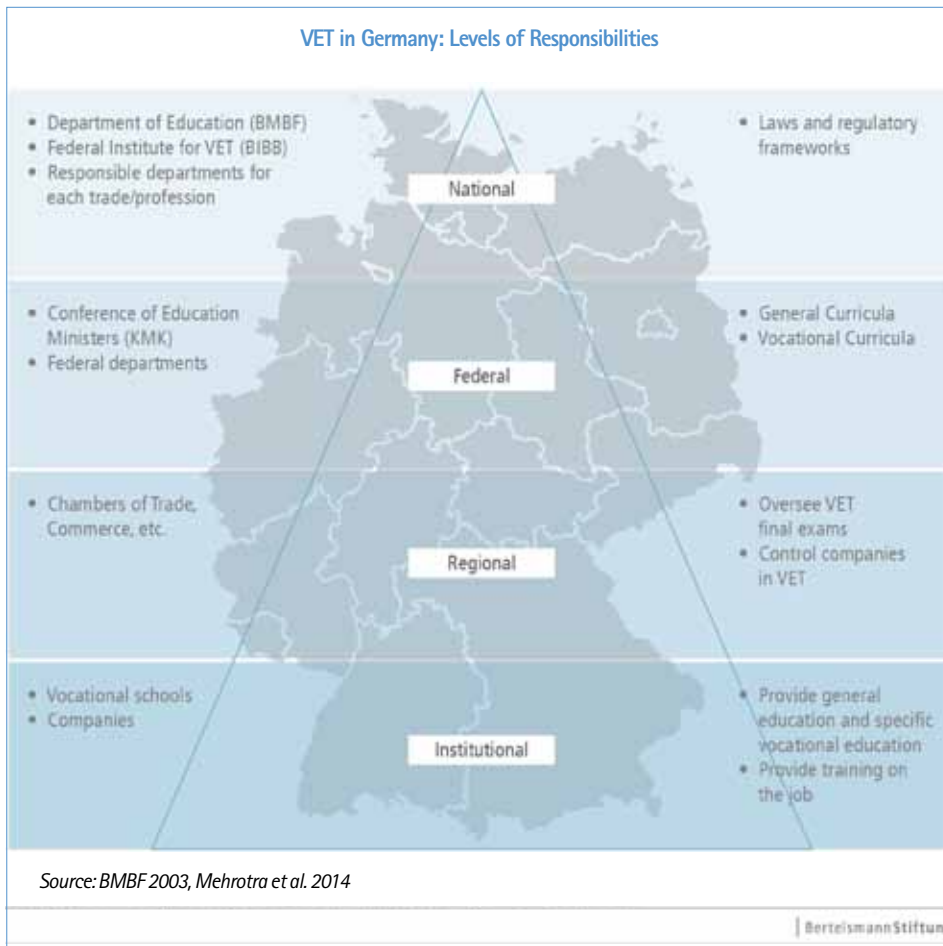
A transfer of the German dual system with its complex institutional structure is neither realistic nor would it yield effective results. A more promising approach involves identifying those elements of the dual system that are appropriate for India and considering how best to implement them. In a recent study vocational education expert Dieter Euler has identified eleven essential elements of the dual system in Germany and looked at how these elements could be transferred and modified to suit other countries' needs.⁸ Three of these elements are identified below as being especially important for reforms of VET in India. The following paragraphs describe these elements and discuss how they can be implemented.⁹

The dual principle

The first of these elements, the so-called dual principle, refers to the combination of theory and practice in vocational training. An apprenticeship in Germany usually combines theoretical learning in a vocational school with practical on-the-job learning. This can involve various combinations of learning sites at which students spend different periods of time. The advantage for the apprentice is that s/he can apply their theoretical knowledge to real-life situations. Companies, at the same time, benefit from an apprentice who can be put to productive use. Apprentices already familiar with the operations of a company and who have proven their work-readiness are more attractive to employers who then have a greater incentive to hire such an apprentice once the apprenticeship is completed.

As the survey cited above and several other studies show, productive links between theory and practical experience must be established in India's vocational training system. Introducing application oriented learning could go a long way towards improving the employability of vocational training graduates. Any reforms of or new initiatives in vocational training should therefore incorporate the dual principle.

⁸Euler 2013 ⁹This discussion draws also on the 2014 study by Mehrotra et al.



or other stakeholders. In terms of national legislation, there is the Apprenticeship Act of 1961, but this covers only a small segment of VET in India.

The benefit of involving the business community in the design of curricula and in the administration of VET is that it creates a connection between the skills taught and the skills actually in demand by the industry. Efforts to establish this connection in India are currently underway. India now features Sector Skills Councils in some 30 industries. These councils, under the supervision of the National Skills Development Corporation, are tasked with bringing together all stakeholders in order to create a skilled workforce for their respective sector.

In the long run, a national VET act in India could provide a more solid basis for government – business community partnerships. Such an act would allow private actors such as the Sector Skills Councils to play an even more active role in defining occupational standards and certifying skills and competencies.

For starters, firms in India must invest and participate more in vocational training. Compared with the other BRIC countries Brazil, Russia and China, India currently has the lowest level of in-firm training.

Firms must not necessarily offer entire training courses in order to allow for more practical experience for VET graduates. Other promising measures that could facilitate this involve establishing close links between firms and ITIs as well as providing internship opportunities within firms for young people during their vocational training.

Partnership between government and businesses

The partnership between the German government and the business community is a key characteristic of the dual system. While the government performs regulatory functions and provides the vocational schools, the business community offers training positions in companies and oversees examination and certification processes through industry organizations such as the chambers of crafts and commerce. Most importantly, occupational profiles and curricula are the product of a complex negotiation process involving representatives of the social partners (i.e., the government, the business community and trade unions). As a result, occupational profiles are consistent throughout the country and are recognized by all relevant actors.

This cooperation in Germany is built on the robust legal foundation provided by the Vocational Training Act¹⁰ of 1969, which has been subject to revisions over time. To date, India lacks a smooth-functioning and systematic mechanism that ensures coordination between different government levels, social partners

Joint funding for vocational training

Quality vocational training requires considerable resources that may be difficult for the state to finance alone. Since apprentices in Germany spend only a limited amount of their time as trainees in state-funded vocational schools (the rest is spent at on-the-job training), costs for VET are shouldered by both the government and the private sector. In fact, more than 40% of total vocational training costs are borne by the private sector.¹¹ Companies participating in vocational training view these costs as an investment. They profit in the long run from highly skilled workers who, after three years in apprenticeship, are intimately familiar with the operations of a company. In the short term, companies can either offset a large share of the initial costs or even profit from their apprentices when they are put to productive use. Both sides, the state and the business community, gain from joint VET funding. While there is a business case to be made for individual firms that invest in vocational training, the government can keep expenditures for VET at relatively low levels.

For India, a cost-sharing arrangement between the government and the business community in the area of VET would be highly desirable. This is especially true, given the large numbers of young people in need of training. Recently, there have been first steps in the direction of joint funding for example with the establishment of Institutional Management Committees for ITIs. A local firm or industry association can be represented in such a management committee, if it is willing to sponsor and upgrade the ITI. Another example is the National Skills Development Corporation (NSDC) which offers funds for companies and organizations that provide skill training. The NSDC is designed as a public private partnership, the shares of which are held by the government (49%) and the private sector (51%).

¹⁰Berufsbildungsgesetz (BBiG) ¹¹Statistisches Bundesamt (German Federal Statistical Office) 2012, p. 29.

However, in order for the private sector to make more substantive contributions to VET funding, firms first need to recognize VET as a form of investment with positive effects for their core business rather than an ancillary form of corporate social responsibility. For their part, the Indian government must accept the fact that the business community must be afforded greater influence in the content and administration of VET if it is to be motivated to share the costs of such a system.

Conclusion

India has already begun reshaping its vocational training system and, under Prime Minister Modi's leadership, will most likely pursue this goal even more rigorously. Even if the effects of such reforms are not felt immediately, India's youth and the economy as a whole are sure to benefit in the long run.

Some German companies like Bosch or Volkswagen successfully replicate dual vocational training on a small scale in India to skill workers for their own demand. This would not be a winning strategy for the Indian economy at large. The economic, social and political conditions of the two countries are just too different. However, the dual system can serve as a useful model for the debate and design of actual VET reforms in India. This includes elements of the dual system not mentioned above such as the establishment of national standards or the education of qualified vocational trainers. The three elements of the dual system discussed in this article – the dual principle, the partnership between government and businesses and joint funding – are especially relevant for the Indian context. They share a common theme: vocational training is a responsibility of both the state and the private sector and it works best when both cooperate.

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