EPF Working Paper

EPF ECONOMIC POLICY FORUM

The Role of the Private Sector in Vocational and Educational Training

Developments and Success Factors in Selected Countries

Institut der deutschen Wirtschaft Köln
Cologne Institute for Economic Research

HSRC Human Sciences Research Council

IEM 1978 Central Institute for Economic Management

ORF Observer Research Foundation

HRD Korea Human Resources Development Service of Korea

EMS Emerging Market Sustainability Dialogues

Contents

Executive Summary

This Policy Paper analyses the vocational education and training (VET) system in four selected countries – namely India, the Republic of Korea, South Africa, and Vietnam. The need for adequately skilled persons is rising in all four countries. And all four countries have identified the VET system – in cooperation with the private sector – as a key actor to provide such skills. In consequence, all four countries have developed individual and apposite measures to strengthen their VET systems. Even though the four countries are very different in terms of their starting points and their demographic, economic and institutional framework conditions, they all face the same challenge: designing a VET system that makes the country future-proof. On the one hand, such a VET system skills young persons for the labour market and improves their employment prospects. On the other hand, teaching the right skills is a key necessity for a sustainable growth strategy for the economy as a whole and for reacting to current challenges like the ongoing digitalisation of the economy. Since in Germany the German dual training system has a long tradition, it is also introduced as a reference model.

The results of the country analyses allow the identification of promising reform options and policy recommendations in VET which also have the potential to be transferred to other countries.

The countries in focus are:

- Not only due to its size, but also due to its economic rise in the last decades, **India** is a very important country. But despite its impressive development, it still lags behind in many development indicators. For a sustainable development, India needs a diversified growth strategy which requires the skilling of a large share of the population. India's VET system is not able to provide such skills. Attempts to improve the VET system have often failed due to a fragmented management system. In 2014 India introduced a new ministry, the Ministry of Skill Development and Entrepreneurship, which coordinates all VET activities.

- The **Republic of Korea** has also undergone a rapid economic upswing since the 1960s. This development was backed by a high skill level of the population. However, there is an increasing imbalance between academic graduates and vocationally skilled persons on the Korean labour market. Today, there are large shortages on the middle qualification level. The Korean VET system is mainly school-based and the participation of companies in VET is limited. In order to improve the reputation and the quality of VET, Korea has introduced so-called 'Meister colleges'. These colleges have a focus on a closer cooperation between schools and companies. Furthermore, dual training schemes have been introduced in some colleges. Still the largest challenge is to win the population for the VET offer and to improve the image.

- Since its transition to democracy, the VET sector and especially Technical and Vocational Colleges in **South Africa** have gained importance. In 2003, South Africa introduced the so-called Support to Education and Skills Development Programme in several model projects. One important pillar of this programme was the strengthening of the student support services in the selected colleges. These services aim at establishing relations between the VET system and the industry. Currently, the focus of reforms is on the improvement of curricula in order to make the training contents more relevant for the industry. South Africa has now decided to expand the project to further colleges.

- Finally, **Vietnam** has also been through a phase with high economic growth rates. The country focuses on further strengthening its non-agricultural sectors. The transition of people to non-agricultural jobs can, however, only be successful with an extensive skilling initiative. Mostly, VET in Vietnam does not include work-based learning, and the relationship with the industry is weak. Vietnam currently tries to improve its vocational guidance, has expanded the VET offer, and has recently introduced several VET model projects with dual elements.

The country analyses reveal fields of action as well as several successful reform approaches which can be generalised and serve as a role model for other countries. Below the main results are briefly summarised.

- **Strengthening of company involvement in VET:** Nobody knows better than the companies themselves what skills are needed on the labour market. Hence, a strong and institutional relationship between the VET system and the private sector is a necessary precondition for a successful VET system.

- **Clear VET responsibilities:** Centralising the efforts of VET institutions in creating a relationship to the industry is a promising approach. This pooling of resources as well as decision-making competences shall make all VET activities more efficient.

- **National VET standards:** National standards are important in order to increase the quality of VET and the acceptance of VET graduates in companies.

- **Incremental introduction of dual VET elements:** In countries where company involvement in VET has no tradition, the introduction of dual training approaches requires a change of mind in the companies. This cannot happen from one day to the other. Therefore, the incremental introduction of dual training – be it in single model regions or single model sectors – can be an important first step.

- **Promote the labour market perspectives of VET:** VET is often considered to be a second choice for many youths if they do not have the possibility to go to university. It is important to conscientise the population about the significance of VET. Vocational guidance needs to be strengthened as it can contribute to the dissemination of knowledge about the career perspectives with VET.

- **Increase the permeability between VET and higher education:** Another important factor to increase the acceptance of VET is to improve the permeability between VET and higher education. This is an important signal for young persons and emphasises the value of VET certificates.

- **Implementation of skill forecasts:** Finally, all countries need to establish instruments to improve skill forecasts in order to reduce prevailing skill gaps and mismatches and to adapt the skill offer to the skill demand.

1 Introduction

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Vocational education and training (VET) provides people with relevant skills for the labour market. VET is crucial for economic development – particularly in developing and emerging countries. The availability of skilled persons can contribute to economic diversification and increase efficiency and sectoral competitiveness (Jagannathan and Geronimo, 2013). Hereby, not only the policy framework and the institutional design of VET but also the acceptance of VET by the population and the private sector is important for the successful skill match of labour market supply and demand.

A policy framework which promotes an active participation of the different stakeholders in VET, such as the government, the private sector as well as participants, determines whether VET is a viable and attractive option – for young persons as well as for economies. The objective of this study is to analyse the private sector engagement in VET in four countries – namely India, the Republic of Korea, South Africa, and Vietnam. The study identifies developments and good practices and derives transnational policy recommendations to strengthen the role of the private sector and, thus, contribute to skill development.

The private sector's options to engage in VET are manifold – but they are used quite differently in various countries. The extent of private sector involvement hinges, for example, on the economic structure of a country (extent of the industrial sector, size structure of companies, size of the informal sector, degree of economic diversification, etc.). If the economic structure is determined by small and microenterprises, the scope for involvement in VET of each individual company is different compared with countries like Germany where medium-sized companies ('Mittelstand') are the backbone of the economy (Economist, 2014; World Bank, 2013). The importance of the informal sector also influences VET institutions. In some regions, informal apprenticeship systems which are embedded in local cultures and traditions are very common but often not related to the public VET system (ILO, 2011). Therefore, the implementation of policy recommendations always has to take into account the respective contextual factors (Barabasch and Wolf, 2011; Blöchle et al., 2016).

In the selected four countries, VET is currently in the focus of public interest – however, for different reasons and under different political, economic and societal preconditions.

India faces a shortage of skilled workers. But unlike, for example, Germany, where shortages of skilled workers are at least partly caused by demographic changes and a shrinking young population, India has a rapidly growing population with close to 13 million people entering the labour market every year. However, the education system is not able to qualify this amount of young persons (Hajela, 2012). One problem is that the VET system does not fully take into account the large share of casual and informal workers which covers over 90 per cent of India's working population.

The **Republic of Korea** has undergone an impressive economic development since the 1960s. One reason for this positive development is the high educational level – which is, however, mainly driven by academic education. VET still suffers from relatively low prestige and employ-

ers' participation is accordingly relatively low – even though these skills are needed in the labour market.

Since its transition to democracy, the VET sector and especially technical and vocational colleges in **South Africa** have gained importance. These colleges have been identified to be best suited to provide the skills which are needed to support the economic growth of the country. This process, however, still needs some effort to take full effect.

As another example of a country striving to transform itself from a developing to a developed economy, **Vietnam** has turned its attention towards educating its labour force with the necessary skills via VET programs. In 2013, only 9.7 million people were trained (18.2% of the labour force), while the majority was not trained.

Table 1 shows the population size and the gross domestic product (GDP) per capita for each of the analysed countries.

Table 1.1: Key indicators 2015

	India	Korea	South Africa	Vietnam	Germany
population (million)	1,311.05	50.62	54.96	91.70	81.41
GDP per capita (USD)	1,581.6	27,221.5	5,691.7	2,111.1	41,219.0

Source: World Bank

Often **Germany** is referred to as a role model in VET. Two thirds of the German population have been qualified in the German dual training system. This means that they have undergone an apprenticeship which takes place in vocational schools (1 to 2 days a week) as well as in companies (3 to 4 days a week) for 2 to 3.5 years. In Germany, there are training occupations for every sector: industry, commerce, skilled trade, office, public administration, health, or agriculture. There are 329 occupations (BIBB, 2015a). The dual training system is regulated by the Vocational Training Act ('Berufsbildungsgesetz'). This act stipulates rights and duties of apprentices as well as of companies offering training.

For every occupation there are in-company training standards which regulate what the apprentice has to learn. The relation between the company and the apprentice is based on a private-law vocational training contract. The companies pay for the training which they provide. This includes a remuneration of the apprentices as well as material expenses and personnel costs for the trainers. In 2016 the average monthly remuneration was EUR 859 in western Germany and 807 in eastern Germany (BIBB, 2017). The education of in-company trainers is governed by federal law. All trainers need a 'Regulation on Trainer Aptitude' qualification. An important institution in dual training in Germany are the Competent Bodies (Chambers). They supervise

the provision of vocational training and conduct the intermediate and final examination. This guarantees that the vocational standards are met.

But what makes the private sector involvement in VET in Germany so successful? In total, one out of five companies offers training. If only companies are considered who are allowed to offer training, more than half of all companies offer training (BIBB, 2015b). In Germany, company involvement in the dual training system has a long tradition. It is part of the companies' social responsibility and has a positive impact on their reputation. But above that, there are manifold economic reasons for companies to invest in dual training. First of all, it is a long-term investment in skills. In Germany, many companies already face skills shortages – in particular with regard to vocationally qualified personnel (Bußmann, 2015). Thus, offering apprenticeship positions is a possibility to improve the odds of having enough skilled personnel in the future. Secondly, an apprenticeship can be regarded as a prolonged screening period. Companies have the possibility to get to know their apprentices and do not need to rely solely on the information provided by external transcripts and certificates. Furthermore, an apprenticeship increases the matching accuracy of the skills. Companies train exactly those skills they need, which guarantees that the apprentice really learns labour market relevant competencies. And last not least, apprentices already contribute to their companies' value creation during their time as an apprentice, and they do so with an increasing productivity. The Federal Institute for VET regularly analyses costs and revenues of dual training from the perspective of companies (BIBB, 2016). Costs comprise personnel expenses for the apprentices (incl. remuneration), personnel expenses for the trainers as well as installation and material expenses. On the other hand, there are revenues in the form of produced goods and services, reduced recruitment costs and reduced personnel development costs. In 2012/2013 the gross costs of one apprentice per year – averaged over all industries and firm sizes – were EUR 17,933. The revenues were at EUR 12,535. Thus, the net costs were EUR 5,398. However, the costs vary enormously between branches as well as between regions. Furthermore, many companies state that this is a very profitable investment which amortises within a short period of time.

Nevertheless, the German VET system also faces challenges. First of all, the demographic development leads to both a shrinking and an ageing of the German society. Every year, fewer young people enter further education. Secondly, more young people prefer to go to university rather than enter the dual training system. While in spring of 2004 only 12 per cent of all school graduates wanted to go to university, in 2012 one out of five (20 per cent) school graduates aimed for higher education (BIBB, 2014). There is an increasing enrolment in higher education. While in the past the number of beginners at universities was around half the number of beginners in the dual training system, the gap has closed in the last years and now both numbers lie around 500,000 beginners (Statistisches Bundesamt, 2016). Due to these developments, companies have increasingly more difficulties in filling their vacant apprenticeship positions. While in the past companies could choose among the best applicants, nowadays there is a strong competition for apprentices. In 2015, for the eighth time in a row there were more vacant apprenticeship positions (40,960) than unplaced applicants (20,712) (BA, 2016). More and more companies which have failed to fill their vacant positions in the past reduce their involvement in VET. This is a dangerous development as it may aggravate labour shortages – which are already present – in the future. Finally, global trends like the advancing digitalisation of the economy influence the skill needs on the labour market. Training contents thus need to be regularly tested and updated in order to keep pace with the technological development.

Hence, independently of whether VET is in the public focus in order to raise the general education level of the population, to reduce a skills mismatch or to support economic diversification, private sector involvement is an important factor to bring the VET system and market needs closer together. In a cross-country comparison between the selected countries, the role of the private sector in VET will be analysed on the basis of the following research questions:

- How is the structure of the economy organised? How important are the various sectors, especially industry and crafts? How is the private sector organised? How important are business associations, chambers, etc.? What is the role of unions?
- How established is the VET system? How many young people enter the VET system? Do firms train according to their needs? What is the role of public schools in teaching labour market relevant skills? Are VET certificates accepted country-wide? How are quality standards assured?
- How important is VET compared to general education?
- Does the existing VET system correspond to the private sector's needs?
- How large is the private sector involvement in VET? How many companies take part in qualifying young people? To what extent do the policy framework and existing institutional structures allow or impede private sector involvement?
- What is the private sector's attitude towards involvement in VET? What are societal attitudes towards VET in general and VET graduates in particular (e.g. compared to tertiary education)? Is there a social stigma associated with VET?
- Are there impulses from foreign VET systems? Are foreign VET elements included to reform the national VET system?

References Chapter 1

Barabasch, Antje; Wolf, Stefan (2011), Internationaler Policy Transfer in der Berufsbildung. Konzeptionelle Überlegungen und theoretische Grundlagen am Beispiel deutscher Transfer Aktivitäten. In: Zeitschrift für Erziehungswissenschaft, Vol. 14, No. 2, pp. 283–307.

Blöchle, Sara-Julia; Flake, Regina; Khairi-Taraki, Tarrin; Körbel, Markus, Pierenkemper, Sarah; Rauland, Corinna; Werner, Dirk; Wörndl, Daniel (2016), Vocational Education and Training for Young People in Europe – Fostering mutual learning, forging the future together, Study in cooperation with Hans-Böckler-Stiftung, Konrad Adenauer Stiftung and Vodafone Stiftung Deutschland, Cologne Institute for Economic Research, www.iwkoeln.de/berufsausbildung [19.07.2016]

Bundesagentur für Arbeit – BA (2016), Arbeitsmarkt in Zahlen – Ausbildungsstellenmarkt, Nürnberg.

Bundesinstitut für Berufsbildung – BIBB (2017), Tarifliche Ausbildungsvergütungen 2016, https://www.bibb.de/de/57121.php [02.03.2017]

BIBB (2016), Kosten und Nutzen der Ausbildung aus betrieblicher Sicht, https://www.bibb.de/de/11060.php [10.08.2016]

BIBB (2015a), Bekanntmachung des Verzeichnisses der anerkannten Ausbildungsberufe und des Verzeichnisses der zuständigen Stellen vom 19. Juni 2015, Bonn.

BIBB (2015b), Datenreport zum Berufsbildungsbericht 2014, Informationen und Analysen zur Entwicklung der beruflichen Bildung, Bonn.

BIBB (2014), Datenreport zum Berufsbildungsbericht 2013, Informationen und Analysen zur Entwicklung der beruflichen Bildung, Bonn.

Bußmann, Sebastian (2015), Fachkräfteengpässe in Unternehmen: Der Ausbildungsmarkt in Engpassberufen, KOFA-Studie 3/2015, http://www.kofa.de/fileadmin/Dateiliste/Publikationen/Studien/Studie_3-2015_Fachkraefteengpaesse_in_Unternehmen_Der_Ausbildungsmarkt_fuer_Engpassberufe.pdf [10.08.2016]

Greinert, Wolf-Dietrich (2001), Die Übertragbarkeit des Dualen Systems in Entwicklungsländer. Möglichkeiten und Begrenzungen einer politischen Strategie, in Thomas Deißinger (ed.): Berufliche Bildung zwischen nationaler Tradition und globaler Entwicklung. Beiträge zur vergleichenden Berufsbildungsforschung. 1st Edition Baden-Baden: Nomos-Verl.-Ges. (Bildung und Arbeitswelt, Bd. 5), pp. 45–60.

ILO – International Laboor Organization (2011), Skills for Employment Policy Brief: Upgrading Informal Apprenticeship Systems, Geneva.

Jagannathan, Shanti; Geronimo, Dorothy (2013), Skills for Competitiveness, Jobs, and Employability in Developing Asia-Pacific, ADB Briefs No. 18, November 2013.

Statistisches Bundesamt (2016), Schnellmeldung Integrierte Ausbildungsberichterstattung – Anfänger im Ausbildungsgeschehen nach Sektoren/Konten und Ländern 2015, https://www.destatis.de/DE/Publikationen/Thematisch/BildungForschungKultur/Schulen/SchnellmeldungAusbildungsberichterstattung.html [10.08.2016]

The Economist (2014), Schumpeter: German lessons. Many countries want a Mittelstand like Germany, 12.07.2014.

World Bank (2013), World Development Report: Jobs

2 India

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2.1 Introduction

The story of India is one of twin realities – while the country's economic achievements over the past three decades have been remarkable, it has significantly lagged behind in terms of overall development. India is among the fastest growing economies in the world and is currently the 3rd largest economy in terms of Purchasing Power Parity (PPP) (World Bank 2011). However, the economic success has yet to trickle down to more than half the country. As Table 2.1: Social Indicators – IndiaTable 2.1 shows, India ranked a low 134 out of 187 countries as per the Human Development Index in 2011. It also suffers from the 'missing women' phenomenon – for every 1,000 males there are 60 missing females. The Indian health system is still unable to offer adequate services – infant mortality rate in India stands at 44, when developed countries like the United States have been able to bring this figure down to single digits. In fact, even Bangladesh – a country with a much more modest rate of economic growth – has outperformed India in a range of development indicators including life expectancy, infant mortality and schooling indicators (Ipshita 2013).

Table 2.1: Social Indicators – India

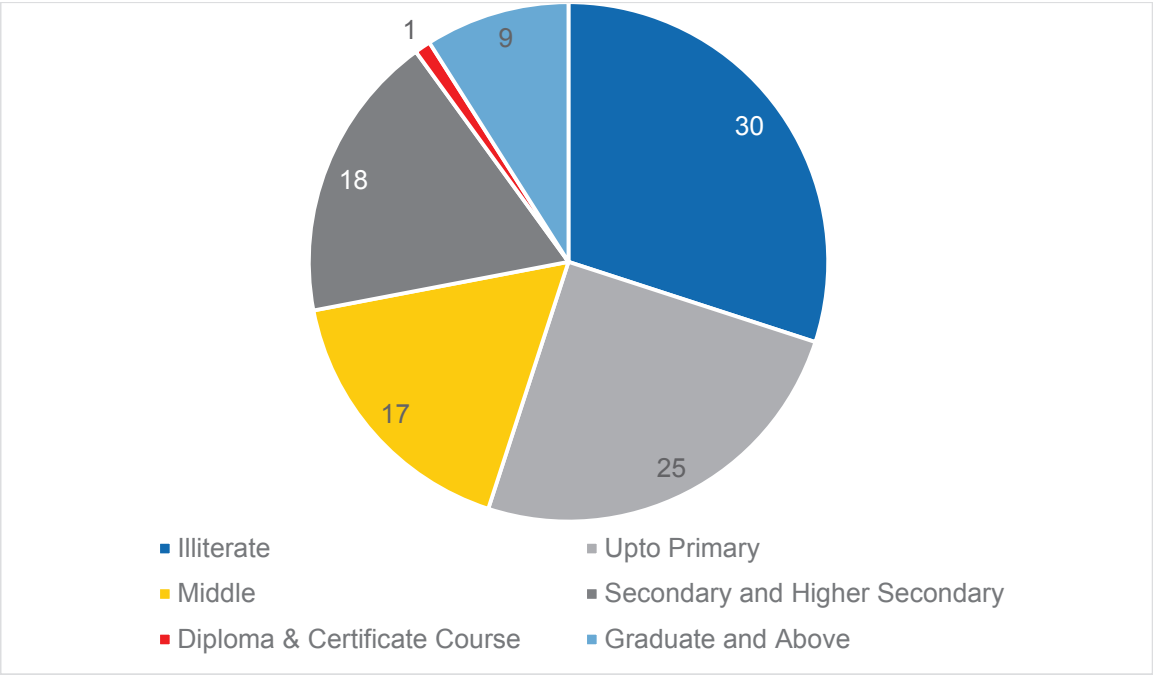
Indicators	2001	2011	Source
Human Development Index (HDI)	0.461	0.547	Rank 134 out of 187 countries
Total population (in billions)	1.028	1.210	UNDP Factsheet
Sex ratio (females per 1,000 males)	933	940	UNDP Factsheet
Child sex ratio (females per 1,000 males)	927	914	UNDP Factsheet
Literacy rate (in %)	64.8	74.04	UNDP Factsheet
Female literacy rate (in %)	53.7	65.46	UNDP Factsheet
Percentage of children in fifth grade with a second grade reading level		46.8	ASER 2012

Percentage of children in fifth grade who can do long division (maths)		24.8	ASER 2012
	2005	**2010**	
Total number of poor (in millions)	407.22	354.68	UNDP Factsheet
Infant mortality rate	57	44.0	Census 2011
Deaths per 100 due to malaria	0.1	0.06	UNDP Factsheet

Why has India failed to translate its economic success into social development? The answer lies in the domestic growth model – India's growth story has been predominantly led by the services sector, which accounts for 65 per cent of the GDP but employs only 29 per cent of labour (World Bank 2016). On the other hand, nearly half of India's workforce is engaged in agriculture, but it contributes a mere 16.1 per cent to the GDP (CIA 2015). The manufacturing sector – one that is generally capable of generating more productive employment – is also left somewhat stunted and holds only 20 per cent of the workforce[1]. This discrepancy between each sector's share in the GDP and their respective employment of labour means that the lion's share of the GDP goes to a very small but highly productive section of the workforce, and the rest must depend on not-so-rewarding avenues. What is then required is a reorganisation of India's growth strategy, with a concentrated focus on reviving labour-intensive manufacturing. The nationwide Make in India initiative was designed to plug this gap in employment creation. However, this effort is of little value in the absence of an adequately skilled labour force, and the chart below shows that the Indian labour force is, at present, ill-equipped for potential employment opportunities: less than 10 per cent graduated from college, and more than half of the total workforce dropped out before middle school.

[1] Labour Force by Occupation. CIA World Factbook India. https://www.cia.gov/library/publications/the-world-factbook/geos/in.html

Figure 2.1: Educational qualification of the Indian workforce in percent



Source: National Sample Survey Organisation 2011–2012

The government recognises the need for human resource development and has been working towards achieving this goal: the 'Right of Children to Free and Compulsory Education Act', which came into effect in April 2010, requires the state to provide free full-time education to children in the 6 to 14 years age group[2]. To augment attendance and retention, the government also runs the Mid Day Meal Scheme – a national programme that provides free cooked meals for students in government, government-aided and other educational centres like Madrasas[3]. Following these initiatives, the country has managed to achieve near-universal enrolment in elementary education (grade 1 to 8) with an enrolment rate of 96.7 per cent in 2014 (Status of Education Report 2014)[4]. Despite this achievement in quantitative aspects, learning outcomes have been poor – less than half of those in fifth grade possessed second grade reading skills, and an even smaller portion (25%) had adequate math skills. Further, most students drop out after attaining elementary education – the current gross enrolment rate for higher education stands at a mere 21 per cent[5].

The divide between GDP growth and educational attainment poses a distinct challenge given the phase of India's demographic transition. The country's large population of nearly 1.2 billion – 65 per cent of which is under the age of 35 – is still highly under-educated and consequently

2 Ministry of Human Resource Development, Government of India. 'Right to Education.' http://mhrd.gov.in/rte

3 Ministry of Human Resource Development, Government of India. 'Mid Day Meal Scheme.' http://mdm.nic.in/

4 Pratham. 'Annual Status of Educational Report (Rural) 2014.' Provisional. January 13, 2015. http://img.asercentre.org/docs/Publications/ASER%20Reports/ASER%202014/fullaser2014mainreport_1.pdf

5 Ministry of Human Resource Development. All India Survey on Higher Education (AISHE) 2014–15.

under-employed[6]. This is reflected in how the country's labour force functions and is organised – nearly 92 per cent of the labour force works in the informal sector[7]. That equates to approximately 475 million people who are part of sectors such as construction, textiles, retail, logistics and transportation, all of which require very low levels of education or skills. Moreover, the largely informal workforce is engaged in activities that still are generally considered exploitative and unsafe. Most jobs are sought through informal means such as contractors and word-of-mouth, and workers have little bargaining power due to a lack of education or skills. The majority of India's workforce, therefore, is not only excluded from the formal net, but it also becomes highly difficult for them to break out of the vicious poverty cycle. Even those who are currently enrolled in schools, as mentioned earlier, fare poorly on learning outcomes.

For India to reap the benefits of its demographic dividend, it must create a work-ready labour force with the right skill-sets. India's population is growing rapidly and is expected to peak by 2050[8]. Education infrastructure – general education and the VET system combined – must not only be able to absorb this demographic bulge, but must ensure that the education and training correspond with the needs of the fast-changing global and domestic economies. China – one of the largest contributors to the global labour supply – is already slowing down, and India must take this opportunity to fill the void in the international labour market. The Indian economy, even with programmes like 'Make in India', is unlikely to create enough jobs for the additional 285 million potential workers[9].Thus, skill development efforts must be designed to meet both national and global standards.

Apart from strengthening the educational outcomes of the future labour force, simultaneous steps must be taken to enhance the employability of the existing working population – VET has a large role to play here. The unique ability of VET to skill even individuals with limited educational qualifications means that it is well positioned to address this specific challenge. In the light of the global labour demand, and India's own demographic and economic developments, this paper investigates the proficiency of the current system in delivering VET. Section two of the paper analyses the particular bottlenecks in the country's governance structure and the efficacy of existing national strategies in addressing them. Section three examines the role of the private sector in the overall governance and delivery framework and its interaction with government agencies. The last section offers certain policy measures that can be adopted to augment the contribution of the private sector.

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6 Virmani, P. 'Note to India's Leaders: Your 150 million young people are calling for change.' *The Guardian.* April 2014.

7 Tholkappian, C. 'Organized and Unorganized Sector Employment in India: Macro Stand Point.' *International Journal of Research*. Vol. 1, Issue 4, May 2014.

8 Bhuyan, Ragini. 'India's demographic window of opportunity.' *LiveMint*. http://www.livemint.com/Opinion/fuetO9uSxzCynoS09uXFCK/Indias-demographic-window-of-opportunity.html

9 Ibid.

2.2 Skilling India through VET

Skill training in India is currently limited to an extremely small section of the working population: merely 4.69 per cent of the total labour force has received formal training[10]. Thus, India is ranked as one of the lowest countries in terms of workforce readiness. The country is in a peculiar situation where employers are unable to meet their labour demands despite the existence of a 487 million strong labour force and the addition of many more millions each year. According to the government's Report of the Working Group on Skill Development and Training, the explanation for this paradox lies in the mismatch between the demand and supply of labour skill sets[11]. Training centres generally provided training in out-dated skills vis-à-vis industry requirements.

The mismatch exists not so much due to the lack of government attention – there are multiple programmes aimed at training the Indian population and a significant proportion of the annual state budget is allotted to these programmes, but due to a complicated governance framework. India's VET structure is plagued by a multiplicity of agencies, which has led to a fragmented management system. Unlike most countries, two different ministries enacted VET policies in India: the Ministry of Human Resource Development (MHRD) was responsible for vocational education and the Ministry of Labour & Employment (MoLE) for vocational training. Apart from these two principal ministries, there are a range of central ministries that also carry out individual skill development programmes like the Ministry of Rural Development, the Ministry of Health and Family Welfare and the Ministry of Agriculture.

The absence of a single decision-making body has meant that both stages of policy design and programme implementation suffer from duplication of effort and a lack of accountability. For example, when the government was developing the National Skill Qualification Framework – a nationally integrated framework that organises skill training into a series of competency based levels[12]; the two principal ministries – the Ministry of Labour & Employment (MoLE) and the Ministry of Human Resource Development (MHRD) – each came up with independent qualification frameworks. An Inter-Ministerial Committee under the Cabinet Secretariat was then appointed to merge the two into a unified qualification system.

Recognising the need for better coordination, and building consensus in the federal structure, the Ministry of Skill Development and Entrepreneurship (MSDE) was created in June 2014[13]. All efforts associated with VET have been subsumed under this ministry. As of now, its primary objective is to ensure India realises the target of skilling 500 million individuals by 2022. It aims to do this by:

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[10] Ministry of Skill Development and Entrepreneurship. 'National Policy on Skill Development and Entrepreneurship 2015 – Policy Booklet.' http://www.skilldevelopment.gov.in/assets/images/Skill%20India/policy%20booklet-%20Final.pdf

[11] Ministry of Labour and Employment. 'Report of the Working Group on Skill Development and Training for XII Five Year Plan (2012–17).' http://planningcommission.gov.in/aboutus/committee/wrkgrp12/wg_skill_develop.pdf

[12] Ministry of Finance, Government of India, 'National Skills Qualification Framework.' December 27, 2013. http://mhrd.gov.in/sites/upload_files/mhrd/files/NSQF%20NOTIFICATION.pdf

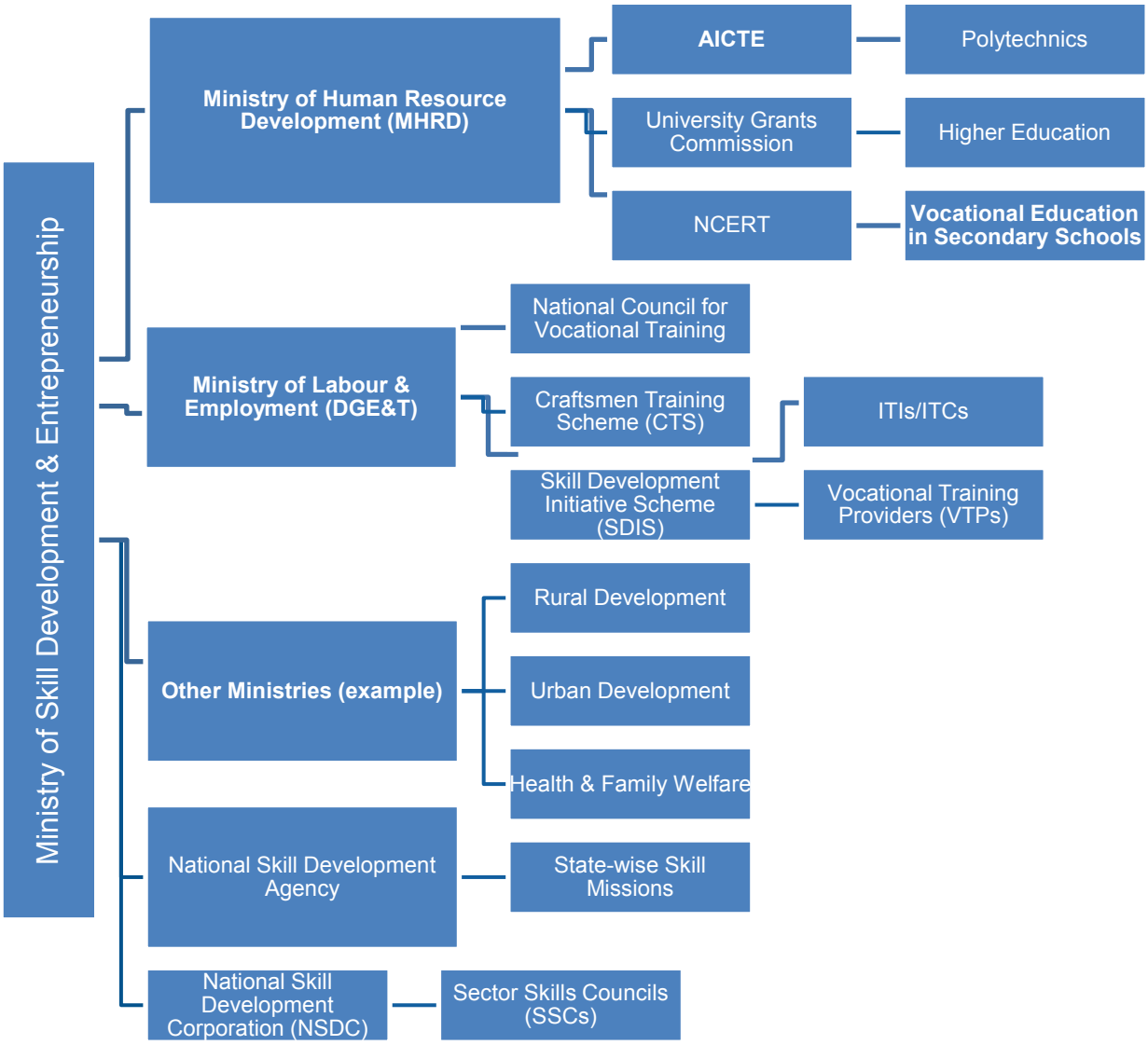
[13] Borpuzari, Pranbihanga. 'Narendra Modi appoints Sarbananda Sonowal minister for skill development, entrepreneurship.' *Economic Times*. May 27, 2014. http://articles.economictimes.indiatimes.com/2014-05-27/news/50122840_1_national-skill-development-agency-entrepreneurship-sam-pitroda

a) streamlining all VET initiatives under the multiple ministries;
b) setting uniform standards for these initiatives; and
c) addressing supply and demand gaps in skill development.

The Ministry also recently launched the National Policy on Skill Development Entrepreneurship in 2015 with the aim of creating an umbrella framework which will incorporate all activities of skill development and entrepreneurship while aligning them to common standards and helping in linkages with demand drivers and growth centres. More importantly, it will help in aligning skill development initiatives with existing institutional infrastructure as well as provide a platform for suggestions of new institutions as well[14].

[14] Ministry of Skill Development and Entrepreneurship. 'National Policy on Skill Development and Entrepreneurship 2015.' http://www.skilldevelopment.gov.in/National-Policy-2015.html

Figure 2.2: Organisational chart for skill development initiatives in India



Source: Own presentation.

While the idea itself is a move in the right direction, aggregating the vast range of existing initiatives will require dedicated manpower and time. Apart from the general understanding that the MSDE has been appointed as the official coordinating agency, there has been done very little on the ground – specific tasks allocated to the ministry are ambiguously worded. Its arrangements with the MHRD and the MoLE, as they currently stand, are also superficial. For example, if the MSDE has been crafted to be the apex VET ministry, then core departments such as the Directorate General of Employment & Training (DGE&T), which currently operates under the

MoLE, should be brought under the purview of the skill development ministry[15]. Further, the MSDE must develop a clear and detailed mechanism of coordinating with other central ministries who are engaged in VET.

In addition to incorporating VET departments under the MSDE, the ministry must address the supply-demand mismatch in the labour market discussed above. To do so, it must create a single all-encompassing inventory that houses information related to skill development. A systematic plugging of demand gaps requires updated data for various indicators such as the number of trainers, capacity of training institutions, and industry needs. Currently, the National Skills Development Agency is tasked with the creation of a national Labour Market Information System (LMIS)[16]. If the MSDE is responsible for skill development policy at the national level, then the portal must be housed under the umbrella ministry. This will allow the MSDE to design sound data-based policies and make effective mid-course corrections, if the need arises.

Any effective national skills strategy, however, requires active participation of the private sector at the policy design stage and the actual delivery of VET itself. Given the skills mismatch, the Indian government actively sought the participation of the private sector in determining the courses and curriculum offered in Indian VET institutions. The National Policy on Skill Development – predecessor to the recently crafted National Policy on Skill Development Entrepreneurship – was the first nationwide skilling policy introduced in 2009[17]. Since the outset, the policy focused on the participation of industry in the design, implementation and monitoring of VET policies. Under this policy, the National Skill Development Corporation (NSDC) was set up as the first Public Private Partnership (PPP) in the social sector to facilitate skill development. Its primary role is to incentivise the creation of for-profit private VET providers through two channels: (a) by providing funds such as grants and loans, and in some cases through financial incentive schemes like tax breaks; (b) by providing other support services like curriculum design and quality check mechanisms[18]. The NSDC is also responsible for the creation of sector skill councils – a vital platform for the industry to contribute in addressing the issue of skill gaps[19]. This is discussed in detail in the following section.

2.3 The current role of the private sector in skill development

The role of the private sector in skill development is one linked closely to the historical development of some of India's key sectors. The private sector has continuously filled the gap of demand and supply of skilled professionals, when government initiatives have either missed the mark or have been outdated in their standards. The private sector, which includes large corpo-

[15] Vivek, Kumar and Kapoor, Radhika. 'The nuts and bolts of skill development.' *The Hindu*. March 23, 2015. http://www.thehindu.com/opinion/op-ed/the-nuts-and-bolts-of-skill-development/article7020970.ece

[16] Ministry of Skill Development and Entrepreneurship. 'National Skill Development Agency.' http://www.skilldevelopment.gov.in/nationalskilldevelopmentagency.html

[17] FICCI and Ernst & Young. 'Knowledge paper on skill development in India: Learner first.' September 2012. Page 4. http://www.ey.com/Publication/vwLUAssets/FICCI_skill_report_2012_finalversion/$FILE/FICCI_skill_report_2012_finalversion_low_resolution.pdf

[18] National Skill Development Council. 'Our Role.' http://www.nsdcindia.org/our-role

[19] National Skill Development Council. 'An Approach Paper for Setting up a Sector Skill Council.' http://www.nsdcindia.org/sites/default/files/files/approach-paper-ssc.pdf

rations, for-profit institutions, voluntary organisations and NGOs, has been working in the field of skill development for some time, but the impact of these private sector efforts have only been evident in the recent past. Sporadic examples of skill development through the private sector are available, especially in fields like IT, but a concentrated effort in achieving national goals in skill development has not seen much involvement of the private sector, until very recently.

Until the 1970s, technical education and skills in India were primarily led by the few existing government institutions spread across the country. It was only with the emergence of IT companies such as Satyam, Infosys, Wipro, HCL and Tech Mahindra in the late 1970s and early 1980s that technical skill development shifted away from being a public endeavour to involve the private sector. The fast-changing environment of the IT sector created a demand of up-to-date skilled professionals that the few government institutions were not being able to provide. This gave impetus to the private sector to train and skill professionals to be able to meet the changing demand and remain ahead in the IT sector globally[20]. The workplace model, which has been a shining example of private sector penetration in skill development, has been the modus operandi for large corporations and continues to respond to market trends and requirements as quickly as possible.

The success of the IT sector in India and the efforts of the larger corporations in skill development led to the growth of other peripheral private training institutions that serve to fill any gaps that the workplace model is unable to fulfil. This growth, which can be termed as the 'independent institutional model', grew as an industry-linked phenomenon, though not directly owned or operated by the private sector. Similar workplace-based models and independent institutional models are present in other sectors than IT, but have not been able to be replicated in mainstream industry as yet.

The advantage of the private sector lies in its ability and need to respond to market trends, and its ability to adapt more quickly than government institutions. VET providers in India tend to grow as a consequence of advances in the respective industry and the type of employment involved. The private training institutes are usually ahead of the game by being able to provide modified courses or being able to change curriculum quickly.

Realising this advantage, it is only now that the Government of India has begun to infuse private sector knowledge and expertise into its larger skill development initiative. The National Skill Development Corporation, as discussed in the previous chapter, has now incorporated 33 Sector Skill Councils (SSCs) that bring together industrial bodies, industrial houses and government initiatives to formulate the skill training required for each sector and adequately respond to changing market trends and paradigms.

In recent years, the private sector has also played the role of extending government effort in skill development and training. This is why the government is actively seeking to instil the Public Private Partnership model to achieve skill development at a national scale. For example, the National Skill Development Corporation has been actively extending loans to the private sector for skill development training. Some of the NSDC's key initiatives vis-à-vis private sector participation are:

[20] Johri, S. and Kumar, P. 'Skill Development in India: Navigating the Labyrinth.' India and the Global Economy. Hudson Institute. March 25, 2014.

- Udaan[21]: The NSDC and the Ministry of Home Affairs have been mandated to work with the corporate sector to improve the employment and skill space of Jammu and Kashmir. Under the Special Industry Initiative of the Prime Minister, the programme targets Jammu and Kashmir youth for skill development in high growth sectors. Udaan is thus aiming to provide skills to approximately 40,000 students in the next five years.
- Skill Gap Studies[22]: One of the key realisations, brought on by private sector participation, is the need for skill gap studies and a research base for skilling. The NSDC, employing consulting firms and institutions, is trying to assess the geographical and sector-wise skill needs in various subjects.
- Sector Skill Councils: The 33 sector skill councils, made up of industry and government representatives, aim to complement the existing vocational education and training system for the industrial sector by providing a skilled labour force to any part of the value chain of the particular industry.
- Business Plan Competitions[23]: To encourage innovative and implementable business solutions as well as to engage the young entrepreneurs of India, the NSDC along with its corporate partners organises yearly competitions that attract business models and plans to develop and sustain skill development in India.
- Star Scheme: One of the efforts used by the NSDC and corporate partners is to incentivise skill development in India. The Star Scheme provides monetary rewards for completion of skill programmes at approved training centres. The scheme also aims to streamline the standardisation of skills and align training and certification to national standards as well as global, regional or domestic requirements. There are currently more than 40,000 students enrolled in the scheme from a geographical spread encompassing 16 states and 170 districts in India[24].

The NSDC's industrial partnerships also include initiatives like the Larsen & Toubro Construction Skills Training Institute, which imparts training in trades like carpentry, masonry and welding. NGOs such as the Self Employed Women's Association (SEWA) and the Karmika School of Construction Workers (KSCW) also provide similar training programmes. The private corporate and non-profit sectors are also engaged directly with government programmes such as the Hunar-Se-Rozgar programme of the Ministry of Tourism or the Aajeevika programme of the Ministry of Rural Development[25]. The private sector is instrumental in implementing these programmes and providing engagement with skill training providers. Industry associations are also actively responding to the activities of the NSDC – upgrading existing Industrial Technical Institutions (ITIs) as well as imparting skill and technical education in areas such as research and advocacy, monitoring and evaluation (M&E), awareness building and communication, support

[21] www.nscdudaan.com
[22] Johri, S. and Kumar, P. 'Skill Development in India: Navigating the Labyrinth.' India and the Global Economy. Hudson Institute. March 25, 2014.
[23] Partnering Government Ministries. National Skill Development Corporation Annual Report 2010–11.
[24] Standard Training and Assessment Reward Scheme. Centum Learning. http://www.centumlearning.com/standard-training-a-assessment-reward-star-scheme.html
[25] Johri, S. and Kumar, P. 'Skill Development in India: Navigating the Labyrinth.' India and the Global Economy. Hudson Institute. March 25, 2014

services and capacity development. It is important to note that out of the 10,000 ITIs in India, nearly 7,300 are private institutions[26].

2.4 What more can be done

While the NSDC and the private sector are making headway towards achieving the National Skill Objectives of the Indian government, the pace and scope of private sector involvement is still relatively slow and small respectively. While the private sector has targeted some key areas for skill development and training, mainstream sectors such the manufacturing sector, where skill development is greatly required, are still left untouched.

The aforementioned advantage of private sector involvement with regard to addressing market trends is also a disadvantage to the larger national skill development objective. Market trends and free market principles tend to dictate participation in sectors that are performing relatively well, but may at the same time ignore the requirements of those sectors that are vital to the economy. For example, as India shifts away from an agrarian economy towards a more industry/services-based economy, skills are required in areas such as construction, manufacturing and retail. Though some private sector efforts in addressing the skill gaps in these areas are being implemented, the pace of penetration of these efforts is still very slow. Moreover, only targeting market-trending sectors such as IT/ITES or hospitality tends to leave sectors that require large volumes of skilled workers – and are equally vital to the development of the economy – relatively ignored.

Table 2.2: Skill requirements per sector in India

Sector	Skills / Qualification	Yearly requirement in millions
Building, Construction & Real Estate Services	Minimally Educated	2.717
Health Care and Service Industry	Nurses	0.659
Organised Retail	Food & Grocery	0.626
Auto & Automotive Sector	Drivers	0.362
Food and Processing Sector	Bread & Bakery	0.322
Transportation, Logistics, Warehousing & Packaging	Warehouse Workers	0.317
Banking and Financial Service Sector	Sales & Marketing	0.235
Organised Retail	Consumer Durables, Home Appliances	0.199
Media and Entertainment Industry	Television and Films	0.195
Textile Industry	Sericulture	0.164

[26] 'The Concept.' National Association of Vocational Training Providers. FICCI Blog. FICCI. http://blog.ficci.com/initiatives/navtp/

Furniture and Furnishing	Stitching, Sewing, Stuffing, Threading	0.153
Education and Skill Development Sector	Teachers in School Education	0.149
Furniture and Furnishing II	Carpenters	0.135
Leather and Leather Goods Industry	Flaying and Curing	0.133
Food and Processing Sector	Meat & Poultry Processing	0.13

Source: Johri, S. and Kumar, P., Hudson-ORF 2014

As per the NSDC itself, the highest upcoming demand for skilled professionals in the industry sector will be in sub-sectors such as automobiles, textiles and food processing. In the service sector, the highest upcoming demand for skills will be in sub-sectors such as construction, transportation, hospitality, and banking and financial services.

It is estimated that by 2022 the demand for skilled labour will increase significantly, especially in sectors like construction, textiles, transportation and automobiles. The estimates suggest that a total of 282 million skilled workers, employed in various sectors, will be required by 2022[27], and as can be seen in Table 2.3 on incremental labour requirements, sectors such as IT/ITES and hospitality will not be as important as they are currently.

Table 2.3: Sector-wise skilling target

	Employment	Incremental Labour Requirements – 2022	Sector-wise Skilling Target (in millions)
Construction	44,283	84,906,006	84
Transportation & Storage	19,835	21,442,856	4
Auto & Auto Components	16,893	54,468,526	65
Textile & Clothing	15,024	31,048,625	48
Food Processing	7,907	19,158,421	10
Organised Retail	323	23,760,499	102
IT & ITES	1,024	4,960,093	86

Source: Johri, S. and Kumar, P., Hudson-ORF 2014

Just as the initiatives of the IT/ITES sector in the late 1980s and early 1990s were supported by the realisation that the IT sector would require a highly skilled workforce, a realisation of the importance of skilling workers in the sectors in the previous table is the key to achieving and sustaining economic growth in the country. Private sector involvement has to spread out to are-

[27] Srinvasan, S. 'Skill Development Initiatives in India.' ISAS Special Report. No. 15. July 2013. National University of Singapore.

as of industry which are not as market-friendly as some of the others and may not provide short-term or quick returns. Moreover, the private sector has to work in greater coordination with the government such that the private and public sectors are working to complement each other rather than working in isolation. The role of the private sector in skill development in India has to break away from simply supporting trending sectors to supporting sectors that are already vital or will become vital to the Indian economy. Furthermore, it would be to industrial sector advantage to push skilled development in areas where India does not already have a comparative advantage and thus can attract foreign direct investment (FDI). FDI is keenly attracted to areas such as construction, health care, finance, logistics, maritime, urban infrastructure, retail, hospitality and other such medium-skill sectors, areas in which India does not yet have a global presence.

The private sector, as outlined previously, does play an integral part in the skill development initiatives of the country but needs to do much more in order to make an impact on the national skill objectives. The advantage of private sector involvement is that it ensures reach, commitment and efficiency as well as transfers of technology and best practices, but this advantage needs to be spread out across sectors rather than be limited to a few. Moreover, the merits of private sector involvement –which include efficiency, diversity, cost effectiveness and accountability – are elements which are lacking in the government's own programmes. Additionally, the social taboos behind skills and vocational education can only be broken by demand generated from the private sector. The taboo of learning trades and vocations, as they are not regarded as suitable professions, can only be destroyed by the active participation of the private sector, employing skilled tradesmen and vocational workers. The common perception in India is that in the spectrum of professions, individuals should either aim for white-collar professions or remain in the agricultural sector. Skill professions, primarily because of their temporary/contractual tenure and low income generation, are considered somewhat taboo in Indian society and culture. While a large part of this stems from remnants of the caste system, in current generations it has more to do with low income viability of these professions rather than anything else. The government cannot by itself create attraction towards skills, trades and vocations and must bank on the attractiveness of industry, especially one which subscribes to skill development by which to break this archaic mentality.

The private sector's role in skill development in India will largely depend on the schemes and initiatives which the government can provide that act as incentives to India Inc. Imposing laws and regulations that make involvement compulsory in skill development programmes, without providing incentives to the industry, can and most likely will have negative results, wherein the private sector will push back against increased government intervention in their operations. Instead, if the government can add skill development as a part of existing laws, the positive perception it will generate could be instrumental in mainstreaming skill development in the private sector. For example, in Section 135 of the Companies Act of 2013, private sector firms above a certain threshold are required to invest a portion of their profits or revenues towards Corporate Social Responsibility (CSR). The mandated two per cent of net profits towards CSR operations is a compulsory activity. The bill also provides an exhaustive list of possible operations that a company can invest in, including public infrastructure, education and rehabilitation. If this list of activities mandated by the government could incorporate the use of workers from skill development centres, especially in blue-collar jobs, it would not only mainstream these professions by providing an avenue into the private sector but also satisfy the CSR requirements of these firms. It will also help firms, as they will be able to capture a portion of the workforce trained at an in-

ternationally accepted standard rather than having to train and educate such labourers themselves.

Similarly, adding skill development initiatives to the rehabilitation list provided in the Land Acquisition Relocation and Rehabilitation Act, which mandates 25 activities that companies buying large pieces of land in the country must provide to the displaced local population, could be equally mutually beneficial. It would provide companies an avenue of training workers in a livelihood skill in lieu of one or two of the rehabilitation mandates. It will provide those displaced alternative professions and technical skill that can be used to generate livelihood outside of agriculture. The law could also add that one member of each family that has been displaced be given a job in the company post completion of a skill development training programme, again helping mainstream skill development and vocational education.

But the most important policy initiative that India can institute to involve the private sector is the German apprenticeship model. Germany's education programme gives high importance to vocational training and skill development, offering a parallel stream for students who are not as interested in higher academic pursuits. By the age of 16 to 18, students are offered opportunities to learn trades directly with companies. If accepted into the programme, students are trained by domestic companies for a period of two to three years while being provided with taxpayer subsidised education, designed to fulfil industry needs[28]. After the training period, most students are offered jobs within the company but are also suited to apply these skills in other companies within the same sector. Standardisation in training and education across sectors allows interoperability in different verticals within a specific sector.

For India to be able to employ this model, a few preconditions will have to be met. First and most importantly, the government will have to convince Indian companies to provide training to students within their own operations. To do this, incentives like subsidies or waivers for certain legal mandates will need to be provided to compensate for any losses a company may incur. Second, vocational education to be provided to such students alongside the training programme will have to be of an industry-accepted standard. For this, vocational education programmes, TVETs, skill development institutions and training centres will have to consult with industry partners on a regular basis, especially to incorporate changes in technology and practices. The design of training programmes that are not cognizant of changing technologies and practices will result in skills remaining outdated and thus unemployable. Moreover, international standardisation should be enforced in these programmes so as to allow students to operate not only in India but also in similar sectors globally.

This model can be a mutually beneficial programme for all three stakeholders involved. For the students, especially the large young workforce India is adding every month, the model will provide market-based, demand-driven technical skills that will help increase the employability of the population. The model also helps the private sector by providing a large labour force that is not only industry-ready but has been trained by industry experts at an internationally accepted industry standard. Finally, for the government it will alleviate the burden of providing education to all students, reduce unemployment and help in achieving the demographic dividend.

[28] Sorensen, C. 'How the German Style of Apprenticeships could be a Model for Canada.' Maclean's. February 4, 2014. http://www.macleans.ca/work/how-the-german-style-of-apprenticeships-could-be-a-model-for-canada/

Prior to implementing any policy to involve the private sector in skill development, the social taboo surrounding skill development and vocational education in India must be dismantled. Even today with the burgeoning demographics, skill development and vocational education are considered last resorts in terms of education and professions. A social taboo still exists, with such streams of education and professions arising out of these skills regarded as low-end. In fact, youth in the country are less likely to choose blue-collar professions such as carpentry, auto-mechanics or plumbing than low-paying agricultural activities because of the social stigma. It is thus crucial for any government serious about expanding the skill development programme to help societies and communities break from this archaic notion.

The importance of skill development in India cannot be understated. The 12 million annual entrants into the workforce require high-standard skills and vocations to be functioning members of the economy. While skill development must remain an overall government objective, the involvement of the private sector, especially in a country like India, is paramount. Such involvement will help make skill development a part of mainstream education and offer a large section of society an alternate avenue towards a robust livelihood and sustainable economic participation. For India to be able to capture its demographic dividend, private sector involvement at a far more enhanced level than current standards has to be initiated immediately.

3 The Republic of Korea

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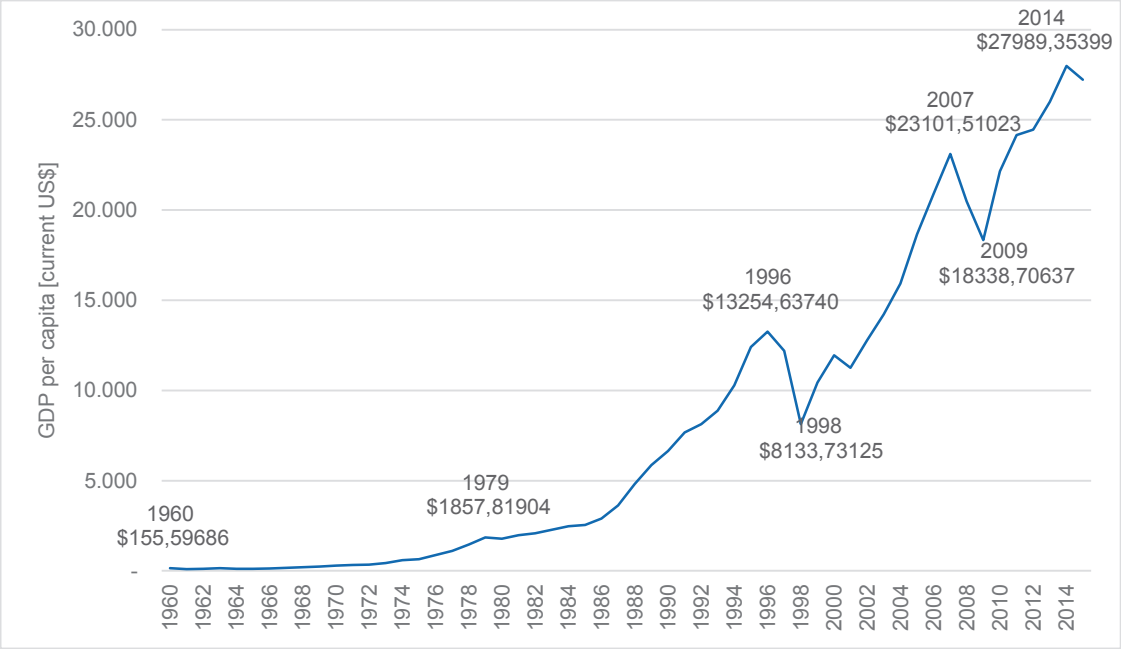
3.1 Introduction

3.1.1 Economic Development

At the time of the foundation of the Republic of Korea in 1945, the peninsula was an agricultural country. In the 1960s the government set up a new economic growth plan for a systematical growth of industry. Once one of the poorest nations of the world, Korea has developed to an industrialised country which is one of the OECD member countries. National income per capita grew 299-fold from USD 67 in 1953 to USD 20,045 in 2007. The rate of economic growth also continuously increased with average growth of 6.8% except for the three upheavals of 1956, 1980 (oil crisis) and 1998 (financial crisis). GDP increased from USD 13 million in 1953 to USD 9,699 million in 2007 (Statistics Korea)[29].

Figure 3.1: Economic development of the Republic of Korea



Source: The Worldbank (2016)[30]

Korean economy has been built on high export activities. Due to the lack of natural resources for industrial development, the manufacturing industry was very strongly present in electronics, automobile and semiconductor industries. To speed up the economic growth the government supported only a few innovative industrial sectors in the past. This is why 'Chaebols' as big con-

[29] http://www.kostat.go.kr/portal/korea/kor_nw/2/1/index.board?bmode=read&aSeq=60300
[30] http://data.worldbank.org/indicator/NY.GDP.PCAP.CD?locations=KR

glomerates have such a dominant economic role within the Korean society today. The main export countries for the Republic of Korea are China, the USA, Japan, Taiwan, Germany, Great Britain, Indonesia and Malaysia. While light service industries like accommodation and food etc. are widespread, the knowledge-based services like finance or business consulting etc. are still in development. Current Korean economy is not growing as fast as in the 1990s. Economic growth has decreased from 4.3% to 3.2% in 2015 due to shrinking private consumption and export. One of the reasons is the structural problem of lacking innovations for continuous growth.

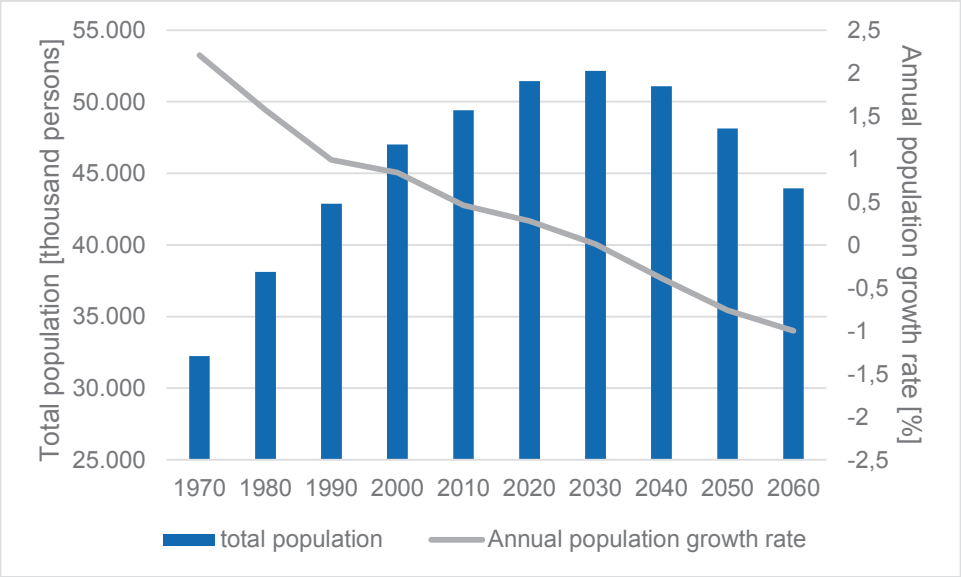
Besides the increase of youth unemployment and labour supply of elderly even after retirement age, Korea has been facing new challenges to master its demographic decrease at the same time. The priorities of the new reform agenda are thus aimed at the stabilisation of economic growth and productivity, at innovation to boost private consumption and at a labour market reform for job preservation.

3.1.2 Demographic development

The total population of the Republic of Korea was about 50.6 million in 2015 (Statistics Korea). A total population of over 40 million had been achieved in 1984, the population growth had slowed down to 45 million in 1997. Statistics Korea expects a continuous decline of population after retiring of the 'baby boomer generation' until 2030 with the consequence of a population decrease down to 42.34 million in 2050[31]. While the birth rate in the 1960s was six children per woman on average, it abruptly dwindled to 2.08 children in 1982 after the adopting of birth control by the government. Stronger participation of women in the labour market, uncertainty of employment and deficient child care have led to a further drop of the birth rate, with 1.24 child per woman in 2015[32]. At the same time, Korea is going to be an ageing society in 2019 with more than 7% elderly in relation to the total population and to a super-aged society in 2060 with more than 20% elderly over 65 years. Due to the increase of the average life expectancy of up to 82.4 years in 2014 (78.99 years for men and 85.48 years for women[33]), the welfare expenses will ascend enormously during the next decades.

[31] www.statistic.go.kr population
[32] Statistics Korea, statistics of birth and death in 2015, p. 4, http://www.index.go.kr/search/search.jsp
[33] Statistics Korea, life expectancy 2014 http://www.index.go.kr/potal/enaraIdx/idxField/userPageCh.do?idx_cd=2927

Figure 3.2: Total population and population growth (1970–2060), Statistics Korea (in 1,000 persons and %)



Statistics Korea (2016)[34], Projection: Medium-growth

3.1.3 Offer and demand for skilled workers

During the economic boom from the 1980s to the mid-1990s, the supply and demand of skilled workers was balanced all in all. During the 1980s the government supported school-based vocational education in upper secondary high school in order to train technical and commercial workers for the fast-growing industrial economy for export. This recruitment practice, however, changed in the 1990s because of two main reasons: firstly, the expansion of college and university education due to the introduction of a lifelong vocational education system proposed by the Presidential Commission for Education Reform (PCER) in 1996. As a consequence the student enrolment in junior colleges escalated up to 300% from 1990 to 2000, i.e. the proportion of students rose from 323,825 to 913,275 (Go, Hye Won, et al. 2011, p. 9 f.), many of them from vocational high schools. The transition rate of students to higher education rose from 33.2% in 1990 to 79.0% in 2008. As a result, the percentage of workers with a completed college education rose from 6.7% in 1980 to 38.9% in 2010. Many young people preferred to study humanities or non-technical subjects because studying scientific or technical subjects was often associated with precarious job perspectives with a low income and difficult career paths. Graduates of higher education have been avoiding jobs at small and medium enterprises because of insufficient working conditions.

Exceeding numbers of graduates from colleges and universities by decreasing workforce at middle level qualification has particularly led to a shortage of skilled workforce in SMEs. ‘Today, a large majority of high schools graduates tend to go on to tertiary education rather than enter

34 http://kostat.go.kr/portal/english/news/1/9/index.board?bmode=download&bSeq=&aSeq=253456&ord=2

the labour market.' (Go Hye won et al. 2011, p. 9 f.). Since 2000, the unemployment rate among young people with university and college degrees is going up twice as fast as the overall unemployment rate. Since the introduction of the 'Employment Permit System' in Korea in 2004, enterprises have recruited foreign workers outside Korea. In 2012, 480,000 foreigners were employed in Korean companies, 84,000 of them in small firms (Go Hye Won 2011, p. 10). It is a widely held view among policy-makers, employers and academics in Korea that there is a mismatch between the attributes of graduates from education and from training programmes (e.g. Kim, Woo, Ryu and Oh 2011; Joo 2007; Kim, Kim and Choi 2011).

Table 3.1: Employment in Korea (in 1,000 persons and %)

year	population at working age	working popula-tion	em-ployed	unem-ployed	econ. inactive population	participa-tion rate	Employ-ment rate	unem-ployment rate
2009	40,092	24,394	23,506	889	15,698	60.8	58.6	3.6
2010	40,590	24,749	23,829	920	15,841	61.0	58.7	3.7
2011	41,052	25,099	24,244	855	15,953	61.1	59.1	3.4
2012	41,582	25,501	24,681	820	16,081	61.3	59.4	3.2

Source: Statistics Korea 2015

Choi Young Real of KRIVET suggested that youth unemployment is related to the opinion of generalised social mind[35]: First, youths have unrealistic expectations of working conditions. While large conglomerates are unable to accommodate the excess number of juvenile job seekers, shortage of labour still continues in SMEs because of differences in wages, working hours, welfare conditions, etc. Second, family tradition is a critical element for youth. The youth's dependence on their family is excessive. Choi thinks that the tradition of depending on one's family is a major element that affects unemployment in Korea. Third, there is a lack of personal preparation for employment among job seekers. Since the civil-service career paths have been opened for all ages of population by just passing the exam, the number of candidates has risen year by year with an increasing competition between them because many people in Korea tend to prefer financial and job security with regular working hours and holidays.

3.1.4 Education level of the population

The average education level of Koreans is relatively high. A key factor in Korea's economic development, however, has been the high investment willingness for education by common people. Public expenditure on education reaches a GDP percentage of 7% (OECD average: 5.7%), even though private investment for education amounts to more than half of the total expenditure for schools, and tertiary institutions charge tuition fees. The characteristics of Korean education

[35] Choi, Young Real (2005), Case Study – Korea: Vocational Education and Training, VET, for the Youth – Sustainable Economic Growth and Youth Employment: Prospect in Korea. http://docplayer.net/8357563-Vocational-education-and-training-vet-for-the-youth-sustainable-economic-growth-and-youth-employment-prospect-in-korea.html

can be described as follows: high ambitions of parents combined with high expectations of income, bound with social status and job security. There is also a substantial private sector at all levels of the education system, like the Hagwon (private education institutes) which originally have established to compensate for school education of the students. More and more these institutions have a role of competitors to the public school system in Korea.

Accompanied by high interest of parents and Korean society, the success in formal education has taken a very important role for young people. Today, university and college graduation can be seen as a minimum standard for the entry into the first labour market for young people. Families thus take high financial burdens to invest into the education of their children.

Since universities and colleges had been opened for all young people who passed a general entry exam, a university degree has become a generalised phenomenon which is necessary to start working, i.e. to enter the labour market. To get a better job, many young people prefer to study at universities with higher ranking and reputation.

Table 3.2: Overview of working population at each education level, July 2015 (in 1,000)

Education level	2015.07							
	15 years and over	econom. active population	employed persons	unemployed persons	econom. inactive population	participation rate %	unemployed %	employed %
Total	43.055	27.303	26.305	998	15.751	63.4	3.7	61.1
Elementary School	5.843	2.331	2.279	52	3.512	39.9	2.2	39.0
Middle School	5.618	2.277	2.217	60	3.341	40.5	2.6	39.5
High School	16.424	10.844	10.366	478	5.580	66.0	4.4	63.1
Tertiary Level	15.170	11.851	11.442	409	3.319	78.1	3.5	75.4
College	4.451	3.504	3.372	133	946	78.7	3.8	75.8
University	10.720	8.347	8.071	276	2.373	77.9	3.3	75.3

Source: Statistics Korea 2015

The above table shows an overview of the education level of Koreans. The participation and completion rates at all levels of formal education are high. The percentage of 25- to 29-year-olds with upper secondary education is 94% (OECD average: 72%). Korea scored high in the first results of the OECD Programme for International Student Assessment (PISA), including the highest mean scores among OECD countries for scientific literacy. Currently, the Ministry of Education realises an education reform at tertiary level with a higher skill formation due to the demographical change after 2020.

3.1.5 The role of small and medium enterprises (SMEs)

Until the 1960s, the employment rate and production efficiency in SMEs was very low. Between the 1960s and 1980s, the small and medium enterprises in Korea had a supporting role of several companies in key export industries like chemical and heavy industries, which were primarily supported by the state for a fast emerging economic growth of the country. By delivering industrial components for big export companies, the Korean SMEs could consolidate and enlarge their position within the economy. The share of SMEs amounts to 97% of total enterprises in Korea and the employment rate to 85% of all employees. While big companies reduced their labour force during the financial crisis in 1997, SMEs absorbed the unemployed persons and tried to grow with new strategies like restructuring the organisation, strengthening the use of information and communication technology, launching of new products on the export market, e-business, etc. (Kim, Eun-Hyang 2013, p. 8)[36].

Since 2010, the economic growth of big conglomerates has decelerated because of the rising competition on the world market. The new government policy aims to strengthen the SMEs' activities for more employment and innovation development, reflecting the role model of 'hidden champions'.

Table 3.3: Employees in manufacturing SMEs in 2012

Production sector	Employees	2012		
		number of companies	jur. persons %	private %
Manufacturing	Total	109,779	70.8	29.2
	5–9 persons	54,386	60.2	39.8
	10–19 persons	29,369	72.0	28.0
	20–49 persons	18,801	89.9	10.1
	50–99 persons	4,709	96.9	3.1
	100–199 persons	1,989	95.9	4.1
	200–299 persons	525	99.8	0.2
	small companies	102,556	69.0	31.0
	medium companies	7,223	96.9	3.1

Source: Small and Medium Business Administration (SMBA)[37]

According to the statistics of the Small and Medium Business Administration in Korea, there were 2,707,805 SMEs existing in the year 2000, that is 99.2% of all companies registered, and 3,351,404 (99.9%) in 2012. They comprised 2,442,787 (89.5%) small enterprises in 2000, but

[36] Kim, Eun-Hyang (2013): Studie über den Entwicklungsprozess der koreanischen SMEs, Dong-Shin University, Dissertation, Korea National Library. http://dlps.nanet.go.kr/DlibViewer.do?cn=KDMT1201409639&sysid=nhn

[37] http://220.71.4.163:8000/statHtml/statHtml.do?orgId=142&tblId=DT_C40010#

this figure moderately reduced to 2,918,595 (87.0%) in 2012. The rate of companies owned by females was 34.7% in 2000 and rose up to 39.0% or 1,305,967 companies, respectively. Employees of SMEs were 8,680,694 persons (80.6%) in 2000 and increased to 13,059,372 persons (87.7%) in 2012. However, the rate of employees in small enterprises was 43.9% of all people working in SMEs in 2000, it went down to 38.1% in 2012. The main field of Korean SMEs is the manufacturing of industrial goods. SMEs in the production area were 97,393 in 2000 and almost 115,500 in 2012. Also, the employment increased from 1,962,908 in 2000 to 2,363,961 in 2012. But the rate of production was only 47.4% in 2000 and decreased to 45.7% in 2012.
However, the potential for the expansion of productivity has been 'limited by persistent structural problems, such as a lagging service sector and weak small and medium-sized enterprises (SMEs), reflecting the traditional growth strategy centered on exports by large chaebol companies' (OECD Economy Outlook 2012). The OECD recommended lately that Korean SMEs must promote more innovations and narrow the productivity gaps between manufacturing and services, as well as between large firms and SMEs, which account for 87% of total employment, but only half the productivity of the whole Korean economy.

A new paradigm, the 'creative economy', was introduced when the presidential legislative under Park Geun-hye had been established in 2013. Venture businesses and their sustaining growth would enable SMEs to play an important role for economic growth. In this view, the 'hidden champions' of German enterprises should be a role model for Korean SMEs. These companies are small, but have innovative ideas and products to fill market niches and to become very successful as global players.

3.2 Structure of the VET system

3.2.1 Historical development of the VET system

The vocational education and training system had and still has a very important role in the history of Korea. During the industrialisation between the 1970s and the beginning of the 1990s, the VET system had contributed to supply workforce for crucial economic growth. The Korean Educational Development Institute divides the history of the Korean VET system into four stages, from the establishment of the Republic of Korea in 1945 up to the present day, as follows:

Foundation period of the VET system after World War II: 1945–1960

After the liberation of Korea from Japanese colonialism in 1945, the Korean War between 1950 and 1953, and the circumstances of the division of the territory into two parts, the peninsula suffered an economic disaster. Vocational and technical training were provided by industrial primary schools, vocational high schools, and industrial technology training centres in sixth months terms. The first law to establish vocational training in Korea was the Labour Standards Law announced in May 1953. The Labour Standards Law's regulations on 'fostering technicians' didn't stimulate vocational training. A group of industrial companies educated and trained the personnel needed in 11 industries including the electrical, heavy chemical, machine, shipbuilding, welding, and plumbing industries. This period can be seen as the birth of the modern vocational training system.

Export oriented industrialisation and period of rapid growth of economy: 1961–1981

From the beginning of the 1960s, the industrialisation was effected by a five-years economic development plan of the government. Economic growth was based on labour-intensive light industry like footwear, clothing, wigs, etc. In 1967, the Vocational Training Law was drafted which had been prosecuted separately from the Labour Standards Law and the Industrial Education Promotion Law. In the 1970s, the government promoted the capital-intensive Heavy-Chemical Industry Drive. With the implementation of the government's industrial policy, vocational training was in effect and contributed to a dramatic growth of economy, due to the boom of heavy and chemical industries, and the export of construction workforce to the Middle East. The government drafted a Special Measures Law in December 1974 in order to supply further workforce in core industries and to promote vocational training at workplace. The Vocational Training Law drafted in 1967 was integrated into the Basic Law on Vocational Training. The law introduced a training levy system, in case employers didn't conduct training.

Restructuring period of economy: 1982–1996

After shifting from technology-intensive industries to knowledge-based industries in the 1980s, advanced products like automobiles, semiconductors, and telecommunication devices were launched on the leading markets, as well as financing and service industries extended. The rapid growth of economy continued. GDP per capita exceeded USD 10,000 in 1995, and Korea joined the OECD. Vocational training in this period expanded, too. First, the Human Resources Development Service of Korea (HRD Korea) was founded in this context as a subsidy of the Korean Ministry of Employment and Labor. It provides vocational training, employment services, skills testing, human resource registration management, and job study. Second, the Korea University of Technology and Education (KUTE) was established in 1992 for educating vocational training instructors. Third, an employment insurance system was implemented in July 1995 to bridge a gap of subsistence for unemployed workers.

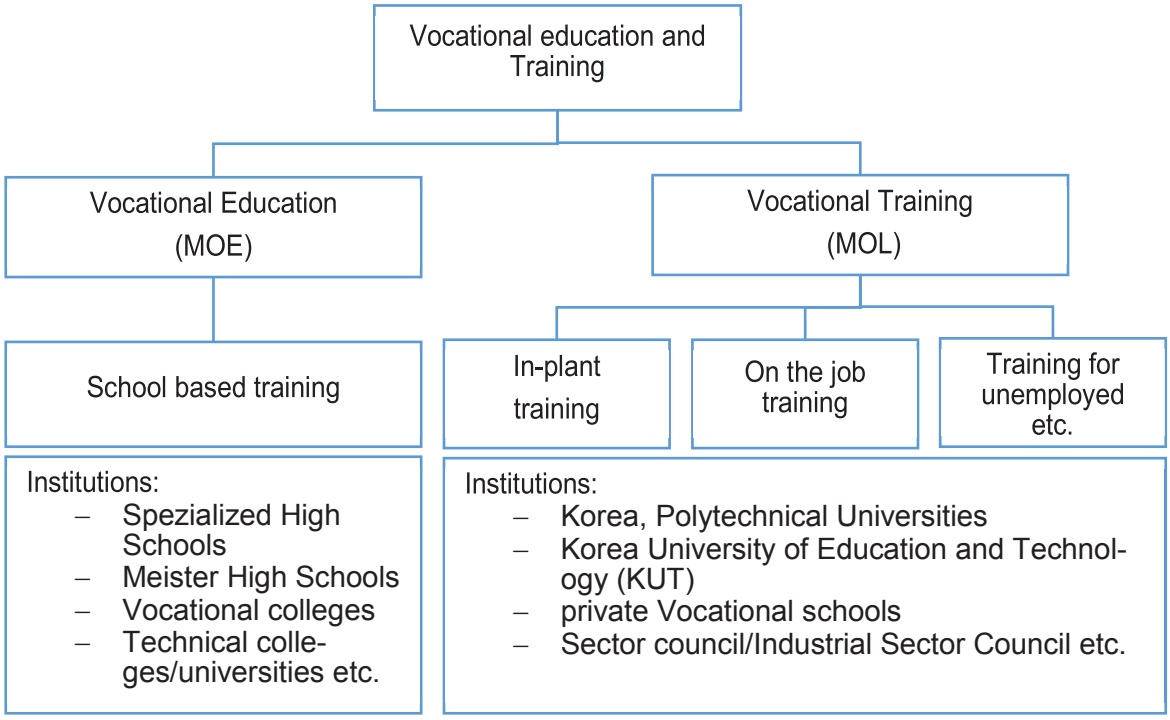
Period of VET paradigm: 1997 to present

Korea underwent a big financial crisis in 1997 while companies experienced extensive restructuring, and it caused massive layoffs of workforce. After restructuring the economy, the labour market became more flexible. As a result, the core industries like electronics, semiconductors, IT, shipbuilding, and automobiles could demonstrate their competitiveness in the world market. The Vocational Training Promotion Act for workers was introduced in 1999 as a response to the changes of the economic environment. It should shift the emphasis of training from the fostering of technicians to helping people develop skills for lifelong occupations. The training market was liberalised. This means that all VET institutions could supply trainings, whether profit-seeking or non-profit-making, whether corporations or individuals. Before introducing the new Vocational Training Promotion Act, supply of vocational trainings had only been allowed to nonprofit organisations approved by the Ministry of Labour. For a systematic skills development over the whole working life of individuals, the Workers Vocational Skills Development Act was drafted in 2004 (KEDI A 2009, pp. 22–27).[38]

[38] Korea Education Development Institute (2009), Understanding Korean Educational Policy, Vol. 5, Vocational Education and Training in the Process of Industrialisation.

3.2.2 Legal framework / governance

Figure 3.3: Legal framework and governance of vocational education and training in Korea



Source: designed by the author

The governance of the legal framework for vocational education and training is carried out by two ministries. The Ministry of Education is responsible for the vocational education part, i.e. for school-based learning in upper secondary schools, colleges and universities. The Ministry of Employment and Labor is responsible for all vocational trainings outside the authorities of the Ministry of Education, like lifelong learning, vocational trainings for employees and unemployed, and work-based trainings. The first one is in charge of financial distribution, the management, and the coordination of vocational training.

3.2.3 VET institutions

Vocational education and training in Korea can be divided, according to the 'Employment Insurance Act', into public and private vocational training institutions (The Ministry of Education 2012, p. 62 f.)[39].

There are three public training institutions: the Human Resources Development Service of Korea (originally called the Korea Vocational Training Management Agency, established in 1982, abbreviated as HRD Korea), Korea Polytechnics (polytechnic colleges), and the Human Re-

[39] The Ministry of Employment and Labor (2012), 2011 Modularization of Korea's Development Experience: Vocational Training System for a Skilled Workforce.

sources Development Office of the Korea Chamber of Commerce and Industry (KCCI) as the joint vocational training institute of a privately organised employers' association. The first two of them are financed by the Ministry of Employment and Labor, the last one through vocational training levies. The main function of HRD Korea consists of the adjustment and management of vocational training activities in Korea. HRD Korea is in charge of skill testing, management of public vocational facilities like training courses, curriculum composition, operation methods, as well as the support of public and private training, in-plant skills development, distance training, etc. Korea Polytechnics offers two-year multi-skilled engineer courses and one-year craftsman courses at its nearly 40 campuses. It has three groups of major training departments: machinery, automation and architecture. The Human Resources Development Office of the Korean Chamber of Commerce and Industry (KCCI) offers training courses in electricity, electronics, architecture and green technology.

Furthermore, the Korea Research Institute for Vocational Education and Training is in charge of research and development of national vocational education and training matters.

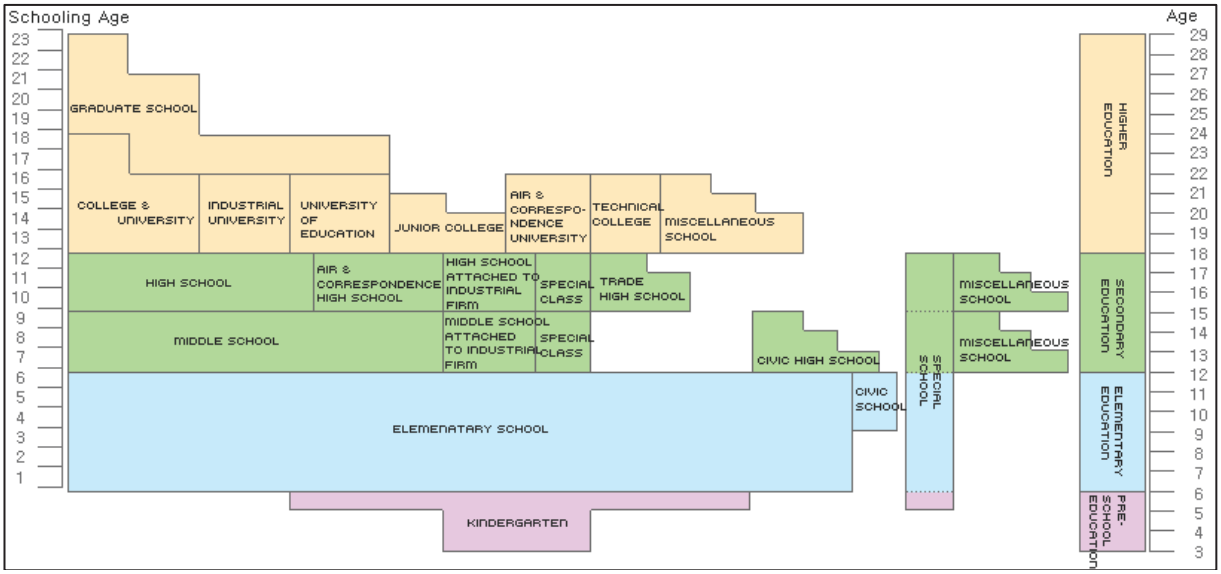
Private vocational training can be divided into three branches, too. First, in-plant vocational training is conducted by employers according to their option in the Basic Vocational Training Act. Second, authorised private vocational training facilities as per the Basic Vocational Act in 1976. The rate of these training institutions is 7.7–25.6% of total training facilities. They often offer vocational trainings in trades like transport, construction, information processing, electronics and communication (MOEL 2012, pp. 62–65). Both public and private training institutions offer vocational trainings for the unemployed, according to article 4 of the Workforce Development and Training Act.

Nowadays, the main purpose of vocational education and training is to improve the employment opportunities for job seekers and to strengthen the employability of already employed persons. There were 6,896 training institutions in 2010, 7,014 in 2011 and 5,275 in June 2012.[40]

[40] Anti-corruption & civil rights commission (2012), Report on Logical improvement for cancellation of accredited VET institutions, Dpt. of Social improvement, Oct. 2012.

3.2.4 Embeddedness of VET in the general education system

Figure 3.4: The current school system. Understanding Korean Education, Vol. 5. Education and Korea's development



Source: KEDI 2007, p. 11

The school system has been developed to include four basic school ladders: six years of elementary education, three years of middle school education, another three years of high school education, and four years of higher education.

Educational development by stages:

- 1945–1960: Reconstruction and enrolment expansion of elementary education
- 1961–1980: Quantitative growth of secondary education, and development of technical and vocational education and training (TVET)
- 1981–2000: Qualitative improvement of education and expansion of opportunities for higher education
- 2001–present: Development of human resources to bolster the transition into a knowledge-based society (restructuring educational institutions)[41]

The vocational education and training system is embedded in the level of upper secondary high school (as vocational high schools) and in colleges at tertiary level, comprising 2–3 years. These are in the responsibility of the Ministry of Education. Vocational high schools are differentiated in the categories technics, commerce, agriculture, marine, and home economics. However, the vocational high schools are now changing into specialised high schools[42] and Meister

[41] The World Bank (2000), Republic of Korea: Transition to a Knowledge-based Economy, Report No. 20346-KO. pp. 38–59.

[42] 494 specialised high schools existing in 2014 (Ministry of Education 2015) http://www.moe.go.kr/web/100012/ko/board/view.do?bbsId=316&boardSeq=47997

high schools[43], which offer subjects like animation, electronics, car manufacturing, machining, hair styling, cooking, printing media, automation, design, etc., determined by the schools. Additionally, there are vocational education and training institutes funded by the Ministry of Employment and Labor, like Korea Universities of Education and Technology, and Korea Polytechnic Colleges. Particularly, Korea Polytechnic Colleges were established with the purpose to qualify young people through work-based trainings and thus practice-oriented. There are nine colleges with 34 campuses in Korea. Polytech could show a positive result in 2014 that unemployed young people from universities found a job after the completion of training offered by Polytech Colleges. The employment rate of graduates of Polytech Colleges was 85.5% in 2014, 20% more than the rate of graduates of specialised colleges.[44]

Future challenges will be to strengthen the nation's competitiveness in the international market and realigning the educational system in order to meet the requirements of human resource development (KEDI 2009, pp. 24–26).

3.2.5 Length of training, number of occupations, entry conditions, etc.

One of the special characteristics of vocational education and training in Korea is that most courses are state-funded under the name of 'Employment Insurance System (EIS)'. Employed persons in enterprises have more advantages by joining the trainings than unemployed persons. The EIS finances trainings for employees, particularly to support learning organisations of SMEs, to improve core job competencies and to train in a work-based environment.

The current regulation for vocational education and training prescribes that the following institutions can offer training courses:

- training institutes or legalised bodies corresponding to the Workforce Development and Training Act,
- education institutes corresponding to the Higher Education Act,
- lifelong learning institutes corresponding to the Lifelong Education Act,
- private educational institutes which are legally entitled to give private lessons,
- employer-owned or legitimised HRD facilities belonging to employers' associations, and
- other facilities regulated by law.

The public vocational trainings are 1 year and longer, private vocational trainings like in-plant trainings are short-term trainings which can vary between 3 and 36 months (Young, sun Ra 1987).

The technical qualifications regulated by the state consist of[45]:

- 198 qualifications for skilled workers with initial training, no entry condition,

[43] 36 Meister high schools existing in 2014 (Ministry of Education 2015)http://www.moe.go.kr/web/110501/ko/board/view.do?bbsId=348&boardSeq=57860

[44] YTN Radio, Interview report 20.08.2015 http://radio.ytn.co.kr/program/?f=2&id=37795&s_mcd=0206&s_hcd=15

[45] Q-net http://www.q-net.or.kr/main.jsp

- 125 qualifications for skilled workers with the entry condition of a qualification adequate to engineers of technical colleges,
- 112 qualifications for skilled workers with the entry condition of a qualification adequate to engineers with a graduation of technical colleges and at least 1 year working experience,
- 28 qualifications for master craftsmen with the entry condition of a qualification adequate to initial vocational training and at least 5 years working experience, and
- 89 qualifications for consultant engineers with a graduation of technical universities and at least 5 years working experience.
- Qualifications for service occupations are as follows:
- 18 professional administration qualifications, and
- 16 basic administration qualifications.

The administration of qualifications for technical occupations and professional administration is carried out by the Human Resources Development Service of Korea (HRD Korea) and the Korean Institute of Nuclear Safety.http://license.kins.re.kr/ Basic administration qualifications are managed by the Korea Chamber of Commerce:

- HRD Korea: 565 qualifications (549 technical qualifications and 16 qualifications for professional administration)[46],
- Korea Chamber of Commerce: 18 basic administration qualifications and 2 qualifications for e-commerce administration,
- Korea Institute of Nuclear Safety: 3 qualifications (nuclear development consultant engineer, nuclear engineer, radiation consultant engineer).

Furthermore, the Korea Research Institute for Vocational Education and Training (KRIVET) is responsible for the evaluation of 17,000 qualifications self-regulated by associations and educational establishments.[47]

3.2.6 Share of secondary students in VET

Vocational education in Korea begins at first with the entry into the upper secondary level. It is organised school-based, and controlled as well as financed by the Ministry of Education. Currently, the government promotes the performance-based education instead of the former theory-concentrated lessons at schools in general, due to the mismatch between the demand of industries and the supply of education for the young generation after leaving school. The vocational high schools in Korea can be subdivided into three types: Meister high schools, specialised high schools, and comprehensive high schools.

Meister high schools were established in 2009 to supply skilled workforce for the high technology sector. The practical part of lessons, combined with training opportunities at enterprises by contract, should ease the transition from school to industry due to a school-industry cooperation. As of April 2013, there were 34 Meister high schools with 15,728 students (0.83% of total high school students nationwide). The figure of Meister high schools is related to the 1.46% of total high schools in Korea.

[46] Information system for technical qualifications are given by HRD Korea (http://www.hrd.go.kr).
[47] http://www.pqi.or.kr/inf/qul/infQulList.do

Specialised high schools originally developed from vocational high schools which were divided into technics, commerce, marine, agriculture and home economics, as mentioned before. When the specialised high schools were introduced in 1996, the Ministry of Education intended to liberalise the curricula of vocational high schools in order to enlarge practical learning of curricula managed at school by fostering school-industry cooperation, etc.[48] Currently, the new reform of vocational education, based on National Competency Standards, causes additional challenges for vocational high schools. In April 2013, there were 470 specialised high schools including comprehensive high schools, which is a combination of general and vocational high school. This type of school offers both curricula. One year after school entry, students can select between the specialised vocational education track or the general education track. After the division, students of the vocational track participate in similar curricula as in specialised high schools. The number of comprehensive high schools was 109 (4.69% of total high schools) with 30,321 students (64,084 in total), which relates to 3.38% of total high school students.[49]

3.2.7 Labour market perspectives of VET graduates

After the 1980s, the Korean government gave particular advantages to graduates of vocational high schools in order to keep the social demand on vocational high schools. Therefore, young people could enter universities with a quota system for the vocational track. In 1996, specialised high schools were established because of the government policy to meet the industrial requirements and to grant more opportunities for the transition of graduates into the labour market. To sophisticate the value of specialised high schools, the Ministry of Education selected 20 of them to become Meister high schools. This enabled the Ministry of Education to strengthen the relationship between industry, regional administration and vocational high schools, and it customised the vocational education with the demand of industry. All students were granted the right to demand a place at school dormitory and a fellowship, furthermore a job as a skilled worker right after the graduation. The following feature shows some figures to compare between further entry to higher education and employment of graduates from different high schools in contrast.

3.2.8 Lifelong learning opportunities / further education

To improve the quality of lifelong learning, the Ministry of Education has encouraged specific policy measures to promote lifelong education on the basis of the formal educational system. Many universities established ‘Lifelong Learning Centres’ which offer many courses for learning in order to receive credit points of lifelong learning. There are also cyber and open universities which offer the possibility of distance learning[50]. Furthermore, private institutes offer different

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48 Brings, C.(2012): Berufliche Kompetenzbildung durch institutionelle Kooperation? Eine vergleichende Analyse der Berufsausbildungssysteme Deutschlands und Koreas mit einem besonderen Fokus auf die Struktur, Organisation und Gestaltung der Lernorte. Practice based learning for building of competency? A comparison of German dual vocational training system and Korean school based vocational education system in view of their structure, management, practical learning. In German.

49 The Ministry of Education (2013): A guide for Meister high school, Specialised high school, Comprehensive high school.

50 The Ministry of Education (2002, 2004). Kong Kyo Yuk Jindan mit Naesilhwa Daechak (Diagnosis of Public Education and Measures for Improvement). Kong Kyo Yuk Jeong Sang Hwa reul wihan Sa Kyo

courses for adults to improve their professional skills and to access working licences for assisting jobs, like nursing assistance, elderly care, truck driving, cooking, etc.

3.3 Private sector involvement

3.3.1 Demand of companies for VET / university graduates

Due to rapid changes in technologies, the pace of the introduction of new innovations has increased. To survive on the world market, innovative ideas for more productivity as well as investments into human resource development gain more importance for the success of enterprises. From this point of view, not only the demand for higher qualified experts but also the expectations regarding the quality of skills have ascended. Even though Korea has well-educated tertiary graduates, in strategic industry fields there is an increasing need for personnel in specific creative fields, in the service sector or in strategic industries.

For several years, Korea has been facing a decline of economic growth and the employment has been decreasing respectively. By altering the employment structure and improving the effectiveness of production processes, enterprises prefer to employ more experienced people than young graduates from the VET systems or universities.

Most university graduates prefer jobs in large conglomerates. But big enterprises cannot create more jobs than their own labour demand. At the same time, young people avoid to work in SMEs due to precarious working conditions. To solve the decline of manpower, SMEs prefer to employ experienced workers. At present, the Ministry of Employment and Labor promotes vocational education at high school and college level to meet the demand of human resources in SMEs.

Table 3.4: Recruiting status of companies on graduates from formal education in 2014

	Schools Total	Graduates Total	Employment rate (in %) linked with health insurance database Total	**Employed Total**	Advanced into higher schooling Rate (in %)	Advanced into higher schooling Total
Total	**567**	**557,236**	**58.6**	**284,116**	**7.1**	**39,763**
National	**85**	**93,111**	**55.8**	**43,680**	**10.0**	**9,348**
Public	**9**	**5,037**	**61.1**	**2,716**	**7.8**	**391**
Private	**473**	**459,088**	**59.1**	**237,720**	**6.5**	**30,024**
Polytechnic College	24	6,669	85.5	5,254	1.2	80
General Graduate School	176	44,652	67.2	23,558	7.0	3,114

Source: The Ministry of Education, modified by the author

Yuk bi Kyong Kam Daechak (Ways for Reducing the Cost of Private Education for the Normalisation of Public Education).

3.3.2 Involvement of companies in VET (work-based learning, internships, etc.)

According to the statement of the Ministry of Employment and Labor, the rate of companies which offer work-based training as initial training is only 14.5% with an of average 23.1 days per year, which equals to 102.2 hours (only companies with more than 300 employees). Middle companies with more than 300 employees pay KRW 266.000 (USD 250) per capita and year for training. Companies with a number of employees between 300 and 499 tend to invest more into work-based trainings with 224 hours per year on average. The main reasons for not offering initial training in companies are: firstly, that companies can still recruit enough experienced workers (34.6%) on the external labour market, and secondly, that employees can learn by doing at their workplace. Korean labour experts mention that the situation of the labour market could be improved enormously if work-based trainings in SMEs would be carried out more systematically and efficiently. Nevertheless, most companies do not evaluate whether training has brought effective outcomes. Furthermore, it is a fact that a lot of companies have a demand for training, but the trainings cannot be realised due to the limited time and work capacity. Learning evaluation is often not realised because of a lack of professional trainers or other supervisors, so that the evaluation of learning outcomes is left on employees or apprentices by themselves.

3.3.3 Participation in companies in development of curricula and qualification standards

As mentioned before, vocational education and training historically had a strategic role for the economic growth of Korea. Because of its extraordinary meaning, the management and coordination of this part had been arranged for by the state. Companies had a passive role in view of training. They followed the strategic policy of government during the period of economic growth. The private sector was also indirectly involved in decision-making with regard to the development of curricula and national qualification standards. These tasks were carried out by HRD Korea and some other institutions like the Korean Chamber of Commerce. These institutions invited ad-hoc specialists from the industry, university professors and expert pools on a case-by-case basis. HRD Korea is the main supplier for national occupational standards and for the testing of exams on this basis, besides other institutions. In addition to this, Korea University of Technology and Education and polytechnical colleges are institutions in charge of the development and consulting of vocational curricula and also the training of vocational instructors for public and private training institutions. On the other hand, big companies developed curricula and qualification standards due to their own demands for technological change and according to the standards valid on the world market. Samsung, Hyundai, LG, etc. have their own qualifying systems since some decades.

3.3.4 Own training offers of the companies

In Korea, there are very different kinds of vocational training organised by companies based on their own interest to qualify employees. However, these trainings are mostly offered to regularly employed persons and less often to irregular employees. Almost all new employees coming from formal education receive in-house trainings for more than six months. All regularly employed persons have to participate in training offers made by employers, because the traditional mind of seniority career paths in companies obligated each employee to follow the HR policy of

that company. Normally, vocational training in Korea is differentiated in training purpose/content and methods.

Vocational trainings initiated by companies for employees are often advanced or initial trainings, depending on the target groups. All of the methods mentioned above are realised by using different learning media.

A survey of the Ministry of Employment and Labor in 2009 showed an exemplified average situation of in-company trainings in Korea. MOEL sent questionnaires to 3,500 statistically registered companies with more than 30 employees of all industrial sectors except agriculture, forestry and fishery. MOEL intended to get basic information about the offer of vocational training in companies, investment and outcome, evaluation, and the effectiveness of the promotional policy of the government in view of vocational training in companies.[51]

In view of advanced training, the gap is quite big between enterprises because companies with more than 300 employees tend to offer more training (80.5%) than companies with less than 300 employees (48.8%). Companies with more than 1,000 employees do not offer in-house training for cleaning or security personnel or personnel from order service companies. In-house trainings per employee and year for companies with less than 300 employees lasted 12.4 days on average, those for companies with more than 300 employees lasted 15.1 days on average, which shows a longer participation of employees in companies with more than 300 employees. If necessary, companies also give the training orders to private training facilities or trade associations.

An interesting point to mention is that companies have their own qualifications which they insert in case of internal job placements, but also consider national qualifications by recruiting new employees who have an advantage in competition to other job seekers per se, due to the possession of national qualifications. Additionally, the most important aspects in recruiting new personnel by companies are, firstly, the characteristics and behaviour of the candidates, and secondly, the working experience of the candidates.

3.3.5 Attitudes of the private sector towards the VET system

As the readiness of the private sector to participate in or contribute to the VET system is not very high, it is not easy to convince companies to engage for more vocational education and training.

The OECD recommended Korea the following suggestions in 2013 to strengthen the motivation of the private sector for more engagement in vocational education and training:

[51] The survey had been effected up to November 2007. The participation rate was 50.8% of the interviewed companies, as well as employees outside companies who took part in in-company trainings of the cooperating company. Excluded were profit-oriented private vocational training institutions, licence-based on-the-job-training like doctors or lawyers called ‘internship’, vocational trainings to be offered obligatory ruled by law (health safety trainings, etc.), orientation periods for newly employed persons, information exchanges (meetings, workshops, seminars, etc.), job rotation within the same working place, learning circles, quality management circles, open lectures, instructions, etc.

- The private sector should engage actively in the development of work-based training regulations and national qualifications (by considering the consequences of demographic change in SMEs).
- School-to-work transition should be accompanied by a support system. VET in SMEs should be promoted indirectly by setting up a better infrastructure (no direct monetary grants).
- Public services are required to work out own internship programmes as a role model for the private sector.
- The state-independent VET system should be strengthened by giving more autonomy and responsibility to the private sector.
- The trainers should be trained by improving the quality of learner-oriented training plans and methods.
- Innovative technologies are to be transferred into VET training regulations as nationwide recognised standards.
- Networks should be established to promote the transfer in 'social partnership'.

3.3.6 Return on investment in training

In contrary to some countries like Germany and Switzerland, where the costs and return-on-investment expectations of the dual training system are published, the accountability of vocational training in Korean companies is not statistically available yet. According to a survey of the Ministry of Employment and Labor in 2010, half of all surveyed companies do not have any evaluation system on trainings (49.3%). But there are some positive effects of trainings from the view of companies: first, companies see the improvement of working skills of the employees who participated in trainings (65%). Second, employees have a higher working motivation (59.9%). Third, trainings can contribute to improve the image of the company (46.3%). Finally, companies indicate positive effects on the productivity of their employees (56.6%).

Table 3.5: Evaluation results on improvement of productivity of employees replied by companies' owners (in 2009)

Classification	high effect	tends to be high	normal	tends to be low	low
Total	752 (4.7%)	8,230 (51.9%)	6,352 (40.1%)	429 (2.7%)	87 (0.5%)
Less than 300 employees	670 (4.7%)	7,353 (51.4%)	5,795 (40.5%)	392 (2.7%)	86 (0.6%)
30–99 employees	506 (4.8%)	5,616 (53.4%)	4,126 (39.2%)	228 (2.2%)	47 (0.4%)
100–299 employees	164 (4.4%)	1,737 (46.0%)	1,669 (44.2%)	164 (4.3%)	39 (1.0%)
300 employees and more	82 (5.3%)	877 (56.4%)	557 (35.8%)	37 (2.4%)	1 (0.1%)
300–499 employees	27 (3.9%)	360 (51.7%)	288 (41.5%)	20 (2.9%)	0 (0.0%)

		500–999 employees	28 (6.0%)	258 (56.6%)	159 (34.8%)	11 (2.3%)	1 (0.2%)
		More than 1,000 employees	27 (6.8%)	259 (64.5%)	109 (27.2%)	6 (1.5%)	0 (0.0%)

Source: Ministry of Employment and Labor 2010.

However, this effect refers only to trainings which are given to employed persons in companies and is not valid for initial trainings.

Last not least, there is another aspect to mention: that trainings seem to have no effects on the job change frequency of employees (positive reply rate by employers: 29.3%).

3.4 Policy challenges and recommendations

3.4.1 Relevant actors

As mentioned above in Chapter 3.2, the political leadership of human resources development and vocational education and training in Korea is lying by the Ministry of Employment and Labor and the Ministry of Education. Currently, due to the growing interest in VET policy, many ministries, public organisations and trade associations[52] participate in the decision-making on the development and improvement of national vocational qualifications by the integration of the demands of industrial sectors. Furthermore, it is expected that the trade unions will engage more and more in the policy of national vocational education and training as part of the labour market reform.

The Ministry of Employment and Labor intends to transfer more autonomy to regional authorities of vocational education and training, as well as to the trade associations, for more effective self-government by playing an active role regarding to the school-industry cooperation, particularly.

3.4.2 Current reforms to strengthen VET and private sector involvement

There are some movements for improving the national vocational qualification system. These movements are motivated by three different reasons. Firstly, the mismatch problem must be solved because of an increasing youth unemployment – in particular among graduates from tertiary education institutions. The mismatch is caused by the divergence of demand and supply of skilled workforce caused by different expectations of the educational and the labour market system. Baek discusses this phenomenon of mismatch in wage, skill and information (Baek Pil Gyu 2012, p. 12 f.)[53]. Secondly, national skill qualifications have suffered obsolescence of their value because certificates could be acquired by theoretical learning in private vocational training institutes without having any professional working experience. Thirdly, more and more members

[52] They have been reorganised in 11 industrial sectors and called the Industrial Sector Council (ISC) since 2014.

[53] Baek, Pil Gyu (2012): Research for policy recommendations for releasing mismatch between labour supply and demand of SMEs.

of the baby boomer generation, born between 1950 and 1960, have officially retired from their original working places with the seniority system, but have to carry on working to maintain their living standard at old age. In Korea, there is an enormous burden of private households to finance the educational costs for the young generation in view of study and private tuition fees. In this regard, lifelong learning plays an important role for the older generation to find a job for the second part of their working life.

Due to this background, an improvement of national qualifications has been started in 2013. The government promotes to reinforce the individual performance, skills and working experiences instead of the recognition of formal qualifications as the only standard for recruitment.

A national competency standard was introduced to change the former qualification system, which is based on an analysis of jobs in 24 industry sectors. Based on these further qualifications for implementing, new qualifications have been developed on dual approaches. To strengthen the management and coordination of vocational training by companies, industrial sector councils have been established in 11 industry sectors, as well as regional centres for a better implementation of vocational policies financed by the Ministry of Employment and Labor.

All technical colleges and vocational high schools, like specialised high schools, Meister high schools, etc., have to change their curricula totally or partly into NCS qualifications. Working experiences at educational institutions are obligatory. Furthermore, the testing assessment to acquire national qualification certificates will be changed in intermediate and final exams. The intermediate exam is to be assessed by teachers or internal trainers and the final exam by external examiners. Additionally, a national qualification frame has to be developed until 2017 in order to enable identifying the level of individually acquired qualifications and to recognise the outcomes of prior learning systematically.

Table 3.6: Main tasks of the Ministry of Employment and Labor in 2015

Strategy	Tasks
Creative economy	Promotion of employment, business establishment, working abroad of youths
Customised employment and social welfare	Implementation of evaluation system for working productivity of employees at working place
	Solving the discrimination of irregularly employed persons and securing living standards of employees
	Shortening working times and prolongation of retirement
	Securing und supporting the employability due to economic change
	Promoting customised recruiting and strengthening the employment service
	Activating of social enterprises and associations
Creative education	Performance-based society i/o formal-qualification-based society

Source: Ministry of Employment and Labor (2015)[54]

3.4.3 Impulses/cooperation with foreign VET systems

Even though it is not very clear in which direction VET approaches will go in the next years, Korea will face big challenges on demographic change and economical alteration. Consequently, the need of a skilled workforce will increase in order to improve the competitiveness of Korean economy in the world market. The young generation is thus in the position to cover the reducing productivity and create new ideas via high potential of innovation resources.

The role model of vocational education and training is the dual vocational education and training system as in Germany or Switzerland. In 2014, nine vocational high schools were established nationwide for implementing the same concept of a dual vocational education system as in Switzerland. In 2009, the Ministry of Education institutionalised Meister high schools with the German role model of the 'Meister'. But from the perspectives of educational organisation, structure and management, these types of vocational education will remain as a Korean model of its own ideology and educational framework.

3.4.4 Impulses for other VET systems

Korea has implemented not only impulses of positive experiences in vocational education and training, but approaches to give its own experiences to other countries. Currently, there are strong trends of an internationalisation of vocational training by transferring the introduction of good practice patterns of vocational education and training to other countries, like Meister high schools and the training of vocational trainers and dispatching of job seekers and students abroad. For these, Korea cooperates with APEC countries like Australia, Vietnam, Cambodia, Thailand, as well as with South American countries, the Arab Emirates and African countries. KOICA is one of those organisations which have the task to coordinate cooperation with other VET systems abroad (http://www.koica.go.kr). Furthermore, Korea has met mutual agreements on the recognition of technical qualifications with APEC and Southeast Asian countries, too.

[54] The Ministry of Employment and Labor. http://www.moel.go.kr/view.jsp?cate=7&sec=6&smenu=2

References Chapter 3

Anti-corruption & civil rights commission (2012): Report on Logical improvement for cancellation of accredited VET institutions, Dpt. of Social improvement, Oct. 2012.

Baek, Pil Gyu (2012): Research for policy recommendations for releasing mismatch between labour supply and demand of SMEs.

Brings, C. (2012): Berufliche Kompetenzbildung durch institutionelle Kooperation? Eine vergleichende Analyse der Berufsausbildungssysteme Deutschlands und Koreas mit einem besonderen Fokus auf die Struktur, Organisation und Gestaltung der Lernorte (Practice-based learning for building of competency? A comparison of German dual vocational training system and Korean school based vocational education system in view of their structure, management, practical learning).

Choi, Young Real (2005): Case Study – Vocational Education and Training, VET, for the Youth – Sustainable Economic Growth and Youth Employment: Prospects in Korea. http://hrd.apec.org/images/a/ad/88.4.pdf

Go, Hye Won et al. (2011): Vocational Training 1960~Presence in Korea. Korea Research Institute for Vocational Education and Training.

HRD Korea (2015): Q-net. http://www.q-net.or.kr/main.jsp

HRD Korea (2015): Information system for technical qualifications. http://www.hrd-net.go.kr

Jones, R. S. (2013): Education reform in Korea. http://www.oecd-ilibrary.org/docserver/download/5k43nxs1t9vh.pdf?expires=1433836239&id=id&accname=guest&checksum=D4C3824F7EEEF4329EE3B45497C69307

Kim, Dae Il (2015): Efficiency of the Labour Market Allocation of Human Resources. Korea Development Institute.

Kim, Eun-Hyang (2013): Studie über den Entwicklungsprozess der koreanischen SMEs, Dong-Shin University, Dissertation, Korea Natonal Library. http://dlps.nanet.go.kr/DlibViewer.do?cn=KDMT1201409639&sysid=nhn

Korean Economic Research Institute (2014): KERI Economic Bulletin no. 75, April 2014.

Korean Educational Development Institute – KEDI (2014): Education Forum no. 248. Current status of different high school types, pp. 32–34.

Korean Educational Development Institute – KEDI (2007): Understanding Korean Education. Education and Korea's development, p. 11.

Korean Educational Development Institute – KEDI (2009): Understanding Korean Educational Policy, Vol. 5, Vocational Education and Training in the Process of Industrialisation.

Korea Research Institute for Vocational Education and Training (2015): Private qualification information system. http://www.pqi.or.kr/inf/qul/infQulList.do

OECD (2013): Economy Outlook Korea, 2012.

OECD (2012): Education at a Glance 2012, Country Korea.

Small and Medium Business Administration of Korea (SMBA, 2012): Employees in manufacturing SMEs in 2012.
http://220.71.4.163:8000/statHtml/statHtml.do?orgId=142&tblId=DT_C40010#

Statistics Korea (2016): Population Projections for Korea: 2010-2060,
http://kostat.go.kr/portal/english/news/1/9/index.board?bmode=download&bSeq=&aSeq=253456&ord=2

Statistics Korea (2015): Statistics of birth and death in 2015, p. 4.
http://www.index.go.kr/search/search.jsp

Statistics Korea (2015): GDP.
http://www.kostat.go.kr/portal/korea/kor_nw/2/1/index.board?bmode=read&aSeq=60300

Statistics Korea (2015): Population and rate of population growth (1970–2060).

Statistics Korea (2015): Overview of working population at each education level, July 2015.
http://kosis.kr/statHtml/statHtml.do?orgId=101&tblId=DT_1DA7003&vw_cd=MT_OTITLE&list_id=MT_CTITLE_H1&scrId=&seqNo=&lang_mode=ko&obj_var_id=&itm_id=&conn_path=E1

The Ministry of Education (2015): Specialised high schools, 2014.
http://www.moe.go.kr/web/100012/ko/board/view.do?bbsId=316&boardSeq=47997

The Ministry of Education (2015): Meister high schools, 2014.
http://www.moe.go.kr/web/110501/ko/board/view.do?bbsId=348&boardSeq=57860

The Ministry of Education (2013): A guide for Meister high school, Specialised high school, Comprehensive high school.

The Ministry of Education (2002, 2004): Kong Kyo Yuk Jindan mit Naesilhwa Daechak (Diagnosis of Public Education and Measures for Improvement). Kong Kyo Yuk Jeong Sang Hwa reul wihan Sa Kyo Yuk bi Kyong Kam Daechak (Ways for Reducing the Cost of Private Education for the Normalisation of Public Education).

The Ministry of Employment and Labor (2012): 2011 Modularisation of Korea's Development Experience: Vocational Training System for a skilled workforce.

The Ministry of Employment and Labor (2010): Evaluation results on improvement of productivity of employees replied by companies' owners. 2009.

The Ministry of Employment and Labor: Qualification.
http://www.moel.go.kr/policyinfo/reclamation/view.jsp?cate=7&sec=1

The World Bank (2000): Republic of Korea: Transition to a Knowledge-based Economy, Report No. 20346-KO, pp. 38–59.

The Worldbank (2016), Database,
http://data.worldbank.org/indicator/NY.GDP.PCAP.CD?locations=KR

YTN Radio (2015): Interview report 20.08.2015.
http://radio.ytn.co.kr/program/?f=2&id=37795&s_mcd=0206&s_hcd=15

4 South Africa

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4.1 Introduction

South Africa's public Technical Vocational Education and Training (TVET) sector is undeniably in a healthier condition than during the transitional phase of the country's migration to democracy. The student college enrolment is on a steady rise. Racialised demographics of student profiles have been successfully transformed. New policies have been developed for all aspects of TVET college activities and there has been much progress with regard to governance and management of the colleges. The sector is now tackling key issues of curriculum transformation with the aim of making the TVET sector more relevant and responsive to industry needs and the development of skills that could support the economic growth of the country. With the increased realisation of the significance of establishing a mutually beneficial relationship between TVETs and industries, the Department of Higher Education and Training sought to strengthen the student support services offered by TVET colleges. It introduced a programme that aimed to strengthen the capacities of student support services units in TVET colleges so that they can be able to provide effective support to college students. Services where improvements were urgently needed included the development of industry relationships, successful placement of students for learnerships and work-based exposure for the acquisition of experiences, and successful absorption of college graduates by industries. To standardise the process, the department developed a student support services framework, which colleges have to use as a guide. Results so far obtained differ between colleges. Hence there is a great expectation that through this intervention, relationships between TVET colleges and industries will be strengthened over years, such that TVET colleges in South Africa will incorporate all expectations of the industries as part of the training process of TVET students.

4.1.1 Economic development

Since 1996, South Africa's Gross Domestic Product (GDP) has almost tripled to $400 billion, and foreign exchange reserves increased from mere $3 billion to nearly $50 billion; creating a growing and sizable African middle class. South Africa shifted from a primary and secondary economy in the mid-twentieth century to an economy driven primarily by the tertiary sector, which accounts for an estimated 65% of GDP or $230 billion in nominal GDP terms. The economy is reasonably diversified with key economic sectors including mining, agriculture and fisheries, vehicle manufacturing and assembly, food processing, clothing and textiles, telecommunication, energy, financial and business services, real estate, tourism, transportation, and wholesale and retail trade. The country is in the process of incorporating ocean as an additional sector of the economy.

One critical challenge facing the economy of South Africa is the high unemployment rate, and unlike other emerging markets, South Africa has struggled through the late 2000s recession. The recovery has been slow, largely led by private and public consumption growth, while export volumes and private investment have yet to fully recover.

The long-term potential growth rate under the current policy environment has been estimated at 3.5% per capita GDP. Growth has proved to be below expectations, though improving, growing by 1.6% a year (from 1994 to 2009), and by 2.2% (over the 2000–2009 decade), compared to the world growth of 3.1% over the same period.

The economic hurdle facing South Africa shows that, while the country has been celebrated as a model for peaceful transition in Africa, attaining economic accolades is a reality the country is grappling with. Although external shocks somehow contribute to South Africa's economic stagnation, internally, the policies of the system of economic segregation seem to have persistent crippling effects. Part of this relates to how the system was modelled to use cheap low-skilled labour.

4.1.2 Demographic development

The demographics of South Africa encompasses about 53 million people of diverse origins, cultures, languages, and religions. Africans (also referred to as Blacks) are in the majority at 41,000,938, making up 79.2% of the total population. The coloured (mixed race) population is estimated at 4,615,401 (8.9%), the European (commonly referred to as White) population at 4,586,838 (8.9%), and the Indian/Asian population at 1,286,930 (2.5%). In the census carried out in 2011, 280,454 (0.5%) South Africans classified themselves as 'other'. Females make just over half (51.3%) of the population.

Besides the eleven official languages, scores of other African, European, Asian and more are spoken in South Africa, as the country lies at the crossroads of southern Africa. Among the eleven official languages *isiZulu* is the most common home language and spoken by nearly a quarter of the population. It is followed by *isiXhosa* at 17.6%, *Afrikaans* at 13.3%, *Sepedi* at 9.4%, and *Setswana* and *English* each at 8.2%. Most South Africans are multilingual, able to speak more than one language. English and Afrikaans speaking people tend not to have much ability in indigenous languages, but are fairly fluent in each other's language. Most South Africans speak English, which is fairly common in official and commercial public life.

4.1.3 Offer and demand for skilled workers

South Africa′s skills shortages are widely regarded as a factor that hinders the country to achieve the desired economic growth targets. There is some dispute as to the nature and extent of these shortages, given that the country has a large pool of unemployed graduates (Kraak, 2004). This represents an obvious mismatch between available job opportunities and workforce produced by tertiary institutions. Hence South Africa's economy desperately needs high-skilled workers.

There are as many as 829,800 unfilled positions for high-skilled workers across a wide range of occupations in the country. The highly-skilled categories experiencing the greatest skilled shortages are a) senior management; b) professions, which include medicine, engineering, accounting and the law; c) technical occupations that are specialists technicians and artisans; and d) agriculture (Kraak, 2008). This poses a significant limitation on the country's long-term economic growth potential, with viable economic opportunities often rendered unviable.

To partially address this, technical and vocational colleges have been identified to be best suited to produce artisan skills needed to support the economy and the country's recently adopted National Development Plan, which serves as a blueprint for economic growth and development.

4.1.4 Education level of the population

According to a 2012 survey, the literacy rate in South Africa is at 99.27%. It is the highest value over the past 32 years. According to Index Mundi the country ranks 43rd among other countries of the World.

4.1.5 The role of small and medium enterprises (SMEs)

South Africa has an estimated 2.8 million small, medium and microenterprises (SMEs), which contribute 52% to 57% of Gross Domestic Product (Abor and Quartey, 2010). They provide about 60% of jobs, and contribute more than 40% of the country's total remuneration. This means that SMEs in South Africa employ more people than private sector and government combined. They are essential for a competitive and efficient market (Department of Trade and Industry, 2001). Like in most developing countries, SMEs are an important contributor to the economy.
For South Africa, they serve as a buffer to the high unemployment rate that is estimated to be above 23% (CSS, 1998). They are productive drivers of inclusive economic growth and development and they drive diversification through their development of new and unsaturated sectors of the economy (Elaian, 1996; Ntsika, 1999). If South Africa is to achieve part of its National Development Planning Vision 2030, SMEs need to be one of the key levers to help achieve the vision (DTI, 2011).

4.2 Structure of the TVET system

South Africa has 50 public TVET colleges that operate in 262 campuses spread across the country. Their administration falls directly under the Ministry of Higher Education and Training. TVET colleges are recognised as having huge potential of enhancing human capabilities and skills in the country. In South Africa TVET colleges are understood to be:

- an integral and important part of the general education system,
- a means of preparing for various occupational fields and for effective participation in the workplace,
- an aspect of lifelong learning and a preparation for responsible citizenship due to ever changing work requirements,
- an instrument for promoting sound principles of sustainable development in the face of global change, and
- vehicles for facilitating poverty alleviation.

The name Technical Vocational Education and Training (TVET) has been recently adopted. Before that TVET colleges were referred to as Colleges for Further Education and Training (FETs). The purpose for changing the name and mandates of TVETs in South Africa is to strengthen their roles so that they play a central role in the development of skills which will allow the South African labour force to better relevant to the economy.

Unlike FET colleges, which is a term that was established by the South African Department of Higher Education and Training, TVET is an international term. Adopting the term Technical and Vocational Education and Training has brought South Africa into the mainstream of international technical and vocational training practices.

The term was born from the 1999 UNESCO Second International Congress on Technical and Vocational Education in Seoul. According to UNESCO's website, TVET focuses on the acquisition of knowledge and skills for the world of work. This term encompasses, and draws on the elements of, historical educational terms such as 'Apprenticeship Training', 'Vocational Education', 'Technical Education', 'Workplace Education', and more (UNESCO-UNEVOC, 2006). For all practical purposes then, it can be seen as encompassing the principles of South African's 'Further Education and Development' as well.

4.2.1 Legal framework / governance

The Department of Higher Education and Training (DHET) is responsible for ensuring the development of a skilled and capable workforce to support an inclusive growth path in South Africa. The education system is governed by the following set of policies and legislation (Department of Education, 2007):

The National Education Policy Act, 1996 (Act 27 of 1996), which brought into law the policies, and legislative and monitoring responsibilities of the Minister of Education, as well as the formal relations between national and provincial authorities. It laid the foundation for the establishment of the Council of Education Ministers, as well as the Heads of Education Departments Committee, as intergovernmental forums that collaborate in the development of a new education system. The National Education Policy Act, of 1996, therefore, provided for the formulation of national policy in general, and Further Education and Training (FET) policies for curriculum, assessment, language and quality assurance.

The South African Schools Act, 1996 (Act 84 of 1996), seeks to ensure that all learners have access to quality education without discrimination, and makes schooling compulsory for children aged seven to 15 years. It provides for two types of schools, namely independent and public schools.

The Adult Basic Education and Training Act, 2000 (Act 52 of 2000), regulates adult basic education. It provides for the establishment, governance and funding of public adult learning centres. It also provides for the registration of private adult learning centres and for quality assurance and quality promotion in adult basic education.

Skills Development Strategic Plan, the Department of Higher Education and Training developed a Skills Development Strategic Plan for the period of 2010 to 2015. The role of TVET colleges is central to this plan. The plan outlines objectives that from education and training perspective are universal hallmarks of any modern and effective education and training system.

National Skills Development Strategy, the key driving force of the National Skills Development Strategy is improving the effectiveness and efficiency of the skills development system. It represents an explicit commitment to encouraging the linking of skills development to career

paths, career development and promoting sustainable employment and in-work progression. The emphasis is particularly on those who do not have relevant technical skills or adequate reading, writing and numeracy skills to enable them to find employment. The strategy promotes partnerships between employers, public education institutions (TVET colleges, universities of technology and universities), private training providers, and sector education and training authorities (SETAs) to ensure that cross-sectoral and intersectoral needs are addressed.

The strategy also addresses the scope and mandate of the SETAs. The SETAs are expected to facilitate the delivery of sector-specific skills interventions that help achieve the goals of the strategy, address employer demand and deliver results. It emphasises the relevance, quality and sustainability of skills training programmes focusing on eight goals, namely:

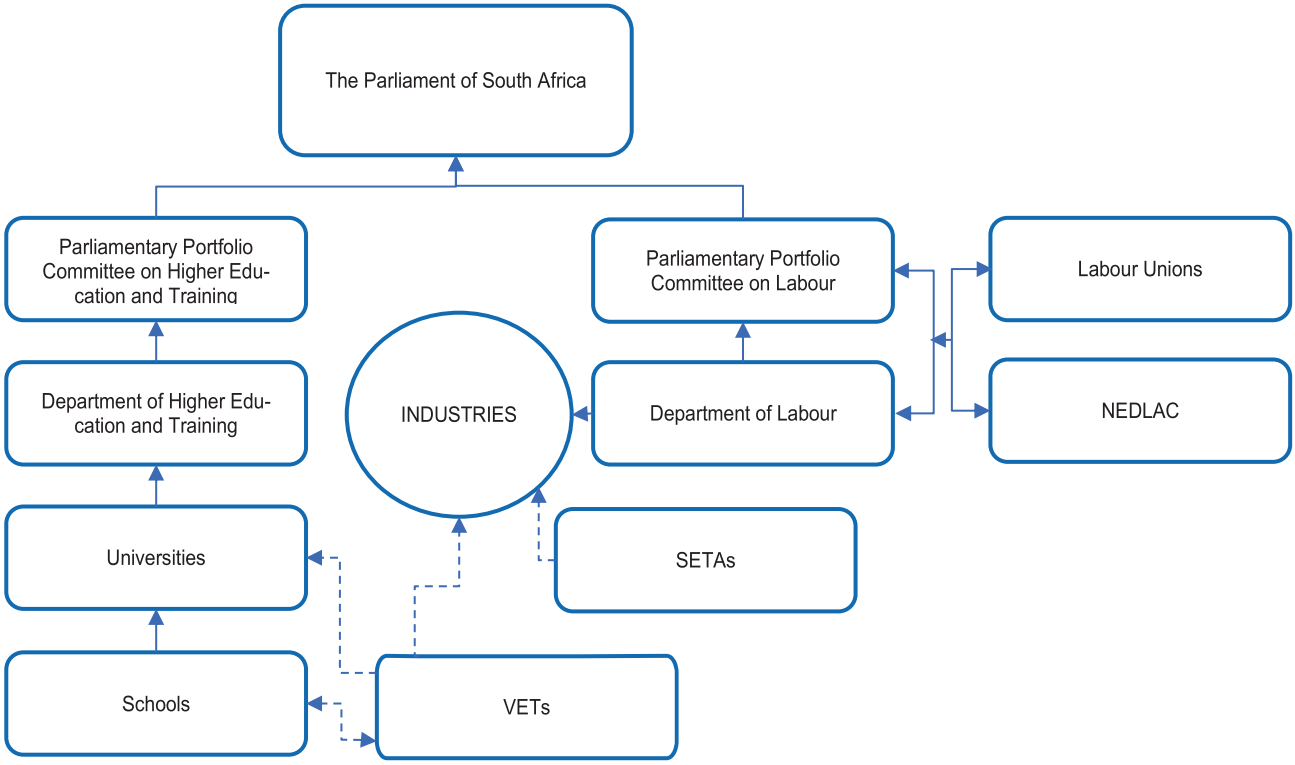
- establishing a credible institutional mechanism for skills planning, and ensuring that the national need in relation to skills development is researched, documented and communicated to enable effective planning across all economic sectors,
- increasing access to occupation-specific programmes targeting intermediate and higher-level professional qualifications,
- promoting the growth of a public FET (TVET) college system that is responsive to sector, local, regional, and national skills needs and priorities,
- addressing the low level of youth and adult language and numeracy skills to enable additional training,
- encouraging better use of workplace-based skills development,
- encouraging and supporting co-operatives, small enterprises, worker-initiated NGOs and community-training initiatives,
- increasing public-sector capacity for improved service delivery and supporting the building of a developmental state, and
- building career and vocational guidance.

The department has been increasing access to higher education programmes by expanding spaces and options available at TVET colleges and universities. The move is part of the department's plan to shift learner focus from traditional institutions such as universities and universities of technology to TVET colleges, where training is vocationally based.

South Africa Qualification Authority, the overall quality of courses offered by TVETs is overseen by the South African Qualification Authority (SAQA). SAQA has a standards-setting function. Its main responsibility is to generate standards and register the qualifications of students. It retains the ultimate responsibility for the quality of qualifications. The institution also develops the level descriptions for NQF (National Qualification Framework) 1–10. It is responsible for the development of policy, criteria and guidelines for the recognition of professional bodies and registration of professional designations on the NQF.

The NQF (National Qualifications Framework) Act positions SAQA (South African Qualification Authority) as the overseeing body of the NQF and the custodian of its values. This enables SAQA to engage with high-level strategic issues that enhance the implementation of the NQF. Its objectives are the integration of South Africa's education and training system as well as mobility and progression for personal empowerment, and economic development and social justice. Its role in terms of the NQF Act includes the flow of information throughout the education and training system.

Figure 4.1: Embeddedness in the general education system



Source: Own presentation.

4.2.2 Lifelong learning opportunities / further education

The lifelong learning opportunities' responsibility in South Africa is shared by the Departments of Basic Education (DBE) and of Higher Education and Training. The DBE deals with all schools from Grade R to Grade 12, and adult literacy programmes, while the DHET deals with universities, and other post-school education and training, as well as coordinating the Human Resource Development Strategy for South Africa. The DBE develops, maintains and supports a South African school education system for the 21st century in which all citizens have access to lifelong learning, as well as education and training, which will, in turn, contribute towards improving quality of life and building a peaceful, prosperous and democratic South Africa. Despite some challenges, there has been steady progress in education, with government systematically addressing the shortcomings that have hampered progress in the past.

4.3 Private sector involvement

4.3.1 Demand of companies for TVET / university graduates

For South Africa, there is a need to improve in this area. Long-term consideration should be to provide guidelines for developing beneficial partnerships between TVETs and industries (Dhillon, McGowan, and Wang, 2006). This should seek to increase the demand for TVET graduates by companies.

To address this, the Department of Higher Education and Training has started a programme through which it intends to strengthen Student Support Services of colleges. This has been motivated by observations that:

- Student Support Services were not being fully operational in colleges and were thus unable to develop relationships with companies or support students to get employment in companies,
- there were inconsistencies in the allocation of resources to the Student Support Services programmes of the colleges, as a result some colleges were showing signs of succeeding to develop beneficial relationships with companies, while others were lagging behind,
- there were generally poor competency levels of Student Support Services officers as some did not know how to design programmes for engaging with companies,
- there was a range of different, un-aligned services being offered by the Student Support Services division that fell short of achieving the desired impact of successfully placing students in the companies, and
- there were Exit Support Services that failed to successfully place students in the workplace.

As a guide, the Department of Higher Education and Training developed the Student Support Services Framework. This has been adopted and is used to forge beneficial relationships between industries and TVET colleges. The long-term goal is to increase the demand for TVET graduates.

4.3.2 Involvement of companies in VET (work-based learning, internships, etc.)

TVET institutions are well resourced with personnel, skills and facilities that could be used to transform communities in the areas they operate and beyond, especially in developing countries where there is high unemployment (Lader, 1996; Tucker, 2012). These institutions should not only run formal programmes for those who qualify during formal times but they should target the unemployed in the communities including people in the informal sector (King, and Palmer, 2010).

In South Africa, private sector companies spend just under R3 billion on education (McGrath, and Akoojee, 2007). This is channelled to targeted programmes that include district and systemic change interventions and innovation projects. An example is Sasol who have recently entered into a partnership with Flavius Mareka TVET College with the support of the Chemical Industries Education and Training Authority (CHIETA), to include the institutional (knowledge) component of CHIETA learnerships with the current programmes offered at the college. The aim is to make the unemployable youth in communities around Sasol in Secunda, due to low pass marks or wrong subject choices, with grade 12, employable by providing them with an industry-related occupational qualification combined with improving their educational qualification. It is planned that this could result in the TVET College taking full responsibility for the institutional training of occupational learning programmes, thus allowing Sasol to focus on providing work experience for occupational learning programmes. This is just one of the examples that exist in the country. A number of similar initiatives exist across the country. These include graduate placement programmes, internship programmes for TVET students, and temporal exchange of personnel between TVETs and industries.

Efforts are being given towards organising joint participation of TVETs and industry in conferences and networks, initiating industry and TVETs joint research and development projects. This entails joint research and development projects and the presentation of the findings. Personnel from both TVETs and industry jointly supervise trainees and jointly fund the training and research.

4.4 Policy challenges and recommendations

4.4.1 Current reforms to strengthen TVET and private sector involvement

The management of TVET colleges has historically shifted between being a national and provincial responsibility. While in previous years provinces had full responsibility for the management of TVET colleges, which were previously referred to as Colleges of Further Education and Training, in 2014, the National Department of Education reclaimed the responsibility of TVET colleges. This means that TVET falls directly within the scope of the National Department of Higher Education and Training.

South Africa's technical and vocational sector has been marred by a number of challenges that range from poor administration, lack of interest to enrol to Technical and Vocational Colleges by school leavers, high rates of dropout, low course pass rates and the curricula that do not match the needs of industries (McGrath, 2004). Many of these challenges have been specific to provinces.

As an intervention measure the Department of Higher Education and Training introduced the Support to Education and Skills Development Programme, which was piloted in 12 TVET colleges. The programme ushered new perspectives in the management and administration of TVET colleges in South Africa. Implemented in three phases (i.e. SESD I [2003–2006], II [2007–2010] and III [2011–2014]), phase three of the programme emphasised the strengthening of the capacities of Student Support Services units so that colleges can provide effective Student Support Services to students, which include successful placement of students in industries so that they can acquire relevant work-based exposure.

The short-term success indicators of the programme were improvements in pass rate, subject rate, student retention rate, attendance and successful work-based exposure. The long-term impact has been the development of models of reference to be replicated to other TVET colleges in South Africa.

Despite these initiatives, what is obvious in South Africa is that there is ample room for improvement through international benchmarking and critique. International trends on how Student Support Services are offered, including the strengthening of industry–TVET relationships across the world, are very important for South Africa. Establishing linkages between the private sector and education institutions is a rising trend in many developing countries (Obwoge, Mwangi, and Nyongesa, 2013). The beneficial relationship between TVETs and industries is of paramount importance, since the primary focus of TVETs is to interpret the market demand signals and prepare human resources to satisfy the manpower needs of industries (Hippach-Schneider, Krause, and Woll, 2007).

Sustainable relationships between TVET institutions and industries need to be based on benefits and long-term views of economic growth (Augustine, and Jafari, 2013). In doing this, TVETs need to be aware of industry training needs and expectations. TVET institutions thus need to have methods of assessing demands for training and determine factors that influence training.

4.4.2 Impulses/cooperation with foreign VET systems

Globalisation as a form of interconnectedness is not a new phenomenon, but new elements of globalisation in the form of skills production and demand have impacted on TVET at global and developing country level in many ways. International support and influences on the South African TVET system in the first decade of democracy came mainly through AusAID, GTZ and Danida that supported both the establishment of the system and research.

As noted by Badroodien and McGrath (2005), in the process of international support, what makes the South African skills development case unusual is that there was genuine national leadership throughout all projects and engagements with international experts. In the broadest terms the relationship with donors was positive. South Africans led the process, they were eager to learn from other experiences rather than being presented a particular version by agencies or consultants, and South Africans entered into a considerable period of detailed negotiations.

Looking more closely at the achievements and weaknesses of this experience, it is necessary to contextualise it in terms of South Africa's pattern of growth and employment over the past decade.

What is clear from South Africa's experience is that Technical and Vocational Education and Training is an evolving process. South Africa made a grave mistake by placing heavy reliance of its economic growth on cheap unskilled labour. Faced with the realities of integration into international economy through globalisation, it became obvious that South Africa cannot sustain the model of supporting economic growth through unskilled labour. This has placed the TVET sector at the centre stage of skills production. Unfortunately, in terms of adjusting to the needs and expectations of industries, South Africa is playing a catch-up. This because TVETs are ill-prepared to supply skills needed by industries, and this has led to a mismatch between labour and available job opportunities.

4.4.3 Policy challenges and recommendations

Developing skills and labour potential is at the heart of governments' skills policies in South Africa. This requires designing curricula and education and training systems that are responsive to the needs of the labour market, industry and society at large, as well as skills that are relevant and of good quality. This demands encouraging, supporting and enabling individuals to participate in the system. This means that a mechanism for encouraging school leavers to take opportunities in TVET colleges should be developed. This should be supported by the establishment of programmes ensuring that colleges retain their students until they acquire relevant qualifications.

The Student Support Services Framework has provided guidelines as to how this can be done. This has enabled students to participate in the mainstream of skills development through self-

discovery. What this illustrates is that the Department of Higher Education and Training needs to take full responsibility of guiding TVET–industry relationships through a set of well-documented guidelines and support. At international levels, governments play significant roles in this by:

- funding TVET institutions for infrastructure and equipment,
- funding salaries for staff,
- supporting students through loans and grants,
- providing internships for students,
- overseeing the quality of TVET programmes together with the industry, and
- providing a system for examinations and trades testing for students.

South Africa seems to be on a par with many countries where governments provide similar support to TVET colleges. However, there is room for improvement in perfecting these offerings.

Based on prevailing realities, the following areas require policy guidance and improvement:

- Development of guidelines for the placement of Student Support Services within the college operating structures. This will ensure that there are similarities in the provision of Student Support Services in all TVET colleges in South Africa.
- Development of guidelines for qualification requirements of Student Support Services managers and officers. In South Africa, there exist indications that Student Support Services are not considered to be a career but an additional task. This perception needs to be addressed by developing guidelines for qualification requirement, knowledge and experience needed to manage Student Support Services units.
- Provision of guidelines for the development and management of TVET–industry relationships. In South Africa, there are clear indications that colleges attempting to place their students to industries through work-based exposure programmes are struggling to develop sustainable relationships with industries.
- Provision of clarity on the role of the departments (both provincial and national) on the management of TVET colleges. In South Africa, there seems to be a lack of clarity on the supporting roles that should be played by provincial departments in TVETs, and this impacts the development of relationships with local industries.

References Chapter 4

Abor, J. and Quartey, P., Issues in SME Development in Ghana and South Africa, *International Research Journal of Finance and Economics,* 39 (2010), pp. 218–226.

Augustine, M. S. and Jafari, M., Modeling the Impact of Knowledge and Technology Transfer between TVET institutions and Industries, *CAPA Scientific Journal*, 1 (2013), No. 1.

Badroodien, A. and McGrath, S., International influences on the evolution of South Africa's national skills development strategy, 1989–2004 (Eschborn: GTZ 2005).

Badroodien, A., Kraak, A. and Unwin, L. (eds.), Shifting Understandings of Skills in South Africa: Overcoming the Imprint of a Low Skills Regime (Cape Town: HSRC Press 2004), pp. 212–238.

CSS, Employment and Unemployment in South Africa 1994–1997 (South Africa 1998).

Department of Education, Pretoria DoE Audit of Student support services at FET Colleges (Department of Higher Education and Training 2007).

Department of Trade and Industry, 2001, Small and Medium Enterprise (SME) – Definitions, available at
http://webarchive.nationalarchives.gov.uk/20070603164510/http://www.dti.gov.uk/SME4/define.htm

Dhillon, J., McGowan, M and Wang, H., What do we mean by student support? Staff and students' perspectives of the provision and effectiveness of support for students (Cape Town: HSRC Press 2006), pp. 100–130.

DTI (Department of Trade and Industry), Medium Term Strategic Plan 2011–2014 (Pretoria, South Africa 2011).

Elaian, K., Employment Implications of Small Scale Industries in Developing Countries: Evidence from Jordan, *Science, Technology and Development,* 1996 14 (1), pp. 80–101.

Hippach-Schneider, U., Krause, M. and Woll, C., Vocational education and training in Germany: short description. European Centre for the Development of Vocational Training (Cedefop Panorama series 2007), p. 138.

King, K. and Palmer, R., Planning for technical and vocational skills development (UNESCO 2010).

Kraak, A. K., The education-economy relationship in South Africa 2001–2005, in: Kraak, A. and Press, K., Human Resources Development Review (Cape Town: HSRC Press 2008), pp. 1–25.

Kraak, A., Rethinking the high skills thesis in South Africa, in: McGrath, S. (Cape Town: HSRC Press 2004), pp. 1–45.

Lader, P., The Public/Private Partnership, *Springs*, 1996 35 (2), pp. 41–44.

McGrath, S. and Akoojee, S., The emergence of marketing and communications strategy in South African further education and training colleges, *Education, Knowledge and Economy*, 2007 1 (3), pp. 301–321.

McGrath, S., The state of the Further Education and Training college sector, in: McGrath, S., Badroodien, A., Kraak, A. and Unwin, L. (eds.), Shifting Understandings of Skills in South Africa: Overcoming the Imprint of a Low Skills Regime (Cape Town: HSRC Press 2004), pp. 158–175.

Ntsika, T., State of Small Business in South Africa, *SARB Quarterly Bulletins and Stats SA Releases* (South Africa 1999).

Obwoge, M., Mwangi, S. and Nyongesa, W. J., Linking TVET Institutions and Industry in Kenya: Where Are We?, *International Journal of Economy, Management and Social Sciences*, 2013 2 (4), April 2013, pp. 91–96.

Tucker, M. S., The Phoenix: Vocational Education and Training in Singapore (Center for international education benchmarking 2012).

UNESCO-UNEVOC, Participation in formal technical and vocational education and training programmes worldwide, an initial statistical study (2006).

5 Vietnam

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5.1 Introduction

5.1.1 Economic development

Until 2004, Vietnam has undergone high GDP growth rates. The average growth rate between 1990 and 2004 accounted for 7.3%. Since 2005, GDP growth has begun to reduce and has not recovered in comparison to the previous period. The average growth rate for the period from 2005 to 2013 was only 6.2%.

Vietnam is not able to maintain the pace of economic growth because the economy has lost growth momentum. In 2012, Vietnam began the process of economic restructuring in order to establish a new economic growth model focusing on quality, efficiency and competitiveness. The Vietnamese government has identified human resource development as one of the three strategic objectives for the period of 2011 to 2020 besides infrastructure development and institutional improvement.

5.1.2 Demographic development

Vietnam is densely populated. The population in 2013 accounted for 89.7 million persons with a labour force of 53.2 million people (59.3% of the total population). The labour force increases by about 1 million persons annually. 52.2 million persons are employed (98.1% of the labour force) and 1 million persons are unemployed (1.9% of the labour force). Even though only 30.1 per cent of employed persons live in urban areas, unemployment in urban areas makes up 51.4% of total unemployment[55]. ILO (2009) showed that the official unemployment rate was low compared to the real unemployment rate because Vietnam had a large percentage of self-employment and informal employment as well as underemployment.

In 2013, the young population aged 14 and younger accounted for 16.6% of the total population. The working age population (15 to 64 years) accounted for 76.2% and the population aged 65 and older accounted for 7.2%. Currently, Vietnam shows a ‘golden population structure’ in which the working age population is nearly twice the size of the dependent population. However, the country will face rapid ageing in the near future. 15- to 24-year-olds account for 14.9% of the total workforce. Over three quarters of young people are working in rural areas (77.5%, see Table 5.1).

Table 5.1: Number and distribution of employed young people by urban and rural areas in 2013 (15- to 24-year-olds)

	Total number of employed young people (persons)	Percentage (%)
Nation	7,428,000	100.0

[55] Employment Survey 2013 by General Statistics Office

Urban	1,674,000	22.5
Rural	5,754,000	77.5

Source: Employment Survey 2013 by General Statistics Office

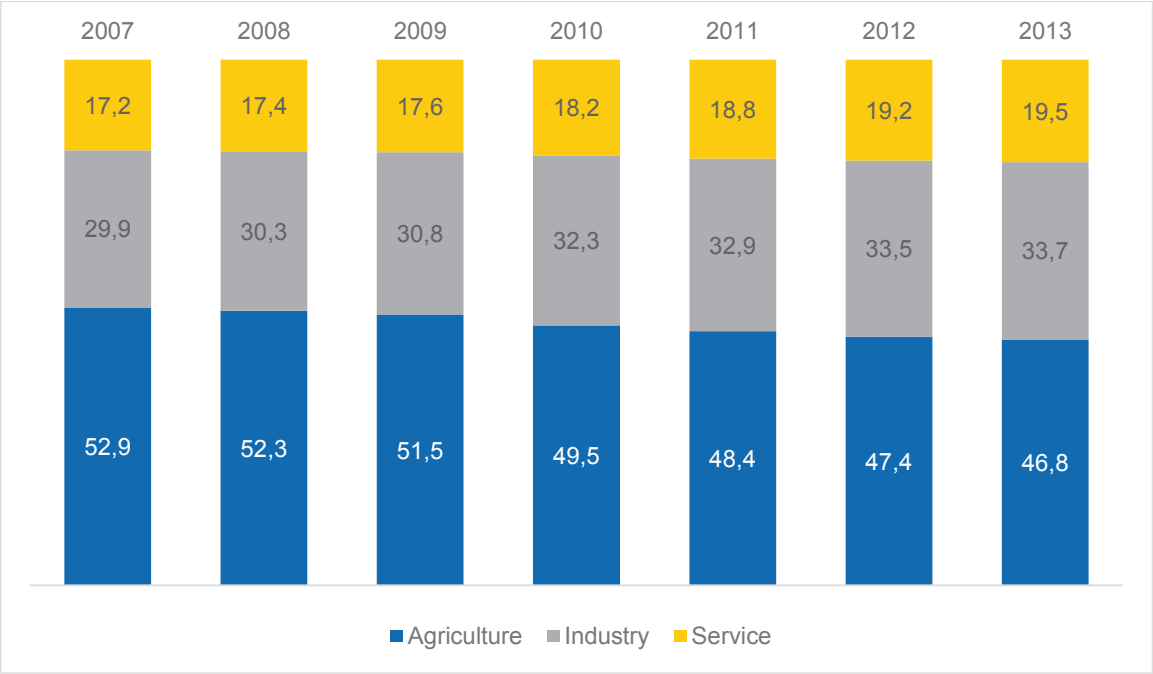
5.1.3 Education level of the population

As of 2013, the proportion of the skilled workforce in Vietnam was very small. Of the 53.2 million adults aged 15 or older, only 9.7 million people were trained (18.2% of the labour force), while the majority of 43.5 million people was not trained (81.8% of the labour force). Obviously, Vietnam has a large potential of young human resources but is, nevertheless, encountering a great shortage of skilled labour.

The largest sector of employment is the agricultural sector. However, the share of this sector shows a declining trend. The industrial and the service sector have absorbed employment from the agricultural sector by creating new jobs and thereby reducing unemployment and underemployment (see Figure 5.1). A current challenge is to manage the transition of people to non-agricultural jobs. Vocational training is regarded as a key to the solution of this challenge. Due to this, the government has implemented a project on vocational training for rural labourers in 2009[56]. The training programmes for rural labourers have the objective to train approximately 6.54 million rural labourers by 2020. In the period of 2010 to 2012, 1,088,393 people were trained in this programme. 44.2% of these people participated in non-agricultural vocational education and 55.8% in agricultural vocational education. The 2012 General Statistics Office (GSO) results show that 70% of rural labourers were employed after graduating.

[56] Decision 1956/QD-TTg, dated 21.11.2009, of prime minister on vocational training for rural labourers up to 2020

Figure 5.1: Structure of employment by economic sectors (in %)



Source: General Statistics Office

In the context of a low percentage of trained workers, many enterprises, especially foreign enterprises, face difficulties in employing skilled workers. Table 2 shows the share of skilled workers – nationwide as well as in the two largest cities, Hanoi and Ho Chi Minh City. Only 18.2% of the total workforce had a professional qualification in 2013. The two biggest cities have a much higher share of trained workers compared to nationwide average. The reason for this is that many enterprises and factories which require skilled labourers are located in the two cities.

Table 5.2: Share of trained workers in 2013 (in %)

		Nationwide	Hanoi	Ho Chi Minh City
Total		18.2	36.9	31.4
Vocational training	Vocational training	5.4	10.1	7.6
	Professional secondary education	3.7	5	3.4
Academic training	College	2.0	2.9	2.6
	University or higher	7.1	19	17.8

Source: Employment Survey 2013

Table 5.3 shows that out of 1 million unemployed persons in 2013, 15.1% were graduates from vocational training (vocational training and professional secondary education) and 20.6% were graduates from academic training (college and university or higher).

Table 5.3: Unemployment by level of education in 2013

Highest education level achieved	Proportion (in %)
Didn't go to school	2.6
Didn't finish primary education	6.8
Finished primary education	15.5
Finished lower secondary education	21.9
Finished upper secondary education	17.5
Vocational training	8.4
Professional secondary education	6.7
College	6.6
University or higher	14.0
Total	100

Source: Employment Survey 2013

Theoretically, Vietnam's labour market has a plentiful supply of labour. In reality, however, enterprises have difficulties in hiring adequately skilled employees who meet the needs of technology innovation. In the labour market, there is a redundancy of unskilled labour and a shortage of skilled labour. Many qualifications of graduate students do not meet the requirements of the companies (World Bank, 2014).

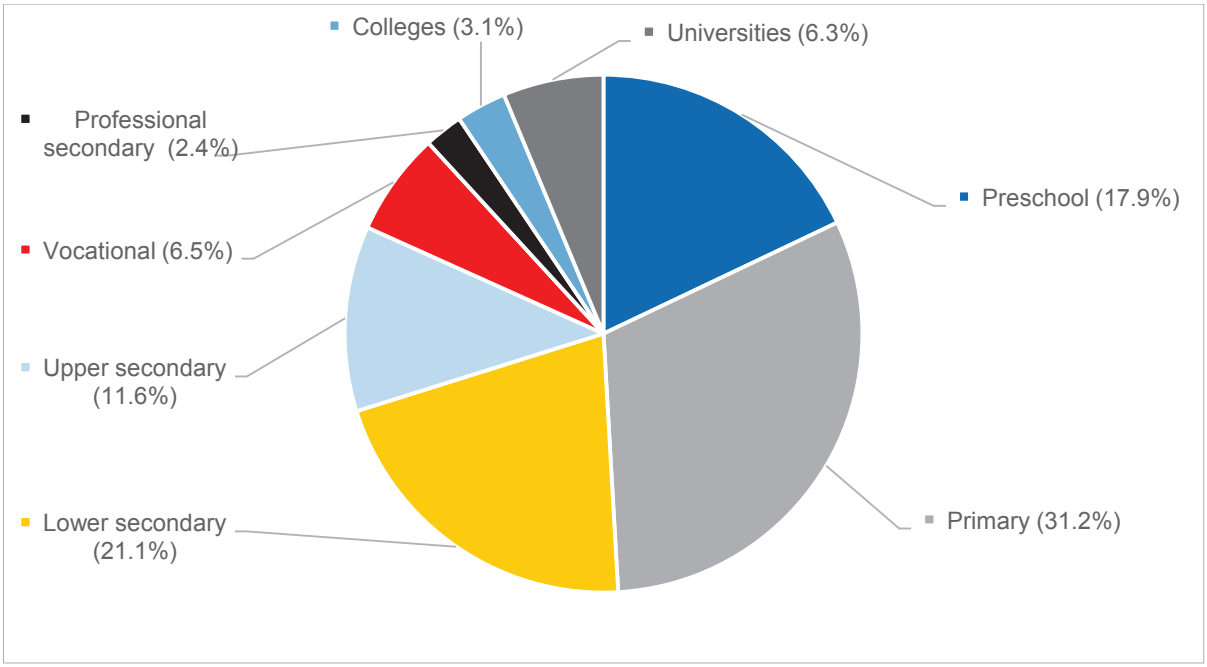
Thuy and Hoang (2010) surveyed 160 enterprises in the manufacturing sector in Hanoi and surrounding areas and showed that enterprises were not only dissatisfied with the working attitude and the style but also with the practical skills of new graduates – in particular technical skills. Some enterprises indicated that new graduates were passive and little self-conscious. Furthermore, the Central Institute for Economic Management (CIEM) together with the World Bank (2012) illustrated that practical skill training was limited because vocational schools lacked facilities, equipment/machines and co-operations between vocational schools and employers. The Ministry of Labour, Invalids and Social Affairs (MOLISA, 2012) also verified that 44% of foreign enterprises had to provide re-training courses for their employees.

5.1.4 Education System

Vietnam's formal education system consists of pre-primary education, lower secondary education, upper secondary education, academic training (undergraduate [college and university] and postgraduate [master and PhD]) and vocational training (professional secondary education, vocational training).

In 2013, there were about 23,121,000 students in the Vietnamese education system. Figure 5.2 shows the distribution of students by education level. Students in preschool accounted for 17.9% of all students, primary students accounted for 31.2%, lower secondary students accounted for 21.1%, and upper secondary students accounted for 11.6%. Academic training including professional secondary education accounted for 11.8%, while vocational training only accounted for 6.5%.

Figure 5.2: Percentage of students by education level 2013



Sources: Ministry of Education and Training (MOET), MOLISA

5.1.5 The role of small and medium enterprises (SMEs)

Small and medium enterprises (SMEs) have become an important part of Vietnam's economy. The General Statistics Office (GSO, 2011) showed that the total number of enterprises accounted for 324,691 in 2011. SMEs made up the largest share with 97.6% of all companies. 5.06 million persons were working in SMEs, i.e. 10% of the total workforce. Tax payments of SMEs accounted for 40% of tax payment from business activities and accounted for 24.6% of total national budget. They contributed to the creation of new jobs and the mobilisation of capital for production and business activities. Thereby, they contributed to reduce unemployment and underemployment.

5.2 Structure of the VET system

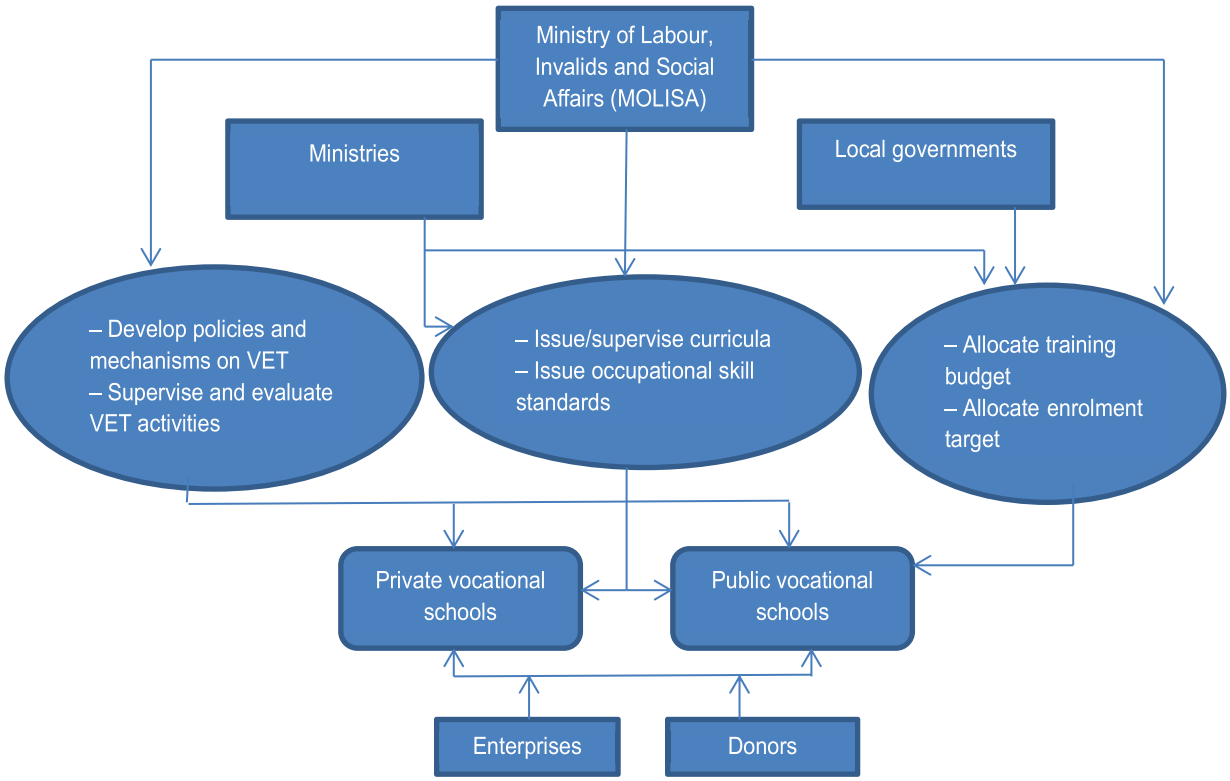
5.2.1 Legal framework

The government plays a dominant role in the management and administration of vocational training. According to the Law on Vocational Training (2006), there are three levels of vocational training under the management of the Ministry of Labour, Invalids and Social Affairs (MOLISA):

(i) college vocational training; (ii) secondary vocational training, and (iii) elementary vocational training (short-term courses).

Annually, the government spends an amount of money to allocate to public vocational training schools through MOLISA and ministries who directly manage vocational schools. The amount depends on the number of students. The government also allocates admission norms to public vocational training schools.

Figure 5.3: The VET system in Vietnam



Source: Own presentation.

Figure 5.3 shows that MOLISA is responsible for the state management of VET. It issues policies and mechanisms, establishes curricula and occupational skill standards, and allocates training budgets and admission norms for public schools which are owned by MOLISA. Ministries are responsible for issuing curricula and occupational skill standards for occupations which they manage in term of professional issues; they allocate training budgets and enrolment targets for public schools which are owned by these ministries. Local governments allocate training budgets and enrolment targets for public schools which are owned by them.

5.2.2 VET institutions

In 2013, there were 1,337 vocational training schools, including vocational elementary, secondary and college schools, and vocational training centres (see Table 5.4). One third of these institutions are private vocational training schools. Public vocational training schools are directly

under the supervision of MOLISA, line ministries and provincial governments. These state agencies manage public schools in terms of enrolment, budget allocation and training programmes.

Table 5.4: Network of vocational training schools in 2013

	Vocational college training schools		Vocational secondary training schools		Vocational elementary schools/Vocational training centres		Total	
	Public	Private	Public	Private	Public	Private	Public	Private
Number of schools	118	41	205	100	543	330	866	471
Proportion (%)	74.2	25.8	67.2	32.8	62.2	37.8	64.8	35.2

Source: Ministry of Labour, Invalids and Social Affairs

The vocational training schools face difficulties in enrolment because they only offer available training courses. They often focus on few occupations which can be trained with the available facilities and which do not require large investments, like, for example, business accounting. Many occupations, however, which are currently demanded on the labour market, like in the fields of textiles, leather, mechanical, machine assembly lines, electricity, electronic, electromechanical, and processing of agricultural products, are not offered because the training in these occupations requires materials, machines and, thus, requires large investment capital. Curricula include a larger percentage of theory teaching time than that of practical guidance time.

Many vocational schools (especially private schools) lack sites for practical training. Additionally, most of them have no connection with enterprises who could offer practical training for students, leading to weak practical skills of students. Vocational training quality still does not meet the requirements of enterprises. Graduates still have limitations regarding occupational skills in comparison with regional standards.

Vietnam has a strategy to develop high quality vocational training schools[57]. These schools will be applied preferential policies and mechanisms as well as be invested in facilities and teachers, with curricula to meet high standards of training. A quality supervision process will be used to evaluate the skills of graduates. The project target is to have 40 high-quality vocational schools by 2020. Their graduates will be accredited by regional and international nations.

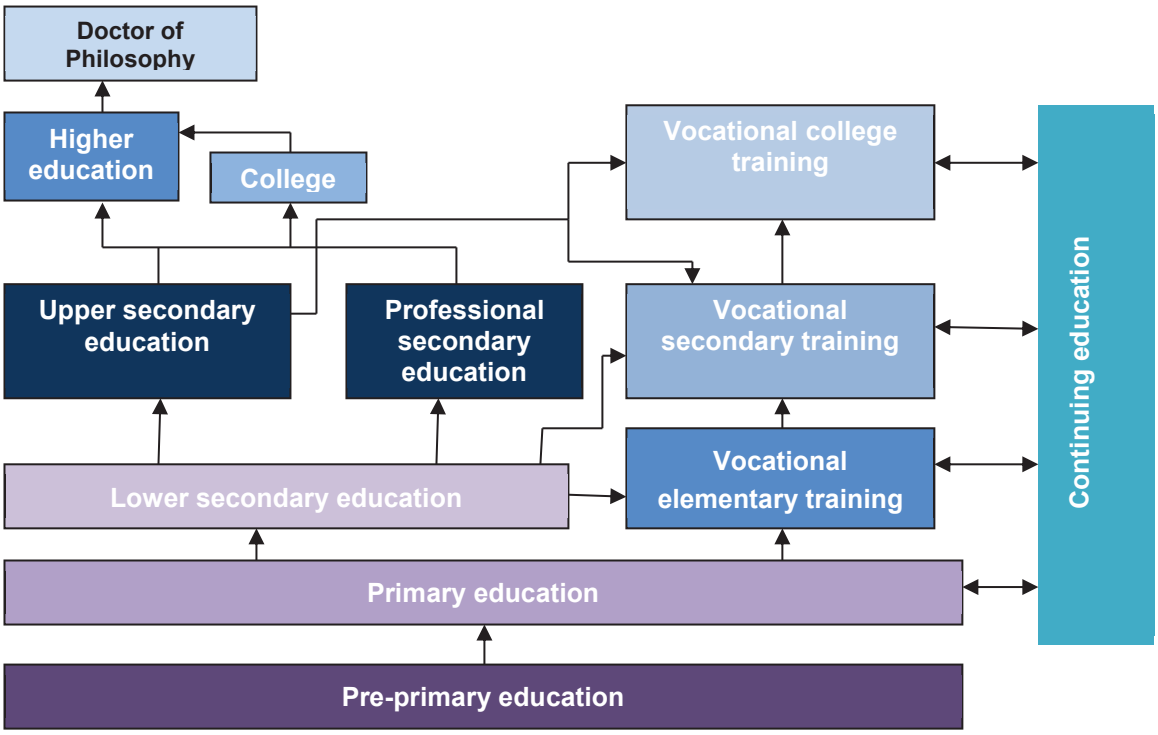
[57] Decision 761/QĐ-TTg on Project to develop high-quality vocational training schools up to 2020, dated from 23.05.2015

5.2.3 Embeddedness in the general education system

The national education system consists of four types of education (see Figure 5.4): (i) pre-school, (ii) general education (including primary, lower secondary and upper secondary), (iii) vocational education, and (iv) academic training.

Vocational colleges, vocational secondary schools, universities, colleges, professional secondary schools and enterprises are eligible for providing vocational activities.

Figure 5.4: National education system in Vietnam



Sources: Law on Education and Law on Vocational Training

5.2.4 Length of training, number of occupations, entry conditions, etc.

Vocational college, secondary and elementary training have different durations (see Table 5.5):

- Vocational elementary training: elementary level to equip trainees with practice capacity for one occupation, training duration of 3 months to 1 year.
- Vocational secondary training: secondary level to equip trainees with professional knowledge and competence, the ability to work independently and apply techniques and technology to work, training duration of 1 to 2 years (for upper secondary graduates) or 3 to 4 years (for lower secondary graduates).
- Vocational college training: college level to equip trainees with professional knowledge and competence to work independently and in teamwork, with creative capacity, apply techniques and technology to work; resolve complex situations in practice, training duration of 2 to 3 years (for upper secondary graduates), 1 to 2 years (for vocational secondary training graduates).

Table 5.5: Vocational education training system in Vietnam

Vocational training level/ degree	Vocational training institutions	Required time	Entry requirements	Degree	State agency
College	– Vocational colleges – Universities/colleges	1–2 years	graduates from vocational secondary schools	Diploma	MOLISA, MOET and other ministries and agencies
		2–3 years	graduates from high schools		
Secondary	– Vocational colleges – Vocational secondary schools – Universities/colleges/ professional secondary schools	1–2 years	graduates from junior secondary schools	Diploma	
		3–4 years	graduates from lower secondary schools		
Elementary	– Vocational colleges – Vocational secondary schools – Vocational training centres and other VET institutions	3–12 months	– appropriate qualification that depends on the training levels – health	Certificate	

Source: WB (2014)

Graduates from middle and college vocational training are eligible for higher education studies. Training length for graduates from college vocational training ranges from 1.5 to 2 years, depending on the trained occupations. Training length for graduates from vocational secondary training ranges from 3 to 4 years, also depending on the trained occupations.

In 2012, 177 occupations were offered. The number went up to 192 occupations in 2013. The structure of vocational qualifications changes between the elementary and the 3-month short-term training types Students prefer short-term training courses (see Table 5.6). The share of graduates who found a job accounted for 80% and 79% in 2012 and 2013, respectively.

Table 5.6: Share of students in different VET levels (in %)

Content	2012	2013
Structure of vocational training levels, of which:	100	100
College level	5.6	5.1
Secondary level	8.7	7.4
Elementary level	60.9	50.6
1- to 3-month vocational training course	24.8	36.9

Source: Ministry of Labour, Invalids and Social Affairs

5.2.5 Acceptance of VET

The majority of students graduating from lower secondary schools have aspirations to continue studying at upper secondary level. A larger share of students graduating from upper secondary schools tend to continue studying at higher education level. In the academic year of 2011/2012, there were more than 78% of students, having graduated from lower secondary schools, who continued studying in upper secondary schools. After finishing upper secondary schools[58], most students take an entrance examination to college or university and only consider vocational training if they do not pass the entrance examination to university.

The number of students who register to vocational education after finishing lower/upper secondary schools is small[59]. Vietnam issued a policy[60] on the ramification of students who finish lower secondary education. This policy gives orientation for lower secondary students on how to continue learning suitable to their capacities and aspirations, and helps them choose an appropriate occupation. The occupational orientation is implemented just after students finish lower secondary school.

However, after three years of implementation, in many provinces and cities, the number of students participating in vocational education only accounted for 5 to 7% of total lower secondary graduates, while the goal of this rate is 30% by 2020.

The main difficulties why vocational training does not attract students are:

– Firstly, people and society are not aware of the necessity of vocational training and the demand of enterprises for skilled labour. Many families and students do not understand their own learning capacities and economic conditions to find an appropriate occupation

[58] Students finish upper secondary school at the age of 18.

[59] According to statistics from the Ministry of Education and Training, in the academic years 2010–2012, the percentage of students who, after graduating from lower high school, went to upper secondary school accounted for over 70%. Only 1.8 to 2% of the students finishing lower secondary school registered to vocational training.

[60] Directive No. 10-CT/TW dated 05.12.2011 of the Politburo on ramification of students who finish lower secondary education.

early. In Vietnam, there is a prejudice that students only develop their careers if they graduate from colleges/universities.

- Secondly, the system of labour market information is undeveloped. Vocational training is not connected to the demand of enterprises. Investment in vocational training is limited.
- Thirdly, the education system is rigid, vocational training is not connected to upper education levels (vocational training to college/university). Moreover, academic subjects taught in vocational schools are difficult for students with a weak learning capacity.

The imbalance in the structure of vocational and academic training gives an impulse to enhance vocational guidance policies for students as soon as they are lower secondary students[61]. Vocational guidance policies aimed at helping students to access occupations and encouraging students to participate in vocational training courses, by which they will be added more score if they take entrance examination to an upper education level. Consequently, they are able to understand their opportunity to decide about their appropriate future career.

Table 5.7: Number of persons in vocational training

	Enrolment	Increase or decrease in relation to the previous year (in %)	1 year vocational training course and longer	Less than 1 year vocational training course
2006	1,340,000		260,000	1,080,000
2007	1,436,500	7.2	305,500	1,131,000
2008	1,538,000	7.1	258,000	1,280,000
2009	1,707,000	11.0	287,000	1,420,000
2010	1,745,527	2.3	277,079	1,468,000
2011	1,773,491	1.6	221,366	1,552,125
2012	1,493,379	-15.8	213,340	1,279,239
2013	1,732,016	16.0	216,116	1,515,900

Source: General Department of Vocational Training – Ministry of Labour, Invalids and Social Affairs

The target of vocational training policies[62] was to achieve a rate of a vocationally trained workforce reaching 40% by 2015, equivalent to 23.5 million persons, and to reach a rate of 55% by 2020, equivalent to 34.4 million people. However, Table 5.7 shows that there has not been a

[61] Directive No. 10-CT/TW dated 05.12.2011 of the Politburo on ramification of students who finish lower secondary education.

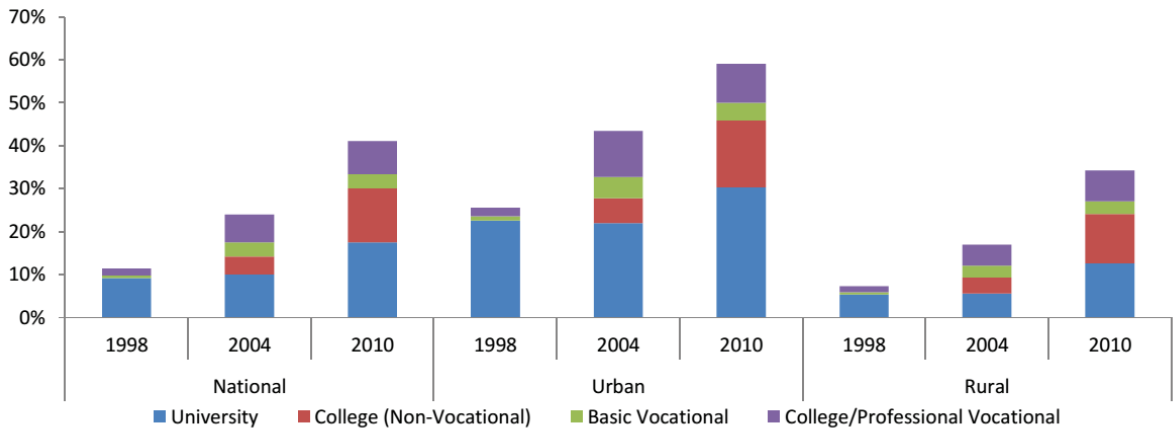
[62] Decision 630/QD-TTg of Prime Minister, dated 29.05.2012, promulgating strategy of vocational training in period of 2011–2010.

clear upward trend in the enrolment in vocational training in recent years. This may suggest that the targeted policies on vocational training are far away from being realised.

5.2.6 Labour market perspectives of VET graduates

In Vietnam, there exists an excess of labour supply with an academic background, compared to vocationally trained persons. Vocational training is less desirable than higher education, and the proportion of youth aged 19 to 21 years participating in vocational education remains at a standstill (see Figure 5.5).

Figure 5.5: Share of 19- to 21-year-olds in post-secondary education



Source: WB (2014)[63]

In Vietnam, students only enrol in vocational training if they fail in the entrance examinations to universities and colleges. Students and their parents often consider passing entrance examination to universities and colleges as an ideal destination, regardless of the quality of universities and colleges or whether they find jobs or not after graduation. They also have the prejudice that if you graduate from vocational training schools, you will be a lifelong blue-collar worker and you will have very few opportunities to promote. Moreover, the fact that enterprises in Vietnam often pay low wage levels for vocational training graduates has further exacerbated the contemptuous attitude of vocational training.

5.3 Private Sector involvement

5.3.1 Demand of companies for VET / university graduates

MOLISA (2013) showed that the average employment rate of vocational training graduates was approximately 80%, and especially in some occupations this figure is even higher at 90% (see Table 5.8).

63 http://documents.worldbank.org/curated/en/729391468126891915/pdf/829400AR0ENGLI0Box0379879B00PUBLIC0.pdf

Table 5.8: Selected occupations with highest employment rate

No.	Occupation	Proportion
1	Solder	90%
2	Metal cutting	90%
3	Building technology	90%
4	Fashion sewing	89%
5	Cooking techniques	87%
6	Refrigeration and air-conditioning engineering	86%
7	Management of small and medium businesses	82%
8	Industrial electricity	81%
9	Automotive technology	80%
10	Technical repair, computer assembly	80%
11	Industrial Electronics	77%
12	Hotel management	72%
13	Computer network administration	71%
14	Computer programming	69%
15	Business accounting	68%
16	Civil power	52%

Source: MOLISA (2013)

The current vocational training situation illustrates a problem in the educational system in Vietnam: while the unemployment rate of university graduates increases, university enrolment does not decrease. And while vocational training graduates have more opportunities on the labour market, the enrolment rates in vocational training schools do not increase.

From 2006 to 2013, Vietnam built 233 framework programmes of occupations for vocational college and secondary training, and built 39 frameworks programmes for key occupations reaching national standard.

5.3.2 Involvement of companies in VET

The Law on Vocational Training stipulates the rights and obligations of enterprises in vocational training, it defines the responsibilities of enterprises to provide training and the improvement of occupational skills for workers. However, the involvement of enterprises in vocational training is still limited. Mainly, enterprises involve in vocational training by receiving students to practise in the companies.

MOLISA (2012) showed that forms of training enterprises were willing to cooperate with are: (i) receiving students to practise in enterprises, (ii) providing information on recruitment, (iii) assessing quality of graduates, (iv) receiving teachers to visit and study, and (v) co-organising job fairs. Forms of training enterprises were not willing to cooperate with are: (i) funding equipment and machines for training, (ii) sending their experts to teach practical skills to students, (iii) granting scholarships, and (iv) recruiting graduates.

Linkages between vocational schools and enterprises are quite weak. Currently, there are no big projects in the pipeline in order to supply equipment and machines as well as laboratories from enterprises to vocational schools.

A linkage model between vocational training schools and foreign enterprises – mostly from Germany[64] and Korea[65] – dates from 2012. It is considered a pilot model. The dual vocational training system was applied. Training programmes must have two modules, theory and practice. The practical module is guided by experienced and skilled workers at enterprises. Students are considered as interns and paid a salary. This pilot model is the foundation for improving the co-operation between vocational schools and enterprises.

5.3.3 Foreign investors in VET

Vietnam acknowledges the importance of attracting foreign investors to improve its vocational training system. The government issued a regulation[66] on foreign investment in education in order to stipulate foreign cooperation and investment in education, including educational associations, foreign educational establishments, representative of office openness in Vietnam. Thereby, foreign investors may invest in all educational activities except activities related to security, defence, politics and religion.

However, Vietnam is not successful in attracting foreign investment in education. By the end of 2013, there were 179 FDI projects with a total registered capital investment of 742.7 million. It ranked 17/18 of the sectors in terms of capital.

Foreign language and informatics short-term training are the most attractive sectors for foreign investors. There are 103 projects, accounting for 42.5% of total foreign education projects. Vocational training only has nine foreign investment projects.

Under the AANZFTA[67], Vietnam committed to further open its vocational training sector to foreign investors and expand the WTO-committed fields they can provide (e.g. building, construction, computer science, information systems, engineering, environmental, surveying, manufacturing, health, nursing, pharmacy, community services, land and marine resources, animal husbandry, culinary and hospitality, transport).

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[64] The linkage between the vocational college of Hung Yen University and Lilama vocational college in Vietnam and three German companies, including Messer Gas Vietnam, Braun Vietnam, Bosch Vietnam, with the support from delegates of German Industry and Commerce in Vietnam.

[65] Five vocational schools were established with the funding from Korea government. These schools were applied the Korean vocational training model.

[66] Decree 73/2012/ND-CP, dated 26.09.2012, on foreign cooperation and investment in education.

[67] ASEAN-Australia-New Zealand Free Trade Agreement

5.3.4 Participation of companies in the development of curricula and qualification standards

Enterprises play a small role in designing curricula and assessing qualifications because MOLISA and other relevant ministries are responsible to design curricula and assess qualifications, and these state agencies are also responsible for allocating budgets and enrolment targets to public vocational training schools. Representatives of enterprises participate only by being invited to make comments on curricula.

State agencies enact framework programmes of vocational training for occupations of vocational colleges and secondary training levels. These framework programmes define knowledge and skills which graduates have to achieve during the courses. Required subjects account for approximately 75% of the training programmes. The framework programmes apply uniformly to all vocational training schools across the country. On the basis of the framework programme for each occupation, vocational training schools build select subjects which account for 25% of the training programme. Since 2013, 233 framework programmes at vocational colleges and secondary training levels have been issued.

Table 5.9: Number of occupation qualification standards issued by ministries

Ministries	Number of occupation qualification standards
Ministry of Construction	24
Ministry of Industry and Commerce	77
Ministry of Culture, Sport and Tourism	10
Ministry of Agriculture and Rural Development	21
Ministry of Transportation	36
Ministry of Health	5

Source: Report on vocational training, Vietnam 2012

Ministries will issue qualification standards of occupations for which they have state management functions. As of 2012, there were 173 occupation qualification standards that had been issued by ministries (see Table 5.9).

According to Thuc (2012), there are about 210 enterprise-owned training institutions. Most of the big enterprises have their own vocational training centres, with the aim of training and/or retraining employees to meet their requirements.

5.4 Policy challenges and recommendations

5.4.1 Current reforms to strengthen VET and private sector involvement

The government should implement the following key solutions to strengthen the VET system:

1. **Enhancing market-based vocational training.** There should be mechanisms and policies to encourage enterprises to participate in the vocational training system. Enterprises understand the demands of the labour market. They must be consulted and/or be involved in policies of enrolment and vocational training programmes.

Currently, the vocational training system in Vietnam is not closely affiliated to the labour market because public vocational training schools, which dominate in the vocational training system, are allocated budgets and assigned enrolment targets by state agencies. These state agencies do not clearly understand the labour market but have the power and the functions to decide about the orientation of vocational training.

From 2012 on, there were collaborative projects between vocational training schools and German enterprises, based on the dual vocational training approach. This model needs to be analysed and the actual results to be shared.

2. **Encouraging graduates from secondary education to enrol in vocational training schools**, promoting vocational guidance activities to increase the rate of enrolment of lower and upper secondary graduates to vocational training institutions. Vocational guidance programmes must be analysed whether they are scientifically designed and consistent with the psychology of students and their parents or not.

3. Current curricula are mainly established by managers and vocational schools with small contribution by enterprises. Training programmes pay more attention to theory than to practical contents. Thus, **training curricula need to be reformed through increasing the quantity and quality of practice modules.**

4. State budget is allocated to public vocational schools based on the number of students. This leads to a dependence and stagnation of public vocational schools and to a reduction of the quality of their training. **Allocating budgets to public vocational training schools based on outputs** like job rate of graduates would be useful instead. The next step is to allow self-reliant, self-responsible, and financially self-accounting mechanisms to public vocational schools.

5. **Encouraging enterprises to place training orders at vocational schools.** Vocational training schools and enterprise should design training programmes. Vocational training schools enrol students and organise the training courses. Students will study theory in class and practice in enterprises. Graduates will work for the ordering enterprise for a certain period of time, as agreed on before. If other enterprises want to recruit them, they will have to pay for the training costs.

6. **Since 2012, a pilot vocational training model based on the dual vocational training system,** linking training cooperations with German enterprises, is applied. The training programmes have two modules, theory and practice. The practical module is guided by experienced and skilled experts at the enterprises. This model needs to be assessed to indicate the success or failure of the model and to determine the way in which the expansion of this model is implemented or not.

References Chapter 5

CIEM-World Bank, 2012, The employer survey report

General Statistics Office Vietnam, 2012, Employment Survey 2012

General Statistics Office Vietnam, 2013, Employment Survey 2013

General Statistics Office Vietnam, 2011, Small and medium enterprises, period of 2006–2011

Kenichi Ono, 2010, Avoiding the Middle Income Trap: Renovating Industrial Policy Formulation in Vietnam, Vietnam Development Forum (VDF)

ILO, 2009, Employment Trends Report

Ministry of Labour, Invalids and Social Affairs (MOLISA), 2012, Vocational report 2012

Ministry of Labour, Invalids and Social Affairs (MOLISA), 2013, Vocational report 2013

Nguyen Thi Xuan Thuy, Pham Truong Hoang, 2010, Human resource of industrial sector: A point of view from enterprises

Phan Chinh Thuc, 2012, Overview of the TVET Structure in Vietnam, Hanoi

Vietnamese Decision 1956/QD-TTg, dated 21.11.2009, of Prime Minister on vocational training for rural labourers up to 2020

Vietnamese Decision 630/QD-TTg of Prime Minister, dated 29.05.2012, promulgating strategy of vocational training in period of 2011–2010

Vietnamese Decision 1021/QD-TTg, dated 31.08.2012, on national targeted programme on employment and vocational training period of 2012–2015

Vietnamese Decision 339/QD-TTg, dated 19.02.2013, approving the master plan on economic restructuring in association with conversion of the growth model towards improving quality, efficiency and competitiveness during the 2013–2020 period

Vietnamese Law on Vocational Training (2006)

Vietnamese Law on Vocational Education (2015)

Vietnamese Directive No. 10-CT/TW, dated 05.12.2011, of the Politburo on ramification of students who finish lower secondary education

World Bank, 2012, Vietnam workforce development

World Bank, 2014, Skilling up Vietnam: Preparing the workforce for a modern market economy

6 Conclusion and policy recommendations

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The country analyses have shown that in all selected countries – India, Korea, South Africa, and Vietnam – Vocational Education and Training (VET) has been identified as a crucial instrument to support the respective development strategy.

Not only due to its size, but also due to its economic rise in the last decades, **India** is a very important country. But despite its impressive development, it still lags behind in many development indicators. India's growth is mainly based on the service sector. For a sustainable development, however, it is important that India diversifies its growth strategy. This requires the skilling of a large share of the population which currently amounts to around 1.3 billion persons. India's VET system is not able to provide such skills: It does not have the capacities, and in many sectors the training contents are outdated. Furthermore, the training offer does not match the demands of the labour market. Attempts to improve the VET system and to introduce modern training standards have often failed due to a fragmented management system. The VET system was under the shared responsibility of different ministries which made reforms cumbersome. In 2014 India introduced a new ministry, the Ministry of Skill Development & Entrepreneurship, which coordinates all VET activities. It has the ambitious goal to skill 500 million individuals by 2022.

The **Republic of Korea** has also undergone a rapid economic upswing since the 1960s. This development was backed by a high skill level of the population. A high ambition and a striving for higher academic qualifications is deeply rooted in the Korean society and important for the social status. However, this attitude has led to an increasing imbalance between academic graduates and vocationally skilled persons on the Korean labour market. Today, there are large shortages on the middle qualification level. In particular the large share of small and medium enterprises, which make up 97 per cent of all Korean companies and which employ 85 per cent of the Korean population, need vocationally qualified personnel. The Korean VET system is mainly school-based and the participation of companies in VET is limited. In consequence, the companies have to train graduates themselves when they enter the company. In order to meet international standards, large private companies have introduced own training schemes. In order to improve the reputation and the quality of VET, Korea has introduced so-called 'Meister colleges'. These colleges have a focus on a closer cooperation between schools and companies. Furthermore, dual training schemes have been introduced in some colleges – following the example of the Swiss dual VET system. In 24 sectors nationwide VET standards have been introduced to guarantee a high quality. Still the largest challenge is to win the population for the VET offer. To attract students, scholarships were introduced, apprentices get a place in a dormitory and they have a guaranteed job after graduation.

Since its transition to democracy, the VET sector and especially Technical and Vocational Colleges in **South Africa** have gained importance. These colleges have been identified to be best suited to provide the skills which are needed to support the economic growth of the country. In 2003, South Africa introduced the so-called Support to Education and Skills Development Programme in several model projects. One important pillar of this programme was the strengthening of the Student Support Services in the selected colleges. These services aim at establishing relations between the VET system and the industry. During their apprenticeship, students are

placed in companies and thereby acquire work-based experience. Currently, the focus of reforms is on the improvement of curricula in order to make the training contents more relevant for the industry. The visible results of past reforms differ between the colleges. However, some colleges were already successful in improving the pass rates of the students and reducing student retention rates. Furthermore, there has been an increasing share of students with periods of work-based learning within companies. South Africa has decided to expand the project to further colleges. The aim of the campaign is not only to skill young persons but also to increase the demand and the reputation of VET graduates in industrial companies.

Finally, **Vietnam** has also been through a phase with high economic growth rates. The country focusses on further strengthening its non-agricultural sectors. The transition of people to non-agricultural jobs can, however, only be successful with an extensive skilling initiative. Today, more than 80 per cent of the labour force in Vietnam is unskilled. The available offer of the VET system often depends on available resources in VET institutions – not on the labour market demand. Mostly, VET does not include work-based learning and the relationship with the industry is weak. Even though more and more national standards are implemented to improve the training quality, the companies are not very involved. In addition, as in other countries, young people prefer to go to university after graduation from upper secondary schools, even though the employment opportunities after VET are good. VET is a ‘second choice’. However, Vietnam has ambitious VET goals: by 2020, more than half of the labour force is supposed to be vocationally trained. To reach this goal, Vietnam tries to improve its vocational guidance, has expanded the VET offer, and has recently introduced several VET model projects with dual elements.

Even though the four countries are very different in terms of their demographic and economic development, they all face the same challenge: designing a VET system that makes the country future-proof. On the one hand, such a VET system skills young persons for the labour market and improves their employment prospects. On the other hand, teaching the right skills is a key necessity for a sustainable growth strategy for the economy as a whole and for reacting to current developments like the ongoing digitalisation. The country analyses reveal fields of action as well as several successful approaches which can serve as a role model for other countries:

Strengthening of company involvement in VET

Nobody knows better than the companies themselves what skills are needed on the labour market. Hence, a strong and institutional relationship between the VET system and the private sector is a necessary precondition for a successful VET system. The private sector involvement should comprise the participation of the companies in the development of training standards as well as the provision of training in the companies. Periods of work-based learning in the companies are the best preparation for young persons for the labour market. In none of the four selected countries does the private sector play a large role in VET, yet. However, some approaches become visible which strengthen the role of the private sector.

Clear VET responsibilities

In South Africa, for example, Student Support Services play a coordinating role in creating a closer bond between the VET colleges and the industry. Centralising the efforts of VET institutions in creating a relationship is a promising approach. India has even gone one step further

and has created an own ministry for skills. This pooling of resources as well as decision-making competences shall make all VET activities more efficient. At the same time, the implementation of an own ministry increases the visibility of VET enormously.

National VET standards

All countries have introduced nationwide VET standards in selected occupations during the last years. This is an important measure to increase the quality of VET and the acceptance of VET graduates in companies. In Germany, nationwide minimum standards are an important aspect in VET as they guarantee that companies know exactly which competencies they can expect from VET graduates – independent from where they have undergone their apprenticeship. Therefore, the efforts of introducing VET standards should be expanded to more occupations and sectors.

Incremental introduction of dual VET elements

In Korea and Vietnam, there are several model projects which implement dual training approaches after the Swiss or German example. In countries where company involvement in VET has no tradition, the introduction of dual training approaches requires a change of mind in the companies. This cannot happen from one day to the other. Therefore, the incremental introduction of dual training – be it in single model regions or single model sectors – can be an important first step. Successes and advantages of companies' activities need to be made visible so that in consequence the readiness of other companies to offer training places for apprentices increases.

Promote the labour market perspectives of VET

The analyses of the four countries show, however, that mental reservations exist not only among the companies. In particular in Korea, VET has a social stigma. VET is considered to be a second choice for many youths if they do not have the possibility to go to university. Particularly in countries like Korea or Vietnam, where there is an excess of university graduates compared to vocationally qualified persons, this is a very critical situation as the vocational decision there seems to be disconnected from the future labour market prospects. It is important to conscientise the population for the significance of VET. Vocational guidance needs to be strengthened as it can contribute to the dissemination of knowledge about the career perspectives with VET. In addition, the government and/or the VET institutions can emphasise this message by connecting apprenticeships to a job guarantee. Korea and South Africa have gone this way to attract more young persons to the VET system. Furthermore, scholarships were introduced for VET students. But again, changing the public perception of VET – be it that of young persons, their parents or the society as a whole – needs time and is a big task. Nevertheless, countries can accelerate this process, for example by supporting the explanatory work or waging image campaigns.

Increase the permeability between VET and higher education

Another important factor to increase the acceptance of VET is to improve the permeability between VET and higher education. In Germany, for example, where more and more youths prefer going to university rather than entering the VET system, the admittance for VET graduates to

universities has been facilitated during the last decade. This is an important signal for young persons and emphasises the value of VET certificates. Also, further education becomes more important as VET in the sense of initial VET can only be a first step in the labour market. In the light of ever faster global trends like digitalisation, employers need to regularly update their skills. VET can set a solid basis for this. Thus, a higher permeability can make VET more attractive and, therefore, make it easier for companies to win young persons for VET programmes.

Implementation of skill forecasts

Finally, all countries need to establish instruments to improve skill forecasts in order to reduce prevailing skill gaps and mismatches. The implementation of dual elements already contributes to this as companies' investment in VET is always connected to their own skill demands: companies train exactly those skills that they really need. However, every country needs an institutionalised system to supervise developments in the labour market and the related skill demands (e.g. related to the ongoing digitalisation of the economy). Furthermore, in consequence, processes need to be established which translate the forecast results into the VET system.

In conclusion it can be said that all countries have already gone the most important step: the identification of VET as a crucial success factor for a sustainable growth strategy. In all countries, there is need for action to enable the VET system to meet this challenge. A stronger integration of the private sector in VET is thereby the most crucial measure: strengthening work-based learning in companies leads to a better match between the VET offer and the real labour market demands – and thereby improves young persons' future employment prospects.

Project partners

Under the umbrella of the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH and commissioned by the German Federal Ministry for Economic Cooperation and Development (BMZ), the Emerging Market Sustainability Dialogues (EMSD) provide a network of stakeholders and decision-makers from think tanks, multinational corporations, and the financial sector. The Economic Policy Forum (EPF) represents one of the three EMSD networks and brings together the world's leading political economy think tanks from emerging and industrial economies, such as the BRICS, Mexico, Indonesia, Turkey, Vietnam and other countries. Its strategy and policy papers are produced for governments and national policy-makers to inform national and international policy processes. In this vein, EPF has been contributing to the BRICS Academic Forum, the official track-II coordinators of the annual BRICS summit. It also works on specific socio-economic themes for the G20, and has fed its policy proposals and research findings into the COP21 and Munich Security Conference. Its goal is to better inform domestic and global economic policies with evidence-based policy recommendations.
http://www.emsdialogues.org/

Founded in 1951, IW is a registered non-profit organisation, which stands for a free market economy. It sees its main task in promoting a better understanding of economic and social processes among politicians, opinion makers and the general public. IW analyses facts, reveals trends, explains economic developments and publishes proposals. Its research intends to initiate debate and the institute is committed to develop the best possible strategies for the German economy and German economic policy.
http://www.iwkoeln.de/en/

Set up in 1990, ORF seeks to lead and aid policy thinking towards building a strong and prosperous India in a fair and equitable world. It helps discover and inform India's choices, and carries Indian voices and ideas to forums shaping global debates. ORF provides non-partisan, independent analyses and inputs on matters of security, strategy, economy, development, energy, resources and global governance to diverse decision-makers (governments, business communities, academia, civil society). ORF's mandate is to conduct in-depth research, provide inclusive platforms and invest in tomorrow's thought leaders today.
http://www.orfonline.org/

Human Resources Development Service of Korea (HRD Korea) has been established in 1981. It is a subsidy organisation of the Ministry of Labour and Employment of Korea. Its headquarter is based in Ulsan and it has six regional head offices as well as two universities named Korea University of Technical Education and Korea Polytechnics.
The main tasks of HRD Korea are consisting of the development of qualification concepts, the organisation and examination of exams for state-recognised vocational qualifications, the support of foreign workers in Korea, the preparation of national skill competitions and co-working in the organisation of World Skills Competition, as well as collaborating with numerous national and international labour and employment organisations.
http://www.hrdkorea.or.kr/ENG

The Human Sciences Research Council (HSRC) is a South Africa's statutory research Council that conducts research, which generates critical and independent knowledge, relative to all aspects of human and social development. Its existence is per the HSRC Act No. 17 of 2008, which replaced the Human Science Research Act No. 23 of 1968. The aim of the Act is to provide for the promotion of research in the field of human sciences in order to improve understanding of social conditions and the process of social change and to provide for the continued existence of the Human Sciences Research Council. The HSRC is committed to creating cutting-edge research which supports development nationally (i.e. in South Africa), in the SADC (Southern African Development Community) region and Africa at large.
http://www.hsrc.ac.za/en

The Central Institute for Economic Management (CIEM) was established in 1978 and is a leading institute in terms of research and decision-making in Vietnam. CIEM has been charged to research, initiate and participate in the formulation of economic policies and management tools, and translate these into working plans, policies, laws and regulations for consideration and enactment by the National Assembly and/or Government.
http://www.ciem.org.vn/en/home.aspx

March 2017

Published by

giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH