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Financing TVET:

A comparative analysis in six Asian countries

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ABSTRACT

Over the last years, technical and vocational education and training (TVET) has been rising in the political agenda of both the international community and many governments around the world. In the new Agenda for Sustainable Development, which will guide the actions of the international community for the next fifteen years, TVET is expected to address multiple demands by helping young people and adults develop the skills they need for employment, decent work and entrepreneurship, promoting equitable, inclusive and sustainable economic growth, and supporting transitions to green economies and environmental sustainability. Yet the question of how to finance this priority is still insufficiently explored.

In order to improve their ability to provide sound, evidence-based analysis and advice to their constituents, the French Development Agency (Agence Française de Développement, AFD) and UNESCO launched a regional comparative study on TVET financing approaches. Looking into the example of six Asian countries (Laos, Malaysia, the Philippines, Republic of Korea, Thailand and Viet Nam) and benchmarking them against international practices in Europe, Latin America, Africa and other Asian countries, this study raises issues and explores ways to respond to the challenge of TVET funding.

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Abbreviations and acronyms

ADB	Asian Development Bank
AFD	French Development Agency (*Agence Française de Développement*)
CIT	Corporate income tax
DOLISA	Department of Labour, Invalids and Social Affairs (Provincial Level)
DTS	Dual training system
EIF	Employment Insurance Fund
EIS	Employment Insurance System
GDP	gross domestic product
GDVT	General Department of Vocational Training
GIZ	German Cooperation Agency (*Gesellschaft für Internationale Zusammenarbeit*)
GRET	Groupe de Recherche et d'échange technologiques
GSO	General Statistics Office of Viet Nam
HRDF	Human Resource Development Fund
IGA	income-generating activities
IGP	income-generating projects
ILO	International Labour Organization
KPI	key performance indicator
KW	South Korean won
LAK	Lao kip
LLL	lifelong learning
LOE	local office for education
MOE	Ministry of Education
MOEL	Ministry Of Employment and Labour
MOES	Ministry of Education and Sports
MOET	Ministry of Education and Training
MOLISA	Ministry of Labour, Invalid and Social Affairs
MPI	Ministry of Planning and Investment
MSME	micro, small and medium enterprises
NEET	not employed, or in education or training
ODA	official development assistance
OVEC	Office of the Vocational Education Commission

PESFA	Private Education Student Financial Assistance
PHP	Philippines peso
PPC for VE	Joint Public and Private Committee for Vocational Education
RM	Malaysian ringgit
SDC	Swiss Agency for Development Cooperation
SDF	skill development fund
SMEs	small and medium-sized enterprises
SOE	State-owned companies
STEP	Special Training for Employment Programme
TESD	technical education and skills development
TESDA	Technical Education and Skills Development Authority
THB	Thai baht
TVET	technical and vocational education and training
TVSD	technical and vocational skills development
TWG	trade working groups
TWSP	Training for Work Scholarship Program
UNESCO	United Nations Educational, Scientific and Cultural Organization
USD	United States dollar
VAT	Value added tax
VCA	Viet Nam Cooperative Alliance
VCCI	Viet Nam Chamber of Commerce and Industry
VGCL	Viet Nam General Confederation of Labour
VND	Viet Nam Dong
ZAR	South African rand

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Specific econometric work was entrusted to Dr Ana Rosa Gonzalez-Martinez, from the Dutch consulting firm Ecorys, for the purpose of this study, to estimate the resources that could be generated through the implementation of a training levy in Viet Nam. This work was based on a methodology that was developed by UNESCO and Cambridge Econometrics.

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Executive summary

Over the last years, technical and vocational education and training (TVET) has been rising in the political agenda of both the international community and many governments around the world. In the new Agenda for Sustainable Development, which will guide the actions of the international community for the next fifteen years, TVET is expected to address multiple demands (economic, social and environmental) by helping young people and adults develop the skills they need for employment, decent work and entrepreneurship, promoting equitable, inclusive and sustainable economic growth, and supporting transitions to green economies and environmental sustainability. Two of the seventeen Sustainable Development Goals (SDGs) are directly related to TVET.

Yet the question of how to finance this priority is still insufficiently explored. In order to improve their ability to provide sound, evidence-based analysis and advice to their constituents, the French Development Agency (Agence Française de Développement, AFD) and UNESCO launched a regional comparative study on TVET financing approaches. Looking into the example of six Asian countries and benchmarking them against international practices in Europe, Latin America, Africa and other Asian countries, this study raises issues and explores ways to respond to the challenge of TVET funding.

It first analyses how public resources for TVET are mobilized and invested. It shows that the funding available for TVET is far below the needs of the sector, and often barely sufficient to cover the financial needs of the existing training centres. This can be explained partly by the lack of public resources, but also by the low priority given to TVET. While in the six Asian countries analysed, the public budget allocated to TVET reaches 0.03 to 0.46 per cent of gross domestic product (GDP), international comparison shows that high-income countries tend to invest a higher share of their GDP in TVET (1.3 per cent of GDP in Finland, 0.83 per cent in Sweden, 0.81 per cent in the Netherlands, 0.75 per cent in Austria and the Czech Republic). This contrasts with the numerous objectives TVET is expected to address in terms of preparing a growing number of young people for the labour market, raising the competitiveness of the economy, ensuring continuing training for adults, and promoting sustainable economic growth.

One of the first possible steps is to enhance States' planning capacity, in order to invest available resources adequately. This can be done by developing a political strategy for TVET, improving coordination between sectoral ministries that are involved in skills development, and establishing reliable and comprehensive statistical information systems, consolidating data from all channels receiving public funding (sectoral ministries, provinces, industry and so on). The key purpose is to help the State adopt a strategic vision of skills development, monitor the inputs and outputs of the national TVET system, and plan resources accordingly.

The study also analyses how public resources could be used more efficiently by implementing performance or demand-based funding. It analyses the various strategies that are being implemented in the six countries, and the risks and advantages associated with each approach. It shows that the implementation of result-based funding implies a careful definition of performance indicators, efficient and transparent tools to assess whether they are attained, and institutional capacities to supervise the whole system. It also requires a legal framework that promotes and regulates training centres' initiatives to develop partnerships with industry, improve their training offer and adapt it to the local labour market, and develop a continuing training offer and income-generating activities that would help increase their resources and make connections with the local environment.

Industry is another crucial player that countries can mobilize to contribute to the funding of TVET. Companies have historically been mobilized to finance training. They do so in kind, by providing pre-employment training to apprentices and on-the-job training to their employees. Many countries have implemented work-based learning systems, not only to share the financial burden of TVET with companies, but also as part of a strategy to improve the relevance of TVET and the quality of training. This often goes hand in hand with specific measures aimed at making it easier and cheaper for companies to invest in work-based training (such as tax rebates, direct subsidies, simplified procedures and specific support to help them access government incentives, and awareness campaigns on the net profit generated by apprentices).

Industry can also be made to contribute through the payment of a training levy, usually imposed on payroll (ranging from 0.5 per cent to 4 per cent), and can benefit from this system through various schemes (cost reimbursement, cost redistribution or levy exemption). The introduction of training levies often goes hand in hand with the establishment of training funds (sectoral or intersectoral) to manage the funds raised. If they are well managed and have adequate procedures, training funds may turn into strategic players in the funding of skills development. The report provides various recommendations concerning the setting-up and management of training funds. It stresses the need for operational and managerial partnership-based autonomy, full recovery of the training levy, and the importance of implementing funding windows that are adapted to the needs and constraints of specific targets (small and medium-sized enterprises (SMEs), young people, women, the unemployed and so on) in order to ease the access of various groups to the funding.

Specific econometric work has been conducted in Viet Nam, to help the government assess the amount that could be raised by means of a training levy, which is under discussion in Viet Nam. This analysis, carried out by the Dutch consultancy firm Ecorys and based on UNESCO/Cambridge Econometrics methodology, presents various scenarios and estimates the contributive capacity of companies in Viet Nam.

Countries may also complement the core funding of TVET by introducing training fees, which are often accompanied by scholarships or student loans to mitigate the effect on the less affluent and ensure equitable access for all. Official development assistance (ODA) also represents an important source of funding, which should nevertheless be considered as a complementary, non-structural source, since it is provided for a limited period of time, after which the State has to take over.

Beyond the need to enhance the cost-effectiveness of public resources and diversify funding sources, the report concludes by emphasizing the importance of developing funding tools that support the implementation of policy objectives. The Third International Congress on TVET held in Shanghai (China) in 2012 notably discussed challenges faced by TVET systems and explored appropriate responses to face them (Shanghai Consensus: UNESCO, 2012). The report shows that, while some progress has been made in areas such as the establishment of open competency-based training systems recognizing various pathways to acquiring skills, there is still room for improvement in other areas, such as greening and digitizing TVET, which have not received as much attention.

Chapter 1
Rationale of the study

1. TVET at the centre of the 2030 Agenda

In 2015, the international community defined a new Agenda for Sustainable Development which will guide its action for the next fifteen years in areas of critical importance. Education and training are central to the achievement of the 2030 Agenda. More specifically, two of the seventeen Sustainable Development Goals (SDGs) are directly related to technical and vocational education and training (TVET).

Through SDG4, the international community commits itself to 'ensuring inclusive and equitable quality education and promoting lifelong learning opportunities for all', especially for those in vulnerable situations. SDG4 puts a special emphasis on lifelong learning (LLL) opportunities which will help people to 'acquire the knowledge and skills needed to exploit opportunities and to participate fully in society'. It notably targets 'equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university' (SDG4.3) and a substantial increase in 'the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship' (SDG4.4).[1] SDG8 calls on Member States to 'promote sustained, inclusive and sustainable economic growth, and full and productive employment and decent work for all'. More specifically, SDG8.5 targets the achievement of 'full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value', notably through a substantial reduction of 'the proportion of youth not in employment, education or training' by 2020 (SDG8.6).[2]

As defined in the 2030 Agenda, TVET is thus expected to address multiple demands (economic, social and environmental) by helping young people and adults to develop the skills they need for employment, decent work and entrepreneurship, promoting equitable, inclusive and sustainable economic growth, and supporting transitions to green economies and environmental sustainability.

2. Global challenges facing the TVET system

The analysis of the international context stresses the challenges facing TVET systems in the near future and questions our ability to respond to them.

The first challenge relates to the major demographic shifts the world is facing: the global population reached 7.3 billion in mid-2015, with 60 per cent living in Asia (4.4 billion), 16 per cent in Africa (1.2 billion) and 9 per cent in Latin America and the Caribbean (UN, 2015). It is projected to increase by more than 1 billion people within the next fifteen years, reaching 8.5 billion in 2030, and to increase further to 9.7 billion in 2050 and 11.2 billion by 2100. Africa is expected to be the fastest-growing region, followed by Latin America and Asia. These major demographic trends imply a considerable increase in the training demand and thus in the training offer that will have to be provided.

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1 www.un.org/sustainabledevelopment/education/
2 https://sustainabledevelopment.un.org/sdg8

The second challenge TVET systems have to face is related to the types of job for which the population needs to be prepared. According to the International Labour Organization (ILO) *World Employment Social Outlook 2016* (ILO, 2016) and the World Bank *World Development Report 2013* (World Bank, 2012):

- **Almost half of the world's working population is in vulnerable employment.** ILO defines those in vulnerable jobs as own-account and contributing family workers (ILO, 2016), who are highly exposed to precariousness since they have limited access to social protection schemes. Vulnerable employment accounts for more than 46 per cent of total employment, and involves nearly 1.5 billion people. This problem is particularly acute in developing and emerging countries, where it accounted for 76.6 per cent and 52.6 per cent respectively of all employment in 2016. In South-East Asia and the Pacific, and in Southern Asia more particularly, vulnerable employment comprised 52.5 per cent and 71.9 per cent respectively of total employment.
- **Unemployment is widespread**: it is forecast to rise by about 1.1 million in 2017, to reach a total of 200.5 million people, of whom 15.1 million are in South-East Asia and the Pacific, and 29.4 million in Southern Asia.
- **Young people (generally defined as the age group 15–24) are facing greater difficulties in entering the job market**, with an unemployment rate often reaching twice the national average or more. Some of the main youth challenges, including unemployment, early school leaving and labour market discouragement, are reflected in the indicator for NEET (those not employed, or in education or training), which can reach more than one-third of all young people (World Bank, 2012).

These developments will bring significant changes to the skills required on the labour market and will have an impact on the type of TVET offered. They suggest that countries will have to undertake profound reforms of their TVET systems and financing mechanisms to deal with these fundamental shifts.

3. Funding strategies will play a fundamental role in achieving the 2030 Agenda

Mobilizing the means to respond to these challenges and reach the targets of the 2030 Agenda is crucial. This involves a need to both optimize the use of available financial resources and mobilize additional resources. It also involves, as it was underlined in the Third International Congress on TVET organized in Shanghai in 2012, 'a paradigm shift that includes the active involvement of relevant actors, such as industry' (UNESCO, 2012), with the aim, not only to improve the efficiency of existing resources by orienting them to sectors that are crucial for the economy, but also to increase the means by harnessing the contribution of industry.

TVET funding is nevertheless constrained by various parameters which will be analysed in this report:

- State budgets are limited and some countries are over-indebted, which constrains their capacity to increase the budget dedicated to TVET.
- Structured financing schemes drawing on industry's resources, notably for continuing training, are not always in place.
- Families and individuals are often asked to contribute to the funding of TVET through tuition fees but their contribution should be kept low in order to maintain affordable and equitable access to training.
- Income-generating activities through which training providers could complement their resources are generally limited.
- Donor financing complements funding but does not replace it (it mainly covers part of investment costs).

4. Objectives of the study

The French Development Agency (*Agence française de Développement,* AFD) and UNESCO have been concerned with analysing how TVET financing is organized (including public funding, the contribution of companies through general or specific taxation or levies, the contributions of families and trainees, and so on), to understand the potential contribution of industry in financing TVET, and how TVET financing systems are designed and used as operational tools for steering and implementing public policies.

In order to improve their ability to provide sound, evidence-based analysis and advice to their constituents, AFD and UNESCO launched this regional comparative study on TVET financing approaches.

The objective of the study is twofold. It first aims at examining TVET financing systems in a selected number of Asian countries (Laos, Malaysia, the Philippines, Republic of Korea, Thailand and Viet Nam). These countries were chosen to represent a diversity of economic contexts (including low, middle and high-income countries) and of TVET financing approaches and strategies (particularly the existence of training funds or levy systems).

The study's second objective is to share good practices drawn from international experience to fuel the reflections of policy-makers and practitioners of vocational training on possible approaches to tackle the lack of resources available for TVET.

The results of the study will feed into both AFD and UNESCO TVET strategies:

- In the context of ODA financing of TVET projects in developing and emerging countries, AFD is engaged in the analysis and comparison of different mechanisms of TVET financing – particularly training funds – in order to better understand the advantages and risks of each system depending on local economic and institutional contexts and the dynamics of skills development. A comparative study of training funds was published in 2014 covering Latin American and sub-Saharan funds (Walther *et al*., 2014), and this followed several earlier publications produced since 2008. AFD is also supporting the reform of financing systems and several training funds in a diversity of countries in the Mediterranean region, sub-Saharan Africa and Latin America.

- The Executive Board of UNESCO adopted a new *Strategy for TVET* in April 2016 (UNESCO, 2016*a*), which sets out key policy areas and actions for the period 2016 to 2021. The *Strategy* aims to support the efforts of Member States to enhance the relevance of their TVET systems, to equip all young people and adults with the skills required for employment, decent work, entrepreneurship and lifelong learning, and to contribute to the implementation of the 2030 Agenda for Sustainable Development. In its support for policy reviews and policy development, the *Strategy* provides that, in order to ensure the availability of stable and sustainable resources for TVET, UNESCO's work is expected to support Member States to design efficient and effective funding strategies and target TVET investments on projects and programmes that are cost-effective for individuals, enterprises and society at large. This will include identifying good practices in the design, governance and management of TVET funding mechanisms, and options for financing TVET expansion, equity and quality.

5. Structure and methodology of the study

To reach these objectives, country case studies have been carried out by national consultants in each of the six countries, under the coordination of the French NGO Gret, supported by AFD and UNESCO.

These case studies have been complemented by a literature review on the main available studies that have been conducted in the past ten years, including UNESCO (2015, 2016*a*), AFD (Walther and Uhder, 2014, 2015*a*), and a study for the World Bank (Johanson, 2009).

The report presents the funding strategies that have been implemented in the six selected Asian countries and puts these approaches in the perspective of international practice:

- The first approach consists of mobilizing public resources for TVET and improving their cost-effectiveness through the introduction of funding formulas (***Chapter 2***).
- A second approach consists of ensuring that industry contributes to funding TVET, by introducing training levies and setting up training funds to manage the levies (***Chapter 3***).
- ***Chapter 4*** provides an overview of other possible approaches to complement existing resources, notably the introduction of tuition fees, encouraging training institutions to develop income-generating activities, and drawing on ODA.
- The study concludes by providing examples of innovative approaches in funding TVET that aim at enabling flexible learning pathways for individuals.

As far as possible, the advantages and risks of each approach have been analysed and recommendations for the implementation of efficient funding strategies have been provided.

Furthermore, country briefs can be found in the ***Chapter 6***. This also includes a short presentation on the Cambodian context, based on a study led by the Asian Development Bank (ADB) and UNESCO.

Chapter 2
Mobilizing public resources and improving their cost-effectiveness

1. Prioritizing public resources according to labour market needs

In many countries, initial and institution-based training is considered to be the responsibility of the State (Atchoarena, 2009). By securing regular and long-term resources for public and sometimes private training institutions, the State contributes to the development of a strong national training capacity and a well-trained labour force.

Despite the priority given by States to skills development, TVET nevertheless remains largely underfinanced.

TVET is underfinanced first because it is expensive compared with general education, because of the high costs of material, equipment and facilities in centre-based training approaches, but also because the share of public budget dedicated to TVET is generally low compared with that allocated to general education.

The analyses conducted in the six Asian countries show that in five out of the six countries, the share of GDP invested in TVET is relatively low compared with that in high-income countries. In Thailand, it reaches 0.15 per cent of GDP (4.83 per cent of state spending on education), while in Malaysia, it only reaches 0.09 per cent of GDP. In the Philippines, the budget dedicated to TVET is only 0.07 per cent of GDP (1.44 per cent of the total education budget). The percentage fell to 0.03 per cent of GDP in Laos in 2013.

In the Republic of Korea, no consolidated data is available. The Ministry of Education (MOE) transfers about 72 per cent of its budget to seventeen local offices of education (LOE) as a block grant to finance education and training. Since no sections of this budget are earmarked for specific purposes, no estimate is available on the total share of the budget allocated to TVET.[3]

Viet Nam stands out as an exception: state budget spending on vocational training increased ten times from 2001 to 2011, rising from VND 968 billion to 9,800 billion (Viet Nam, 2011). In 2011, 0.46 per cent of GDP was allocated to TVET funding, representing on average 8 per cent of state spending on education, in comparison with 0.20 per cent of GDP and 4.90 per cent of state spending on education in 2001.

International comparison shows that high-income countries tend to invest a higher share of their GDP in TVET than the six Asian countries analysed (see ***Table 1***). According to Eurostat, the statistics agency of the European Union, public spending on secondary and post-secondary vocational training in 2013 reached 1.3 per cent of GDP in Finland, 0.83 per cent in Sweden, 0.81 per cent in the Netherlands, 0.75 per cent GDP in Austria and the Czech Republic, and 0.48 per cent in France.

[3] In 2016, the seventeen LOE budgets amounted to KW 56,200.1 billion (US$45.4 billion: KW 1,000 = €0.807925 on 4 October 2016). Out of that amount, KW 326.3 billion (US$263.6 million) was allocated to vocational education, but this did not include salaries for trainers and other staff. Consolidated data on the total budget for TVET (under the governance of both the MOE and the LOEs) is not available.

Table 1 International comparison of public budgets dedicated to education and TVET

Percentages				Education of GDP	Education of national budget	TVET of GDP	TVET of education budget
In the six countries studied							
Laos			2014	3.33	12.19	0.03*	
Malaysia			2013		6.09	0.09	2.03
Philippines			2015	4.86	13.21**	0.07	1.44
Republic of Korea			2015	3.54	14.69		
Thailand			2016	4.1	20.2	0.15	4.83
Viet Nam			2013	4.34	14.3	0.46	8.15
In European countries							
Austria			2013	5.66	11	0.75	
Czech Republic			2013	4.16	9.8	0.75	
Finland			2013	7.16	12.3	1.3	
France			2012	5.68	10	0.48*	
Germany			2013	4.8	10.8	0.58	
Netherlands	2013	6.06	12.2	0.81			
Sweden	2013	7.43	14.1	0.83			
Switzerland	2013	5.24	15.4***	0.58			

Sources: Figures from the six Asian country briefs, www.uis.unesco.org, Eurostat (2016, 2017).

Notes: * 2013 figure. ** 2009 figure. *** 2012 figure.

One possible step to mobilize resources for TVET is to adopt a strategic approach to the funding of skills development, by prioritizing resources on levels of education and training that meet labour market needs. The experience of the Republic of Korea offers insightful lessons in this regard, showing a sequential education and TVET expansion strategy, along with corresponding funding tools to support its national economic development plan (see ***Box 1***).

Box 1 The Republic of Korea's sequenced approach to funding education and training

After the Korean War (1950–53), the Korean Government conceived a six-year Plan for Completing Primary Education (1954–59). It invested around 80 per cent of the MOE budget, education tax and local education grant in primary education, in order to produce for the labour market good-quality manual workers who would populate the labour-intensive light manufacturing sector in the 1960s.

After universalizing primary education, the government shifted its investment focus to secondary education in the 1960s and 1970s, to supply skilled workers to the heavy and chemical industrial sectors. It then shifted to higher education in the 1980s and 1990s as the country's economy moved to a more advanced level.

Realizing that the regular initial education system alone could not supply the workforce needed to implement the economic development plans, the government introduced a vocational training system in 1967 and a training levy system in 1976, aiming at encouraging companies to provide continuing training to their workers. This training levy system was replaced by the Employment Insurance System in 1995 to meet the demand for lifelong learning.

Source: South Korea country brief.

2. Enhance the planning and monitoring of TVET provision and resources

Another aspect that hampers the cost-efficient use of public resources is the fragmentation of the training offer. Most countries have a large number of TVET institutions with different structures of ownership and control (TVET or education ministries, sectoral ministries, local authorities, employer or employee organizations, and so on), all receiving funding from various sources. Countries therefore lack an exhaustive view of their training offer and its funding, which makes it difficult to develop a well-planned approach to TVET supply and to have a precise idea of the overall consolidated budget allocated to TVET.

Among the six Asian countries analysed, four (Malaysia, Thailand, the Philippines and Viet Nam) have progressively unified the management of their TVET system under one authority to enhance the management of the system.

In **Thailand**, the Office of the Vocational Education Commission (OVEC) under the MOE is the main agency responsible for the administration of the TVET system. It supervises the training offer of 416 vocational colleges around Thailand. The TVET system is mainly financed through the MOE, with OVEC defining the criteria and allocation of budget.

The **Malaysian** approach also shows a centralization of all planning and funding aspects within one structure, the Economic Planning Unit of the Prime Minister's Department, which is the main government agency responsible for planning and policy change in the country. It coordinates the training offer provided by 525 public training institutes under seven different

ministries (Ministry of Human Resources, MOE, Ministry of Youth and Sports, Ministry of Regional and Rural Development, Ministry of Agriculture and Agro-Based Industry, Ministry of Works and Ministry of Defence). Each of these ministries receives direct funding from the Ministry of Finance for its training offer according to the planning ensured by the Economic Planning Unit.

In the **Philippines**, the TVET system is also supervised by one single authority: the Technical Education and Skills Development Authority (TESDA). The creation of TESDA resulted from the merging in 1994 of the National Manpower and Youth Council of the Department of Labour and Employment (DOLE), the Bureau of Technical and Vocational Education of the Department of Education, Culture and Sports, and the Apprenticeship Program of the DOLE Bureau of Local Employment. The fusion of these offices was one of the key recommendations of the 1991 Report of the Congressional Commission on Education, to reduce overlapping in skills development activities initiated by various public and private sector agencies, and to provide national direction for the country's TVET system. The funding of public TVET provision nevertheless still flows through more than ten other government agencies.[4]

The same observation can be made in **Viet Nam**, where the 2014 Law on Vocational Education merged two parallel systems, for professional education and vocational training – which were previously under the separate management of the Ministry of Education and Training (MOET) and the Ministry of Labour, Invalid, and Social Affairs (MOLISA) – under the responsibility of the General Department for Vocational Training (GDVT) of MOLISA. However, this rationalization process did not cover funding aspects, since funding for TVET still flows through various institutions, such as sectoral ministries, provinces, employer organizations and trade unions. For example, the Viet Nam General Confederation of Labour (VGCL) owns twenty-one schools for which it receives direct funding from the Ministry of Finance, which covers on average 20 per cent of their current expenditure.

In **Laos**, the responsibility for skills development is shared between the Ministry of Education and Sports (MOES) which is in charge for initial training, and the Ministry of Labour which is mainly responsible for continuing training of workers and unemployed. In the **Republic of Korea**, TVET is also governed mainly by two ministries, the MOE and the Ministry of Employment and Labour (MOEL). MOE takes charge of providing vocational education at secondary and tertiary education level through vocational high schools, junior colleges and industrial universities, while MOEL is responsible for managing the vocational training system for new entrants to the labour market, workers currently employed and the unemployed.

[4] In 2015, the government allocated funding estimated at PHP5,911,232,000 (approx. US$118.4 million) to the following public agencies: Department of Agriculture, Department of Education, Department of Labour and Employment, Department of Public Works and Highways, Department of Science and Technology, Department of Social Welfare and Development, Department of Interior and Local Government, Department of Tourism, Department of Trade and Industry, State Universities and Colleges, Department of Transportation and Communications, Department of National Defense, and other government agencies.

In the six countries analysed, a great variety of structures are involved in TVET provision and receive a large share of the government budget for this purpose. Some countries have taken actions to improve the planning of TVET provision and funding by progressively merging the management of the system under one authority or ministry, as in Malaysia, the Philippines, Thailand and Viet Nam.

An important step towards an efficient management of TVET and its funding concerns the establishment of strong, reliable and comprehensive statistical information systems, consolidating data from all channels receiving public funding (sectoral ministries, provinces, industry and so on). The key purpose is to help monitor the inputs and outputs of the national TVET system and plan resources accordingly.

3. Improving cost-efficiency by implementing output-based funding approaches

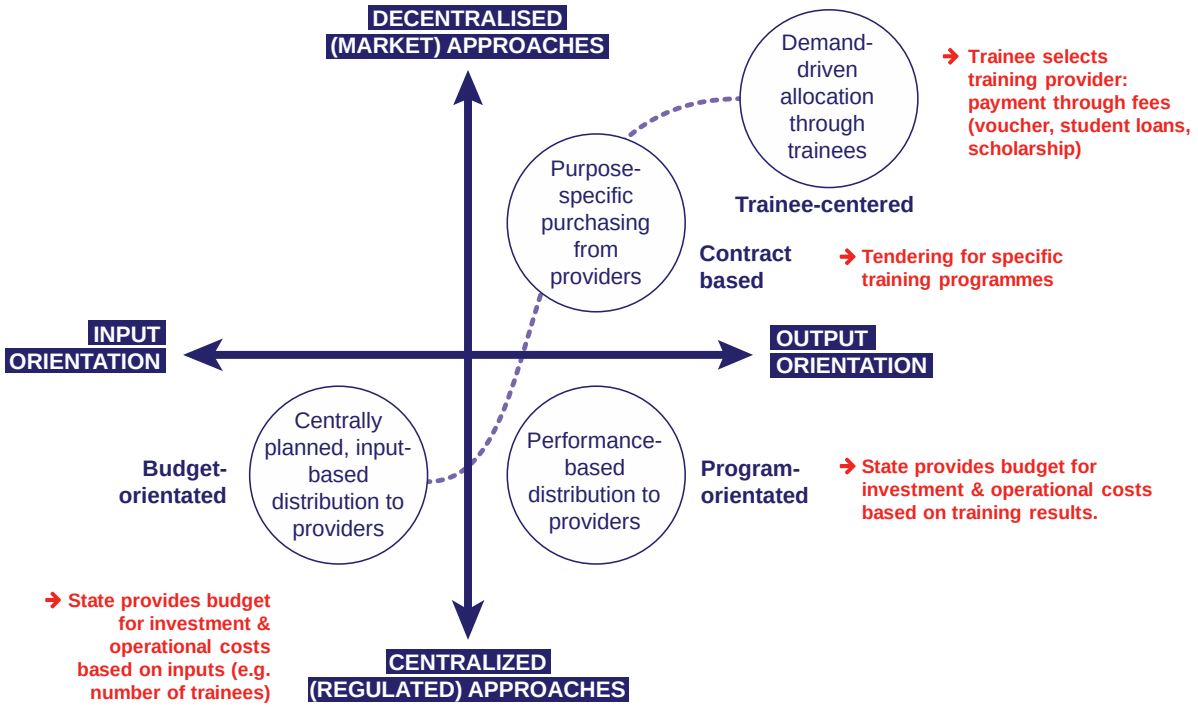
The allocation of public resources may also be optimized by moving progressively away from input-based towards output-based funding approaches. In an input-based funding system (a budget-oriented model), governments fund TVET providers based on unit costs calculated for a set of expenditures (utilities, teachers' wages, cost of materials and so on). Some countries use an average unit cost without distinction between trades, while others allocate funding based on real unit costs for different courses. No account is taken of performance: grants are allocated to training providers based on the previous year's expenditures and inflation, and incentives are lacking for well-performing TVET providers. Mechanisms for prioritizing and justifying budgetary allocations are seldom defined. Governments consequently have little appreciation of the return on their investment.

Consequently, output-based funding models have been introduced with the aim of improving TVET providers' performance and reducing the gap between the training offer and labour market needs. These models take various forms:

- **a performance-based approach** (programme oriented), where the state provides the budget for investment and operational costs based on outputs (internal and external effectiveness including pass rates and placement rates)
- **a contract-based approach**, where the budget is allocated through tendering to run training programmes
- **a trainee-centred funding,** where the budget is allocated via the trainee (in the form of vouchers, student loans or scholarships), who selects the training provider.

These four main allocation models (budget-oriented and the three output-based approaches) are not mutually exclusive, and countries usually combine several of them. They are summarized in ***Figure 1.***

Figure 1 Allocation models of resources



Source: G. Specht, 2014.

3.1. Funding strategies in the six Asian countries

Most of the six Asian countries analysed have sought to improve the cost-efficiency of their budget allocation process by introducing performance-based funding. In this approach, a given percentage of a training provider's budget is determined based on quantitative indicators and on quality assessment. It is designed to encourage TVET providers to continuously improve the quality and relevance of training while maintaining core funding. Such an approach may also be used to facilitate the achievement of national strategic goals for TVET.

The **Thai** funding strategy mixes an input-based and a performance-based approach: the budget allocation process to secondary and post-secondary training institutions is mainly based on inputs, considering the number of students and permanent teachers. Furthermore, incentives are provided to training providers based on a quality assessment of their training programmes, regarding the introduction of apprenticeship and entrepreneurship modules, and how well students integrate into the labour market. Training institutions achieving a good performance during the previous year are allocated THB 500,000–2,000,000 (US$14,000–56,000[5]) depending on the public budget available.

In **Malaysia**, each of the six ministries involved in TVET (MOE, Ministry of Higher Education, Ministry of Human Resources, Ministry of Works, Ministry of Youth and Sports, and Ministry of Rural and Regional Development) is allocated funding based on historical costs,

[5] Based on THB 1 = US$0.028036 in October 2016.

enrolment figures and the results of its negotiations with TVET agency coordinators and the Finance Ministry. The ministries operate and monitor their expenditures independently, based on their own key performance indicators (KPI), which mainly relate to TVET graduates' employability and earnings, and on-time graduation rates (no information could be obtained on the detailed KPI applied by each ministry). Until recently there had been limited coordination of these KPIs at national level, but the Economic Planning Unit has launched an initiative aiming at harmonizing them among various ministries.

In the **Republic of Korea**, performance-based funding in initial TVET is mainly implemented in private junior colleges (a form of tertiary education) through MOE's new financial support policy, called Specialized College of Korea (SCK). This policy was introduced in 2014 to induce junior colleges to restructure their departments, programmes and curricula with a focus on specialized major areas in which they have comparative advantage through links to certain industry sectors (see ***Box 2*** on Korea's funding formula).

Viet Nam has adopted a different approach to optimize the cost-efficiency of its public resources. The GDVT has opted for a progressive shift towards contract-based funding. The approach is currently being pilot-tested with three higher tertiary education establishments, which are being supported in their autonomy process, and will be extended progressively to the whole system, including both secondary and tertiary TVET. The three pilot institutions are currently in a transition period where they still receive direct government funding, but it is allocated based on outputs (number of trainees, graduation rates and employment rates). GDVT indicates that after a transition period, the institutions will no longer receive regular direct funding: government funding will be allocated based on a public tender for training quotas, to which both private and public institutions will be able to respond. This will apply to both intermediate and tertiary TVET, and to the funding provided by all parent organizations (GDVT, sectoral ministries, provinces and so on). GDVT and MOLISA's role will shift towards global system management, where they will supervise and control on a legal basis. Direct funding should be maintained for remote and poor regions. This information should nevertheless be taken with care. At the time of the field mission (October 2016), the TVET system was undergoing major reforms as a consequence of the 2014 Law. TVET system management was progressively being unified under MOLISA and the new national TVET strategy had not yet been defined. A progressive shift towards a contract-based funding approach was anticipated but the underlying regulations, the effective operationalization of this strategy, its implications on training provider funding and the necessary support for training providers to secure the process had not been yet defined.

The **Philippines** approach to improve the cost-efficiency of public resources is trainee-based. In a context where more than 90 per cent of training provision is private, the government mainly provides funding through scholarship programmes, aiming to support trainees' demand. Public funding flows through three major scholarship programmes (the Training for Work Scholarship Program/TWSP, Private Education Student Financial Assistance/PESFA, and Special Training for Employment Program/STEP), through which the government supports high-demand sectors and disadvantaged young people.[6]

Box 2 Progressive evolution of the Republic of Korea's funding formula

In Korea, junior colleges offer programmes of variable and sometimes low quality. To tackle this, the government of Korea introduced steering arrangements to give incentives to institutions that show continuous quality improvement. These involve the introduction of formula funding based on performance criteria, and the introduction of an external evaluation and accreditation regime, implemented in 2010–12.

The first performance indicators which were implemented in 2010–12 included the employment rate of graduates (allocated 25 per cent of the formula funding), the ratio of enrolment to the number of places allocated by quota (20 per cent), income from industry funding relative to total income (5 per cent), the ratio of full-time lecturers to the number required by law (10 per cent), the ratio of cost of education to tuition income (20 per cent), the amount of scholarships relative to tuition income (12 per cent), indicators of academic credits earned by students (3 per cent) and the rate of increase in tuition fees (5 per cent). Underperforming post-secondary institutions lost access to government funds, and their students faced restrictions in the amount of money they could borrow from the student loan programme.

A critical analysis for the Organisation of Economic Co-Operation and Development (OECD) by V. Kis and E. Park led to recommendations in their report *A Skills beyond School Review of Korea* (2012), to improve these steering arrangements after a first phase of implementation. They stressed the following aspects:

→ Input indicators used in the funding formula only weakly capture the aspects of quality that are specific to post-secondary VET. The report argued that quality indicators should be chosen to reflect input factors that are most relevant to vocational programmes, namely: i) links with industry and the extent of industry participation in the governance of the training institution; ii) the inclusion of workplace training in curricula or the level of participation in workplace training; iii) industry experience among teachers and notably ensuring that teachers are familiar with the rapidly changing requirements of industry.

[6] For more information on these programmes see Chapter 4, section 1.

→Output indicators such as graduates' employment ratio could also be improved, by wmoving away from employment rates declared by training providers to data collected by independent structures (such as the Health Insurance Register) and by assessing to what extent graduates find a job that is related to their study and adequately uses their skills.

The Republic of Korea country report that was drafted for this study shows that funding criteria have been improved accordingly, notably through: i) the introduction of an industry–college cooperation capacity index; ii) a plan for specialization in linkage with local and national industry sectors and labour resource development; and iii) the rate of completing practical training in a workplace for students in specialized major areas.

The amount of subsidy allocated to each junior college is now decided based on:

- the number of students
- the level of restructuring towards specialized major areas (measured by changes in the number of students in specialized major areas)
- college evaluation results measured by:

  (a) basic capacity (35 points): overall employment index, the ratio of the number of students registered to enrolment quota, the ratio of tuition to education expenditure, the number of professors required by the law, industry-college cooperation capacity index

  (b) plan for specializing college programmes (50 points): plan for specialization in linkage with local and national industry sectors and workforce development, plan for designing and applying the National Competency Standards-based curriculum, plan for building infrastructures according to the NCS-based curriculum, plan to evaluate students' job competency, and performance management system of specialized programmes

  (c) capacity of specialized major areas (15 points): employment index in specialized major areas, the ratio of student numbers to enrolment quota in specialized major areas, the rate of completing practical training in a workplace for students in specialized major areas, the ratio of trainers to that required by the law in specialized major areas, and entrepreneurship education index in specialized major areas.

Funding formulae should nevertheless be tailored to the funding mix of institutions. In Korean junior colleges, which are financed 58 per cent by student tuition fees, government steering mechanisms tend to remain relatively inefficient given the low weight of State financing (less than 20 per cent) in the institution's funding.

In this configuration, Kis and colleagues argue that quality steering mechanisms should rather focus on informing student decisions, notably through accreditation processes of training providers, career guidance services to help students make well-informed choices, and high-quality information on the labour market outcomes for graduates by institution and field of study. In contrast, government funding formulae would be relevant for public polytechnic programmes, where the weight of government in the institutions' funding is substantial while tuition fees remain relatively low.

Source: Adapted from South Korea country report and Kis and Park (2012).

3.2. Lessons learned from international experience in the design of output-based funding strategies

The review of literature on international experience shows that there are a certain number of preconditions to the successful setting-up of output-based funding mechanisms.

Particular attention should be paid to the definition of performance indicators. Poorly defined or incomplete performance indicators may be difficult to measure (thus making it difficult to tie them to rewards) or seem difficult to achieve, thus deterring training providers from complying (see ***Box 3*** for insights into the development of quality indicators). Performance-based criteria should be defined in consultation with industry, but also with TVET providers, researchers and data producers. They should also be derived from the national TVET and skills development strategy in order to support the realization of its objectives (see ***Box 4*** on the Finnish example).

Box 3 Assessing the quality of indicators

S. Holzapfel and H. Janus (2015) have developed a list of criteria to assess the quality of indicators used in different types of results-based approach. Although the study is focused on primary education, there are relevant aspects that can be considered for TVET. According to their research, five criteria should be considered to assess the quality of disbursement-linked indicators: (1) focus on results, (2) control, (3) financial incentives, (4) measurability and verifiability, and (5) unintended consequences. *See* ***Table 2*** *below*.

Table 2 Criteria to assess quality of indicators

CRITERION	KEY QUESTION	CONSIDERATIONS FOR RESULTS-BASED APPROACHES
1. Focus on result	Do indicators ensure a focus on results?	• The indicators can measure results (outputs and outcomes) or processes (inputs and activities).
2. Control	Can results be influenced by and plausibly associated with the intervention?	• The extent to which incentivized actors have control over achieving the intended results. • The extent to which results can be attributed to the intervention. • The institutional setting of incentivized actors.
3. Financial incentives	Can intended effects be maximized?	• The extent to which financial amounts reflect 'value for money', policy leverage, risk or other considerations. • Whether disbursement is scaled in proportion to performance or conditional on achieving a threshold level.
4. Measurability and verifiability	Are indicators reliable, consistent over time and independently verified?	• The relationship between the indicator and the underlying objective of the programme. • The data quality and source (administrative data or survey data). • The way verification is organized (independent or not).
5. Unintended consequences	Can unintended effects be minimized?	• The extent to which indicators allow gaming (active manipulation of the indicators). • The extent to which indicators lead to distortions (indirect consequences of overemphasizing or neglecting policy choices).

Source: Holzapfel and Janus (2015).

Besides careful definition of indicators, successful implementation of performance-based funding formula also requires (Franz et al., 2007):

- prior introduction of standard-based quality assurance as well as capacities and instruments to define, measure and control quality
- a high degree of management autonomy for TVET institutions
- information on course costs, completion rates and graduate outcomes
- appropriate tools and support for the professional development of TVET managers.
- The main advantages and risks for each output-based approach, as well as recommendations for efficient implementation, are presented in ***Tables 3, 4*** and ***5***.

Table 3 Advantages, risks and recommendations for the implementation of performance-based funding

ADVANTAGES	RISKS	RECOMMENDATIONS
Induces training providers to improve their training offer while maintaining secure core funding Consolidates the training offer at global level by securing regular annual funding	Low-quality definition of criteria May discourage training institutions if not attainable Long disbursement procedures	Careful design of output-based criteria: → taking into account the essential aspects to maximize TVET quality: • training prepares for existing or future jobs • curricula have been developed according to the competency-based approach, in close partnership with industry • inclusion of workplace training in curricula • extent of industry participation in the governance of the training institution • experience of teachers in relation to the professional environment → aligned with national TVET strategy → defined in consultation with industry and training providers → designed according to purpose of training → control factors to mitigate aspects that are not attributable to training providers' efforts (regional location, fields of training, characteristics of students enrolled) → performance-based funding should concern only a relatively small portion of the training provider's budget in order to create incentives to improve while securing core funding for long-term development.

Source: authors' elaboration.

Table 4 Advantages, risks and recommendations for the implementation of contract-based funding

ADVANTAGES	RISKS	RECOMMENDATIONS
More demand-led training system. Induces training providers to improve their training offer.	May lead to a concentration of the training offer within few competitive training providers to the detriment of a denser training network. Might weaken training provision (no secured funding on a regular basis) and deter training providers from long-term planning and investment. Might induce training providers to reduce their costs to remain competitive to the detriment of quality.	Requires high autonomy of TVET providers. Institutions' managing boards should be supported to develop entrepreneurial skills. Careful design of funding criteria (see ***Table 2***). Should be coupled with maintaining direct funding for disadvantaged groups or remote areas.

Source: authors' elaboration.

Table 5 Advantages, risks and recommendations for the implementation of trainee-based funding

ADVANTAGES	RISKS	RECOMMENDATIONS
Encourages a more demand-led training system. Induces providers to improve quality of training.	Might weaken training provision (no secured funding on a regular basis) and deter training providers from long-term planning and investment. Might induce training providers to reduce their costs to remain competitive to the detriment of quality.	Develop trainees' information through an accreditation process for training providers, career guidance services to help students make well-informed choices, and high-quality information on the labour market outcomes of graduates by institution and field of study. Should be coupled with public policy objectives – for example, maintaining direct subsidies in areas assessed as having particular social and economic importance.

Source: authors' elaboration.

Box 4 Performance-based funding in Finland

In Finland, the responsibility for funding TVET is divided between the State and municipalities. State funding covers about 40 per cent of all public funding, for both municipal and private training providers. Funding criteria are the same for both municipal and private providers, which must be authorized by the Ministry of Education and Culture to deliver training.

Government transfers are calculated each year based on a unit price and the number of students. The unit price is calculated based on actual current expenditure (unit costs per year per student) and the fields of education available from each provider.

In addition to this core funding, 3 per cent of the public funding allocated to TVET providers is based on the performance of the individual training provider. Finland introduced performance-based funding in 2002. The indicators were revised ten years later. The performance targets were derived from the objectives that legislation and the Ministry of Education and Culture specify for vocational education and training. The performance indicator consists of three elements:

- An **outcome indicato**r: this measures the performance of TVET providers based on the outcomes of their students. The highest-ranking result includes graduates who are employed at the end of the reference period. The second-highest category includes those who are in further education at tertiary level (polytechnic or university education) at the end of the reference period. The third-highest category comprises the rest of the graduates. The fourth category includes those who did not complete their training and who are employed, studying, or who have received some other educational qualification. The lowest-ranking category covers the remaining individuals who did not complete their training. It is important to note that the performance indicator is corrected by considering aspects that are not attributable to the training provider's effort (regional location, fields of education available, type of education and characteristics of students enrolled).
- A **teacher competence indicator**: this describes teaching staff formal qualification levels, and represents the ratio of formally qualified teachers to all teachers. The objective is that this proportion should be as high as possible. The main rule for competence requirements in TVET is that teachers must have a university or polytechnic degree and pedagogical studies that are suitable for the field of education and general subject taught.

- A **staff development indicator**: this describes the provider's investment in developing and maintaining its staff's professional competence. It is calculated based on the proportion of all personnel expenditure spent on staff development, including staff training and teachers' professional development placements, when teachers are familiarizing themselves and/or working in an enterprise or a corporation within their field of expertise.

The weights of these three indicators are: outcome indicator 90 per cent, teacher competence indicator 7 per cent and staff development indicator 3 per cent.

Source: Adapted from Finland (2011).

4. Concluding remarks

In this chapter, various options to enhance public funding for TVET were presented. The first section underlined the need to align public funding strategies with national priorities and the needs of the local economy: the relatively low level of public funding allocated to TVET does not reflect the high priority given to vocational training in national skills development strategies.

The second section showed that the cost-efficiency of public resources may be improved through enhanced planning of TVET provision and funding, which is often undermined by the lack of coordination between the multiple bodies providing TVET (including various ministries, regional or local authorities, employers and employee organizations). The implementation of a reliable, comprehensive and detailed data collection system, based on a standardized approach to data collection and definition of TVET, is one of the first steps needed to enhance the cost-efficiency of public resources.

As was shown in ***section 3***, output-based funding strategies are another step towards a cost-efficient use of public resources. Their implementation should however be carefully thought through, and requires efficient and transparent tools and institutional capacities to assess whether performance criteria are attained. They also require that the training providers have the necessary autonomy (in a legal framework) and means to improve their training offer.

The performance system should be kept simple (well defined, with few and easy to measure criteria) in order to avoid long and slow disbursement procedures (which could undermine the financial equilibrium of training providers) and expensive and time-consuming evaluation processes.

Particular attention should also be paid to equity aspects: poorly defined funding strategies may lead to a concentration of training providers in economically dynamic regions, where it is easier to fulfil performance criteria such as employment rate after graduation. They might also incite training providers to target well-performing students to the detriment of young people facing academic difficulties, to maximize the training centre's graduation rate.

The analysis showed that there are several approaches to take into account for the equity aspects in a funding strategy, notably:

- Introducing quotas for disadvantaged young people.
- Maintaining direct funding for economically depressed regions and disadvantaged students (as is done in Viet Nam).
- Introducing control factors to mitigate the impact of such aspects on training providers' performance. In the Finnish performance-based system (Finland, 2011), factors related to regional location and students' social background are taken into account through a coefficient system which neutralizes their impact on training centres' performance. These factors relate to:
- characteristics of the trainee: age, gender, mother tongue, family status (marital status, children), average grade on the leaving certificate from comprehensive schooling, qualifications completed before the reference period
- characteristics of education: starting term of studies, field of education, type of education (such as apprenticeship training), enrolment in a special needs programme
- characteristics of the region: individuals' subregion of residence.

Although interesting, the Finnish approach tends to be a bit heavy, while direct financing approaches to take care of equity aspects are more straightforward.

The relevance of a criterion such as access to employment is also often questioned. The impact of training on a student's capacity to integrate into the labour market is often only visible in the medium term, while performance-based criteria are rather focused on the short term. The measurement of such a criterion in contexts marked by underemployment and informal employment is also often complex, and makes it difficult to assess whether the criteria have been attained or not. Input criteria such as those focusing on the quality of training (preparing for existing or future jobs required by the labour market, competency-based curricula, integration of company-based training, quality and experience of teachers and the management board, involving industry in the governance of the training institution, and so on) are easier to measure, and provide a good basis to determine the quality of training.

Furthermore, while designing performance-based funding approaches, governments should consider (Kis and Park, 2012):

- **Student age**: Younger, school-age students may be less able to make longer-term career decisions, so student preferences for certain vocational programmes should be balanced by attention to labour market outcomes, particularly where provision is free of charge to the student.

- **Purpose of training**: Programmes designed to prepare students for the next level of education do not need to be constrained too tightly by employer demand. Conversely, in programmes designed for direct labour market entry and that contain much occupation-specific content, employability should be a major factor determining provision.

The literature review showed that in-depth comparative studies on the pros and cons of the various output-based funding approaches are lacking. It is particularly difficult to determine the long-term impact of contract-based and trainee-based funding strategies (where sustainable base funding for training providers is no longer secure) and notably: i) on training providers' capacity to plan and invest in their mid- and long-term development without certainty about their yearly resources; ii) on the training offer quality under a contract-based approach, where the selection of training providers is based on a cost-effectiveness ratio, potentially driving them to cut their costs to remain competitive; iii) on the territorial network of the training offer, since market-based allocation processes may lead to a concentration of the training offer in more affluent areas.

Performance-based funding strategies that secure regular resources for training providers, and only make part of their budget subject to performance (for example in Finland, only 3 per cent of training centres' budgets is linked to their performance) seem less risky: they encourage training providers to continuously improve their offer while providing them with the resources they need to secure their basic functioning. Such an approach also seems more consistent with the public service mission of the State, which is to ensure equitable access to training for all, especially those who live in under-served areas.

Chapter 3 Mobilizing resources from industry

Another important source of funding for skills development is companies. Companies have historically financed the training of their workforce. They typically do so in kind, by providing pre-employment training to apprentices and on-the-job training to their employees. Through work-based learning approaches, companies tailor their workforce according to their own needs and specificities. In many countries, notably in sub-Saharan Africa, a significant share of the working population still receives its initial professional training through traditional apprenticeships.

Other countries have introduced dual vocational training, where company-based apprenticeship is complemented by institution-based training. This model is quite widespread in countries such as Austria, Denmark, Germany and Switzerland, and is progressively being implemented in South-East Asia (see ***section 2***).

Industry can also be directly involved in funding through the introduction of payroll taxes and levies, and in some cases the setting-up of training funds to manage the levy (***sections 3*** *and* ***4***).

Industry involvement in the funding of TVET is however often hampered by a lack of participation in the governance of the TVET system, regarding the training offer and/or budgetary prioritization (***section 1***).

1. Place industry at the core of TVET system governance

One of the first steps to encourage companies to contribute to the funding of training consists of ensuring that they take part to the governance of the TVET system. Very often, companies feel that the training offer does not meet their requirements and are therefore reluctant to contribute to its funding. When companies become more involved in the governance of the TVET system, they can contribute to the definition and evolution of the training offer (identifying relevant training programmes, determining the content of training and how it could be efficiently delivered) and may also participate in the definition of budgetary guidelines and priorities for TVET. By doing this, the government reinforces companies' sense of ownership of the training system and their willingness to contribute to its funding.

The analysis in the six countries shows that, with the exception of the Philippines, where the main training authority is managed by a public–private partnership (PPP), the involvement of industry is improving but remains mostly consultative. In several cases, consultative bodies encompassing both the private and public sectors are provided for in educational or TVET law but do not function appropriately. Representatives of industry are generally consulted but rarely form an integral part of the governance of the TVET system. This situation affects the capacity of companies to significantly influence decisions concerning training supply and priority investment areas for the future.

In **Laos**, a National Training Council was established in 2002, and renamed the National Advisory Council for Vocational Education and Skilled Labour Development under the 2013 Law on Vocational Education. Its role consists of providing policy and strategic advice on

vocational education development. The Council members are representatives from the State, the industry and trade unions.[7] According to the Permanent Office of the Council, around 50 per cent of the members come from industry. The Council has established twelve sectoral trade working groups (TWG), bringing together leaders of industry, TVET providers, the Ministry of Labour and MOE, to work on the development of skills standards. In addition to the Sectoral TWG, provincial councils for vocational education and skills development (PCVESD) will be set up in 2017 in three provinces (Luang Prabang, Savannakhet and Champassak) to work specifically on provincial skills development issues. Discussions led with the Council nevertheless revealed that these bodies are not very active. When encountered during a field mission in December 2016, staff of the Permanent Office of the National Training Council indicated that the TWG had not met for the last three years and that they were planning to revitalize these bodies.

The same difficulty seems to exist in **Viet Nam.** To improve the quality of the TVET system, the government has established national skills standard development committees (NSSDCs).[8] These committees are formed to undertake tasks and skills analysis, through which skills standards can be identified and adopted. There are currently about twenty NSSDCs, involving the Ministries of Industry and Trade, Transport, Construction, Agriculture and Rural Development, and Labour (ADB, 2014*a*). NSSDC operations are funded by MOLISA, and can be supplemented from lead government agencies and industry, to facilitate the identification and establishment of standards. Here also, it is not clear whether these strategic bodies play the full role they were assigned: during a one-week mission to discuss industry's involvement in the TVET system with TVET stakeholders, NSSDCs were not mentioned once. The Viet Nam Chamber of Commerce and Industry (VCCI) rather identifies the Quality Advisory Board it has established in coordination with MOLISA and Departments of Labour, Invalids and Social Affairs (at provincial level) (DOLISAs), TVET institutions, business associations and enterprises as a strategic body to improve the quality of TVET. The mission of this Quality Advisory Board is to promote vocational training through close cooperation among the abovementioned stakeholders and to provide advisory services for quality improvement of TVET through interventions in curricula, continuous teacher training, encouraging practical experience through internships, quality and efficiency evaluations, and career orientation programmes. No industry involvement is foreseen on funding issues.

In **Thailand**, the MOE has developed a policy aiming at strengthening cooperation with industries for a better matching of supply and demand of TVET. In 2014, a Steering Joint Public and Private Committee for Vocational Education (PPC for VE) was established, as well as thirty-three occupational cluster subcommittees to support the central Steering Committee. These subcommittees are chaired by an industrial representative, and cover

[7] For complementary information on the National Advisory Council for Vocational Education and Skilled Labour Development, see Chapter 3 on "Perspective on the setting-up of a training fund in Laos".

[8] The regulations prescribe the establishment, role and operation of these committees in Articles 8, 9, 10, 11 and 12 of the 2013 TVET Law.

Thailand's leading industries, such as automotive, electronics and electricity, ICT, logistics, food moulding, tourism, petroleum and petrochemical. The main objectives of the clusters are to develop twelve operational frameworks: 1) analysis of TVET labour demand; 2) analysis of TVET labour supply; 3) identifying competency standards ; 4) curriculum improvement; 5) selection and implementation of competency-based curricula in pilot institutions and provision of dual vocational education or apprenticeships; 6) training of teachers and trainers in companies; 7) development of learning and teaching media and equipment; 8) improvement of the learning environment; 9) strengthening, testing and assessing the system; 10) monitoring and evaluation; 11) testing occupational standards; 12) promotion of work placement and career path development. PPC for VE committees comprise industrial representatives, education leaders, teachers, and representatives from related agencies and organizations (skills standards agencies, universities, the Federation of Thai Industry and the Chamber of Commerce). These committees were active and helped improve the quality of TVET, especially in terms of identification of demand, competency standards for curriculum development, workplace learning experience of teachers, and apprenticeship programmes. However, as in Viet Nam, PPC for VE committees are not involved in budget decisions.

The **Republic of Korea**'s government has tried to involve industry in TVET as a major actor since the early 2000s, by introducing the sector HRD (human resource development) councils (now called sector councils), benchmarking England's sector skills councils, to work on major policies on TVET, such as training institution–industry linkage, development of National Competency Standards, and an 'Employed First, Then Study While Working' campaign. Trade unions are also involved in the governance of the training system, through industry skills councils, whose main role include the analysis of workforce demand and supply, and the development of the National Competency Standards and qualification standards, as well as in regional councils, which are in charge of analysing changes in skill demands in the local labour market, and make regional HRD plans. It nevertheless appears that trade unions' role in LLL and in the global governance of the TVET system is much more limited than that of industry (there is more information on the sector HRD councils and the industry skills councils in ***Box 5***).

Box 5 Sector HRD councils and industry skills councils in the Republic of Korea

In the early 2000s, the Korean Government recognized the necessity for industry to participate actively in workers' vocational competency development to tackle the serious problems of the mismatch between the supply of and demand for labour in terms of quality and quantity. In 2003, the Ministry of Industry, the Ministry of Labour and the MOE proposed a pilot project of forming sector HRD councils. After the revision of the Industrial Development Act, three sector HRD councils, each of which consisted of representatives from industrial associations, enterprises, research institutes and experts, were first introduced in 2004 in the areas of mechanics, information technology (IT) and electronics. As of 2015, seventeen sector HRD councils were operating (for mechanics, electronics, IT, shipbuilding, steel, textiles, semiconductors, display, bio, nano, robot, automobile, software, medical equipment, design, renewable energy, and root industry).

The main roles of the sector councils include the analysis of demands for labour and TVET, development of and suggestions for qualification standards and vocational competency standards, and development of TVET programmes. Sector councils share information on the demand for skills with TVET providers and local governments, and participate in projects to provide vocational training programmes tailored to skill demands, and career guidance in collaboration with the regional HRD councils. The Ministry of Industry selects new sector councils recommended by the related ministry through a review process, and provides financial support to the sector councils annually (in 2015 the budget was KW3.4 billion for the seventeen sector councils) after assessing their performance in previous years and future plans.

Parallel to that, the Ministry of Employment and Labour introduced industry skills councils in 2015. These consist of representatives of employers' organizations, enterprises and workers' organizations based on the Workers Vocational Skills Development Act (article 22). Their main roles include surveying and analysing labour demand and supply, and development of the National Competency Standards and qualification standards. As of 2016, thirteen industry skills councils were in operation (IT/business management, business administration/accounting, finance/insurance, design/cultural contents, shipbuilding/maritime, mechanics, metal processing/welding, materials, chemistry, textile/fashion, electricity/energy/resources, electronics, and broadcast/communication technology).

It was pointed out that the sector councils currently in operation do not cover all major industry sectors and lack expertise in fulfilling the main functions mentioned above. As a response, the Ministry of Industry plans to implement countermeasures such as

introducing new sector councils in sectors not covered yet and developing best practice cases of training professional workers for local industries.

It is also unclear how the sector councils from the Ministry of Industry and the industry skills councils from the Ministry of Employment are coordinated, which reveals the need to deepen the collaboration between the two ministries.

Sources: Republic of Korea country report: (i) Plan of the Sector HRD Councils Project, Ministry of Industry (2015.6), (ii) Current Status of the Industry Skills Councils, HRDKorea (2016.4), and (iii) Industrial Development Act and Workers Vocational Skills Development Act. www.law.go.kr/

The **Philippines** show the most structured approach to putting industry at the core of TVET system governance, including on funding issues. In the Philippines, industry is involved through private–public partnership on the board of the highest policy-making body, TESDA, which exercises national leadership in the TVET system. TESDA's board has twenty-two members, fourteen from industry and eight from the government. (The latter are the secretary of labour and employment (chairperson), the secretary of education (co-chair), the secretary of trade and industry, the secretary of agriculture, the secretary of interior and local government, the secretary of science and technology, the chair of the Commission on Higher Education, and the director-general of the TESDA. Six members come from the labour sector (trade union representatives), four members from employer/industry organizations, two members from the national associations of private technical-vocational education and training institutions, and two members from the business and investment sectors. TESDA's board relies at regional/provincial level on technical education and skills development committees (R/PTESDCs), which are multisectoral bodies, composed of partners from various sectors such as industry, academe, and national government agencies or local government units. The R/PTESDCs act as subsidiaries of TESDA's board and provide policy recommendations for more efficient and effective training delivery in their areas. The R/PTESDCs also coordinate and monitor training delivery. (More information on industry's involvement in the Philippines' TVET system governance in ***Box 6.***)

Box 6 Public–private partnership in the governance of the Filipino TVET system

The Philippines case study shows that consultation and partnership with the industry is at the core of the governance of its TVET system.

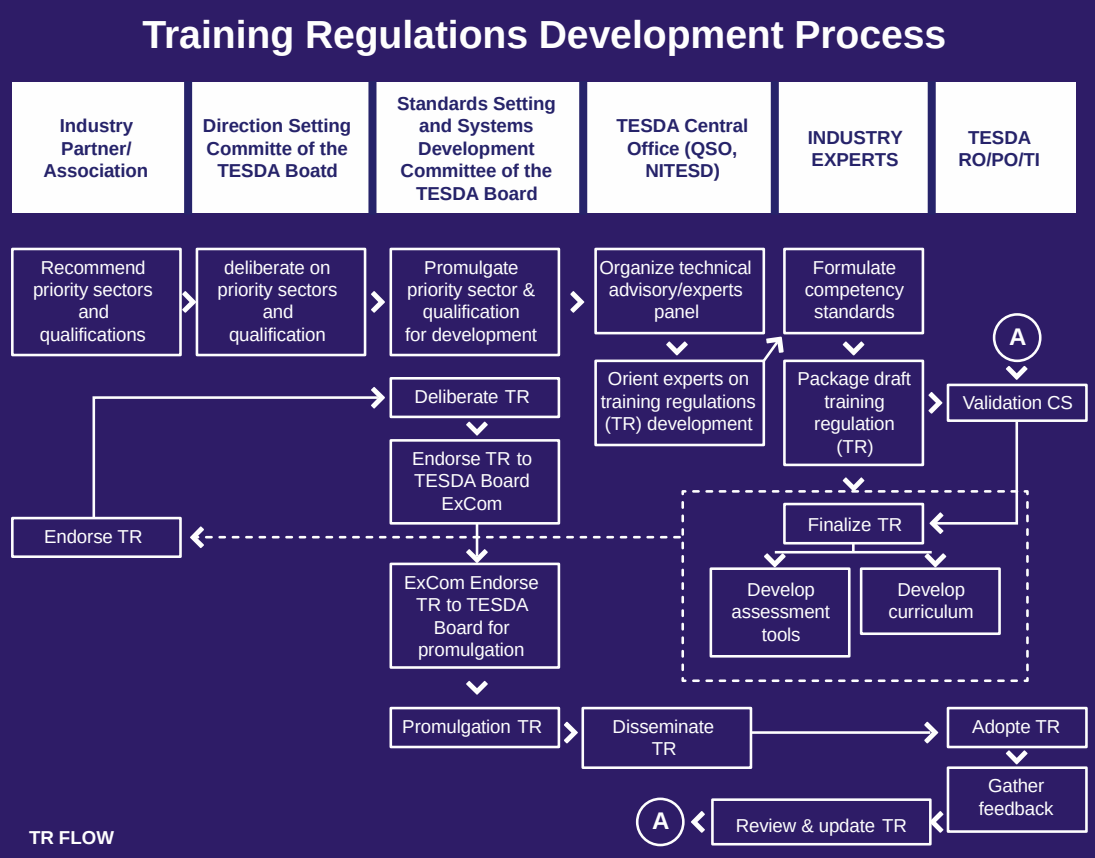
Industry is deeply involved in TESDA's governing board, which is the managing body of the Filipino TVET system: of the twenty-two members of TESDA's board, fourteen are non-governmental, while the remaining eight members represent the government.

Industry is also involved in the development of training regulations and competency standards with the aim of aligning middle-level skills qualifications with industry standards. The development of training regulations takes into consideration four essential components of training delivery: curricula, qualifications of trainers, tools and available equipment, and training facilities.

Training regulations are developed either on the request of industry, or based on consultation led by TESDA with industries that have high potential for generating employment.

The training regulation development process is shown below.

Figure 2 The training regulations development process



TESDA was recently awarded the Recognition for Commitment to Quality Management of the Philippines Quality Award (PQA). The PQA award programme is a global competitiveness template that aims to encourage and engage public and private organizations and stakeholders to strive for and attain performance excellence. It is a national award programme that recognizes the achievements of public and private sector organizations in a common journey towards performance excellence.

Source: TESDA, Country Case study report, 2016.

The analysis shows that there is room for improvement in the involvement of industry in the governance of the TVET system in most countries analysed. This is most effectively achieved by having representatives of industry join TVET managing bodies, as has been done in the Philippines. It can also be achieved through specific sectoral or provincial committees, although there is a risk that such ad hoc bodies will be no more than consultative and will not be strategically involved in the governance of TVET provision and funding.

The analysis of the six country case studies also shows the very low involvement of workers' representatives and trade unions. If such organizations participated in the governance of the training system, it would help to ensure that not only companies' demands but also those of workers were taken into account, to reach a more complete and balanced vision of the training needs the TVET system should address.

Further information on the involvement of social partners in the governance of training funds is provided in ***Chapter 4***.

2. Sharing costs through the introduction of work-based learning

Considering the challenge to train efficiently an increasing number of young people, many countries have sought to diversify their financing mix by promoting co-financed mechanisms for TVET, notably with an increasing role for industry in TVET funding.

Ensuring that companies assist in the funding of TVET may be done by introducing alternance-based or apprenticeship models, where part of training costs is transferred to companies which ensure that training takes place. The German dual apprenticeship system is usually mentioned as a reference.

In dual vocational training, on-the-job training is complemented by institution-based training (usually, around 60 to 70 per cent of training takes place in the company and 30-40 per cent in a training institution). The institution and the company share the responsibility of providing students with a well-coordinated training course.

In this approach, apprenticeship is handled like a form of public–private partnership where the state bears the cost of training that takes place in an institution, while employers finance the workplace element of the training.

Through apprenticeship or alternance-based training, part of the training cost is transferred to companies who bear, first, the direct costs of training, such as wages for the apprentices, salaries for training personnel, teaching material, equipment, and building infrastructure; and second, indirect costs, such as drop-out costs (Hoeckel, 2008). In many countries, companies benefit from tax rebates that compensate for part of the costs they incur by taking on apprentices.

2.1. Work-based training in the six countries analysed

All countries analysed in the study have introduced alternance-based training. In **Viet Nam**, the initiative is recent: the country is currently testing the implementation of a dual training system (DTS) in two schools (in Lilama 2 and Ho Chi Minh Vocational Training College of Technology) with the support of the German development agency (GIZ). In **Laos** also, DTS is in a pilot implementation phase, supported by GIZ.

In the other countries that we analysed, DTS has been implemented for four years or more and has spread quickly.

In **Thailand**, dual apprenticeship is implemented in both secondary and post-secondary TVET. Within four years, the share of apprenticeship-based training increased from 5.6 per cent of the total number of students in 2012 (representing 37,614 students) to 13.6 per cent (91,448 students) in 2015. It reached 16.1 per cent of the total number of students (111,821 students) in 2016. There were 3,826 companies involved in apprenticeship training in 2012, which increased to 13,686 in 2016 and is expected to reach 17,791 in 2017. This rapid increase results from a number of factors:

- the implementation of tax incentives, reaching 100 per cent tax exemption for expenditure incurred because of the apprenticeship
- subsidies from the Department of Skills Development for training expenditure according to the following rates:
    - expenses of trainers: up to THB 1,200 (US$33) per hour for not more than 8 hours a day
    - transportation of trainees: reimbursement based on real expenses up to THB 1,000 (US$28) per trip
    - daily allowance for trainees: THB 200 (US$5)
    - accommodation: max. THB 3,000 (US$84) per month or THB 100 (US$2.8) per day

- course uniform: real expenses, up to THB 2,000 (US$56)
- safety equipment and basic material and equipment for training: real expenses, up to THB 3,000 (US$84) per trainee
- accident insurance: THB 3,000 (US$84).

OVEC provides guidelines and related documents to training institutions to help them work collaboratively with industry. Trainers in industries must be qualified according to the standards of the apprenticeship programme. Students either spend two days in the institution and three days in the workplace, or alternate one week in the workplace and one week in the institution, according to the agreement with the industry.

Table 6 Number of dual vocational apprenticeship students and industries under OVEC in 2012–16

Academic year	Distribution of trainees across levels and types of training					Number of industries involved
	Secondary	Post-secondary	Total	Total students	% of dual apprenticeship	
2012	22,257	15,437	37,694	661,326	5.6	3,826
2013	24,292	19,076	43,370	652,584	6.6	7,826
2014	32,129	29,155	61,244	652,817	9.4	8,098
2015	42,968	48,480	91,448	674,113	13.6	10,527
2016	54,520	57,301	111,821	693,887	16.1	13,686

Source: OVEC 2016, techno.vec.go.th; National Education Council, Education Statistics.

In 2010, the **Republic of Korea** also adapted Germany's model by establishing Meister vocational high schools,[9] which have been specifically designed to prepare young people to work in high-skilled manufacturing jobs. Meister schools provide customized classes. In Grade 1, students take a basic vocational competency programme and are exposed to a variety of industries, including new media content, energy, machinery, mechatronics and telecommunications. In Grade 2, they choose a speciality and make an employment contract with a company. Meister schools were created with the idea of restructuring vocational high schools in Korea to make them responsive to the changes in skill needs of the labour market. The government supported these schools and their students by mandating a school dorm system, offering waivers of tuition fees, and providing training for teachers to strengthen their field experience. In 2016 there were 40 Meister schools providing training to 11,500 young people in partnership with 1,611 companies. Meister schools are still new, and account for less than 2 per cent of all Korean high schools.

[9] 'Meister' means master of a trade in German.

In the **Philippines**, DTS was introduced as early as the 1980s through a joint project of the Southeast Asian Science Foundation and the Hanns Seidel Foundation. This experience was extended to selected public and private technical schools in 1991 and was institutionalized in 1994 through the Dual Training System Act. Under the DTS Law, the Filipino TVET authority TESDA is mandated to promote, coordinate and administer the DTS. The Act also details companies' obligations: companies have to pay the training centre a daily allowance for the trainee of not less than 75 per cent of the applicable minimum daily wage. The allowance is then repaid by the training centre to the trainee. Companies are allowed to deduct from their taxable income 50 per cent of these expenses, provided that they do not exceed 5 per cent of their total direct labour expenses and PHP 25,000,000 (US$500,799) a year. Companies also have to take out a life and/or accident insurance policy for the trainee, and cover on a voluntary basis expenses such as clothing, lodging, transportation and meal allowances.

In 2009, there were 348 TESDA accredited companies and fifty-seven TVET institutions in the DTS programme. As of December 2015, data from TESDA showed 706 firms and 108 TVET institutions practising DTS (there were no figures on the number of trainees). Compared with the Thai experience, the number of trainees in the Filipino DST is still small (1,187 trainees in 2009), probably because of the costs imposed on Filipino companies (75 per cent of the minimum wage, while trainee allowances are provided on a voluntary basis in Thailand) and the high involvement of the Thai Department of Skills Development to support DTS costs at company level (subsidies are provided to participating companies).

The benefits generated by apprenticeship for companies are also often underestimated. In many cases, companies involved in pilot initiatives aimed at implementing DTS require to be compensated for their participation in the training system, which they consider to be the prime responsibility of the State. While it is true that there are costs incurred by the apprentice, there are also short and long-term benefits for the companies.

A study conducted in 2015 on DTS in the Philippines (Mapa et al., 2016) provides useful information on the costs and benefits participating companies incur by taking on a trainee. It also provides useful policy recommendations to improve DTS in the Philippines (*see **Box 7***).

Box 7 Cost-benefit study on DTS in the Philippines in 2015

Mapa and colleagues (2016) looked at the costs and benefits for companies implementing DTS in the Philippines. The study showed that the average monthly cost per trainee is about PHP 12,800 (about US$256). A substantial percentage (about 44 per cent) of this cost is made up by the allowances and other benefits given to the trainees by companies, followed by physical costs (materials and equipment used by trainees: PHP 3,828 or US$77) and the cost of trainers (PHP 2,365 or US$47).

Table 7 Average cost per trainee per month in running the DTS for the firm

			95% confidence interval	
Cost category	Mean (in PHP)	Std. error	Lower limit	Upper limit
Cost of trainees (e.g. allowance)	5,588	316	4,964	6,212
Cost for trainers	2,365	383	1,609	3,121
Physical costs	3,828	674	2,497	5,159
Total costs	12,801	873	11,077	14,524

Parallel to that, the short-term benefit for the firms (which arises from trainees' productive work) is about PHP 5,487.00 (or US$117) per trainee per month, so this equates to around 43 per cent of the average cost of apprenticeship.

Table 8 Average short-term benefits per trainee per month in the DTS

			95% confidence interval	
Short-term benefits	Mean (in PHP)	Std. error	Lower limit	Upper limit
Productivity	5,105	209	4,694	5,517
Seasonal benefits	382	58	268	497
Total benefits	5,487	220	5,053	5,920

In addition to short-term benefits, trainees also provide a long-term benefit because of the productivity difference between internally trained workers and externally recruited workers (this includes savings in recruitment costs).

Table 9 Long-term benefits per trainee for the firm

Long-term benefits	Mean (in PHP)	Standard Error
Cost of ads	997	324
Cost of labour (internal) in hiring	11,488	1,930
Cost of labour (external) services	822	138
Cost of orientation materials	16	28
Cost of laboour in orientation	3,169	702
Productivity difference	2,032	135

(continued on next page)

This simulation exercise shows that, based on the assumption that trainees stay with the firm for at least three months, the combined short and long-term benefits are bigger than overall costs by about PHP 3,500 (US$70) per trainee for large firms. For firms in the manufacturing and hospitality sectors, the net benefits are even higher, estimated at PHP 10,259 (US$206) and PHP 11,352 (US$227) respectively. Only firms in Northern Mindanao showed a negative net benefit of PHP 4,164.00 (US$83) per trainee for a three-month programme, primarily because of the higher production costs than in other regions (notably because of high shipping costs from Manila to Mindanao).

Table 10 Cost and benefit in doing DTS per trainee for firms (in PHP)

Type of firm	Overall cost	Short-term benefit	Long-term benefit	Productivity difference	Net benefit
Large firms (more than 200 employees)	29,982	17,376	9,000	7,092	3,486
Firms in manufacturing sector	29,925	16,413	17,273	6,498	10,259
Firms in hospitality sector	29,700	16,065	19,398	5,589	11,352
NCR firms	35,487	17,673	40,479	10,854	33,519
Region 3 firms	27,018	17,577	12,110	5,025	7,694
Region 4A firms	28,332	17,26	16,360	7,539	12,832
Region 10 firms	46,650	14,973	22,446	5,067	(4,164)

The study concludes that:

- The combined short-term and long-term benefits derived by firms clearly outweigh overall costs. The simulations made for firms in the manufacturing and hospitality sectors showed such benefits could be at least 30 per cent higher than overall costs.
- The DTS programme has a substantial positive effects on trainees: they become more productive, as shown by the substantial long-run productivity difference between DTS-trained and non DTS-trained workers. In addition, one in three DTS trainees is employed by the sponsoring firm.
- Success depends on cooperation between TESDA, training institutions and firms. One common problem experienced by firms is that the institutions have difficulty in catching up with the latest technology and new skill sets that the companies require their workers to be familiar with. One recommendation is that institutions might partner with the firms, which could train their instructors in the use of the latest technology.

- The Philippine Chamber of Commerce and Industry (PCCI) has an important role to play in encouraging firms to participate in the DTS programme, as well as in the promotion of the DTS.
- TESDA needs to intensify its monitoring in order to propose appropriate policy recommendations to refine the DTS system. In particular it needs to:

1) Maintain an up-to-date database of schools in order to identify which ones are offering DTS, determine how many students are in the DTS and which firms are already partnering.
2) Monitor the employment rate of DTS trainees and validate whether the employment is in the formal or informal sector.
3) Support firms (particularly micro-enterprises for whom the average cost of DTS is relatively higher) to take advantage of government incentives, such as tax incentives related to the DTS. The procedures for applying for the incentives should be clarified and simplified.
4) Find ways for MSMEs to obtain training assistance for DTS trainees through the Training for Work and Scholarship Program (TWSP) managed and funded by TESDA.
5) Review the current DTS training duration. Empirical evidence suggests that average combined short-term and long-term benefits are higher when the duration of training is between 3 to 12 months or more than 12 months.

For more information on the methodology used to conduct the cost–benefit survey, see ***Annex 1.***

Source: Adapted from Mapa et al. (2016).

2.2. Lessons learned on how to encourage companies to participate in DTS

The six country case studies revealed some valuable initiatives that encourage companies to participate in DTS:

- Tax rebates for companies that participate in DTS. In the Philippines as in Thailand, tax rebates are granted to companies that hire an apprentice (up to half of the expenses incurred by daily allowances paid to trainees in the Philippines; up to 100 per cent of the expenses incurred by apprenticeship in Thailand). These tax rebates are complemented in Thailand with subsidies that are allocated by the Thai Department of Skills Development to cover training expenditures. It appears that the Thai approach is very efficient in supporting the development of DTS (16 per cent of TVET trainees are involved in DTS). Conversely, the requirement for companies to pay trainees a daily allowance, representing 75 per cent of the minimum wage,

seems to have been an obstacle to the development of DTS in the Philippines, although part of the costs could be reimbursed through the tax rebate system.

- Concrete measures to support the implementation of DTS in companies and training centres. Various tools were implemented to help companies and training centres implement DTS. In Thailand, OVEC has developed guidelines to help training centres work with industry. It also provides for flexibility in the way alternance can be organized between training centres and the company. In the Republic of Korea, teachers received training to strengthen their field experience to help them work collaboratively with industry. In Laos, some companies (such as Ford, Kubota and Toyota) offered equipment to training centres and ensured the training of teachers to make sure that trainees received relevant training on adequate equipment. The Filipino study also underlined the difficulty for SMEs in participating in DTS, a particular problem when these small companies make up the majority of businesses. It suggested simplification of procedures and specific support to help them take advantage of government incentives.
- Raising awareness of companies on the net profit generated by apprenticeships. Cost–benefit studies such as the Mapa and colleagues study are powerful tools to encourage companies to participate in dual training system.

Elsewhere in the world, we noted a number of other approaches to induce companies to participate in alternance or apprenticeship-based training.

For example in Denmark, an Employers' Reimbursement Fund was introduced to provide incentives for firms to engage in the provision of apprenticeship places (Grollmann et al., 2003). It was introduced as early as 1977, and is financed by employers themselves. All employers are obligated by law to pay a fixed sum per employee to the Fund (approximately €400 in 2017 (KR 3,000). The annual budget of the Fund is around €500 million. Should there be a shortage of apprenticeship places, their number can be increased by offering financial support from the fund. Moreover, the apprentice's wage while attending off-the-job training in college is 90 per cent refunded by a grant from the fund. The fund has provided some remedy to the problem of under-provision of apprenticeship places in Denmark (Hoeckel, 2008).

France offers an example of a compelling approach to encourage companies to participate in alternance or apprenticeship-based training. In 1925 it introduced an apprenticeship tax, imposed on almost all employers from the private sector, except those who train apprentices. In 2017 the rate was 0.68 per cent of payroll, complemented by an 'additional contribution to apprenticeship' (*contribution supplémentaire à l'apprentissage*), which is imposed on companies that have more than 250 employees and employ less than 3 per cent of apprentices, alternance trainees and volunteers combined. The contribution ranges from 0.05 per cent to 0.60 per cent of payroll. The tax is collected by apprenticeship tax collectors (*organismes collecteurs de la taxe d'apprentissage*, OCTA), who are also responsible for forwarding funds to training institutions that deliver apprenticeship training.

Nevertheless measures to compel employers to contribute have been criticized. The Council of the German Economy for Vocational Education listed several arguments against general training contributions: they could lead to a cost increase for business, more bureaucracy, stronger influence by State and trade unions on employers' decisions, and loss of quality and competitiveness for businesses (Hoeckel, 2008).

3. Establishing incentives or compulsive mechanisms to make industry fund TVET

There are two main categories of strategy to make companies fund TVET (Billett and Smith, 2003):

- the 'incentive approach' to encourage voluntary involvement, where companies are induced to participate in funding because they benefit from tax incentives or rebates when they provide training
- the 'compulsion approach', through the imposition of tax on companies who do not train, or the introduction of training levies.

In the six countries analysed, **Viet Nam** and the **Philippines** have mainly opted for an incentive approach, where companies that contribute to training are entitled to tax rebates and other advantages and exemptions.

In **Viet Nam**, the 2014 Law on Vocational Education and Training provides tax exemption for a series of investments related to training: tax exemption for investments in socialized TVET institutions, tax exemption or reduction on the profits of products and services generated from TVET activities, and tax incentives for production and services and supplies relevant to training. The Law also provides for credit incentives for investments in infrastructure or improvement of training quality, and land concessions for building training infrastructure.

In the **Philippines,** companies are allowed to deduct from their taxable income 50 per cent of the daily allowances paid to apprentices.

The **Republic of Korea**, **Malaysia** and **Thailand** have opted for more voluntarist approaches to involve companies in funding TVET, by implementing either training levies or 'train or pay' (levy exemption) systems. **Laos** also plans on implementing a levy system.

3.1. The levy exemption approach

Thailand has implemented a levy exemption scheme. In this model, also called a 'train or pay scheme', firms are exempted from paying a training levy to the extent of the amount of the approved training provided to their workers.

Through the Skill Development Promotion Act of 2002 (updated in 2014), employers with 100 or more employees are required to provide skill training for at least 50 per cent of their employees every year. To qualify under the tax exemption scheme, the training has to meet several requirements: the curricula must be approved by the Department of Skill Development (DSD it has to be relevant to the work done; it should last at least 6 hours for upgrading training and at least 18 hours for changing-job training; the number of trainees

should not exceed fifty per group for group training, and twenty-five for practical training; and trainees should attend at least 80 per cent of the whole training session.

If companies are unable or unwilling to provide training, they have to pay an amount equal to 1 per cent of the current legal minimum wage for each employee who has not been trained. The tax raised on companies that do not provide training goes to a Skills Development Fund (SDF) which serves as a revolving fund for developing the skills of employees and unemployed.

The SDF is administered by a Skill Development Promotion Committee, under the Department of Skill Development. A major specificity of the SDF is that its resources are reinvested in the form of loans to employers, employees or training providers. Trainees/companies have to repay the loan within 12 months after completion of training, at an interest rate of 1 per cent. The fund can be used in the following activities as stipulated in the Skill Development Promotion Law:

- loans to trainees for training expenses: the training should last at least 30 days
- loans to trainers, skill standard assessors, training providers and industry
- supporting or subsidizing other skill development activities according to the policy of the Committee
- providing expenses for administration at a maximum of 5 per cent of annual skill development funding.

The introduction of the levy exemption scheme in Thailand has led to a sharp increase in the training provided by companies, reaching around 4 million workers who receive training every year.

3.2. The introduction of levies and partnership-based training funds

The **Republic of Korea** and **Malaysia** have opted for a different approach, where a training levy is paid by companies to a training fund which reinvests the levy according to companies' requests and national skills development objectives.

3.2.1. The Republic of Korea's Employment Insurance Fund

The analysis of the Republic of Korea example shows that, as in Thailand, the government first introduced a levy exemption scheme before gradually adapting its approach according to its labour market needs.

The levy exemption approach was first introduced in 1976: employers could either pay a levy to the Vocational Training Promotion Fund or provide in-house training to their employees. Through this approach, more than 70 per cent of companies mandated provided in-house training, while the rest chose to pay the levy. Over the years, since the amount of levy that companies had to pay was smaller than the actual cost of in-house training, a large number

of companies stopped investing in in-house training and preferred to pay the levy. The proportion of companies that undertook in-house training kept decreasing after 1978.

This system was replaced in 1995 by a comprehensive Employment Insurance System (EIS), which includes an employment security programme, a Vocational Competency Development Program (VCDP) and unemployment benefit. The Employment Insurance Fund's (EIF's) main resources come from the employment insurance fees collected from employers (including public-owned companies and services) and employees according to the rates shown in ***Table 11***.

Table 11 Levy rate in the Korean Employment Insurance System

		Employee	Employer
Employment security and VCDP	Enterprises with 1–149 employees	-	0.25% of payroll
	Priority support enterprises with 150 employees or more	-	0.45% of payroll
	Enterprises with 150–999 employees except priority support enterprises	-	0.65% of payroll
	Enterprises with 1,000 employees+	-	0.85% of payroll
Unemployment benefit		0.65% of payroll	0.65% of payroll

Source: Republic of Korea country brief.

The levy is used to support apprenticeship and continuing training for workers through various schemes:

- financial support to employers (support to employer-provided training, support to paid-leave vocational training, and loans for vocational training facilities and equipment)
- financial support to individual workers (training vouchers and worker's vocational competency development)
- specific financial support to SMEs (special schemes aiming at providing customized vocational training to SMEs)
- financial support for apprenticeship: support to companies that participate in government-initiated apprenticeship schemes
- financial support to the unemployed through a vocational training account for job-seekers.

In 2014, a total of US$7 billion of insurance fees was collected, of which US$2 billion went to employment security and the VCDP. The EIF spent US$1 billion on training, of which:

- 58 per cent was used for the training of workers (3.6 million trainees) (20 per cent to support training for SMEs)
- 35 per cent was used for the unemployed (284,000 trainees)
- 7 per cent was used for public training (37,000 trainees).

The resources collected are allocated flexibly under each scheme according to the needs expressed.

The EIF seems successfully to support the skills development of various categories of individual (continuing training for workers, pre-employment training for young people, and training of the unemployed). Over the years, it has adapted its training schemes and funding approaches to take into account the needs of its target audiences. More specifically, the EIF Evaluation Center encouraged EIF in 2010–11 to improve the relevance of training with regard to the workforce, notably to solve the problem of mismatch between training supply and demand at regional level, and introduced a new policy to induce more SMEs to participate in the VCDP. As a response, regional human resource development plans tailored to the local economy were introduced in 2013. These plans are conceived by regional councils which consist of representatives from regional chamber of commerce and industry, employers federations, local offices of employment and labour, small and medium business administration, and local offices of education. Specific financial support for SMEs was also introduced in 2013, including apprenticeship training.

As of 2014, more than 1.9 million workplaces and 11.9 million workers were in the EIS (Korea, 2015). The EIF plays a critical role in promoting and providing vocational training for workers and the unemployed, which represents a major part of the national skills strategy.

3.2.2. The Malaysian Human Resource Development Fund

Malaysia has also implemented a levy system with the aim of encouraging employers to 'upgrade the skills of their employees, apprentices and trainees in line with their business needs and the development strategy of the country'.[10]

It established in 1993 a Human Resource Development Fund (HRDF), whose main resources derive from the Human Resources Development Levy, a mandatory payment imposed on companies at a rate of 1 per cent of total payroll.

The categories of employer subjected to the levy vary according to the sector. It covers employers with fifty Malaysian employees and above in the manufacturing, mining and quarrying sectors, employers with thirty Malaysian employees and above in food and beverage services, and employers with ten Malaysian employees and above in thirty-eight selected industries in the services sector.

The HRDF is governed by a board of directors which consists of public sector representatives, private sector representatives, and heads of employer federations and industrial associations. The Fund ensures the up-skilling of the Malaysian workforce by allowing employers to receive financial assistance covering up to 100 per cent of training costs incurred. Depending on their training needs, firms can choose among several training schemes (an industrial training scheme, equipment, recognition of prior learning and so on). Some of these programmes are specifically designed for SMEs. The government has also

[10] HRDF website.

launched special programmes financed by HRDF targeting apprenticeship, unemployed women with caring responsibilities returning to work, and SME development.

In 2015, US$137 million was collected through the levy system and US$122 million was spent, financing 836,468 training places under various schemes (continuing training, industrial training scheme, recognition of prior learning, future workers training, and SME on the job training).

It is interesting to note that SMEs received more funding than they actually invested: while SMEs contributed 24 per cent of the levy collected, 37.8 per cent of the levy was reinvested in SMEs. This was achieved through training schemes specifically designed to allow for the constraints affecting SMEs.

The administrative costs of the HRDF are reduced by using registered training institutions as collection agents, by giving firms well-developed training plans, and also by standardizing costs (using an allowable cost matrix) (Johanson, 2009).

Table 12 Approved financial assistance and levy collected by size of employer in Malaysia, 2015

Industry/employers	Levy collected (RM million)	Financial assistance (RM million)	Share of financial assistance received (as % of total financial assistance)	Difference (financial assistance less levy collected) (RM million)
Large	458.70	336.91	62.42	-121.79
Small and medium	144.30	202.85	37.58	+58.55
Total	603	539.76	100	63.24

Source: HRDF Annual Report 2015.

3.2.3. A perspective on the setting-up of a training fund in Laos

In **Laos**, the setting-up of a National Skills Development Fund (NSDF) has been under discussion for several years. It was introduced in the *TVET Master Plan* in 2008 and confirmed as part of the 2010 Decree on TVET and Skills Development. The 2013 Lao Labour Law provides for resources for the NSDF from:

- 1 per cent from tax on income which should be transferred by the Ministry of Finance to the Fund
- 1 per cent of payroll of workers
- 5 per cent of one month's salary for employees working abroad
- 15 per cent of registration fees for issuing a work permit for one person, for companies that use foreign labour in Laos
- contributions by individuals, legal entities, international organizations, both domestic and foreign, mass organizations and social organizations
- benefits derived from the fund and from other activities.

The NSDF is intended to be managed by the National Advisory Council for Vocational Education and Skilled Labour Development (former National Training Council), which is a tripartite body under MOES. The 2013 Vocational Education Law provided for it to comprise:

- minister of education and sports (president)
- minister of labour and social welfare (vice-president)
- president of the National Chamber of Commerce and Industry (vice-president)
- chief of cabinet/director general of mass organizations at central level (member)
- director-general of Labour Skill Development and Employment Arrangement Department (member)
- director-general of Vocational Education Department (member)
- president of association of relevant occupations (member)
- representative of labour units (member)
- representative of vocational education institution (member).

The president and vice-presidents of the Council are appointed by the prime minister, and members are appointed by the Council's president. The Permanent Office of this Council acts as its secretary.

During the field mission led in December 2016, discussions were still ongoing regarding the way to operationalize the future fund. Employer organizations agreed on the principle of the training levy, although some of them were concerned that the levy might not be reinvested in developing the skills of their workers. Discussions were also ongoing regarding the main training schemes and how the levy should be disbursed. Various international partners, especially the German cooperation, support the NSDF and the discussions on how to establish the fund, but leadership for its actual implementation is lacking. International experience and regional benchmarks to determine how the board of such a training fund could function, the training schemes it can finance and the related disbursement procedures should be useful to help fuel the discussions.

4. Lessons learned from international experience on levy systems

International experience shows there are various approaches to setting up a training fund, defining its governing mode, raising resources from industry, and determining the training schemes it can finance. These experiences provide lessons which can be used to improve operating modes and practices.

4.1. Sectoral versus inter-sectoral training funds

There are many approaches to the setting-up of training funds.

Training funds can be inter-sectoral: in this case, the levy is collected from various sectors, mutualized at national level and reinvested in the economy according to the needs expressed, national policies and priorities. Inter-sectoral training funds are the most common form of training fund. They are found particularly in Asia (for example in Singapore, Malaysia, the Republic of Korea), in New Zealand, in the Middle East and North Africa (MENA) region (for example in Algeria, Morocco, Jordan and Tunisia) and in sub-Saharan Africa, as is the case for example with the eleven training funds that participate in the RAFPRO (*Réseau Africain des Institutions et Fonds de Formation Professionnelle*/African Network of Institutions and Vocational Training Funds). A synthesis of the characteristics of these inter-sectoral training funds (drawn from Walther et al., 2014) can be found in ***Annex 2.***

The main advantage of inter-sectoral training funds is the mutualization of resources: the resources available for skills development in one sector are not limited to the contributions raised on the companies of that specific sector. Inter-sectoral training funds are therefore able to invest in territories or sectors with insufficient means to address their training needs. Because they function as a national training authority, this also allows them to mobilize resources to operationalize national funding priorities for skills development.

Inter-sectoral training funds nevertheless appear to have difficulty in adapting to sector-specific needs, and even fail to reach some of them (notably in economic sectors with a high degree of informality, where many companies are too small to meet the training fund's requirements). They also often have to achieve multiple objectives with limited means, and tend to spread resources very thinly across various objectives, sectors and priorities.

Training funds can also be sectoral (for example an agriculture training fund, retail training fund, transport training fund and so on), in which case the levy is raised on the companies of a specific sector and reinvested in the development of worker competencies in that sector.

Sectoral training funds are found in Latin America, notably in Brazil, which has six sectoral training funds called 'National Service for Training' (*Serviçio Nacional de Aprendizagem*): SENAI for industry, SENAC in commerce, SENAR in agriculture, SENAT in transport, SEBRAE for small enterprises, and SESCOOP for urban cooperatives. Sectoral training funds are also found in several countries in Europe, notably in Belgium, Cyprus, the Czech Republic, Denmark, France, Greece, Hungary, Iceland, Ireland, Italy, the Netherlands, Poland, Slovenia, Spain and the United Kingdom.

Table 13 Examples of European countries with sectoral training funds

Country	Name of sectoral training funds
Belgium	*V*ocational training funds *(Sectorale opleidingsfondsen* in Flemish)
Denmark	*Uddannelsesfonde* [educational funds] and *Kompetenceudviklingsfonde* [competence development funds]
Spain	*Fundación tripartita para la formación en el empleo* [Tripartite Foundation for Training in Employment], plus la *Fundación Laboral de la Construcción* [Foundation for Construction Labour] and *Fundación del metal para la formación, cualificación y empleo* [Foundation of the Metals Sector for Training, Qualifications and Employment]
France	*Organismes collecteurs paritaires agréés (OPCAs)* [approved collecting organizations]
Italy	*Fondi paritetici interprofessionali per la formazione continua* [interprofessional funds for continuing training]
Cyprus	Human Resource Development Authority (HRDA) (*Αρχή Ανάπτυξης Ανθρώπινου Δυναμικού Κύπρο)*
Netherlands	'O&O Funds', comprising *Scholingsfondsen* [training funds] and *Opleidingsfondsen* [educational funds]
United Kingdom	Construction Skills; Skillset; Engineering Construction Industry Training Board (ECITB)

Source: Cedefop (2008).

Sectoral training funds generally tend to have a keener vision of their sector's need for critical skills and the required development strategies. They can also adapt their training approaches to sector-specific needs (for example in the agricultural sector, training might be provided close to the place of work to address mobility and availability constraints, and literacy programmes may be provided to adapt to beneficiaries' low level of schooling). Employers are generally more favourably disposed to sectoral training funds because they are fine-tuned to sector-specific needs. There also tends to be stronger involvement of sectoral social partners in the governance of the training fund.

However, this approach generally limits available resources to the levy raised on a single sector, which is problematic for relatively unstructured economic sectors where there is little value added, and sectors with a high degree of informality. When a sectoral approach is taken, therefore, it is generally necessary to supplement sectoral resources with other resources pooled at national level in a national fund, which reorients them towards priority sectors or sectors with high training needs and low resources.

Some countries have tried to implement hybrid approaches, combining sectoral and inter-sectoral financing mechanisms, as in South Africa. The South African financing system is based on a complementary framework with a transversal National Skills Fund (NSF) and twenty-one sectoral training funds called SETAs (sector education and training authorities). The SETAs are funded through a levy equivalent to 1 per cent of the payroll of all private-sector companies whose annual payroll exceeds ZAR 500,000 (US$35,740 approx.):

- 20 per cent of these resources are mutualized at national level by the National Skills Fund to finance national priorities for disadvantaged groups (workers in the informal sector and the unemployed), cross-sectoral training needs, or training in areas that have insufficient means to ensure skills development of their human resources.

- The rest of the levy is managed by the SETAs at sectoral level to develop critical and scarce skills in their sector, and more generally to enable the sector's companies to reinforce their employees' skills.

It must be stressed that the setting-up of sectoral funds is only relevant if economic sectors are sufficiently developed to support them. The management of a network of several sectoral training funds would otherwise be too expensive and therefore inefficient.

The Kenyan approach is interesting because it combines the advantages of both systems while keeping administrative costs low, by creating sectoral committees within an inter-sectoral fund. The government has established a National Industrial Training Authority (NITA), whose mandate is to ensure adequate supply of well-trained workers at all levels in industry, notably by collecting an industrial training levy from registered employers in all sectors of KES 50 (approx.US$ 0.48) per employee per month to fund specific skills development schemes. In order to refine its approach and fine-tune its interventions with sector-specific needs, NITA has established nine sector training committees (STCs) to collect up-to-date-labour market information and identify relevant occupational competence standards so as to provide guidance to NITA's oversight board, employers, employees, trainers, assessors and employers.

4.2. Governance of training funds

The main advantage of training funds is that they provide a secured channel for funding, which is distinct from the State budget, and is specifically dedicated to developing productive work skills.

Brazil was one of the first countries to set up training funds. Because of the chronic lack of skilled workers on the labour market, industries decided to tax themselves to fund their own network of training institutions. The governing body of the Brazilian training funds is therefore entirely privately managed by national federations of employers (in Industry, Commerce, Agriculture and Transport), except for SENAR, which has a tripartite board which also includes employee and government representatives (Johanson, 2009).

Much of the success of the Brazilian training funds can be explained by the strong sense of ownership companies have: their direct involvement in managing the training fund and defining its funding priorities facilitates companies' adherence to the principle of the training levy and allows for the continual adaptation of the training fund to the needs of industry.

Other governing models have been explored in the setting-up of training funds. When they are established as training authorities by the government, training funds often have a tripartite governing body, with the government (usually the Ministry of Labour), employer and employee organizations represented. This configuration allows for partnership-based management, which considers the interests of the government, but also those of the industry and its workers.

The effectiveness of a training fund depends to a large extent on the degree of autonomy, participation of stakeholders and composition of its governing body (Johanson, 2009). Particular attention should therefore be paid to the distribution of seats and the management of the board, in order to prevent one interest group from dominating.

In many countries, public authority supervision remains predominant. This is reflected in the number of seats, the presidency of the fund, the way members, especially the secretary-general, are appointed, and also in the autonomy of the fund's decisions (the definition of its strategy, allocation of its budget and so on). This prevents social partners from fully participating in the selection and decision-making process for the training fund, and undermines employers' support for the levy.

R. Johanson underlines that training funds that allocate a leading role to employers tend to be more successful, as is the case in Singapore, where employers play a strong role: they occupy seven out of fifteen positions, including both chair and vice-chair, compared with three positions for unions and four for government representatives).

4.3. Resources and incentive schemes

There are various possible tax bases for a training levy, of which a levy on payroll is the most common. ***Table 14*** classifies countries according to the tax base chosen.

Table 14 Classification of countries by type of levy base

Levy base	Country
Company profit tax	Jordan, Egypt (suspended)
Levy on foreign workers	Bahrain, Marshall Islands
Payroll	Algeria, Barbados, Belgium, Benin, Bolivia, Brazil (for SENAI, SENAC and SENAT), Burkina Faso, Bulgaria, Central Africa, Chad, Colombia, Costa Rica, Côte d'Ivoire, Cyprus, Dominican Republic, Ecuador, El Salvador, France, Greece, Guatemala, Guinea, Honduras, Hungary, Ireland, Italy, Jamaica, Malawi, Mali, Mauritania, Mauritius, Morocco, Namibia, Netherlands, Nicaragua, Nigeria, Paraguay, Peru, Poland, Romania, Senegal, Singapore, South Africa, Spain, Tanzania, Togo, Tunisia, United Kingdom, Uruguay, Venezuela, Zimbabwe
Fixed amount per worker	Slovenia
Value of production	Brazil (SENAR), South Africa Agricultural Training Fund (SETA)
Social security fund	Panama, Republic of Korea.

Source: adapted from UNESCO (2015).

The implementation of a training levy has several advantages and limitations, which are summarized in ***Table 15***.

Table 15 Advantages and limitations of training levies

Advantages	Limitations
Earmarked payroll levies can be viewed as 'benefit taxation', i.e. those that benefit (employers and workers) pay for the training.	Earmarked taxation does not conform well with the principles of sound public finance, and weakens attempts to unify the national tax system.
Levy systems can substantially augment the resource base for training.	Payroll levies raise the cost of labour to the employer, possibly discouraging employment.
Increased training resources, in turn, can substantially increase the incidence of training.	Employers may shift the incidence of the levy on to workers in the form of lowered wages; in this case, workers and the employers bear the burden of the tax.
Levies can provide a steady and protected source of funding for training, particularly in the context of unstable public budgets.	Insecurity of income: under fiscal pressure, the government might divert levy proceeds into general public tax revenues for non-training uses.
Levy-grant systems can encourage firms to intensify their training efforts, increase training capacity and raise training quality.	Unequal access: many firms, particularly small ones, do not benefit from the scheme. This breeds resentment, opposition and compromises the status of training levies as 'benefit taxation'.
Training levies collected from formal-sector employers can serve as a vehicle for cross-subsidization, e.g. for smaller employers and especially for firms in the informal sector.	Inefficiency: payroll levies may constitute an over-sheltered source of funding, leading to unspent surpluses, inefficiencies and heavy bureaucracies.
Funds with tripartite management can forge cooperation among social partners and facilitate formulation of appropriate training policies.	Red tape may erect high barriers for firms to access funds.
Funds can influence the quality of training through accreditation procedures and helping to stimulate a competitive training market.	
Levy-financed funds can also help correct imbalances in training access by pooling funds, e.g. for training disadvantaged segments of society, the unemployed and those in the informal sector. This redistribution can be termed 'cross-subsidization'.	
Establishment of a separate training fund account can facilitate transparency and minimize distrust between employers and the public sector.	

Source: Hakim (2011). Adapted from Ziderman (2003) and Johanson (2009).

The main advantage of a levy system lies in the stability and sustainability of resources. The main risk is however that payroll levies raise the cost of labour for employers, which they might shift on workers in the form of lower wages, or this could discourage them from employing people. Another limitation relates to the fiscal pressure on enterprises and their competitiveness at regional level, which has to be taken into account when designing a levy system.

Companies may benefit from the levy according to various incentive schemes (Johanson, 2009):

- Cost reimbursement scheme, in which companies are reimbursed for approved training expenditure within the limits of the levy they pay. The reimbursement is often below the actual amount of levy paid in order to cover central administration costs.
- Levy-grant scheme: funds are redistributed to companies in the form of grants on a case-by-case basis, in accordance with predefined criteria, without necessarily reflecting an enterprise's payments. Companies can receive grants far in excess of the amount paid, thus providing incentives for firms to train their staff.
- Levy exemption scheme: also called a 'train or pay scheme', where firms, as previously mentioned, are exempted from the training levy to the extent of the amount of the approved training provided to their workers.

The schemes implemented by various countries have been mapped by UNESCO (2015) (***Table 16***).

Table 16 Main features of levy systems implemented across various countries

Country	Rate (%)	Revenue generating	Payroll tax exemption	Levy grant	Training cost reimbursement
Bahrain	1.0–3.0	x			
Brazil	1.0–1.5	x			
Côte d'Ivoire	1.6		x		
France	1.5		x		
Honduras	1.0	x			
Hungary	1.5			x	
Ireland	0.7	x			x
Jordon	1.0				x
Kenya	1.0				x
Korea	0.5		x		
Malawi	1			x	x
Malaysia	0.5–1.0				x
Mauritius	1	x			x
Morocco	1.6	x			
Nigeria	1.25				x
Panama	15	n.a.			
Republic of Korea	0.25-0.85				x
Singapore	1.0				x
South Africa	1.0			x	
Tanzania	2.0			x	
Thailand	1.0		x		
Turkey	n.a.	x			

Source: Adapted from Cambridge Econometrics' elaboration based on Dar et al. (2003) and UNESCO (2015).

There are pros and cons to each of these schemes, as summarized in ***Table 17.***

Table 17 Advantages and disadvantages of levy systems

Incentive scheme	Advantages	Risks	Recommendations
Cost reimbursement	• Supports industry training initiatives. • Leads to improvement of company training in some countries, e.g. development of training policies, requirement for company training plans, and central advisory guidance on training.	• Imposes high administrative and maintenance costs which reduce the amounts that can be returned to employers. • Tends to favour routine training instead of new programmes. • Deters many enterprises from applying because of bureaucratic requirements and paperwork. • Delays training within enterprises in some cases because of a slow approval process.	• Keep administrative costs low. • Give social partners a central role in training fund governance. • Levies should be used to promote company training and not be used to replace public funding (funding of public institutions, etc.). • Special mechanisms should be set up to support training for SMEs and non-contributing companies (equity function) notably development of competencies in the informal sector (which represents up to 60% of labour force) • Find balance between tax burden, labour cost and productivity gains.
Levy grant	• Mutualization of resources. • Promotes the allocation of resources to priority training programmes. • Supports industry-wide training initiatives. • Changes priorities flexibly in accordance with changed circumstances.	• Might impose high administrative costs. • Requires effective management skills and capacities. • Excludes many enterprises paying the levy from funding.	
Levy exemption	• Keeps financial allocations within enterprises; employers are free to plan, manage their funds and administer their training. • Economizes on costs: central administration of funds is not required; the national cost of administration is low. • Forges links between employers, schools and agencies, and stimulates the development of private training markets through the option for training institutions to compete for employer grants (e.g. French apprenticeship tax).	• Ineffective spending of the compulsory allocation in some cases. • Cannot support broader sectoral (or national) training priorities and activities. • No mutualisation of training amongst companies who have the same needs.	• Refine criteria of training provided in companies: → Target on work relevant skills for all employees. → Use the tax paid by companies to fund national priorities and care for disadvantaged groups.

Source: Recommendations from the author; Johanson (2009), adapted from ADB (1997) and Ziderman (2003).

Despite being a tremendous tool to mobilize resources from industry, training funds often suffer from constraints which tend to generate reluctance from companies when the setting-up of a training levy is discussed:

- The levy pooled from the industry for skills development is often diverted from its initial purpose. As defined by UNEVOC/NCVER (2009), a training levy is raised with a view to financing training activities. In other words, training levies are a means to collect funds from employers that are required to pay the levy and subsequently invest the money back into the industry (UNESCO, 2016). Many times however, levies are integrated into the national budget and only partly returned as training funds in the form of an annual subsidy, whose amount varies according to national budgetary constraints. This raises the importance of securing the levies. This can be done by opening a dedicated account at the public treasury for the training fund, and ensuring that the fund can directly access the resources of that account. This approach tends to be more efficient than collection systems that rely on training agencies to collect the levy (as in Kenya and Tanzania).
- Resources may be used in an inefficient way. Training funds tend to operate like 'across the counter' services, dealing with requests one by one, rather than funding priorities based on a diagnostic of the skills needed for the economic activities that could generate growth and add value on a national scale (Walther et al., 2014). The lack of visibility of the amount of funding available (when the training levy is allocated in the form of a subsidy by the State depending on wider budgetary constraints) reinforces this aspect. There are also problems in actually using the funds, such as low disbursement rates and high operating/administrative costs.

4.4. Training schemes and funding priorities

Training funds usually allocate funding for three types of training (Johanson, 2009):

1) Pre-employment training, where the aim is to increase the supply of qualified workers on the labour market. Pre-employment training funds are mostly found in Latin America, where professional branches invest in the creation of training centres providing initial training to address the specific needs of the sector's companies. For example, the Brazilian S-System is responsible for the provision of approximately 43 per cent of TVET in Brazil, with SENAC and SENAI being the biggest training providers. In 2013, 3.4 million and 1.6 million students enrolled in professional and technical education courses run by SENAI and SENAC respectively (IDB, 2015).
2) Enterprise or continuing training, with the aim of increasing the productivity and competitiveness of firms by improving the skills of their workers.
3) Equity-oriented training, which specifically targets disadvantaged groups (informal workers, the unemployed, young people and so on) who are not covered by enterprise training schemes. An example is the Cambodian Training Fund, which was established to support community-based training initiatives, in particular in rural areas (UNESCO, 2013b).

Most training funds provide finance for specific training schemes in all these three areas.

Particular attention should be paid to the accessibility of the training schemes, by designing procedures that take into account the constraints of the people and companies that are targeted.

The **Malaysian** HRDF is particularly emblematic in that regard. It has developed specific approaches to its various targets to maximize the impact of its training schemes, for example:

- 'SME on the job training' scheme: SMEs make a major contribution to employment, national income and exports. These companies tend not to benefit from training schemes, because they cannot afford to let their employees take time off for training, or the procedures for obtaining funding for training are too complex, or they cannot support the costs of training upfront while awaiting reimbursement by the fund. Considering this, HRDF has designed a specific financing tool to help SMEs train their workers and minimize work interruption when they send workers for external training. According to this scheme, in-house training is delivered by the SME's own employee who is a skilled worker or the trainee's supervisor.
- Skills development for women: An HRDF scheme targets unemployed women with caring responsibilities, with the aim of upgrading their skills and knowledge so they can enter self-employment and work flexibly and/or from home. The training is provided in eight fields chosen because they are compatible with home-based work and flexible working arrangements: translation and editing, training of trainers, web development, graphic design, social media management, simplified internet marketing, green Islamic cleaning, and insurance quality level. Through this scheme, HRDF aims at increasing women's participation rate in the labour market from 46 per cent to 55 per cent.
- Initial training for school leavers and dropouts: under this training scheme, HRDF funds a combination of theoretical training delivered at an approved training centre and structured 'on-the-job' training at the premises of an employer. The duration of training ranges from 9 to 27 months, depending on industry requirements. Training fees are fully paid by HRDF and are deducted from employers' levy accounts. They cover a monthly allowance for trainees of RM 500, consumables used during the on-the-job training, and insurance coverage for the apprentices during the entire programme.[11]

[11] HRDF website.

5. Forecasting resources that could be raised from levies

The review of existing literature on financing skills development shows that the majority of research follows a qualitative approach. This is mainly because of the lack of the statistical data that would be required to conduct an empirical analysis (UNESCO, 2016).

Considering this, UNESCO together with Cambridge Econometrics has developed a methodology to forecast the potential for industry to invest in skills development by means of a training levy.

The methodology shows how the amount of revenue raised depends primarily on the levy base and the rate at which the levy is set, but also on external factors, such as the economic and institutional context, and the general conditions of the labour market.

The main features of the methodology are presented in this section.

5.1. Design a proxy for the levy base

In the vast majority of countries, the levy is applied to payroll. The methodology suggests to distinguish several sectors and use the payroll in each sector as a proxy for the levy base. When no official statistics are available on the evolution of payroll, gross annual earnings in the economy (or in a sector if data are available) can be taken into account.

UNESCO (2016) underlines that using payroll as a proxy is preferred to other variables such as turnover or profits, since such variables may fluctuate significantly between two periods, while average annual employee earnings generally follow a stable trend through time. The methodology can nevertheless be applied regardless of the proxy chosen for the levy base.

The levy rate should result from a discussion either among social partners or between social partners and the state. The extent to which future contributing companies are involved in the design process of the future levy system is critical to obtaining their buy-in.

5.2. Determine the levy rate and the amount of revenue raised

International analysis shows that the levy rate applied on payroll ranges from 0.1 per cent (Belgium) to 4 per cent (Benin).

It also shows that the levy rate may vary according to the size of the company or whether it is in a priority sector. In the **Republic of Korea** for example, the levy rate ranges from 0.25 per cent of payroll for enterprises with 1–149 employees to 0.85 per cent for enterprises with 1,000 employees and more. This levy system also takes into account priority support enterprises, with 150 employees or more, which benefit from a reduced rate (0.45 per cent instead of the 0.65 per cent paid by other companies with 150 employees or more).

In **Malaysia**, a mandatory payment is imposed at a rate of 1 per cent of total payroll for employers with fifty Malaysian employees and above in the manufacturing, mining and quarrying sectors; employers with thirty Malaysian employees and above in food and beverage services; and employers with ten Malaysian employees and above in thirty-eight selected occupations in the services sector.

The amount of revenue raised depends on both the levy rate and the levy base (revenue raised = levy base x levy rate).

Other contributing factors affect the effective amount that is raised, such as the unemployment rate, educational levels and the size of the informal sector, which affects the proportion of individuals who contribute and the amount of their contribution. Other factors, such as the share of public companies (which might be excluded from contributing depending on the scheme's design and policy) in the total number of companies, might also affect the final result. The factors involved are summarized in ***Table 18***.

Table 18 Factors that affect the amount raised by levy systems

Factor	Rationale	Relevant variables to categorize each dimension
Economic context	• Economic contextual factors affect directly the participation of firms in the schemes.	National wealth (GDP), sectoral value added, productivity, average wages, sectoral employment /number of jobs, etc.
Labour market structure	• Labour market factors seem to have an impact (albeit slight) on TVET. • Employment rates also affect the levy base since an increase in the share of individuals who are participating in income-generating activities will increase the levy base. • Educational attainment levels of the population also influence the revenue raised by a training levy. In principle, more skilled workers will be more productive and obtain higher remuneration, which eventually affects the levy base.	Unemployment rates, labour participation rates, educational attainment level of the population, expenditure on labour-market training as percentage of GDP, etc.
Institutional set-up	• Institutional factors such as the size of the informal sector directly affect the outcomes of and disbursement of the training funds. The size of informal sector could be also a possible explanation for a low amount of revenue raised.	Relative weight of the informal economy and relative weight of the public sector in the total economy.

Source: UNESCO (2016), adapted from UNESCO (2015).

The UNESCO/Cambridge methodology includes a vector that corrects the estimation of revenue raised by taking into account these factors.

5.3. Estimating the potential revenue raised through a levy system in Viet Nam

A simulation, based on the UNESCO/Cambridge Econometrics methodology, was conducted by the Dutch consulting firm Ecorys for the purpose of this study to estimate the resources that could be generated through the implementation of a training levy in **Viet Nam**. Seven scenarios were developed, each assessing a particular scheme in which a different levy rate was assumed:

- **Scenario A** – 1 per cent levy rate is assumed for all sectors. This scheme is consistent with the levy rate implemented in other Asian countries (Singapore, Fiji and Thailand).
- **Scenario B** – 2 per cent levy rate is assumed for all sectors. This 'optimistic' scenario is inspired by the schemes that are in force in Papua New Guinea and Tanzania.
- **Scenario C** – 0.5 per cent levy rate is assumed for all sectors. This 'pessimistic' scenario simulates the implementation of a scheme with a levy rate close to that of the Republic of Korea.
- **Scenario D** – 1 per cent levy rate is assumed for all sectors with the exception of the public sector (0 per cent levy rate). This exemption is a common feature of many schemes such as in Malaysia, Cyprus and the Dominican Republic.
- **Scenario E** – 0.5 per cent levy is assumed for agriculture and mining, while 1 per cent levy is assumed for the rest of the economy. The public sector is excluded from the levy.
- **Scenario F** – As scenario E, although a reduced levy rate (0.5 per cent) is assumed for the construction sector. This beneficial treatment for the construction sector has been adopted in order to mitigate a potential negative effect that could emanate from the levy and harm employment in this particular sector, which has strong 'pulling effects' across the economy.
- **Scenario G** – As scenario F, although a higher levy rate (1.5 per cent) is assumed for the services sector. The rationale is that this sector has a stronger demand for training than other sectors such as agriculture.

The fiscal pressure for enterprises (ratio of the amount of financial resources raised from firms to GDP) was also computed for each scenario to help clarify the implications of the implementation of a training levy.

In order to provide a more comprehensive set of results, three variants have been considered:

- **Variant 0** – GDP is inelastic to changes in taxation. This assumption reflects a hypothetical situation in which the implementation of a training levy does not dampen economic activity.

- **Variant 1** – The implementation of the tax provokes a decline in GDP by 3 per cent from 2017 onwards. This is an extreme assumption, which corresponds to a 'pessimistic' case.
- **Variant 2** – The implementation of the tax provokes a decline in GDP by the same amount as is collected in the previous year. In other words, the training levy is implemented by the end of 2016 and the first decline in GDP is observed in 2017.

The various scenarios provided the results shown in ***Table 19.***

Table 19 Possible resources that could be generated through the implementation of a training levy in Viet Nam – various scenarios

Revenue raised (VND billion, constant prices 2010) and fiscal pressure (% of GDP)					
Scenario A (1% levy rate for all sectors) - Variant 0	1,652.928	1,757.063	1,867.757	1,985.426	2,102.741
Fiscal pressure on enterprises (%)	5.25259	5.33419	5.37259	5.38939	5.40619
Scenario A (1% levy rate for all sectors) – Variant 1	1,652.928	1,756.167	1,865.854	1,982.391	2,098.453
Fiscal pressure on enterprises (%)	5.25259	5.33419	5.37259	5.38939	5.40619
Scenario B (2% levy rate for all sectors) – Variant 0	3,305.856	3,514.125	3,735.515	3,970.852	4,205.483
Fiscal pressure on enterprises (%)	5.30679	5.38839	5.42679	5.44359	5.46039
Scenario B (2% levy rate for all sectors) – Variant 1	3,305.856	3,510.542	3,727.901	3,958.718	4,188.341
Fiscal pressure on enterprises (%)	5.30679	5.38839	5.42679	5.44359	5.46039
Scenario C (0.5% for all sectors) – Variant 0	826.464	878.531	933.879	992.713	1,051.371
Fiscal pressure on enterprises (%)	5.22550	5.30710	5.34550	5.36230	5.37910
Scenario C (0.5% for all sectors) – Variant 1	826.464	878.307	933.403	991.954	1,050.298
Fiscal pressure on enterprises (%)	5.22550	5.30710	5.34550	5.36230	5.37910
Scenario D (1% levy rate for all sectors except public sector) – Variant 0	1,596.621	1,697.208	1,804.132	1,917.792	2,031.111
Fiscal pressure on enterprises (%)	5.25075	5.33235	5.37075	5.38755	5.40435
Scenario D (1% levy rate for all sectors except public sector) – Variant 1	1,596.621	1,696.372	1,802.356	1,914.961	2,027.109
Fiscal pressure on enterprises (%)	5.25075	5.33235	5.37075	5.38755	5.40435
Scenario E (0.5% for agriculture & mining; 1% for other sectors; 0% for the public sector) – Variant 0	1,244.526	1,322.931	1,406.276	1,494.871	1,583.200
Fiscal pressure on enterprises (%)	5.23920	5.32080	5.35920	5.37600	5.39280
Scenario E (0.5% for agriculture & mining; 1% for other sectors; 0% for the public sector) – Variant 1	1,244.526	1,322.423	1,405.196	1,493.150	1,580.768
Fiscal pressure on enterprises (%)	5.23920	5.32080	5.35920	5.37600	5.39280

Scenario F (0.5% for agriculture, construction & mining; 1% for other sectors; 0% for the public sector) – Variant 0	1,179.788	1,254.115	1,333.124	1,417.111	1,500.845
Fiscal pressure on enterprises (%)	5.23708	5.31868	5.35708	5.37388	5.39068
Scenario F (0.5% for agriculture, construction & mining; 1% for other sectors; 0% for the public sector) – Variant 1	1,179.788	1,253.658	1,332.154	1,415.564	1,498.660
Fiscal pressure on enterprises (%)	5.23708	5.31868	5.35708	5.37388	5.39068
Scenario G (as scenario F, with 1.5% for services sector) – Variant 0	1,470.925	1,563.593	1,662.100	1,766.812	1,871.210
Fiscal pressure on enterprises (%)	5.24663	5.32823	5.36663	5.38343	5.40023
Scenario G (as scenario F, with 1.5% for services sector – Variant 1	1,470.925	1,562.884	1,660.592	1,764.408	1,867.813
Fiscal pressure on enterprises (%)	5.24663	5.32823	5.36663	5.38343	5.40023

Sources: Dr A. R .Gonzalez-Martinez, Ecorys and UNESCO, 2016.

Some key messages can be drawn from this simulation exercise:

- In the most optimistic scenario (Scenario B – Variant 0), the revenue that could be raised by a 2 per cent training levy is in the range of VND3,305-4,205 billion over the period 2016–20. The *Vocational Training Report of Viet Nam* 2013–14 (GDVT, 2015) gave the budget for vocational training in 2013 as nearly VND 11,784 billion. A training levy on this budget would therefore contribute roughly as much as a third of the total budget allocated to TVET in 2013.
- In contrast, the most conservative scenario (Scenario C – Variant 1) shows that the revenue from a 0.5 per cent rate will be in the range of VND 826–1,050 billion over the period 2016–20 (representing about 7 per cent of the public budget allocated to TVET in 2013).
- Differences in terms of fiscal pressures for enterprise are marginal across various scenarios and the baseline (= no training levy).
- Three variants of each scenario were calculated, but it will be noticed that the differences regarding the revenue that could be raised in each scenario are marginal.

Furthermore, a training levy would have a positive effect in terms of engaging employers with TVET: employers would be aware of the system and try to provide additional training as a way of 'retaining' their contributions to the training fund.

These scenarios were meant to fuel Viet Nam's reflection on the setting-up of a training levy and discussions with industry. As mentioned before, the decision on the levy rate and which organizations should come under the scope of the scheme should be decided after an in-depth consultation with the social partners. The design of the future levy system should also take into account the level of taxation and labour costs compared with neighbouring countries.

Chapter 4 Mobilizing families, training institutions and ODA in funding TVET

Resources provided by the State and industry are often complemented by the introduction of tuition fees (***section 4.1***), the development of income-generating activities and training services by training providers (***section 4.2***) and official development assistance (ODA) (***section 4.3***). Depending on the country, the legal framework and the level of autonomy of training providers, these additional resources may represent important sources of funding for TVET.

1. Tuition fees: finding a balance between equity and cost recovery

There is a general trend towards making individuals (or their families) contribute to the funding of TVET through tuition fees. This either allows for a reduction of public spending to training providers or can improve the training capacity of vocational training institutions at a given level of State funding. For private training providers, which are rarely entitled to public funding, tuition fees often represent one of their major sources of revenue. The analysis of the six Asian countries shows varying approaches concerning the level of tuition fees and the mechanisms that have been implemented to ensure equitable access for poorer families.

In **Viet Nam**, the State represents the main source of funding for vocational training, accounting for 60 per cent of financial resources for the vocational training system between 2007 and 2013. Tuition fees are the second most important funding source for the TVET system, representing 18 per cent of financial resources, followed by 14 per cent from income and services, and 8 per cent from investment and funding from ODA. New tuition fees with increased levels have been introduced since 2010 under Decree No. 49/2010/ NĐ-CP, leading to a steady increase in the income of TVET institutions from tuition fees (it multiplied 3.6 times from VND 407 billion in 2007 to around VND 1,478 billion in 2013). Compared with regular State spending for TVET, the share of income from tuition fees reached 33 per cent in 2013, while it was only 21 per cent in 2007. To counterbalance the negative impact on vulnerable families, there was a review of the criteria and levels for tuition exemption and reduction, leading to an increase in the number of students qualifying, from 14–15 per cent in 2009 to 18–19 per cent in 2010. For private training providers, tuition fees are the main source of income since they are as yet not entitled to direct government funding.

In **Laos**, TVET is mostly provided free up to diploma level. There are some exceptions for specific courses such as automotive/electronic for which students have to pay LAK 1.5–2 million per year (US$183–244[12]). For diplomas, tuition fees again range from LAK 1.5–2 million per year. There is no overall student loan scheme, nor is one proposed, but stipends are provided to encourage training in sectors where there is national skill shortage (of LAK 200,000 per month, approx. US$24).

In **Malaysia**, most students in public TVET institutions have to pay tuition fees, but the amount is minimal. Tuition fees imposed range from RM 0–200 (US$45) per semester depending on the programme and TVET provider. Additionally, students need to pay for their

[12] At the rate on 19 December 2016 of US$1 = LAK 8,185,30.

living expenses (food and accommodation) and a small amount for learning materials and services. This expenditure is borne by either their families or the students themselves, with loans obtainable from the National Higher Education Fund (PTPTN[13]) or from *Majlis Amanah Rakyat* (MARA), an agency under the Ministry of Rural and Regional Development. There is an interest rate currently of 4 per cent. Students following the Malaysian Skills Certification are given grants, while those registered for high-demand programmes under the Ministry of Human Resources are eligible for funding through a Skills Development Fund Corporation. Private TVET institutions receive up to 90 per cent of their funding through tuition fees, which are borne by students' families, the rest being mainly financed by scholarships offered by the government (Public Service Department, Star Education Fund of the Minister of Education), private sector and charitable organizations.

In the **Republic of Korea**, scholarships were introduced for vocational high schools to provide better learning environments, where students are free to focus on TVET without worrying about financial problems, since most of them come from low-income families. Large numbers of students have their tuition fees waived or paid by the government, which has provided full tuition scholarships to students in all public and private specialized vocational high schools since 2011. For all students in Meister high schools, public and private, the government pays a full tuition scholarship and dormitory fee. Students have to bear tuition fees at the tertiary level. In private junior colleges, the tuition fees range from KW 5.5–6.5 million (approx. US$4,840–5,721)[14], and in public junior colleges they were around KW 2.7 million (approx. US$2,376) in 2015. Tuition fees at polytechnic colleges range from KW 2.0–2.4 million (approx. US$1,760–2,112), which is much lower than fees for junior college, because polytechnic colleges benefit from MOEL subsidies. Tuition at Korea Tech ranges from KW 3.3 million (approx. €2,904) for humanity and social science courses to KW 4.75 million (US$4,180) for engineering.

In **Thailand**, three-year-programmes at upper-secondary level are provided for free in public TVET institutions. Some colleges require payment of registration fees of THB 1,500 (US$42[15]), THB 820 (US$23) for extra-English classes, and THB 350 (US$10) for insurance costs, which are collected from students or families. Private training providers that offer TVET at secondary level are also subsidized for cost per head and teacher salaries, and are allowed to require additional payments from students at secondary level, ranging from THB 5,791–14,895 per student (US$162–418). For post-secondary TVET programmes, students have to pay tuition fees, which range from THB 10,000–12,000 per year (US$280–33) for 2-year programmes in public institutions. Tuition fees in private institutions are twice this level or more.

[13] *Perbadanan Tabung Pendidikan Tinggi Nasional*, an agency under the MOE that gives study loans to students who are pursuing tertiary education.

[14] At the October 2016 rate of US$1 = KW1,136.15.

[15] At the October 2016 rate of THB1 = US$0.028036.

The situation in the **Philippines** is unusual. TVET provision in the country is private-sector dominated: more than 90 per cent is privately managed. As of July 2015, there were 4,635 TVET providers offering 20,278 different programmes. There were 4,198 private training institutions, and 437 government-owned institutions.[16] Public training is generally provided for free, while private TVET providers collect fees from the trainees. The levels vary according to the type of course and duration of training, from PHP 500 (US$10) for courses such as beauty care to PHP 50,000 (US$1,000) or PHP 180,000 (US$3,600) for training on slaughtering and culinary arts respectively. In order to address both equitable access to TVET and the skills demand of industries, particularly in employment-generating sectors, TESDA offers scholarships to students/trainees through three major programmes.

- The Training for Work Scholarship Program (TWSP) targets highly critical skills in identified industries. Beneficiaries are entitled to free training and competency assessment delivered through participating TVET institutions. There has been a significant increase in government funding for the TWSP over recent years, and by 2016 its budget was about PHP 2 billion (US$40 million[17]). Regional offices allocate funding to provincial and district offices based on their area requirements and priority sectors.
- The PESFA (Private Education Student Financial Assistance) programme seeks to extend financial assistance to marginalized but deserving students in post-secondary courses enrolling in private TVET. The government allots PHP 200 million (US$4 million) annually to this programme.
- STEP (Special Training for Employment Program) is a programme implemented in 2014 for beneficiaries from indigent families under the National Household Targeting System for Poverty Reduction and Informal Sector Families, as well as those with a slightly higher income, as determined by Department of Social Work and Development. Scholars are given free training and competency assessment, starter toolkits and a training allowance.

Despite these assistance programmes only 14 per cent of students benefited from scholarships in 2015, which suggests that families made a very high contribution to TVET funding in the Philippines.

[16] The government only provides training when it is too expensive for private training providers to provide it.
[17] At the October 2016 rate of 1 PHP = US$0.0200315.

Table 20 TVET enrolment on TESDA scholarship programmes compared with total enrolment in TVET in the Philippines, 2012–15

Year	Total number of enrolled students	Number of PESFA scholars	Number of STEP scholars	Number of TWSP scholars	Total number of scholars	% of scholars in total number of enrolled students
2012	1,804,742	25,586		178,119	203,705	11.3
2013	1,943,589	26,745		107,990	134,735	6.9
2014	2,033,417	28,077	76,256	205,870	310,203	15.3
2015	2,281,389	26,800	20,524	275,138	322,462	14.1

Source: TESDA.

The data and information provided from the six countries show that in most cases, TVET in public institutions is free up to tertiary level. Some countries (the Republic of Korea, Thailand, the Philippines, and to a smaller extent Malaysia) have decided to subsidize private training provision at upper secondary level, thus leveraging the private sector to reach their skills development goals. Private training providers are entitled to government funding either through direct subsidies, as in the Republic of Korea and Thailand, or indirectly through scholarship mechanisms (Philippines and Malaysia), which lowers the costs borne by families.

At tertiary level, students have to pay tuition fees in almost all countries analysed, in both public and private training institutions. Tuition fees are generally moderate to very high, ranging from US$280–336 in Thailand for a 2-year programme in a public institution to US$5,721 in a Korean private junior college.

Defining a fee policy requires careful attention. It raises the question of the degree of freedom training providers should have in determining their own fee level, versus a centralized approach where a fee policy is determined at national level. While complete autonomy might encourage training providers to develop a more demand-oriented training offer, it could also have an adverse effect on access to training for poorer families. To offset this negative impact, some countries have introduced scholarship schemes (Philippines, Republic of Korea, Viet Nam), where tuition fees are waived for disadvantaged groups, or ‘Study first, pay later‘ schemes (Malaysia), where the cost of training may be repaid later. The analysis of the Filipino case nevertheless shows that despite its three major scholarship programmes to support disadvantaged individuals, only a small portion of students (14 per cent) have their tuition waived, which means that the vast majority of students have to fund their training themselves. It is also interesting to note that some countries (such as Laos, Malaysia and the Philippines) use their scholarship policy in a proactive way to encourage enrolment in skills-shortage or priority sectors.

2. Income-generating activities from training providers

Training providers could also develop income-generating activities (IGA) as a possible approach to increasing their financial resources. IGA can take various forms, including:

- selling goods and services produced by trainees
- renting the training centre's equipment
- providing continuing training to local entrepreneurs and companies
- delivering services outside of the premises through community projects.

In the six country case studies, IGA made up 2.5 per cent of training centre resources in the Philippines and 14 per cent in Viet Nam (there was no data available for the other four countries).

In the **Philippines**, some TVET institutions have implemented income-generating projects, whose income is used to improve the training offer by paying for training supplies or equipment.

In **Thailand**, IGA include community projects such as small-scale construction, repairing houses and facilities, and electrical wiring. The main purpose is not necessarily to complement training centres' income, but rather to provide work experience to students in real situations. Students are paid for their work, minus deductions that go to the training centre and to the trainer involved in the activity. The amount depends on the level of supervision required to deliver the product or service.

The interviews conducted in **Laos** showed that training providers there have difficulty in developing continuing training activities that might generate income. SMEs are not accustomed to providing training to their workers and do not look to training providers to offer this, while many bigger companies feel that the training provided in TVET schools does not fit their requirements. Training centre equipment is usually lower in quality than that used in companies, and the teachers are not trained in the latest technical developments. Lastly, it was mentioned that training providers lack a business mentality: they are not accustomed to delivering services to companies or to the community, and tend to focus solely on delivering initial training.

In **Viet Nam**, training centres both deliver services and commodity products ordered by State agencies, whose price is regulated by the relevant State authorities, and make contracts with domestic and international organizations and individuals, for which they have the right to determine the price. From 2007 to 2013, these activities brought in 14 per cent of the total financial resources for vocational training.

The **Malaysian** case study suggests that public universities and TVET tertiary education providers take a proactive approach to IGA. Training providers have to raise funds to meet their operating costs and are therefore forced to adopt strategic plans to generate revenue, for example from consultancy services, franchising educational programmes, fees from renting out facilities, and interest or dividends on investments. By law these institutions have to establish a private holding company if they intend to generate income through the sales of

consultancy services, medical and health services, and joint-venture activities with other industries. Unfortunately no data are available on the revenue generated through these IGA, and on the share of each contributor (State, student fees, IGA and so on) in training providers' budgets.

IGA are an interesting by-product of training activities. Besides complementing training centres' resources, the development of IGA may help training centres rationalize and optimize the use of their resources (such as equipment, facilities, and goods and services produced by the students); develop relations with the local community and industry, and hence deepen their understanding of labour market needs; and provide opportunities to their students to gain real-life experience. It is interesting that IGA are encouraged as part of Thailand's strategy to develop public awareness of the value of TVET.

Factors that limit the development of IGA include the lack of a business mentality in the organization's management team; inadequate quality of equipment; the status of training centres, which might not be allowed to make a profit; and a constraining legal framework or environment (for instance, in some countries, public training providers may not open a bank account, or if they develop other sources of income, could face a change of tax regime).

It must also be stressed that implementing IGA may involve risks such as (Uhder, 2017):

- accusations of unfair competition with local companies, since training providers do not have to pay for equipment, materials or wages to students
- IGA might become so developed that the use of training equipment for commercial purposes interferes with the smooth running of training programmes
- lack of diversification of the training offer, which may happen when students only receive training on activities linked to the IGA and not on the whole programme.

The key is therefore to find a good balance between training and commercial activities. M. Baier D'Orazio and V. B. Mukuza (2016) make several recommendations for the implementation of IGA:

- targeting IGA on activities that are profitable, and also different from what graduates normally do in order to avoid unfair competition (for instance, the institution might innovate instead of carrying out standard activities, locate production/services activities in areas that are more difficult to access for individual economic operators; or involve graduates in orders for the training centre)
- allocating each activity a specific portion of time each day
- allocating a dedicated staff member to run each of the two units (training and production)
- paying a small amount to the trainees involved in production to motivate them and prepare them for their future work situation.

3. Official development assistance

ODA is another source of funding for TVET in developing and emerging countries. It is often instrumental in supporting the implementation of reforms in TVET, providing resources for capacity-building or new infrastructure, and also for equity aspects, testing the introduction of work-based training and enhancing the quality of training provision.

An analysis of ODA at global level shows that increasing amounts are being invested in TVET. The total[18] increased from US$727.848 million in 2006 to US$1,463.370 million in 2015, an increase of more than 100 per cent in ten years *(see **Table 21**)*. Bilateral cooperation from DAC[19] countries is the main share of ODA (between 53 per cent and 73 per cent of funding for vocational training, and 50 to 100 per cent of funding for advanced technical training between 2006 and 2015).

Table 21 Total ODA invested in vocational training and advanced technical and managerial training from 2006 to 2015 (in US$ million, constant prices)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Vocational training (CRS Code 11330) – total	586.617	769.576	665.832	577.778	784.537	711.047	1.042.964	825.665	1.139.891	1.203.501
DAC countries	*371.561*	*409.389*	*486.025*	*390.349*	*565.093*	*487.071*	*668.294*	*565.443*	*702.881*	*752.556*
Multilateral donors	*215.056*	*360.187*	*179.807*	*186.690*	*181.367*	*223.408*	*374.105*	*228.104*	*436.283*	*448.932*
Non-DAC countries				*739*	*38.077*	*568*	*565*	*32.118*	*727*	*2.013*
Advanced technical and managerial training (CRS code 11430) – total	141.233	185.025	182.608	250.462	380.080	163.585	178.055	153.407	208.614	259.869
DAC countries	*82.122*	*153.441*	*182.608*	*200.704*	*344.975*	*129.530*	*137.375*	*144.599*	*175.738*	*131.434*
Multilateral donors	*59.111*	*31.584*		*47.576*	*21.669*	*34.055*	*40.680*	*8.808*	*32.875*	*128.102*
Non -DAC countries				*2.182*	*13.436*				*1*	*333*
Total vocational training + advanced technical and managerial training	727.850	954.601	848.440	828.240	1.164.617	874.632	1.221.019	979.072	1.348.505	1.463.370

Source: Author based on http://stats.oecd.org, data from 22 May 2017.

[18] This analysis used data from the OECD database. The OECD Creditor Reporting System (CRS) has two main categories that relate to TVET: CRS code 11330, which covers formal and informal training pre-tertiary vocational training; and CRS Code 11430 for advanced technical and managerial training. For a global analysis of ODA funding, see Palmer (2015*b*).

[19] Development Assistance Committee (DAC), which currently has 30 members.

ODA in 2015 was mainly invested in the African region (US$628.025 million), followed by Asia (US$610.887 million) (see ***Table 22***). Table 22 Total ODA invested in vocational training and advanced technical and managerial training from 2006 to 2015 (in US$ million, constant prices) by region

Table 22 Total ODA invested in vocational training and advanced technical and managerial training from 2006 to 2015 (in US$ million, constant prices) by region

Region	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Europe	**34.995**	**33.117**	**35.280**	**37.403**	**27.344**	**29.165**	**28.770**	**50.758**	**40.396**	**9.281**
Vocational training	25.155	29.100	27.320	27.917	18.732	26.246	25.304	45.068	36.119	6.220
Advanced technical / managerial training	9.840	4.017	7.960	9.486	8.612	2.919	3.466	5.690	4.277	3.061
Africa	**255.405**	**178.178**	**240.395**	**287.768**	**456.311**	**337.878**	**559.660**	**348.519**	**425.219**	**628.025**
Vocational training	228.996	125.714	203.776	210.045	267.135	268.818	513.107	306.802	400.020	472.356
Advanced technical / managerial training	26.409	52.464	36.619	77.723	189.176	69.060	46.553	41.717	25.199	155.669
America	**151.019**	**96 422**	**62 996**	**67.183**	**109.849**	**63.778**	**77.926**	**76.418**	**50.841**	**90.916**
Vocational training	96.883	79.787	54.979	58.551	91.281	52.730	36.649	71.288	45.682	77.083
Advanced technical / managerial training	54.136	16.635	8.017	8.632	18.568	11.048	41.277	5.130	5.159	13.833
Asia	**205.121**	**421 525**	**347 840**	**300.336**	**460.395**	**349.918**	**437.621**	**426.920**	**768.803**	**610.887**
Vocational training	185.663	390.242	301.654	234.015	341.316	314.425	402.478	377.151	640.502	584.983
Advanced technical / managerial training	19.458	31.283	46.186	66.321	119.079	35.493	35.143	49.769	128.301	25.904
Oceania	**6.020**	**137.737**	**47.051**	**28.104**	**42.514**	**47.696**	**45.275**	**42.681**	**29.131**	**44.917**
Vocational training	2.938	137.207	31.897	17.793	34.452	33.004	18.820	12.769	4.829	21.484
Advanced technical / managerial training	3.082	0.530	15.154	10.311	8.062	14.692	26.455	29.912	24.302	23.433
Unspecified	**75.288**	**87.622**	**114.878**	**107.446**	**68.204**	**46.199**	**71.766**	**33.777**	**34.116**	**79.343**
Vocational training	46.981	7.526	46.206	29.456	31.621	15.825	46.606	12.588	12.740	41.375
Advanced technical / managerial training	28.307	80.096	68.672	77.990	36.583	30.374	25.160	21.189	21.376	37.968

Source: Author based on http://stats.oecd.org, data from 22 May 2017.

A detailed analysis of the six Asian countries shows varying levels of ODA contribution to TVET funding (see ***Table 23***). The Republic of Korea received no funding in this period. Thailand and Malaysia received from 2010–15.

The data provided in the OECD database also shows that on average US$5.6 million from 2010–15, while the Philippines received US$19.9 million over the same period. Laos and Viet Nam were the two main recipients of ODA among the six countries analysed, with Laos receiving US$90 million and Viet Nam US$271 million the cumulated amount of bilateral aid from DAC countries represents the main share of ODA *(see table 16).*

Table 23 Total ODA invested in vocational training and advanced technical and managerial training from 2006 to 2015 in the six countries (in US$ million, constant prices)

Country	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Laos	**7.539**	**3.002**	**7.615**	**2.112**	**24.787**	**9.060**	**12.852**	**16.257**	**17.543**	**10.197**
Vocational training	7.188	2.271	7.459	1.716	24.461	8.886	12.834	15.834	17.518	10.185
Advanced technical / managerial training	0.351	0.731	0.156	0.396	0.326	0.174	0.018	0.423	0.025	0.012
Malaysia	**1.242**	**1.676**	**0,54**	**1.284**	**1.218**	**1.419**	**1.109**	**1.072**	**0.761**	**0.138**
Vocational training	1.124	0.407	0.453	1.103	0.953	1.277	0.672	0.285	0.238	0.048
Advanced technical / managerial training	0.118	1.269	0.087	0.181	0.265	0.142	0.437	0.787	0.523	0.090
Philippines	**2.543**	**2.487**	**3.236**	**1.023**	**2.457**	**1.447**	**5.185**	**2.522**	**6.443**	**1.885**
Vocational training	2.296	1.938	3.038	0.863	1.584	1.003	4.588	2.079	2.090	1.464
Advanced technical / managerial training	0.247	0.549	0.198	0.160	0.873	0.444	0.597	0.443	4.353	0.421
Thailand	**1.094**	**2.914**	**1.345**	**1.118**	**1.139**	**0.750**	**0.838**	**1.262**	**0.411**	**1.125**
Vocational training	0.474	0.771	1.089	0.966	0.665	0.262	0.340	0.130	0.198	0.603
Advanced technical / managerial training	0.620	2.143	0.256	0.152	0.474	0.488	0.498	1.132	0.213	0.522
Viet Nam	**14.604**	**23.191**	**19.098**	**56.181**	**86.899**	**46.977**	**45.030**	**34.670**	**37.561**	**20.690**
Vocational training	13.844	9.795	13.779	19.950	85.582	29.509	43.661	29.612	3.215	19.95
Advanced technical / managerial training	0.760	13.396	5.319	36.231	1.317	17.468	1.369	5.058	34.346	0.738
Republic of Korea	**..**	**..**	**..**	**..**	**..**	**..**	**..**	**..**	**..**	**..**

Source: Author based on http://stats.oecd.org, data from 22 May 2017.

Table 24 ODA invested from 2006 to 2015 in the six Asian countries, per type of training and donor (in US$ million, constant prices)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Laos	**7.539**	**3.002**	**7.615**	**2.112**	**24.787**	**9.060**	**12.852**	**16.257**	**17.543**	**10.197**
Vocational training	7.188	2.271	7.459	1.716	24.461	8.886	12.834	15.834	17.518	10.185
- DAC countries	7.188	2.271	7.459	1.716	2.867	8.886	12.793	15.832	17.514	9.672
- Multilateral donors	..	..	..	..	21.594	..	0.041	0.002	0.005	0.514
Advanced technical / managerial training technical	0.351	0.731	0.156	0.396	0.326	0.174	0.018	0.423	0.025	0.012
- DAC countries	0.351	0.731	0.156	0.396	0.326	0.174	0.018	0.423	0.025	0.012
Malaysia	**1.242**	**1.676**	**0,54**	**1.284**	**1.218**	**1.419**	**1.109**	**1.072**	**0.761**	**0.138**
Vocational training	1.124	0.407	0.453	1.103	0.953	1.277	0.672	0.285	0.238	0.048
- DAC countries	1.124	0.407	0.453	1.103	0.953	1.277	0.672	0.285	0.238	0.048
Advanced technical / managerial training	0.118	1.269	0.087	0.181	0.265	0.142	0.437	0.787	0.523	0.090
- DAC countries	0.118	1.269	0.087	0.181	0.265	0.142	0.437	0.787	0.523	0.090
Philippines	**2.543**	**2.487**	**3.236**	**1.023**	**2.457**	**1.447**	**5.185**	**2.522**	**6.443**	**1.885**
Vocational training	2.296	1.938	3.038	0.863	1.584	1.003	4.588	2.079	2.090	1.464
- DAC countries	2.296	1.938	3.038	0.863	1.584	1.003	4.577	2.077	2.090	1.464
- Multilateral donors	..	..	..	..	..	..	0.011	0.002	..	..
Advanced technical / managerial training	0.247	0.549	0.198	0.160	0.873	0.444	0.597	0.443	4.353	0.421
- DAC countries	0.247	0.549	0.198	0.160	0.873	0.444	0.597	0.443	4.353	0.421

Thailand	**1.094**	**2.914**	**1.345**	**1.118**	**1.139**	**0.750**	**0.838**	**1.262**	**0.411**	**1.125**
Vocational training	0.474	0.771	1.089	0.966	0.665	0.262	0.340	0.130	0.198	0.603
- DAC countries	0.474	0.771	1.089	0.966	0.665	0.262	0.337	0.130	0.198	0.60
- Multilateral donors	..	..	..	..	..	..	0.003	..	..	..
Advanced technical / managerial training	0.620	2.143	0.256	0.152	0.474	0.488	0.498	1.132	0.213	0.522
- DAC countries	0.620	2.143	0.256	0.152	0.474	0.488	0.498	1.132	0.213	0.522
Viet Nam	**14.604**	**23.191**	**19.098**	**56.181**	**86.899**	**46.977**	**45.030**	**34.670**	**37.561**	**20.690**
Vocational training	13.844	9.795	13.779	19.950	85.582	29.509	43.661	29.612	3.215	19.95
- DAC countries	11.098	9.795	13.779	19.950	19.861	29.509	43.661	29.584	3.215	19.952
- Multilateral donors	2.746	..	..	..	65.721	..	..	0.028	..	..
Advanced technical / managerial training	0.760	13.396	5.319	36.231	1.317	17.468	1.369	5.058	34.346	0.738
- DAC countries	0.760	13.396	5.319	36.231	1.317	17.468	1.369	5.058	34.346	0.738

Source: Author based on http://stats.oecd.org, data from 22 May 2017.

In **Viet Nam**, the Asian Development Bank (ADB) was the main donor (with US$65.721 million invested in pre-tertiary vocational training since 2010), followed by Germany (US$65.192 million), the Republic of Korea (US$39.771 million), France (US$29.111 million) and Austria (US$11.237 million). This aid mostly comes in the form of grants, although with substantial variations across the years (from 27 to 100 per cent between 2007 and 2015) (see ***Table 25***).

According to the *Vocational Training Report 2013–2014* in Viet Nam, ODA accounted for about 8 per cent of funding for vocational training in the period 2007–13 (no more recent data are available).

Table 25 Type of ODA contributions in Viet Nam since 2007 (in US$ million, constant prices and per cent)

	2007	2008	2009	2010	2011	2012	2013	2014	2015
ODA Vocational training	9.795	13.779	19.950	85.582	29.509	43.661	29.612	3.215	19.952
ODA loans	2.492		11.011	65.721	13.536	27.707	15.548		
Share of ODA loans in ODA voc. training	25,44%	0%	55,19%	76,79%	45,87%	63,46%	52,51%	0%	0%
Share of ODA grants in ODA voc. training	74,56%	100%	44,81%	23,21%	54,13%	36,54%	47,49%	100%	100%
Total ODA Advanced technical and managerial training	**13.396**	**5.319**	**36.231**	**1.317**	**17.468**	**1.369**	**5.058**	**34.346**	**0.738**
ODA loans		3.347							
Share of ODA loans in ODA adv. training	0%	62,93%	0%	0%	0%	0%	0%	0%	0%
Share of ODA grants i in ODA adv. training	100%	37%	100%	100%	100%	100%	100%	100%	100%
Total ODA (vocational training and advanced technical)	**23.191**	**19.098**	**56.181**	**86.899**	**46.977**	**45.030**	**34.670**	**37.561**	**20.690**
ODA loans	2.492	3.347	11.011	65.721	13.536	27.707	15.548		
Share of ODA loans in total ODA	10,7%	17,5%	19,6%	75,6%	28,8%	61,5%	44,8%	0,0%	0,0%
Share of ODA grants in total ODA	89,3%	82,5%	80,4%	24,4%	71,2%	38,5%	55,2%	100,0%	100,0%

Source: Author based on http://stats.oecd.org, data from 22 May 2017.

In **Laos** too, bilateral aid accounts for the majority of ODA (80 per cent of the total aid received). The KFW, the Swiss Agency for Development Cooperation (SDC) and ADB were the major donors (giving respectively 42.88 per cent, 22.49 per cent and 20.39 per cent of total ODA). The aid to Laos came exclusively in the form of grants.

The ODA aimed at improving the quality of TVET, increasing and ensuring fair access to TVET, strengthening the management and governance of the TVET system, supporting effective project management and implementation. Two donors (SDC and the KFW) specifically aimed at pilot-testing funding mechanisms to finance TVET through two projects:

- the Inclusive Access Fund (IAF) Scholarship System (BMZ/SDC; 2015–18; €4.8 million). IAF was conceived to provide funding for 11,800 disadvantaged young people to attend 3 to 6-month training courses. The financing is divided into two parts, an allowance to the student and an allowance to the training centre, and the student's allowance is transferred by 'pay card', based on attendance records provided by the training organization.
- Innovative TVET financing in Lao PDR: the German donor KfW intends to organize a demand-oriented funding allocation through a cooperative training fund, to which TVET institutes and enterprises can submit a joint proposal to apply for funding to implement dual cooperative training.

Both projects are positioned as pilot initiatives to test funding instruments which could then be transferred to the future Lao National Training Fund.

Chapter 5
Concluding remarks

Over the last decade, TVET has been rising in the political agenda of both the international community and many governments around the world. Two of the seventeen SDGs in the 2030 Agenda are directly related to it. In the Bonn Declaration of 2004, gathering 122 technical experts from Member States, intergovernmental and non-governmental organizations and industry, TVET was considered as 'the master key that can alleviate poverty, promote peace, conserve the environment, improve the quality of life for all and help achieve sustainable development'. Yet the question of how to finance this priority is still insufficiently explored.

Looking into the example of six Asian countries and benchmarking them against international practices in Europe, Latin America, Africa and other Asian countries, this study has raised issues and explored ways to the respond to the challenge of TVET funding.

It first has shown that the funding available for TVET is far below the need, which can be explained partly by the lack of public resources, but also by the low priority given to TVET. This contrasts with the multiple objectives it is expected to address in terms of preparing a growing number of young people for the labour market, raising the competitiveness of the economy, ensuring continuing training for adults to develop the skills they need for employment, and promoting equitable, inclusive and sustainable economic growth.

Considering the scarcity of resources, a first step is to optimize as much as possible the use of resources by intensifying State efforts to define political strategies and enhance planning capacity. This can notably be done by establishing a reliable and comprehensive statistical information system and strengthening ministerial coordination on TVET and skills development.

Rewarding the quality and relevance of training provision by implementing performance or demand-based funding is another possible approach. A prerequisite for this is that training centres have sufficient means to deliver the training properly. It also requires the implementation of a legal framework that promotes and regulates initiatives by training centres to develop partnerships with industry, improve their training offer and adapt it to the local labour market, and develop a continuing training offer and IGA that would help them complement their resources and make connections in their local environment.

Besides public funds, other sources of funding such as ODA can contribute to TVET funding. Multilateral and bilateral donors mostly provide funding through direct support to the government, but also through public–private partnerships and support to NGOs and civil society organizations. ODA should nevertheless be considered as a complementary, non-structural source of funding, since it is provided for a limited period, after which the State has to take over. Palmer (2015*b*) also stresses the risk that some bilateral donors may export their own national training approach without adapting it to the socio-economic and institutional settings of the countries they are working with.

Industry is one of the crucial players that countries can draw on to contribute to the funding of TVET. This can be achieved by implementing a work-based learning system, where companies provide sometimes up to 80 per cent of the training and bear the costs related to it (including the actual training costs and sometimes wages for apprentices and insurance).

In the six countries analysed, the development of a DTS is sometimes promoted using a variety of incentives (such as tax rebates and direct State subsidies). Companies can also be made to contribute through a training levy, usually imposed on payroll (ranging from 0.5 per cent to 4 per cent of payroll) and may benefit from the resulting fund according to various schemes (based on cost reimbursement, cost redistribution or levy exemption).

The introduction of a training levy often goes hand in hand with the establishment of a training fund to manage the levy. If well managed and with adequate procedures, training funds may turn into strategic players in the funding of skills development. To achieve this, they need to control the entire training levy (which is sometimes partly diverted by the State to fund other priorities), enjoy operational and managerial partnership-based autonomy, and align their funding with the strategic needs of the economy. The design of training schemes that are adapted to the needs and constraints of specific targets (SMEs, young people, women, the unemployed and so on) has proved an efficient way of providing access to funding for various groups.

Countries may also add to the funding of TVET by introducing training fees, which are often accompanied by scholarships or student loans to ensure equitable access for all.

Beyond the need to enhance the cost-effectiveness of public resources and diversify funding sources, it must be stressed that funding should be used to promote policy objectives, such as equity and quality of training, and more generally the promotion of sustainable, inclusive, LLL societies. Financing mechanisms therefore have to be conceived to operationalize TVET and skills development objectives.

However, the various priorities set for TVET, as defined in the Shanghai Consensus 2012[20] and the Incheon Declaration 2015 (such as allowing for flexible pathways to acquire skills, enhancing the relevance of TVET, expanding partnerships and mobilizing social partners in the governance of TVET) are still insufficiently reflected in the funding mechanisms.

Significant progress has been made in some countries in recognizing various pathways for acquiring skills. The **Philippines** is among the countries that have most stressed the need for a paradigm shift from an institution-oriented approach to one that recognizes competencies regardless of how and where they were acquired (which might be through formal, non-formal or informal means). TESDA describes the Filipino TVET structure as an open, competency-based system, designed within the framework of a quality-assured technical education system, that adheres to the principle of recognition of prior learning and where the delineation between initial TVET training and continuing TVET no longer applies. It is also in the Philippines that a partnership-based governance of the TVET system has best taken shape.

[20] The Shanghai Consensus led to the following seven recommendations: 1) Enhance the relevance of TVET (notably considering the greening and digitization of the economy); 2) Expand access and improve quality and equity; 3) Adapt qualifications and develop pathways; 4) Improve the evidence base; 5) Strengthen governance and expand partnerships; 6) Increase investment in TVET and diversify financing; 7) Advocate for TVET.

The Employment Insurance System in the **Republic of Korea** illustrates the transition that takes place in various countries, away from supply-oriented funding mechanisms towards a demand-based system that supports workers' training choices to fulfil their professional career plan. Through the EIS workers are now entitled to yearly training vouchers and subsidies to finance vocational training as they choose.

This approach is similar to the individual learning accounts (ILA) which are being implemented in many countries (notably France, the United States, Austria, Belgium, Malta and Scotland). Ziderman (2016) describes how ILAs function: 'Under ILA-based saving schemes, individuals save on a regular basis towards payment for periodic training or retraining over the working life. The incentive for participation in these schemes is a matching contribution by government as well as tax concessions on sums saved.' In France for example, a personal training account (*compte personnel de formation*) was introduced in 2014 to replace the former individual right to train (*droit individual à la formation*) for each person entering the labour force. With the personal training account, individuals are now entitled to a minimum of 24 and maximum of 120 hours training per year. The training rights are now attached to the person and not to their job, enabling individuals to retain their rights even through dismissal, resignation and into successive employments.

Other priorities, such as the greening and digitizing of TVET, have not received as much attention. No funding mechanism specifically supporting these priorities could be identified in the six countries analysed. The main reason is that governments of developing and emerging countries are still struggling to meet other priorities, such as expanding access, and improving the quality and equity of TVET. A training offer designed to prepare individuals for green jobs is nevertheless progressively being developed.

The study revealed varying degrees of maturity in the funding framework for TVET in the six countries analysed. It showed that all the countries have constantly looked to improve, adapt and complement their funding tools to adapt them to the needs of their labour market and regional environment. The report provides useful examples and approaches to governments and the international community to support these efforts, to achieve the transition from a fragmented, supply-oriented training system to an integrated, demand-driven, competitive partnership-based training system.

Chapter 6
Country briefs

COUNTRY BRIEF N°1. FINANCING TVET IN LAOS

The Lao Country Brief was produced as part of the global study “Financing TVET: a comparative analysis in six Asian countries”, AFD-UNESCO, by Mrs Siripan Choomnoom, independent consultant and Mrs Christine Uhder Gonçalves (AFD).

1. Country context

According to the World Bank, the Lao People’s Democratic Republic (PDR) is considered one of the fastest-growing countries in the East Asian and Pacific region. Its gross domestic product (GDP) was projected to grow at around 7 per cent in 2016. Hydropower and the service, construction and manufacturing sectors are key drivers of the economy. Economic growth nevertheless has not translated into sufficient decent employment opportunities: although the unemployment rate was only 3.13 per cent in 2014, the majority of labour is concentrated in unstable employment or in self-employment in agriculture (70 per cent), basic employment (9 per cent) and services, mainly family shops (6 per cent) (Laos, 2016). The move from agriculture very often leads to jobs in the informal sector which are low paid and characterized by poor working conditions.

There has been an increasing amount of foreign investment in Lao PDR for several reasons, such as its stable political situation, good power supply, cheap labour, good labour relations and incentives for investment. In particular, more than forty memoranda of understanding have been signed mainly with Japan, the Republic of Korea and Thailand in the hydropower sector, representing more than twenty times the sector’s present capacity. Laos wants to become the ‘battery’ of the Association of Southeast Asian Nations (ASEAN) but still needs qualified labour to fill the related jobs. Agriculture is the main occupation of 65 per cent of the population, and contributes 27 per cent of GDP. Tourism is considered the sector with the highest potential to create additional income. The total number of visitors was 3.3 million in 2012, and increased to 4.6 million in 2015. Travel and tourism generated 129,500 jobs directly in 2014 (4.2 per cent of total employment), and was forecast to reach 133,500 in 2015. The garment, furniture and construction industries have also seen double-digit growth, with high employment demand.

There are needs for qualified workers, especially skilled and technical workers. According to a study led by the International Labour Organization (ILO) (2014), the sectors that will see the highest increase in their labour force to 2025 are the furniture, vehicles, trade, transportation and services sectors. However, Laos considers agriculture, tourism and hospitality, construction and infrastructure as its main priority sectors.

2. Main figures on the training system

The education system is a 6–3–3 system, with six years of basic education, three years of junior high school and three years of secondary school. Technical and vocational education and training (TVET) starts after secondary education (or grade 9). In its Education and Sport Sector Development Plan (2016–2020) (Laos, 2016*a*), the government has defined a vision for the culture and social sectors for 2030: *'Human resource development meets regional and international standards. They become a strong production power and are capable of contributing to socio-economic development. People have at least upper secondary education and have access to quality health services and average life span is over 75 years old.'* Based on the government vision, the Ministry of Education (MoE) has identified its own vision as follows: *'By 2030, all Lao population equally and equitably has access to quality education in order to become good citizens, disciplined, healthy, knowledgeable, highly-skilled with professionalism in order to sustainably develop the country, to align and be compatible with the region and the world.'* In order to achieve this vision, the issues that relate to TVET include:

- Promote learning and teaching of basic vocational skills in secondary education and improve TVET to ensure that students have the skills required by the labour market.
- Train skilled labour and technicians to use sciences and modern technology to meet economic development needs.

TVET in Lao PDR however faces problems of not only quality but also quantity. **Table 1** shows that only a small number of students who graduate from grade 9 enrol in TVET, which is mainly attributable to the low quality and reputation of TVET. It is planned that transition rate of grade 9 students to TVET should increase from 2.3 per cent in 2016 to 5 per cent in 2020.

Table 1 Planned transition rate of grade 9 students 2016–20

	2016	2017	2018	2019	2020
Grade 9 students	77,471	86,465	93,780	100,476	102,757
Transition rate to TVET	2.3% *	3.0%	3.7%	4.3%	5.0%

Actual figure in 2016.

Source: Laos (2016a).

According to **Table 2**, TVET students in Laos are enrolled at levels from certificate to master's programmes. The number of students in public TVET institutions increased by 63 per cent from 18,496 in 2011–12 to 30,221 in 2015–16, while the number of students in private TVET institutions kept relatively stable. This sharp increase took place mainly as a result of a decrease in the intake to university courses; suspension of bachelor's programmes in the private sector; the improved quality of TVET infrastructure, equipment and dormitories; and provision of opportunities for TVET scholarships. The quality improvement of TVET that resulted from international assistance from the German development agency (GIZ), the government of Luxembourg and the Asian Development Bank (ADB) notably led to better facilities, well-trained teachers, equipment, and scholarships for the poor.

Conversely during 2014–15 and 2015–16, the number of places on bachelor's degree programmes decreased drastically because of government policy on quality control of higher education, which led to the suspension of several programmes. This applied to both public and private institutions, except for the training and upgrading of TVET teachers in vocational training and development institutions and Pakpassak Technical College. The number of students taking both higher diploma and diploma programmes in public institutions significantly increased, while the number taking diploma programmes in private institutions declined from 320 in 2011–12 to 35 in 2015–16. The number of students preparing for a bachelor's degree in private training institutions also declined significantly, from 18,716 in 2011–12 to 5,996 in 2015–16.

Certificate students in private institutions represent a small part of the total student population. Their number however increased from 260 in 2014–15 to 765 in 201–16, which may be the result of international assistance projects such as the Swiss-German VELA (Vocational Education in Laos) project, which specifically targets skills development for disadvantaged students.

In public institutions, the number of certificate students increased between 2011 and 2014 and then declined. This expansion resulted from the voucher support to 4,145 students granted through the ADB's STVET (Strengthening Technical and Vocational Education and Training) project.

Table 2 Number of TVET students 2011–16

	2011–12	2012–13	2013–14	2014–15	2015–16
Total public	18,496	20,886	23,248	26,264	30,221
• **Bachelor**	1,737	2,216	1,039	55	55
• **Higher diploma**	8,077	7,302	9,120	10,195	12,717
• **Diploma**	7,324	9,339	9,975	13,081	16,540
• **Certificate**	1,358	2,029	3,114	2,933	909

Total private	35,375	40,225	41,342	36,405	36,464
• **Master**	512	806	778	595	291
• **Bachelor**	18,710	23,496	18,693	11,696	5,996
• **Higher diploma**	15,833	15,745	21,785	23,766	29,377
• **Diploma**	320	78	86	88	35
• **Certificate**	–	100	–	260	765

Source: MOES, TVED 2016, Statistic Division.

According to the *TVET Development Plan 2016–2020*, there are needs in various sectors at certificate, diploma and higher diploma levels. These can be divided into two groups: fundamental industries (such as garment-making, tourism/hospitality, construction, mechanical systems, furniture, machinery and agriculture) and new areas (such as automotive manufacturing, food processing, high-technology equipment installation for buildings, electronics, energy, and automotive repair). **Table 3** shows the distribution of students by sector. It reveals that 45 per cent of students enrol in service-oriented courses (of the 11,847 students, 37 per cent enrolled in accounting, 12 per cent in business management, and 51 per cent in other service sectors), followed by students in the industry sector (notably 42 per cent taking electrical engineering courses). Only a very small number of students enrolled in shortage fields such as plumbing (21 students), hydropower (11 students) and motorbike repair (36 students), especially at certificate 1 level. For the agriculture sector there were 3,660 students, of whom just 500 were certificate students.

Table 3 Number of students in public institutions by sector, 2014–15

Qualifications	Total	Services	Agriculture	Industry	Teacher training
Total	26,264	11,847	3,660	10,558	199
• **Bachelor**	55	10	16	29	–
• **Higher diploma**	10,195	5,815	1,257	3,013	110
• **Diploma (12+2)**	13,081	5,166	1,887	5,939	89
• **Certificate (9+3)**	2,933	856	500	1,577	-

Source: Department of Vocational and Technical Education, EMIS 2016.

3. General description of the training system

In Lao PDR, the Department of Technical and Vocational Education (DTVE) of the Ministry of Education and Sports (MOES) is the main institution responsible for TVET. In 2015/16, it operated twenty-three public TVET institutions. Sixty-five private institutions also provide TVET. Apart from MOES, twelve other ministries and organizations carry out TVET, including:

- Ministry of Labour and Social Welfare (MOLSW), which owns one institute and four skill development centres
- Ministry of Public Health, which runs one University of Health Science and twelve schools for nurses
- Ministry of Finance (three training institutes)
- Ministry of Agriculture and Forestry (five specialized training institutes)
- Ministry of Information and Culture (five training institutes)
- Ministry of Justice (three training institutes)
- Bank of Laos (one training centre)
- Lao Women's Union (three training centres)
- Lao Revolutionary Youth Federation (10 training centres).

Those training providers train thousands of workers in short courses each year, and also offer certificate and diploma programmes accredited by MOES DTVE. The curriculum of all training institutions (even the ones under other ministries and provinces) needs to be approved by MOES.

Short-term courses are also provided by eight integrated vocational education and training (IVET) schools under MOES, a new type of TVET institution initiated with the assistance of the Swiss-German VELA project. These schools have features that differ from other TVET institutions under MOES, because they offer both formal and short-term courses in TVET. These short courses overlap with those offered by the Department of Skill Development (DSD) of MOLSW and the Department of Non-Formal Education (NFE) of MOES, which focus on literacy, recognition, bridging courses, life skills, and skills for income generation. Three institutes, seventeen centres and eight community learning centres carry out NFE objectives.

The training provided by DSD is 30 per cent theory and 70 per cent practice. DSD's main focuses are skill standards testing in twenty-seven areas, development of skills and training standards, training delivery, labour market information development, improvement of Oudomxay Skill Development Centres and construction of three skill development centres in the provinces. The 2014 Labour Law of MOLSW describes five levels of qualification, mainly in terms of training duration and skills required. No linkages are established with the education levels of MOES TVET qualifications.

Currently, DSD has no close linkage with MOES in the field of TVET. The *TVET Development Master Plan 2016–2020* however identifies five areas of future cooperation: alignment of skills and competency standards; mutual recognition of qualifications and a common vocational qualification framework; a testing system; strengthening the National Training Council; and developing a labour market information system (LMIS).

In addition, the 2015 TVET Law introduced a Vocational Qualification Framework (VQF) at five levels, and new qualifications for those who dropped out from the formal education system before completing lower secondary education: certificate 1 (C1) and certificate 2 (C2). It also refers to a National Qualifications Framework (NQF) (see **Table 4**), the design of which still needs to be detailed.

Table 4 National Vocational Qualifications Framework (NVQF)

NQVF	Qualifications	Entry requirements	Duration of training
Level 1	Certificate I	Primary education or equivalent and higher	3–6 months
Level 2	Certificate II	Primary education or	After Cert. I: 6 months
		equivalent and higher	1 year
Level 3	Certificate III	Lower secondary or	After Cert. II: 1 year
		equivalent and higher	After lower secondary: min. 1 year
Level 4	Diploma	Lower secondary or	After Cert. III: min. 1 year
		equivalent and higher	After lower secondary: min. 3 years
			After upper secondary: min. 2 years
Level 5	High Diploma	Upper secondary or	After Cert. III: min. 3 years
		equivalent or higher	After diploma: 1-2 years
		or diploma	After upper secondary: 3 years

Source: Laos (2016a).

The NVQF will provide the framework needed to link the TVET provided by MOES and other organizations and agencies. It will notably help harmonize the training offer of MOES endorsed in the 2015 TVET Law, described in terms of education levels, entry requirements and duration of training, and that of the MOLSW, endorsed in the 2014 Labour Law, described in terms of training duration and skills requirements without reference to TVET qualifications or levels.

4. TVET funding in Laos

4.1. Public budget

The public budget is the main funding source for TVET. TVET expenditure increased from LAK 54,027 million in 2011/2012 (or 4.4 per cent of the total education sector expenditure) to LAK 139,402 million in 2015/2016 (or 8.4 per cent of the total education budget). Despite this significant increase, the budget allocated to TVET is still lower than the resources needed: it is not based on real costs but on the availability of government resources. While it was planned to receive LAK 88,664 million in 2011/12, TVET was only allocated LAK 54,027 million (60.9 per cent of the planned budget). In the same way in 2015/16, the budget allocated to TVET was LAK 139,402 million,

while it was planned to receive LAK 511,981 million (or 27 per cent of the planned expenditures).

Despite the lack of budget, a large number of activities are still being carried out with international support. For example, while the TVET master plan for 2008–2015 outlined 131 development activities, only twenty-two activities (16 per cent) were implemented using the government budget. Eight-five activities (65 per cent) were carried out with the support of international donors such as ADB, GIZ, and the Swiss and Thai governments. Besides the lack of budget, the availability of qualified staff and organizational capacity were also problems raised in the implementation of TVET activities.

The MOES budget for 2016–20 is allocated based on the annual number of students. The unit cost per TVET student at both certificate and diploma level, for every field of study, is LAK 500,000/student/year. Other expenditures, such as salaries and scholarships, are separated. The budget also takes into account the payroll of the last quarter and the inflation rate.

4.2. Company financing

According to the *TVET Development Plan 2016–2020,* cooperation with private sector and financial support from the industry is still limited. However, companies mobilize in TVET in various ways.

First, it was found that companies and professional associations in sectors such as garment-making, furniture, handicrafts and hospitality establish their own training centres to provide skills training to meet their need for skilled workers. By doing this, companies provide in-kind contribution to TVET funding by supporting the training of the Lao workforce.

The Training Centre of the Furniture Association provides a good example. The Vetsaphong Skill Development and Testing Centre is a private training centre that was established in 2010 with funding from GIZ. Initially managed by the Furniture Association, it is now run by a private businessman from the furniture sector. The training centre works in partnership with forty-five companies based in fifteen provinces of Laos who send the young people they want to hire for pre-employment training. Companies pay US$1,000 for a six-month course. The centre also provides training for disadvantaged young people who are not sent by companies. For this specific target, the centre covers the training costs and negotiates a reimbursement over three years with the company that later recruits the trainee. If the training fees collected do not cover the centre's expenditure, the outstanding amount is covered by the training centre's director himself. The centre does not receive any subsidy from the government, nor does any other private training institute. The Vetsaphong Skill Development and Testing Centre is also recognized by MOLSW as a centre for Furniture Skill Standards Testing.

The Skills Development Centre of the Lao Garment Industry Association is another example of a privately funded training centre. It provides short courses of up to 35 days to workers, based on the ASEAN Common Competence Program (ACCP) developed by the ASEAN Federation of Textile Industries, and using industrial equipment. Funding is provided by companies, private investment and international development projects.

The Lao National Institute of Tourism and Hospitality (LANITH) also works closely with the industry. Started with the initial support of Luxembourg and Swiss Cooperation, it trained more than 1,500 professionals in the hospitality sector in the three years to 2016, through pre-service and in service programmes. The LANITH institution has been accredited by DTVE/MOES. It is supported by the industry through in-kind contribution of internships, and workplace and continuing training activities of paid staff in the hotel industry.

Companies are also mobilized in the training of young people through the implementation of the dual training system (DTS), where part of the training is ensured by companies. In Laos, DTS is in a pilot implementation phase in six schools, supported by GIZ. Alternance is organized according to two systems: a block system (with companies such as BHS, Phu Bia Mining, Toyota, Nam Theun 2 Power Company/NTPC), where one month occurs in the centre and one month in the company; and a weekly system (implemented by the RMA company for example), with one week in the centre then one week in the company. Generally, companies pay a small allowances to DTS students (e.g. NTPC pays 2 million kip/student/month), but they prefer to keep it on a voluntary basis rather than having the government legislate.

Finally, large companies such as Toyota, Kubota and Ford also contribute to TVET by donating equipment and ensuring teacher training to make sure that the trainees receive relevant training on adequate equipment.

4.3. Complementary funding by training providers

Public TVET institutions are allowed to generate income by selling students' products and services and delivering fee-paying courses. The money can be used by TVET institutions for their own purposes such as maintenance of buildings and equipment; 10 per cent of revenue generated needs to be reported to the government, while the rest can freely be used by the training institution.

Generally, income-generating activities are very limited. The STVET project supported by the ADB targeting seven schools aimed among other objectives to encourage training centres to develop income-generating activities, but ADB reported that the results mainly depended on the leadership of school management.

Furthermore, the continuing training offer from TVET institutions does not really attract companies: small and medium-sized enterprises (SMEs) are not accustomed to requesting training, and bigger companies, which could afford it, feel the training provided in public schools does not fit their requirements.

4.4. Students and families

In Laos, TVET is free for all students in any trade up to diploma level. Students working towards a diploma or a high diploma in almost any field, including technical and non-technical programmes, must pay a fee of LAK 1.5–2.0 million per year. Students in automotive and electronic programmes are however exempted thanks to the government's policy to attract students to shortage sectors. In addition, students also have to pay for dormitory accommodation, transportation, daily living expenses, meals and other expenses. The level of tuition fees is defined by schools and submitted to MOES for approval. There is no student loan system in Laos. However, the State provides scholarships to the ten best students as identified in a selection process, and offers stipends of LAK 200.000 per month per student to those taking courses that address skills shortages.

4.5. Official development assistance (ODA)

International donor support has been essential for TVET development in Laos. ODA increased significantly over the five years to 2016. **Table 5** presents main donors' support for TVET in 2008–20.

Table 5 Main donors' support for Lao PDR TVET in 2008–20

Organization	Amount contracted during 2008–15	Timeframe	Planned next step after completion
ADB (STVET)	US$ 23 million (remaining for 2015-2016 : US$4 million)	2010-mid-2016	Project preparatory technical assistance in 2016, around same amount expected
Swiss Agency for Cooperation and BMZ (VELA)	€10.5 million + €4.5 million	2013–18	Not known
Swiss Agency for Cooperation and Luxembourg Cooperation (LANITH)	€15 million	2016–20	
KfW (German development bank)	€6 million	2015–19	
GIZ	€4.1 million	2012-2016	Under discussion
Thailand International Agency (TICA)	US$3 million	2015	Under discussion, likely to be extended
Francophonie	€0.15 million per year	2015	Under discussion
Total	US$69 million		
Estimation of remaining budget for 2016–20	US$39 million		

Source: Lao (2016a).

Two projects (by the Swiss and German cooperation agencies) specifically target the development of funding in Laos:

- The VELA project, together with the GIZ TVET Teacher Education Project (TTEP): among many targets (implementing dual cooperative training (DCT), improving access to TVET for disadvantaged groups, introducing a NQF, preparing the TVET Master Plan 2016–2020, standards and curriculum development, teaching/learning materials and technical equipment, job placement mechanisms, training of trainers), the VELA project aims at supporting the establishment of a National Training Fund and strengthening the National Training Council, which will control the future Training Fund. A further extension of this project beyond 2017 is under consideration.
- The Innovative TVET Financing in Lao PDR: KfW intends to experience a demand-oriented funding allocation through a cooperative training fund, where TVET institutes and enterprises can submit a joint proposal to apply for funding to implement DCT. This project is positioned as a pilot initiative to test funding instruments that could then be transferred to the future Lao National Training Fund.

5. Perspectives in setting up a training fund

The creation of a training fund based on a training levy has been under discussion for several years. Its creation was already stated in the Labour Law of 2008. The new Labour Law promulgated in 2014 reiterates the need to set up a training fund, and MoLSW is committed to implementing it through a decree. The first draft of the decree, covering the objectives, financing mechanisms and governance of the Fund, is currently being discussed by the main stakeholders involved.

The 2013 Lao Labour Law provides that the resources of the future training fund, called the National Skills Development Fund (NSDF), should come from the following sources:

- 1 per cent from a tax on income, which should be transferred by the Ministry of Finance to the Fund
- 1 per cent of payroll of workers
- 5 per cent of one month's salary for employees working abroad
- 15 per cent of registration fees for issuing a work permit for one person for companies that mobilize foreign labour to work in Laos
- contributions by individuals, legal entities, international organizations, both domestic and foreign, mass organizations and social organizations
- benefits derived from the fund and from other activities.

It is planned that the National Training Council (which is a tripartite body under the TVET Department of MOES) will be the governing body of the future training fund. The National Training Council was established in 2002. It was renamed the National Advisory Council for Vocational Education and Skilled Labour Development (NCVESD) in the 2013 Law on Vocational Education. Its role consists of providing policy and strategic advice on vocational education development. According to the 2013 Vocational Education Law, NCVESD comprises:

- minister of education and sports (president)
- minister of labour and social welfare (vice-president)
- president of the National Chamber of Commerce and Industry (vice-president)
- chief of cabinet/director general of mass organizations at central level (member)
- director general of Labour Skill Development and Employment Arrangement Department (member)
- director general of Vocational Education Department (member)
- president of an association for a relevant occupation (member)
- representative of labour bodies (member)
- representative of vocational education institutions (member).

The president and vice-presidents of NCVESD are appointed by the prime minister, and members are appointed by the president of NCVESD. The Permanent Office (PO) of this council acts as its secretary.

According to the PO, around 50 per cent of NCVESD members come from industry. The Council has established twelve sectoral trade working groups (TWG), bringing together leaders of industry, TVET providers, the Ministry of Labour and MoE, to work on the development of skills standards. In addition to the sectoral TWGs, provincial councils for vocational education and skills development (PCVESD) were planned to be set up in 2017 in three provinces (Luang Prabang, Savannakhet and Champassak) to specifically work on provincial skills development issues. Discussions with the council nevertheless revealed that these bodies were not very active (they had not met for three years and PO planned to revitalize them).

During the field mission led in December 2016, discussions were still continuing regarding the way to operationalize the future Fund. Employer organizations agreed on the principle of the training levy, although some of them were afraid that the levy would not be reinvested in the development of their workers' skills. Discussions were also going on regarding the main training schemes and how the levy should be disbursed. Various international partners, especially GIZ, support the NSDF and the discussions to achieve its establishment, but the leadership for its actual implementation is lacking.

Because of the institutional position of the PO of NCVESD (under the TVET Department of MOES) and numerous changes of membership and lack of capacity, the current PO does not have the needed leadership to convene meetings and advance the agenda of the setting-up of the training fund with members who are hierarchically superior to him.

With GIZ's technical assistance, various improvements to NCVESD are being planned, regarding notably capacity-building for the NCVESD PO, improving the decree concerning the future training fund, revitalizing the twelve TWGs, and supporting the establishment of PCVESDs in Luang Prabang, Savannakhet and Champassak.

International experience and regional benchmarks to determine how the board of such a training fund could function, the training schemes it can finance and the related disbursement procedures should be useful to fuel the discussions.

6. Concluding remarks

The public budget is the main funding source in Laos. However, with a total of LAK 500,000 per student per year to cover all the costs of training, except teacher salaries, it remains largely inadequate with regards to the funding needs. The budget allocated to TVET (0.03 per cent of GDP) is also very low compared with other countries at both regional and international level (such as 0.15 per cent in Thailand, 0.45 per cent in Viet Nam, 0.58 per cent in Germany and 1.3 per cent in Finland). International assistance has given an important push to the development and the funding of TVET in the past years. An increasing number of TVET students appear to enrol when scholarships are available. There is also the need to further expand TVET DCT to ensure both the relevance of training and contribution of industries. The development of competency-based training and the recent introduction of a NQF should help develop quality TVET, with the in-kind participation and involvement of industry.

Furthermore, the establishment of the NSDF will help complement the resources available for skills development in Laos, but also reinforce industry involvement in TVET. The role of NCVESD in contributing to DCT TVET and in managing the future training fund should also be strengthened. Especially, it should be placed under higher government authority such as the Minister of Education rather than the Department of TVET. Furthermore, the selection process for members from industries or trade organizations should be carefully designed and carried out in order that the board comprises relevant representatives. The ongoing and future projects (VELA and KFW's Innovative TVET Financing in Lao PDR) should provide useful tools and procedures for the future training fund (for the funding of DCT notably). However, it is important to ensure that good practice in TVET financing will be sustained even without international assistance.

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COUNTRY BRIEF N°2. FINANCING TVET IN MALAYSIA

The Malaysian Country Brief was produced as part of the global study “Financing TVET: a comparative analysis in six Asian countries”, AFD-UNESCO, by Dr Mohammad Naim Yaakub, head of the Department of Polytechnic Education, Ministry of Higher Education, with contributions from Mrs Christine Uhder Gonçalves (AFD) and Ms Anahat Kaur (AFD).

1. Socio-economic context

Malaysia is a new industrial market, relatively open, and State-oriented. The Malaysian economy is the third largest in South-East Asia, after the more populous Indonesia and Thailand, and the thirty-fifth largest economy in the world. The country recorded strong growth rates averaging 5.5 per cent per year from 2000 to 2008, and an average growth rate of 5.7 per cent since 2010.

The contributions of the primary, secondary and tertiary sectors of the economy to GDP are respectively 9.1 per cent, 41.6 per cent and 49.3 per cent. At the same time, the employment shares of agriculture, industry and services are 12 per cent, 28 per cent and 60 per cent respectively. This indicates a relatively higher productivity for the industry sector (ILO, 2015). The share of small and medium-sized enterprises (SMEs) in Malaysia is significant: they account for 97 per cent of all business establishments and for 65 per cent of the country’s employment (World Bank, 2016).

According to the International Labour Organization (ILO) (2015), the labour force participation rate is 68 per cent, with a significant gender difference (54 per cent for women, 81 per cent for men). The unemployment rate stood at 3 per cent in 2015, and increased slightly to 3.5 per cent in July 2016 (Malaysia, n.d.). The youth labour participation rate stands at 43 per cent. The youth unemployment rate is higher than average at 11 per cent. The share of young people not in employment, education or training (NEET) is also significant at 12 per cent.

Of the newly approved projects in 2015, 59.7 per cent of the new employment opportunities were created in the category of skilled workers. The share of managerial, technical and supervisory (MTF) categories was 21 per cent and that of unskilled workers, sales, clerical and other categories was 19.3 per cent.

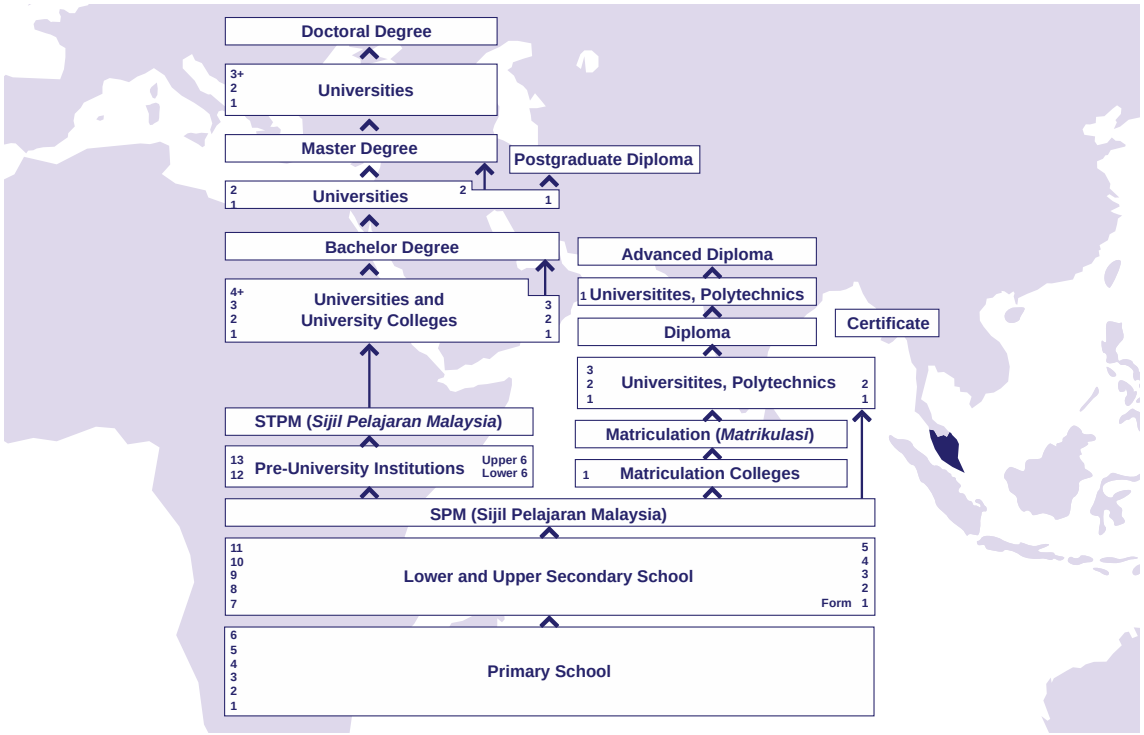
Furthermore, Malaysia is a country that receives and sends workers. It had a diaspora of 1,446,000 persons in 2013, a threefold increase from 482,000 in 1990 (United Nations, 2013). At the same time the significant inflow of irregular workers has led to a paradox in which a country with a tight labour market situation needs to recruit workers from other countries.

Skill shortages and mismatches, deficiencies in the education system and the low participation of women and young people in the workforce are issues that particularly need to be remedied. Measures to improve SMEs' productivity and to reduce gaps between rural and urban SMEs are also needed.

2. Structure and main figures for the TVET system

In the Malaysian education system (see **Figure 1**), technical and vocational education and training (TVET) starts at the upper secondary level, at the age of 16 and upwards.

Figure 1 Malaysia's educational system

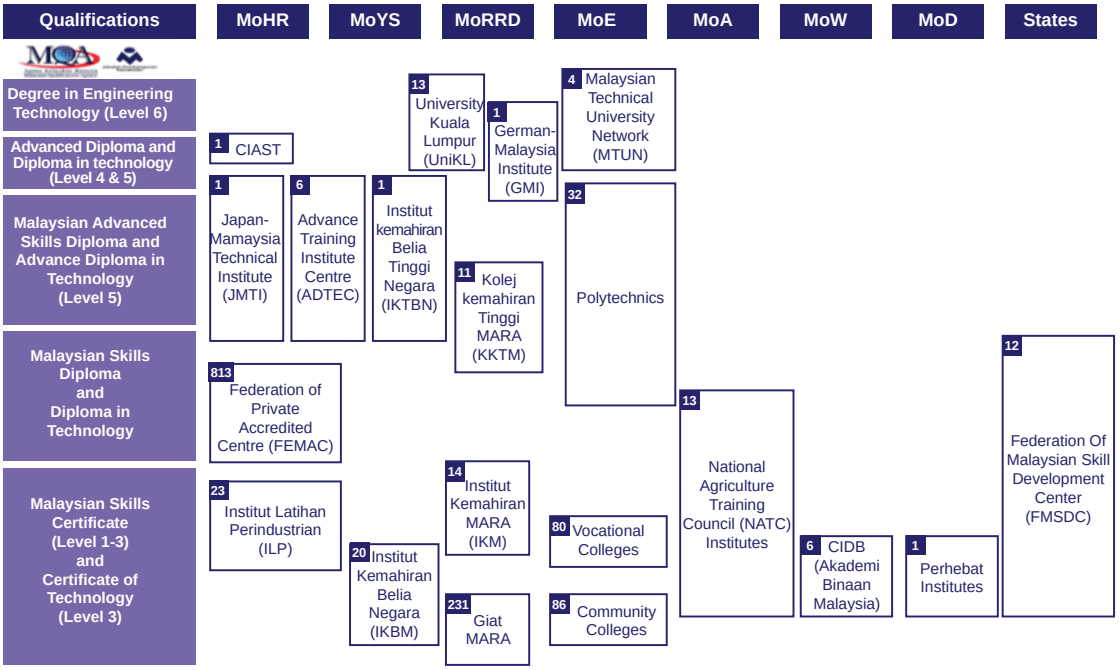


Source: Ministry of Higher Education, Malaysia.

TVET is offered by multiple government ministries and agencies, universities, State skills development centres and privately owned institutions. According to the *Eleventh Malaysian Plan* (Malaysia, 2015*b*), there are 545 public training institutions offering TVET programmes within seven ministries: the Ministry of Human Resources (MoHR), Ministry of Education (MoE), Ministry of Youth and Sports (MoYS), Ministry of Regional and Rural Development (MoRRD), Ministry of Agriculture and Agro-Based Industry (MoA), Ministry of Works (MoW) and Ministry of Defence (MINDEF).

In addition, there are 813 private institutions registered with the Department of Skills Development (DSD) and twelve State skills development centres conducting TVET programmes with varying quality and standards. There are also four public universities – Universiti Malaysia Perlis, Universiti Malaysia Pahang, Universiti Teknikal Melaka and Universiti Tun Hussein Onn – offering degree-level TVET qualifications. The private institutions that offer TVET higher education programmes are Universiti Kuala Lumpur (UniKL) and the German-Malaysia Institute (GMI). The classification of the various TVET providers by ministries is presented in **Figure 2.**

Figure 2 Institutions for technical and vocational education and training



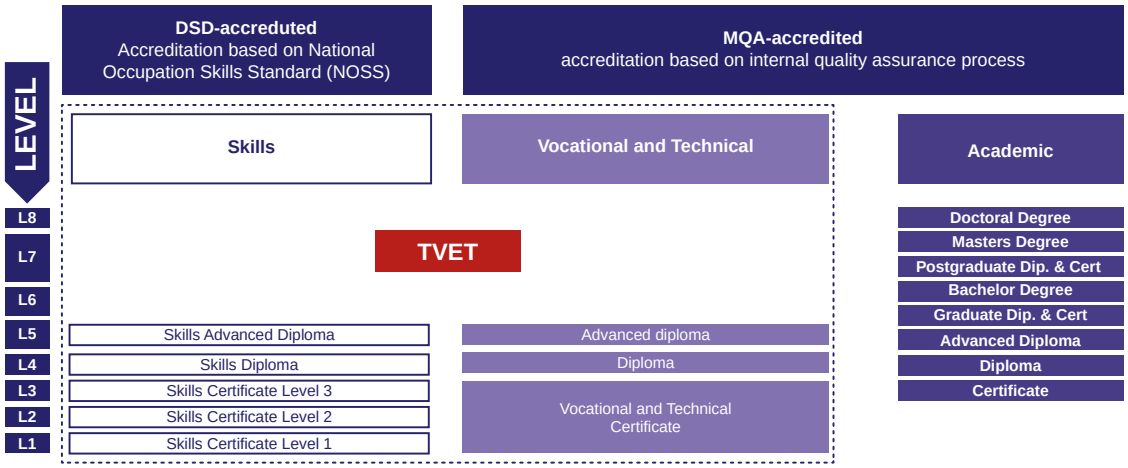
Note: The number in the blue box represent number of institutions under respective agency

Source: Malaysia (2015b).

Accreditation and quality assurance of TVET programmes is ensured by two agencies: the Malaysian Qualifications Authority (MQA), under MoE, which accredits vocational and technical programmes offered by institutions such as polytechnics, community colleges and institutions run by Majlis Amanah Rakyat (MARA), an agency under the Ministry of Rural and Regional Development (KKLW); and the Department of Skills Development (DSD) under MoHR, which is responsible for the accreditation of skills training programmes offered by institutions such as ILP (Industrial Training Institute) and IKBN (Institut Kemahiran Belia Negara). According to the *Eleventh Malaysia Plan*, the existence of two different accrediting bodies for TVET has led to confusion and concerns about the varying quality of programmes. It also points out the lack of mobility of TVET graduates for continuation of study between institutions under different accrediting agencies.

Malaysia's medium-term TVET strategy, which notably focuses on strengthening governance, should help harmonize the accreditation between MQA and DSD, through the streamlining of the national qualification framework (Malaysian Qualification Framework, MQF), an instrument that develops and classifies qualifications based on a set of nationally approved criteria, on a par with international practice. This clarifies the earned academic levels, learning outcomes of study areas and credit system based on student academic load (see **Figure 3**).

Figure 3 Malaysian Qualification Framework (MQF)



Source: Malaysia (2015b).

Of 270,000 students enrolled in the TVET system in 2010, 70 per cent were enrolled in government institutions[21], and enrolment in TVET programmes in Malaysia has been relatively low. This is a cause for concern, and is at the core of the vocational education transformation programme focusing on increasing TVET enrolment in schools.[22]

3. TVET funding

3.1. TVET public budget

Funds from the government are provided by the Ministry of Finance and the Economic Planning Unit (EPU), primarily from the federal government fiscal budget with additional limited funding by State governments and other sources (PwCAS, 2016, p. 97). Pending further study, it can be estimated that about 2 per cent of the annual fiscal budget for education was allocated for TVET in Malaysia.

Public TVET providers (polytechnics, community colleges, MARA skills institutes, national youth skills institutes, industrial training institutes, training institution Giat

[21] World Bank (drawing data from the Economic Planning Unit (EPU), MOHR, MOYS, MOA, MORRD, MOE, MOHE).

[22] As mentioned in a speech given by the deputy prime minister on 6 January 2012 at an event to mark the launching of the vocational education transformation programme.

MARA and vocational colleges) are highly dependent on government funding allocated in annual federal budgets. These funds are disbursed through a complex network of multiple channels via seven government ministries and sixteen TVET agency coordinators overseeing funding for 545 TVET institutions. Funding is calculated based on historical costs, enrolment figures and pre-set key performance indicators (KPIs), and is negotiated with TVET agency coordinators and the Finance Ministry (PwCAS, 2016). The ministries operate and monitor their expenditures independently, based on their own KPIs, which mainly relate to TVET graduates' employability and earnings, and on-time graduation rates (no information could be obtained on the detailed KPIs applied by each ministry). Until recently, there had been limited coordination of these KPIs at national level, but the EPU has launched an initiative aiming at harmonizing them among various ministries. Three KPIs focusing primarily on external efficiency will be applied by all ministries, while KPIs measuring internal efficiency are left to individual ministries.

The complexity of this network makes the task of determining the exact quantum of TVET financing in Malaysia a challenge (Malaysia, 2015*a*; PwCAS, 2016, p. 97).

In recent years, TVET funding in Malaysia has been closely tied to achieving Malaysia's aspiration of Vision 2020: to be an advanced nation that is inclusive and sustainable by the year 2020. In 2015, a total of RM56 billion (20.4 per cent) of the total federal budget funded by public revenue was allocated for education and training (Ernst & Young, 2014; Najib Abdul Razak, 2014). Of this amount, RM1.2 billion was allocated for the purpose of increasing student intake in vocational and community colleges through the Vocational and Technical Transformation Program (Najib Abdul Razak, 2014, p. 20). Another RM100 million was allocated to the MoE to increase intake at technical and vocational private colleges for 10,000 placements, while RM50 million was allocated to MARA to implement TVET programmes (Najib Abdul Razak, 2014, p. 20). RM30 million was allocated to provide TVET to young Indians from low-income families (Najib Abdul Razak, 2014, p. 24). Under the Skills Training Programmes of the Department of Manpower, the government increased skills programmes to train an estimated 48,000 students over 5 years (2011–15) with an allocation of RM570 million (Najib Abdul Razak, 2014, p. 24). The 2015 Budget completed the *Tenth Malaysia Plan* for 2011–2015.

Under the *Eleventh Malaysia Plan*, in 2016, RM41.3 billion (15.5 per cent) of the Malaysian federal budget was allocated for education and training (Malaysia, 2015*b*). RM4.8 billion was allocated to 545 TVET institutions, which include polytechnics, community colleges, MARA skills institutes, national youth skills institutes, industrial training institutes, GiatMARA and vocational colleges, to train TVET workers to meet the target of 60 per cent of the 1.5 million new jobs projected by 2020 (Malaysia, 2015*b*, p. 25). This amount includes institutions' operational expenditure as well as development expenditure (PwCAS, 2016). RM585 million was allocated for procuring

TVET equipment for these institutions. RM350 million was set aside to finance various TVET training programmes under the Skills Development Fund Corporation (PTPK), a Malaysian statutory body under MoHR providing financial assistance in the form of loans to individuals such as school leavers and graduates. RM80 million was assigned to establish a Tourism Academy in Sabah and Sarawak (Malaysia, 2015*b*, p. 25). Another RM280 million was allocated for TVET in national youth skills training institutes (IKBN) and national youth advanced skills training institutes (IKTBN) (Malaysia, 2015*b*, p. 26).

This complex network of multiple channels of disbursement makes it a challenge to quantify TVET financing in Malaysia. Additionally, the ministries operate and monitor expenditure independently based on their own KPIs, with limited coordination at the national level. As a result, determining the amount of funding dedicated to TVET may be an arduous task.

3.2. Company financing (either private or public)

The Malaysian government implemented two incentive schemes to encourage company financing for training, tax incentives and the Human Resource Development Fund (HRDF). HRDF is discussed further in **Section 4**. Among the tax incentives aimed at encouraging employers to play an active role in TVET financing are:

- Double tax deductions for scholarships awarded at the certificate level, double tax deductions for expenses incurred to implement structured internship programmes at diploma and vocational level, and further deduction for training expenses incurred for employees to obtain certification from accredited vocational and professional bodies (Mohd Najib, 2014, p. 20; Ziderman, 2016).
- New private higher education institutions (PHEIs) in the field of science; companies that establish TVET institutions are eligible for an investment tax allowance (ITA) of 100 per cent for 10 years (MIDA, n.d.).
- Skills training providers, both private and public, that conduct approved and accredited programmes under the National Skills Development Act 2006 (Act 652) have been given Selected Goods and Services tax relief for procurement of teaching materials and equipment as approved by the minister of finance with effect from 1 January 2016 (Malaysia, 2015*b*).

In addition to this, some industries provide equipment and pay fees to private TVET providers to upskill their current employees through short-term programmes, or future employees through longer programmes tailored to their needs (PwCAS, 2016). As part of their corporate social responsibility, companies may also finance school leavers from nearby communities to pursue their studies at diploma level in related industries, mainly in mechatronics, which then absorb qualified graduates into the workforce.

An example of such an arrangement is the not-for-profit private TVET institution, Penang Skills Development Centre (PSDC).

PSDC provides an example of company financing in Malaysia. It is the first skills industry-led training centre that was set up in the country. Located in the free industrial zones of Penang, the centre has a tripartite model that brings together industry, academia, and government, through which it pools various resources and management expertise. This private non-profit training centre pools resources among the four free trade zones and four industrial estates in Penang which have a total of 775 factories, employing more than 170,000 workers. Other states in Malaysia have used the PSDC concept to set up their own skills centres: to date, eleven states out of the thirteen states in Malaysia have skills development centres.

3.3. Financing by training providers

Most public TVET institutions offering TVET programmes, from certificate to graduate level, are largely funded by the federal government. Public universities including TVET tertiary education providers, however, have to raise funds for their operating costs and adopt strategic plans to generate revenue from other sources, such as having full fee-paying foreign students, research grants and consultancy services, franchising educational programmes, fees from rental of university facilities, and interest or dividends from investments. These institutions may establish their own private holding companies.

Private TVET institutions receive little government funding except for a selected number of private institutions in high-demand areas. Hence, private TVET institutions are largely funded by full-fee-paying students or public donation. Nevertheless, due to the nature of TVET tertiary education's emphasis on research and development, funds in the form of government grants or financial assistance from private companies or any other interested parties may be obtained through their research and development activities. In general, these government grants are given without any conditions and benefit in return.

Finally, both public and private TVET institutions are encouraged to generate income by offering fee-for-service products. No figures were available on the share that these income-generating activities represent in training centres' budgets, whether private or public.

3.4. Students and families

Most students in public TVET institutions pay tuition fees but the amount is minimal. The fees imposed range between RM 0–200 (US$0–45) per semester depending on the programme and TVET providers. Additionally, students need to pay for their living expenditure (food and accommodation) and a nominal amount for learning materials and learning services. These expenditures are borne by either their families or the

students themselves with loans obtainable from the National Higher Education Fund (PTPTN) or from MARA, an agency under KKLW. The loan is paid periodically and students have to reimburse the amount after graduation, with an interest rate of 4 per cent.

Students following the Malaysian Skills Certification are given grants, and those registered for high-demand programmes offered by JPK under MoHR are eligible for funding through the Skills Development Fund Corporation (PTPK) referred to above (PwCAS, 2016, p. 98).

Private TVET institutions are largely funded by student fees borne by their families, with educational loans provided by organizations such as PTPTN and MARA, and scholarships offered by both the government and private foundations (Public Service Department, the STAR Education Fund, EPF Education Withdrawal Scheme, Kuok Foundation and others). In 2015, student fees made up 90 per cent of private training providers' resources (PwCAS, 2016, p.177).

Some industries provide equipment and pay fees to private TVET providers to upskill their current employees through short-term programmes, or future employees through longer programmes tailored to their needs (PwCAS, 2016). An example of such an arrangement is the not-for-profit private TVET institution PSDC, mentioned above.

3.5. Official development assistance

Official development assistance (ODA) does not represent an important source of funding in Malaysia. From 2010 to 2015, ODA of US$5.7 million was invested in vocational training. Global ODA is decreasing in the country: there was an average of US$1.1 million per year between 2006 and 2013, but only US$0.761 million in 2014 and US$0.138 million in 2015. All ODA came in the form of grants, with Japan being the main donor. Besides Japan, ODA was granted by six countries: the United Kingdom, Australia, the Republic of Korea, Germany, Australia and Italy.

Table 1 Total ODA invested in vocational training and advanced technical and managerial training from 2006 to 2015 (US$ million, constant prices) in Malaysia

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total ODA in Malaysia	1.242	1.676	0.54	1.284	1.218	1.419	1.109	1.072	0.761	0.138
Total ODA vocational training	1.124	0.407	0.453	1.103	0.953	1.277	0.672	0.285	0.238	0.048
Germany	*0.075*	*..*	*..*	*..*	*0.008*	*..*	*..*	*..*	*..*	*..*
Japan	*0.960*	*0.407*	*0.453*	*1.103*	*0.945*	*1.277*	*0.672*	*0.285*	*0.238*	*0.009*
Republic of Korea	*..*	*..*	*..*	*..*	*..*	*..*	*..*	*..*	*..*	*0.040*
Spain	*0.088*	*..*	*..*	*..*	*..*	*..*	*..*	*..*	*..*	*..*
Total ODA advanced technical / managerial training	0.118	1.269	0.087	0.181	0.265	0.142	0.437	0.787	0.523	0.090
Australia	*0.025*	*0.014*	*0.018*	*0.013*	*0.014*	*0.015*	*..*	*0.003*	*..*	
Germany	*0.013*	*0.019*	*0.016*	*0.031*	*0.056*	*..*	*..*	*..*	*..*	*..*
Italy	*..*	*..*	*..*	*..*	*..*	*0.031*	*..*	*..*	*..*	*..*
Japan	*0.065*	*1.235*	*0.054*	*0.050*	*0.074*	*0.040*	*..*	*0.205*	*..*	*..*
Republic of Korea	*0.015*	*..*	*..*	*0.087*	*0.120*	*0.046*	*0.045*	*0.027*	*0.005*	*0.005*
United Kingdom	*..*	*..*	*..*	*..*	*..*	*0.009*	*0.391*	*0.552*	*0.519*	*0.086*

Source: http://stats.oecd.org/

4. The Human Resource Development Fund (HRDF)

Established in 1993 with a matching grant from the government, the purpose of the Human Resource Development Fund (HRDF) is to develop quality human capital to propel Malaysia towards a high-income economy. The HRDF is administered by Pembangunan Sumber Manusia Berhad (PSMB) (earlier known as the HRD Council), an agency under MoHR, corporatized under the PSMB Act 2001. The objective of the fund is to encourage employers covered under the PSMB Act 2001 to retrain and upgrade the skills of their employees, apprentices and trainees in line with their business needs and the development strategy of the country.

4.1. Governance and resources of HRDF

HRDF, under the supervision of MoHR, has a governing board of directors consisting of public-sector representatives (members of the Ministries of Human Resources, Finance, Higher Education, EPU and PSMB), private sector representatives (independent members with an industrial or business background) and heads of employer federations and industrial associations, thus making the governance of the fund tripartite. The private sector is represented only by the formal private sector (with no representatives from the informal sector).

HRDF operates on the basis of a levy-grant system. Employers that pay the mandatory levy qualify for training grants from the fund to defray or subsidize training costs for their Malaysian employees. The government imposes a levy at a rate of 1 per cent of total payroll to certain categories of employers (employers with fifty Malaysian employees and above in the manufacturing, mining and quarrying sectors; employers with thirty Malaysian employees and above in the food and beverage services; employers with ten Malaysian employees and above in thirty-eight selected industries in the services sector, and so on). Although the contribution is not mandatory for small enterprises with fewer than fifty employees, employers of such enterprises may opt to participate in the fund by contributing 0.5 per cent of their payroll (PwCAS, 2016).

The fund is used to reimburse any contributing company's approved training expenses, which include employees' programme fees for approved training courses provided by registered external TVET providers, ad hoc in-plant or external training from non-approved institutions, annual training programmes, costs involved in obtaining certification from approved and accredited professional bodies, and expenses incurred from implementing structured internship programmes for TVET interns (PwCAS, 2016; Ziderman, 2016).

HRDF's administrative costs are reduced by using registered training institutions as collection agents, by giving firms well-developed training plans, and also by standardizing its costs (using an allowable cost matrix). Between 1992 and 2006,

HRDF reimbursed firms over 70 per cent of the RM 2.0 billion collected, and approved training for 5.3 million workers (Johanson, 2009).

In 2015, the total value of approved financial assistance rose to RM539.77 million (+14.3 per cent from 2014), while the number of approved training places advanced to 836,468, a growth of 16.90 per cent from 2014. Figures on approved training places are presented in **Table 2**.

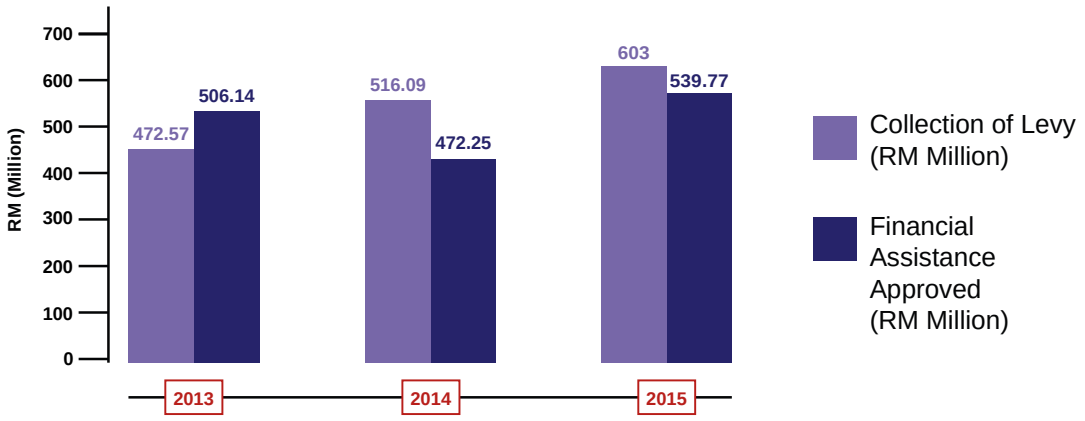
Table 2 Approved training places and total number of registered employers by industry in 2015

Industry	Training places	%	Number of registered employers	Average training places
Manufacturing	414,660	49.57	7,056	58
Services	421,162	50.35	9,464	44
Mining and quarrying	646	0.08	49	13
Total	**836,468**	**100**	**16,569**	**115**

Source: HRDF(2015).

Figure 4 compares the amount of levy collected with the amount of financial assistance approved between 2013 and 2015. It shows that on average 96 per cent of the levy collected was approved in financial assistance between 2013 and 2015. The levy collected increased by 16.84 per cent between 2014 and 2015. Meanwhile, the amount of financial assistance approved in 2015 increased by 14.3 per cent over the previous year.

Figure 4 Comparison between approved financial assistance and levy collected, 2013–15



Source: HRDF (2015).

Table 3 reveals that while SMEs contributed RM 144.30 million in 2015 (representing approximately 25 per cent of the total amount of levy collected), RM 202.85 million was reinvested in the skills development of SME employees (approximately 37.6 per cent of the total financial assistance approved).

Table 3 Approved financial assistance and levy collected by size of company, 2015

Size of the company	Financial assistance (RM million)	%	Levy collection (RM million)	Difference (Levy collection – Financial assistance)
Large	336.91	62.42	458.70	121.79
Small and medium	202.85	37.58	144.30	(58.55)
Total	539.76	100	603	63.24

Source: HRDF (2015).

This has been achieved by HRDF implementing specific training schemes that are adapted to SMEs' constraints (see next section on training schemes).

Among the critical success factors for the HRDF are active employer involvement in the governance and operating committees, reduced bureaucracy, and dissemination of information about the importance of human resource development for raising productivity and competitiveness. In addition, HRDF provides firms with grants for developing training plans, organizes regional courses on training needs assessments, and administers a variety of programmes targeting small enterprises (HRDF website; Johanson, 2009).

4.2. HRDF training schemes

Depending on their training needs, companies can choose between several training schemes. HRDF's bulk funding goes to skills upgrading of workers by employers (industrial training schemes, training equipment, recognition of prior learning and so on). It is also interesting to see how these financing mechanisms have been used to push national priorities or target specific working groups or sectors in Malaysia. Specific approaches have also been designed to help SMEs benefit from the levy grant system (for example, in the 'SME on the Job Training' scheme, through which in-house training is delivered by an SME's own employee who is a skilled worker or the trainee's supervisor). HRDF also finances initial training for school leavers and dropout students (a combination of training delivered at an approved training centre and structured on-the-job training). The government has also launched special programmes financed by HRDF targeting apprenticeships, unemployed women with caring responsibilities returning to work, and SME development.

➢ Skills development and on-the-job continuing training in SMEs

HRDF has an important focus on the development of SMEs. In 2015, 85 per cent of registered employers were SMEs (World Bank, 2016). They make a large contribution to employment, national income and exports. They do however encounter specific constraints in the area of skills development: they often lack the capacity to identify training needs and develop training plans accordingly; they also suffer higher costs of training, as they cannot easily release key employees (World Bank, 2013). HRDF took

these factors into consideration in designing specific financing tools to improve human resource development in SMEs and improve their productivity. It subsidizes training needs assessments; it has conceived pre-approved training courses (which avoid costly application and justification), which helps small companies that lack the resources, competencies or critical mass to formulate and run their own training programmes; it has also facilitated the use by small firms of excess training capacity in large enterprises.

Some key schemes proposed by HRDF to SMEs are:

- the **'SME on the Job Training' scheme**, which was introduced to help SMEs train their workers and minimize work interruption. Under this scheme, in-house training is delivered by an SME's own employee who is a skilled worker or the trainee's supervisor. At the end of the training, which has a minimum total duration of 7 hours and a maximum total duration of 300 hours, the trainee needs to achieve a satisfactory level of skills competency to perform the job. This training scheme is open to registered SMEs in the manufacturing sector with a sales turnover under RM 50 million or fewer than 200 full-time employees, and registered SMEs in the service sector with a sales turnover under RM20 million or fewer than seventy-five full-time employees. Under this scheme, SMEs are reimbursed on the basis of RM 5/trainee/hour (HRDF website).
- the **'SME Training Partners scheme'**: the objective of this scheme is to equip SME employees with specialized skills in four defined areas: training programmes that enhance the skills of internal trainers in conducting in-house training; training programmes in human resources management; specialized training programmes that are not widely available in the market; and upskilling training programmes. Under this scheme, the training provider is also allowed to conduct in-house training for registered employers. The course fee is debited from employers' levy balances, which benefits the employers, as no upfront payment is needed.
- the **Joint Training Scheme**, which enables several employers, particularly SMEs, to jointly appoint a training provider to conduct training for their employees.

➢ **Skills development for women**

Malaysia's HRDF also funds a training scheme whose aim is to train unemployed women with caring responsibilities returning to work. Through this scheme, HRDF targets unemployed married women or single mothers, and seeks to upgrade their skills and knowledge so they can become self-employed and work from home. The training is provided in fields that enable them to work under flexible working arrangements in eight areas: translation and editing, training of trainers, web

development, graphic design, social media management, simplified internet marketing, green Islamic cleaning, and halal insurance. Through this scheme, HRDF aims at increasing employable women's participation rate in the labour market from 46 per cent to 55 per cent.

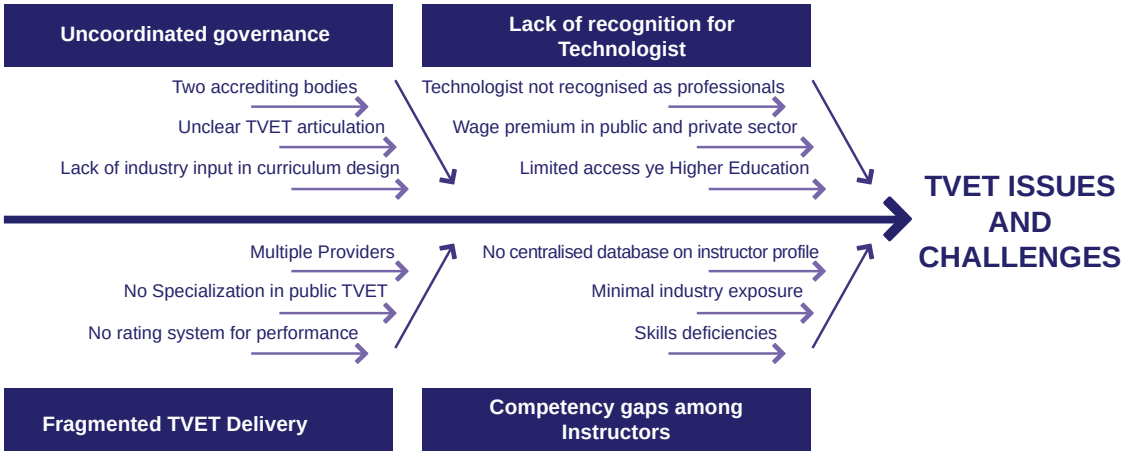
- **Initial training for early school leavers**

Under this training scheme, HRDF finances initial training for school leavers and dropout students. The training is a combination of theory training delivered at an approved training centre and structured on-the-job training at the premises of the employer. The duration of training ranges from 9 to 27 months, depending on industry requirements. Training fees are fully paid by HRDF and are deducted from employers' levy accounts: they cover a monthly allowance of RM 500 to the trainees, consumables used during on-the-job training, and insurance coverage of apprentices during the entire programme.

5. To conclude: challenges and reforms in the Malaysian TVET system

The *Eleventh Malaysian Plan* highlights four main challenges in the TVET system: the fragmentation of the training offer, uncoordinated governance, the lack of recognition for technologists, and competency gaps among instructors, as elaborated in **Figure 5.**

Figure 5 TVET issues and challenges



Source: Malaya (2015b).

To respond to these challenges, the Malaysian TVET system is currently undergoing various reforms, some of which should have a positive impact on the funding of TVET, notably through three principal strategies put in place for the transformation of TVET between 2016 and 2020:

- **strengthening the governance** of TVET for better management, through streamlining of the MQF, and harmonizing of various rating systems across both private and public TVET institutions

- **enhancing the quality and delivery** of TVET programmes to improve graduates' employability by enabling industries to lead curriculum development, eliminating the duplication of programmes and resources, enhancing cost efficiency and expanding funding for TVET to increase enrolment
- **enhancing TVET branding** to increase its attractiveness through promotional activities highlighting TVET as an attractive career choice.

Furthermore, the government has undertaken various initiatives to encourage industry's involvement in the development of highly skilled workers and support private training offers. These include:

- providing matching training grants to assist SMEs
- financial assistance in the form of loans for training
- joint financing with employers for PhD studies in a related field
- expansion of the National Dual Training System (NDTS) which covers Sijil Peperiksaan Malaysia (SPM) school leavers and those unable to complete full secondary or 11 years of education, awarding Malaysian skills certificates and to encourage various public–private partnerships[23]
- projects laid down under the National Key Economic Areas (NKEA) aiming to scale up private skill training provisions, which could increase the number of skilled workers to 50 per cent by 2020; these include providing past SPM students or school dropouts with greater opportunities to continue alternative education in the form of TVET.

[23] Office of the Prime Minister of Malaysia, Tenth Malaysia Plan 2011-2015, Speech by the Prime Minister in the Dewan Rakyat, 10 June 2010, http://www.pmo.gov.my/?menu=speech&news_id=297&page=1676&speech_cat=2

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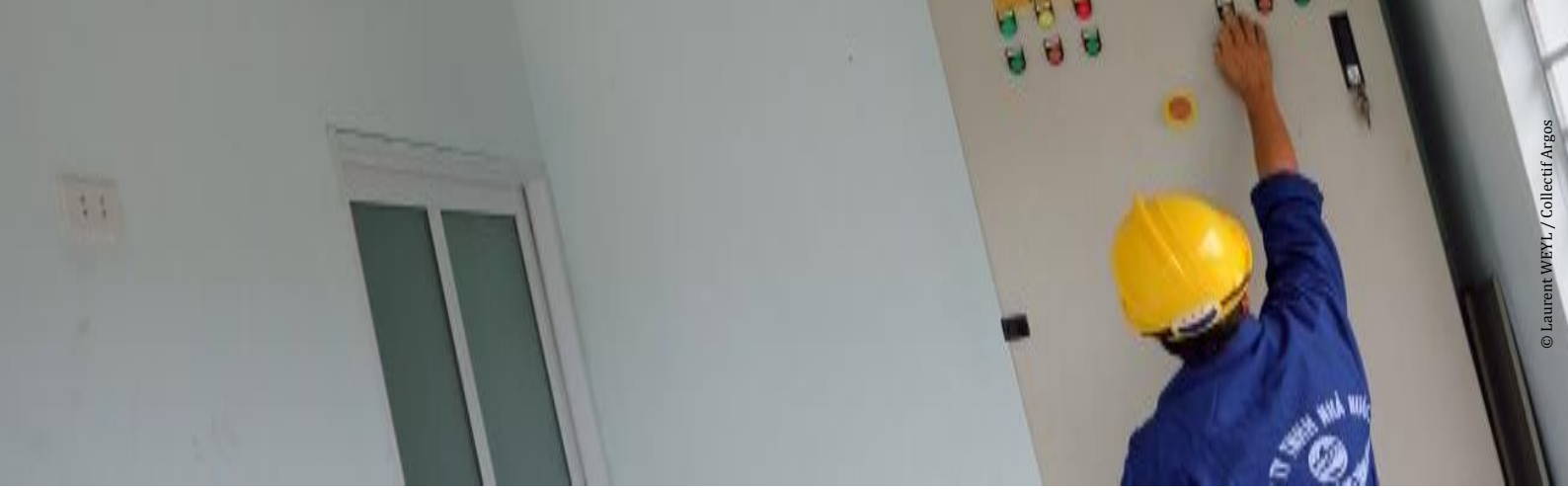


COUNTRY BRIEF N°3. FINANCING TVET IN THE PHILIPPINES

The Filipino Country brief was produced as part of the global study “Financing TVET: a comparative analysis in six Asian countries”, AFD-UNESCO, by Mrs Marissa G. Legaspi, executive director of the Technical Education and Skills Development Authority (TESDA) Planning Office, Mrs Ursula A. Mendoza, chief TESD specialist, Policy Research and Evaluation Division, Planning Office, and Ms Alyssa N. Santiago, TESDS II, Policy Research and Evaluation Division, TESDA Planning Office, with contributions from Mrs Christine Uhder Gonçalves (AFD) and Ms Anahat Kaur (AFD).

1. Economic context

The Philippines counts among the world’s emerging markets and has demonstrated resilience to global economic adversity. Economic growth has remained more or less stable since 2010, with an average annual rate of 6.6 per cent from 2010 to 2015.The country is progressively shifting towards a service and manufacturing-oriented economy: services is the fastest-growing sector, providing 57.13 per cent of GDP in 2015. Industry contributes 33.39 per cent to GDP while the share of agriculture was 9.48 per cent in 2015. A slowdown in the growth of agricultural production has hampered overall growth. Consistent with the service sector’s percentage share of GDP, it provided 55 per cent of total employment in 2015. Industry employs only 16 per cent of the total labour force while the agricultural sector employs 29 per cent.

The labour force participation rate in 2015 was 63.3 per cent. The predominantly male-dominated labour force is relatively young, with 69.3 per cent belonging to the 15–44 age bracket. According to the International Labour Organization (ILO, 2015) *Philippine Employment Trend Report 2015*, the share of young people not in education, employment or training (NEET) declined modestly from 24.6 per cent in 2008 to 24.2 per cent in 2013. The employment rate stood at 94.4 per cent (39.8 million) in 2015. Unemployment, demonstrating a decreasing trend, was 5.6 per cent. However, the double-digit under-employment rate of 17.6 per cent in 2015 (7.0 million Filipinos) is particularly concerning. Of these, 55 per cent were into short-term, seasonal or casual employment.

According to the 2015 labour force survey, 31.5 per cent of workers are labourers and unskilled workers. Based on the 2008 Informal Sector Survey, of the 10.5 million informal sector operators counted, 47.4 per cent were working as farmers, forestry workers and fishers. Others were managing micro and small enterprises in the wholesale and retail sector, transport, storage and communications.

Micro, small and medium enterprises (MSMEs) represent the overwhelming majority of companies, accounting for 99.6 per cent (942,925) of all enterprises. According to 2014 figures of the Department of Trade and Industry, while large enterprises contribute 37.2 per cent of total employment, MSMEs had an employment share of 62.8 per cent. In addition, the MSME share in total exports stood at about 25 per cent. There is an important focus by the government on MSME development in the Philippines. The *MSME Development Plan 2011–2016* (Bureau of Micro, Small and Medium Enterprise Development, 2011) aims to create 2 million sustainable jobs and to raise MSMEs' economic contribution to 40 per cent of the gross value added (to be at par with the GDP share of SMEs in neighbouring countries). This requires more support from government and the private sector in terms of increasing access to support services and finance, skills upgrading/training, and promoting entrepreneurial education and technology transfer.

Other industries expected to contribute significantly in generating employment in Philippines, owing to their rapid growth, are business process outsourcing (BPO), the construction sector (contributing more than 40 per cent of GDP growth in 2013), tourism (contributing 10.6 per cent of the country's GDP), retail (which continues to boost the Philippine economy with rising consumption spending of Filipinos due to remittances, low inflation rates and a growing BPO industry), real estate (7.24 per cent of GDP in 2015), manufacturing (23.19 per cent of GDP in 2015), the automotive industry, semiconductors and electronics, and logistics. A Philippine Green Jobs Act was signed in 2016 promote the creation of 'green jobs', or employment that contributes to preserving or restoring the quality of the environment, be it in the agriculture, industry or services sector.

The Philippine economy has had to face a significant challenge in the form of outward migration of workers, particularly to oil-rich Gulf countries, over the past 40 years. Brain drain has become an important problem, as the yearly exodus of people trained in science and technology grew by about 2.5 times from 1998 to 2009 (Domingo, 2012). Skilled migration is not inherently detrimental, as long as its optimal economic gains are ensured and social costs, including brain drain, are minimized. The challenge is how to translate the gains of skilled migration into productive investments in the country, by transforming migrant workers and professionals into entrepreneurs and investors, and by harnessing their capital, skills and knowledge to spur productive activities. To date, the Filipino economy is the third largest recipient of remittances, next to India and China, and greatly benefits from a large number of overseas Filipino

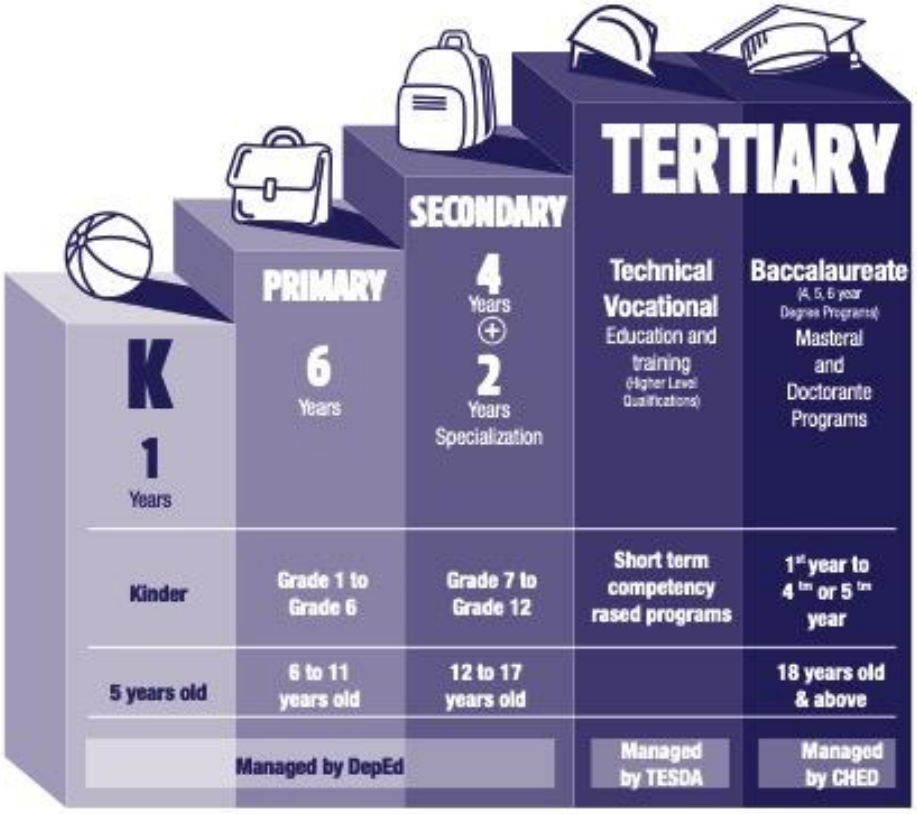
workers (OFWs), estimated at 2.4 million during the April–September 2015 period. Their contribution to the economy in terms of remittances was estimated at US$29.7 billion during this period.

2. Structure of the technical and vocational education and training (TVET) system

The last years have been marked by a revitalization of TVET globally. Global dialogue sponsored by various international organizations has focused on TVET. Following this scenario, governments around the world have put TVET on the national agenda and set priorities aimed at propelling national development. In the Philippines, related reforms include the passage of the K to 12 Law (or Enhanced Basic Education Act) in 2013 and the institutionalization of the Philippine Qualifications Framework (PQF), which paved the way for TVET to be properly recognized in the national development and priority agenda.

According to the Enhanced Basic Education Act, basic education is now composed of Kindergarten plus 12 years (K–12) (six years of primary education, four years of junior high school, and two years of senior high school), compared with only ten years compulsory education before (see **Figure 1**).

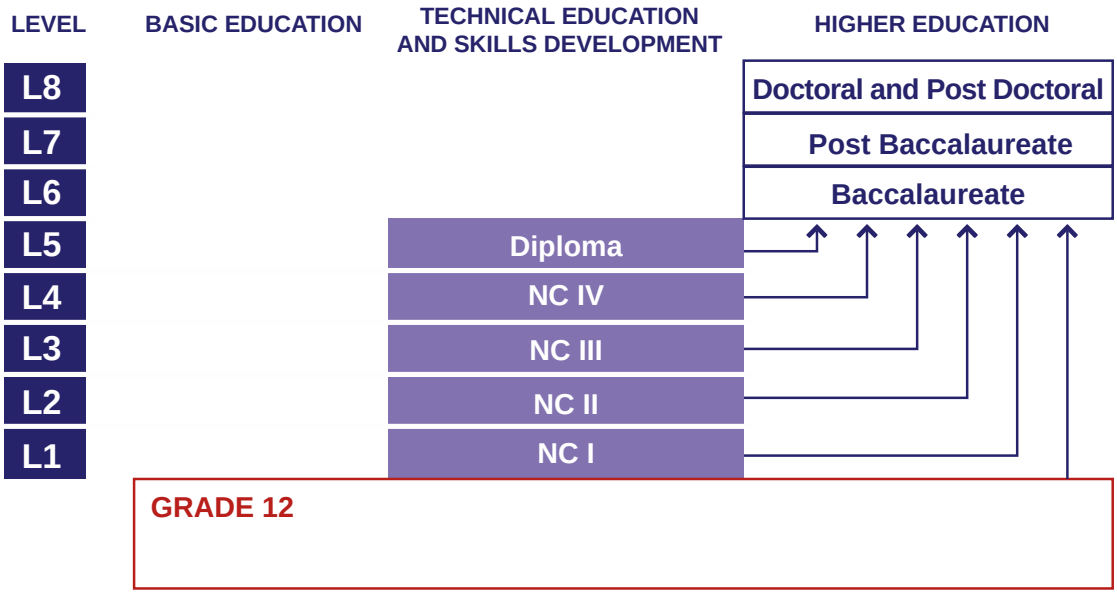
Figure 1 The Philippine education system



Source: Department of Education (DePEd) and TESDA.

More specifically, the PQF describes the levels of educational qualifications and sets the standards for qualifications outcomes (see **Figure 2**). It is a quality assured national system for the development, recognition and award of qualifications, based on standards of knowledge, skills and values acquired in different ways and methods by learners and workers. The PQF has eight levels of qualifications, with levels 1–5 (National Certificate (NC) I, NC II, NCIII, NC IV and Diploma for level 5) pertaining to TVET qualifications and TVET graduates.

Figure 2 Philippine Qualifications Framework



Source: PQF-NCC Resolution No 2014-03.

The Republic Act No. 10647, known as the Ladderized Education Program Act of 2014, was passed in order to strengthen the ladderized interface between TVET and higher education. It will pave the way for easier transitions and progression between TVET and higher education. The PQF too is intended to create a seamless and borderless system of education, to empower students and workers to exercise options or to choose when to enter and exit the educational ladder, and provide job platforms at every exit as well as the opportunity to earn income.

There is therefore no clear delineation between initial training and continuing training in the TVET structure in the Philippines. The Filipino TVET system is an open system, which is competency-based and adheres to the principle of recognition of prior learning (RPL).

Table 1 demonstrates the evolution of enrolment in education in all levels, particularly TVET enrolments over recent years. It shows that enrolment in TVET has progressively increased, from 1.57 million in 2009–10 to 2.03 million in 2013–14, almost a 30 per cent increase in 5 years. The share of trainees enrolled in TVET in the total number of tertiary-level students has however remained stable, at an average of 36 per cent.

Table 1 Enrolment by level of education from school year 2009/10 to 2013/14

School year	Elementary		Secondary		Tertiary				Total
					TVET		Higher education		
	Number of enrolees	%	Total	%	Number of enrolees	%	Number of enrolees	%	
2009/10[a]	13,914,549	55.64	6,755,954	27.01	1,568,617	6.27	2,770,965	11.08	25,010,085
2010/11[b]	14,015,598	55.31	6,813,651	26.89	1,572,131	6.20	2,937,847	11.59	25,339,227
2011/12[c]	14,377,761	54.90	6,973,801	26.63	1,804,742	6.89	3,033,967	11.58	26,190,271
2012/13[e]	14,507,460	54.09	7,051,279	26.29	1,943,589	7.25	3,317,530	12.37	26,819,858
2013/14[d]	16,775,817	56.78	7,171,208	24.27	2,033,417	6.88	3,563,396	12.06	29,543,838

Source: DepEd, Technical Education and Skills Development Authority (TESDA), Commission on Higher Education (CHED) and Philippines Statistics Authority (PSA).

a Data covers public and private schools supervised by DepEd (excludes SUCs laboratory schools).
b Data was based on 78% submission rate of school profiles.
c Data was based on 94% submission rate of school profiles
d Data was generated on 19 August 2014.
e Data was generated on 15 April 2013.

2.1. PPP governance of the TVET system

The governance of the TVET system is ensured by TESDA (Technical Education and Skills Development Authority), which exercises national leadership in TVET. Since its creation in 1994, TESDA has been an attached agency of the Department of Labour and Employment (DoLE). Under the current administration, through Executive Order No. 1 of 2016, TESDA is now under the supervision of the Office of the Cabinet Secretary. The chair of the TESDA Board, however, remains the secretary of the Department of Labor and Employment.

The Filipino context is marked by a high participation of industry in the governance of the TVET sector. Section 2 of TESDA Law states that '*The State shall encourage active participation of various concerned sectors, particularly private enterprises, being direct participants in and immediate beneficiaries of a trained and skilled workforce, in providing TESD opportunities.*' This public–private partnership approach is reflected in both TESDA's board and its governance of the TVET system.

The majority of TESDA's Board members come from the private sector. The Board has twenty-two members, of whom fourteen come from the private sector (six from labour organizations, four from employer/industry organizations, two from national associations of private TVET institutions, and two from the business and investment sectors), and eight from the government (the secretary of labor and employment, secretary of education, secretary of trade and industry, secretary of agriculture, secretary of interior and local government, secretary of science and technology, Commission on Higher Education chair, and the director-general of the TESDA Secretariat).

TESDA has direct supervision of 122 TESDA technology institutions (TTIs). It is headed by the director general, who exercises general supervision and control over TESDA's technical and administrative personnel. He is assisted by four deputy directors general and eight executive directors at the Central Headquarters. Furthermore, there are seventeen regional, seventy-nine provincial and six district offices, each headed by a regional, provincial or district director.

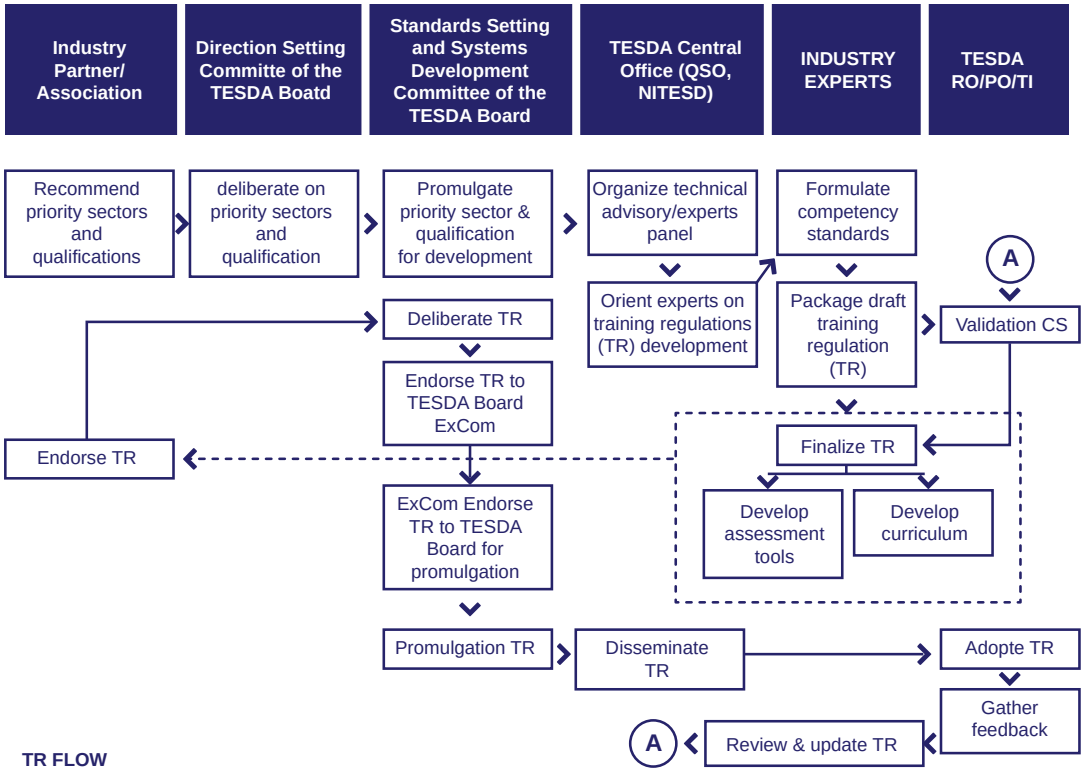
Regional/provincial TESD committees (R/PTESDCs) at local level are also multi-sectoral bodies composed of partners from various sectors such as industry, academe, and national government agencies/local government units) NGAs/LGUs. They act as the subsidiary of TESDA's Board and provide policy recommendations towards more efficient and effective training delivery in their areas. The R/PTESDCs also coordinate and monitor training delivery.

TESDA was recently awarded the Recognition for Commitment to Quality Management of the Philippine Quality Awards (PQA), a national awards programme that recognizes achievements of public and private sector organizations in their journey towards performance excellence.

One of TESDA's major functions is the formulation of a comprehensive plan for the development of skilled labour in the country, through the development of the National Technical Education and Skills Development Plan (NTESDP), which lays out the development efforts for TVET under each administration. The framework for 2017–22 is currently under development. In the formulation and implementation of the NTESDP, TESDA adheres to the Quality-Assured Philippine TESD System Framework, in which industry consultation represents a key component: as end-user, industry is heavily involved both in TVET policy development and in the implementation of TVET provision.

The TVET system under TESDA is competency-based, assessment-driven and occupation-focused. In particular, training regulations (TRs) are developed in consultation with industry and promulgated by TESDA's Board. TR refers to the package of competency standards, national qualifications, training standards, and assessment and certification arrangements. They serve as basis for the development of curriculum and instructional materials, and competency assessment packages for competency-based technical education and skills development. **Figure 3** describes the whole process of how TRs are developed, with a detailed graphical representation of industry consultation.

Figure 3 Training regulations development process



Source: TESDA.

From the configuration of TESDA's Board and the process of developing TR, it is highly noticeable that TESDA finds it imperative to engage its partners in actively participating in the formulation of policies that address current issues on TVET.

2.2. TVET offer

In the Philippines, TVET operates in a demand-driven open market. TVET delivery in the Philippines is private-sector dominated, as more than 90 per cent of TVET institutions are privately managed. As a matter of policy, the government does not compete with the private sector and only provides training when it is too expensive for other providers or there are no private TVET providers. As of July 2015, there were 4,635 TVET providers offering 20,278 different programmes. Private-owned TVET providers accounted for 4,198, while the remaining 437 were public or government-owned institutions.

Public TVET providers consist of TESDA Technical Training Institutions (TTIs), NGAs with training centres, LGU training centres, local colleges and universities (LCUs), DepEd schools, and State universities and colleges (SUCs), which also offer TVET programmes.

Private TVET providers include private training centres and TVET institutions, as well as enterprises/companies providing TESDA-registered training programmes.

All TVET institutions, public or private, prior to offering programmes need to go through TESDA's Unified TVET Program Registration and Accreditation System (UTPRAS). While registration of the programme is mandatory, accreditation is voluntary. The registration provides assurance to beneficiaries that the programme/qualification offered by the training provider has the required resources, facilities and equipment to ensure delivery of quality-assured training.

In the Philippines, there are three major modes to deliver training programmes under TVET: institution-based (that is, school-based and centre-based), enterprise-based and community-based.

- Institution-based programmes refer to the direct provision of TVET programmes by public and private schools/institutions or training centres.
- Community-based programmes are TVET programmes conducted in communities, mostly in partnership with LGUs and non-government organizations. These programmes are usually based on local skill requirements and locally available resources (TESDA, 2016; Esguerra and Orbeta, 2015). This training normally caters to out-of-school young people, women, urban and rural poor farmers, fisher folk, and informal sector groups among others.
- Enterprise-based programmes are TVET programmes implemented within companies or organizations, such as apprenticeship programmes, dual training system (DTS) and learnership programmes.[24] This mode of training delivery is more effective than other delivery modes, as it potentially increases the probability of employment of trainees (Lanzona, 2008; di Gropello et al., 2010; Orbeta and Abrigo, 2013.

Other training delivery mechanisms to expand the reach of TVET exist, such as:

- Mobile training laboratories (MTL): a training delivery model designed to implement technology-based community training programmes (TBCTP) in far-flung communities. MTLs are set to be established in ten poor provinces. This collaborative project should help 23,100 individuals finish various TVET courses annually, thereby providing greater access to decent employment.
- TESDA online programme (TOP): a free online programme (launched in 2012) which makes TVET accessible anytime and anywhere. It generated more than 755,745 users in the Philippines and abroad for thirty courses in its first three years. These online courses empower overseas Filipino workers, especially those in vulnerable jobs such as domestic workers.

[24] A description of each of these three enterprise-based training modes is provided in Section 3.2, Company finance, of this country brief.

The numbers of enrolees by delivery mode for the years 2005, 2010 and 2014 are indicated in **Table 2.** It shows that in 2005, more than two-thirds of the trainees (about 1.14 million) were enrolled in community-based programmes. Through the years, more trainees were enrolled in institution-based programmes, and by 2014 about half of all the more than 2 million trainees were enrolled in institution-based programmes, amounting to about 1.03 million. The number of trainees enrolling in enterprise-based programmes however remains very low, averaging around 70,000 trainees, representing only about 4 per cent of the number of enrolees.

Table 2 Enrolment by mode of delivery: 2005, 2010 and 2014

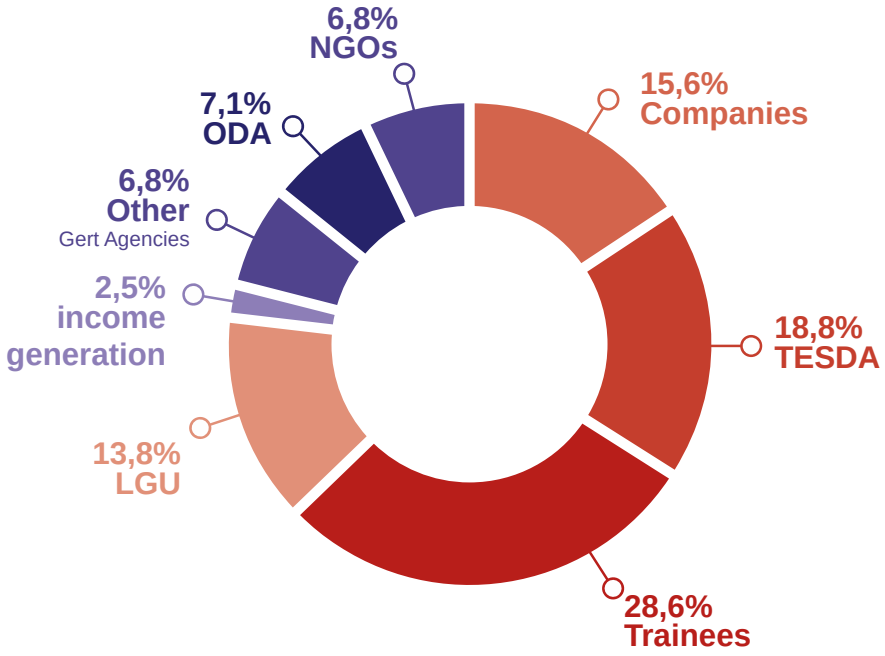
	2005		2010		2014	
	Number	%	Number	%	Number	%
Enrolled	**1,683,382**	**100.0**	**1,568,617**	**100.0**	**2,003, 417**	**100.0**
Institution-based	487,086	28.9	860,919	54.9	1,028,005	50.6
Enterprise-based	59,003	3.5	86,978	5.5	69,138	3.4
Community-based	1,137,293	67.6	620,720	39.6	936,274	46.0

Source: Corporate Affairs/LMD-Planning Office, TESDA.

3. Description of TVET funding in the Philippines

One specificity of the Filipino context is that a very high share of the funding comes from families since the training provision is mostly private. TESDA's contribution to the funding of TVET mainly comes in the form of financial assistance to trainees through various scholarship programmes. The analysis however shows that an average of only 12 per cent of trainees are scholars. The rest of trainees therefore mainly have to support themselves. According to the latest comparative data available on the financial contribution of each stakeholder (2003), the financial burden of providing education was supported 28.6 per cent by the trainees, followed by TESDA (18.8 per cent), companies (15.6 per cent), local government (13.8 per cent) and the remaining 23.2 per cent by other stakeholders (official development assistance – ODA, non-government organizations (NGOs) and other government agencies). Income-generating activities represented 2.5 per cent of the funding of TVET.

Figure 4 Stakeholders' share in TVET financing



Source: Investment in Technical Vocational Education and Training (TVET) in the Philippines, 2008

3.1. Government expenditure

In 2013 the education budget was 3.4 per cent of total GDP, an increase over previous years (2.7 per cent in 2009 and 2.3 per cent in 2012). In 2016, the total budget of the three education agencies (for basic, TVET and higher education) was PhP 470.171 billion (approx. US$9.441 billion). Basic education got a share of 87.28 per cent, while TVET received only 1.43 per cent of the total budget, a stable proportion since 2010. The share of higher education was 12.60 per cent (including the State universities and colleges budget). The bulk of the increase in budget (PhP 11 billion – approx. US$220.88 million) was appropriated for the implementation of K–12.

Table 3 Budgetary appropriation for the Philippine educational system by level of education and by agency (in 000 pesos)

	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
Total	**218,253,345**	**246,566,696**	**243,512,920**	**288,676,958**	**328,717,078**	**369,198,733**	**470,170,969**
Basic education: **DepEd**	191,105,839	219,069,279	216,353,685	249,205,284	280 724 220	319 230 973	410 381 976
Higher education: **CHED**	1 661 974	2 003 008	2 207 484	3 604 497	6 941 041	2 368 769	5 635 834
TVET: **TESDA**	3 083 261	3 459 324	2 854 106	3 096 474	5 117 192	5 319 484	6 738 432
% share of TESDA in total education budget	*1,41%*	*1,40%*	*1,17%*	*1,07%*	*1,56%*	*1,44%*	*1,43%*
State universities and colleges **SUCs**	22 402 271	22 035 085	22 097 645	32 770 703	35 934 625	42 279 507	47 414 727

Source: Department of Budget and Management.

➢ Funding through TESDA's scholarship programmes

TESDA's funding of TVET mainly comes in the form of scholarships to students/trainees. There are three major scholarship programmes funded by TESDA: the Training for Work Scholarship Program (TWSP), the Private Education Student Financial Assistance (PESFA) Program, and the Special Training for Employment Program (STEP).

The **TWSP** has a twofold objective: first, to purposively drive TVET provision to available jobs through incentives and appropriate training programmes that are directly connected to existing jobs for immediate employment, both locally and overseas; and second, to build and strengthen the capacity and capability of TVET institutions in expanding and improving the delivery of quality, efficient and relevant training programmes that meet job requirements, including programmes for higher levels of technology. TWSP tackles the need for highly critical skills in priority industries or key employment generators such as agri-fishery/agri-business/agro-industrial, tourism, information technology-business process management, semiconductor and electronics, automotive, and other priority manufacturing industries and emerging sectors. All training programmes covered under TWSP are registered with TESDA. Beneficiaries are entitled to free training and competency assessment delivered through the participating TVET institutions. In the past years, there has been a significant increase of government funding for the TWSP. In 2016, the TWSP budget was PhP2 billion (US$40.16 million). Regional offices allocate scholarship funds to provincial/district offices, based on their area requirements and priority sectors.

The **PESFA** programme seeks to provide financial assistance for marginalized but deserving students in post-secondary courses from private TVET providers. The government allots an estimated PhP200 million (US$4.016 million) annually to PESFA. Scholarship slots are distributed to districts based on the number of high school graduates from the previous year and the provincial poverty index. PESFA beneficiaries are graduates of basic education who have not taken any other programmes after graduation.

STEP was implemented in 2014 for beneficiaries belonging to indigent families under the National Household Targeting System for Poverty Reduction and Informal Sector families, as well as those under the next lower poverty level as determined by Department of Social Work and Development. Scholars are given a free training and competency assessment, starter toolkits and a training allowance. Toolkits are distributed to TESDA field offices for distribution to beneficiaries.

TESDA scholarship programmes are based on a training voucher system: training vouchers are given to the trainees themselves. These vouchers are then paid by TESDA to TVET providers after they have fulfilled certain guidelines set by TESDA.

Table 4 provides enrolment data on the assistance provided by TESDA through the three scholarship programmes. The proportion of scholars in total enrolment was highest in 2014 at 15.3 per cent.

Table 4 TVET enrolment on TESDA scholarship programmes, 2012–15

Year	Total number of enrolled students	Number of PESFA scholars	Number of STEP scholars	Number of TWSP scholars	Total number of scholars	% of scholars in total number of enrolled students
2012	1,804,742	25,586		178,119	203,705	11.3
2013	1,943,589	26,745		107,990	134,735	6.9
2014	2,033,417	28,077	76,256	205,870	310,203	15.3
2015	2,281,389	26,800	20,524	275,138	322,462	14.1

Source: TESDA.

➢ Funding from other government agencies

Apart from TESDA, other government agencies offer TVET programmes. They include NGAs, SUCs, LGUs/local community colleges and training centres, technical high schools of the DepEd and the government's higher education institutions (HEIs). The government allocated funds of approximately PhP 5,911,232,000 (US$118.7 million) to these NGAs and government training institutions in 2015 (representing half of the TVET budget).

In addition, a bottom-up budgeting (BUB) programme was introduced in 2013 with the objective of developing the overall capacity of LGUs. In 2015, of the total BUB budget, around PhP 408.688 million (approx. US$8.206 million), was utilized for skills training.

To summarize, the total government budget for TVET in 2015 was estimated at PhP 11.639 billion (approx. US$233.7 million), the various components of which are listed in **Table 5**.

Table 5 Summary of government TVET budget, 2015

	Amount (000) PhP	Share of budget
TESDA	5,319,484	45.70%
Other government agencies/institutions	5,911,232	50.79%
Bottom-up budgeting (BUB)	408,688	3.51%
Total	**11,639,404**	**100%**

Source: TESDA.

Table 6 also shows the budget allocation from the government by programme, in accordance with the TVET Roadmap 2014–2016.

Table 6 Budget allocation of the government to implement the TVET Roadmap 2014–2016

Outcome: Filipinos with competencies and life skills to pursue economic opportunities				
TVET Roadmap Strategy 1: Expand Access to Quality TVET				
Programme	**Resource Requirements (PhP)**			**Partner Agencies / Orgs.**
	2014	**2015**	**2016**	
Implement Special Training for Employment Program (STEP)	1.022B	1.022B	1.022B	LGUs, TVET providers
Provide financial assistance to trainees (PESFA)	200M	200M	200M	Private TVET providers
Implement skills development programme under Grassroots Participatory Budgeting (GPB)	394M	434M	477M	LGUs, TVET providers
Provide quality tech/voc. inputs / mobile training labs.	11.25M	40M		LGUs, Department of Budget and Management (DBM), Department of Trade and Industry (DTI), Department of Agriculture (DA)
Implement skills and livelihood training in Yolanda-affected areas	256.5M			LGUs, Department of Public Works and Highways (DPWH), National Housing Authority (NHA), Department of Social Welfare and Development (DSWD), TVET providers
TVET Roadmap Strategy 2 : Develop workforce competencies required in key growth areas				
Institution-based training programmes	39.5M	43.5M	47.9M	DepEd, CHED, industry and TVET assn.
TWSP for key employment generators	1.4B	2.0 B	2.2B	DBM, DoLE, DTI, DA, Department of Tourism (DOT), DPWH, industry assn .
Enterprise-based/apprenticeship programmes	9.6M	11.5M	13.8M	DoLE, industry ass
Competency assessment & certification programme	39.5M	43.5M	47.8M	Industry, DoLE
Implement Quality Assured Tech/voc System	20M	22M	24.2M	TVET providers
Philippine Qualifications Framework Registry of Qualifications by Sector	4M	3M	1M	DepEd, CHED, PRC,[9] DoLE, industry

Source: TESDA.

These figures reveal that TESDA, although it is the main authority in the overall governance of the TVET system, only manages 45.70 per cent of the budget available, mainly through scholarships to trainees in the three assistance programmes (STEP, PESFA and TWSP). Half of the TVET budget transits through other government agencies, which directly receive their funding from the Department of Budget and

Management (DBM) and operate their own training institutions, offer TVET programmes or fund other initiated TVET programmes.

- **Governance of public expenditure for TVET**

In the Philippines, DBM is the government agency responsible for budget preparation of all programmes and projects. To facilitate the timely formulation and submission of agency budget proposals, there is an annual national budget call by the DBM. Preparation for an agency budget includes agency central offices (ACOs) and agency regional offices (AROs) consulting with LGUs and various stakeholders. To maintain transparency, accountability and integrity, consultations with partner and interested civil service organizations, private and other stakeholders are also undertaken.

The public budget for NGAs however is directly released to them, including the budget for their own training provider, if there is one. Their training budget does not need to pass through TESDA or other government agencies.

3.2. Company finance

In the Philippines, companies contribute to the funding of TVET mainly in kind, through enterprise-based training, where part of the training is provided by companies. In enterprise-based training approaches, companies support the costs of in-company training, namely the cost for the trainers (training allowance or wage) and the physical costs (tools and equipment, training materials, training workshops, consumables) required by the training. Under the dual training system, participating companies are also required to pay at least 75 per cent of the minimum wage to trainees. Incentives to participating companies include deduction from their taxable income of 50 per cent of these expenses, provided they do not exceed 5 per cent of their total direct labour expenses and PHP 25,000,000 (US$500,799) a year. Companies also have to sign a life and/or accident insurance policy for the trainee, and bear, on a voluntary basis, expenses such as clothing, lodging, transportation and meal allowances.

There are three types of enterprise-based training, as described in **Table 7**: learnerships, apprenticeships and dual training. They have some similarities but also significant differences.

Table 7 Detailed description of existing enterprise-based programmes in the Filipino TVET system

Enterprise-based programmes	Learnership	Apprenticeship	Dual training
Legal basis	Arts. 73–76 of the Labour Code; TESDA Circular 16, Series of 2004	Articles 57–65 of the Labour Code; TESDA Circular 16, Series of 2004	Dual Training Act or RA 7686; TESDA Circular 31, Series of 2012
Definition	A training and employment programme involving a contract between an apprentice and an employer on an approved apprenticeable occupation. The apprenticeship period is more than 3 months and a maximum of 6 months. Only companies with approved and registered apprenticeship programmes under TESDA can hire apprentices.	Practical training on-the-job for approved learnable occupations for a period not exceeding 3 months. Only companies with TESDA approved and registered learnership programmes can hire learners.	An instructional delivery system in which learning takes place alternately in two venues: the school or training centre and the company. The training is based on a curriculum and a training plan jointly developed by the school and the company.
Type of skill required for the trainee	Semi-skilled and in non-apprenticeable occupations	Highly technical occupations (EO 111)	General technical and vocational occupations
Duration of training	Maximum of 3 months	More than 3 months to 6 months	Depends on agreement of the parties and approved by TESDA.
Should training be accompanied by theoretical instruction?	No, but it can have theoretical instruction.	Yes.	Yes.
Should the training, if any, be in a partner educational or academic institution?	They are considered as 'special workers'	They are considered as 'special workers'	Yes.
Are the trainees considered employees?	No.	No. However, if the employer is found to be guilty of hiring apprentices to prevent regularization to cut labour costs, the apprentice may be considered as a regular employee (Atlanta vs. Sebolino, GR No. 187320, 26 January 2011).	No. There is an express provision in Sec. 8 of RA 7686 that the trainee is not an employee of the business or establishment.
Wages/training allowance	Not less than 75% of the minimum wage.	Not less than 75% of the minimum wage.	Not less than 75% of the minimum wage. In the DTS, this may not be generally true. Training allowance could be in non-monetary form, i.e., free lunch, free lodging, free transportation, etc.
Primary government regulating authority	DoLE for labour standards and TESDA for training component	DoLE for labour standards and TESDA for training component	TESDA
Need for an agreement approved by TESDA?	Yes.	Yes.	Yes.
Is the company obliged to hire the trainee?	No.	No.	No.
Issuance of certificate ?	Training certificate from the company National assessment is voluntary	Training certificate from the company National assessment is voluntary	Assessment is mandatory. National Certificate (NC) or Certificate of Competency (COC) is issued by TESDA if trainee passes the assessment

Source: TESDA.

In the Philippines, DTS was introduced as early as the 1980s through a joint project of the Southeast Asian Science Foundation and the Hanns Seidel Foundation. This experience was extended in selected public and private technical schools in 1991 and was institutionalized in 1994 through the Dual Training System Act.

A cost–benefit study (CBS) of the DTS was conducted by TESDA and the Philippine Chamber of Commerce and Industry Human Resource Development Foundation (PCCIHRDF) in 2015 through its K to 12 Plus Project with technical assistance from the Federal Institute for Vocational Education and Training (BIBB) of the Federal Republic of Germany. It looked at both the costs and the benefits of the company implementing DTS.

Two types of benefits were derived from the study: short-term benefits, which arise from the productive contribution of the trainees; and long-term benefits that arise if the trainee is employed by the firm after the training.

The results show that overall short-term benefits for firms derived from the DTS programme equated to 43 per cent of the average cost of training. This was computed based on the average overall cost of training per trainee per month, which is about PhP 12,800 (allowances and other benefits given to the trainees by companies: 44 per cent of the costs; physical costs (materials and equipment used by trainees: PhpP 3,828 or US$77; cost of trainers: PhP 2,365 or US$47); and the short-term benefits that arise from the trainee's productivity, about PhP 5,487.00 (US$117) per trainee per month.

In addition to the short-term benefits, DTS trainees also provide long-term benefits due to productivity differences between DTS trainees and workers hired externally, and savings in recruitment costs. One interesting item is the long-run productivity difference between DTS trained workers and non-DTS trained workers, which is quite substantial (about 16 per cent of the average overall cost per person).

A majority of firms agree that DTS is an effective mode of training delivery; however, there are some constraints that have to be addressed, including the lack of instructors qualified/trained in the use of latest technology, constraints such as night shifts, overtime and work during holidays of trainees, and voluminous documentary requirements for programme registration. Moreover, tax incentives for firms remain unrealized because of the complex procedures and heavy documentary requirements.

In 2015, an impact evaluation of the DTS was also conducted by the World Bank, the Korean Development Institute and TESDA. The preliminary results show that the DTS has a significantly positive impact on labour market earnings, relative to other programmes. The magnitude of its impact increases with the length of on-the-job training (OJT) in the company, making OJT an important component of the DTS which contributes to higher labour market earnings among graduates of the system.

3.3. Financing by training providers

Income-generating projects (IGPs) have been implemented by some TVET institutions. The IGPs provide students with the opportunity to learn professional competencies. The generated income is used for the improvement of TVET institutions and the acquisition of training supplies and equipment. For example, the IGP income of some TESDA training institutions goes into a fund called Sariling Sikap Program (SSP) and is used to buy supplies and equipment for training purposes.

3.4. Students and families

With the high percentage of privately owned TVET centres in the Philippines, training costs are borne largely by the individual trainees through tuition fees. Tuition fees vary depending on the courses and the duration of training. They can be as low as PhP 500 (approx. US$10) for courses like beauty care, and as high as PhP 50,000 (approx. US$1,000) or PhP 180,000 (approx. US$3,614) for training in slaughtering and culinary arts respectively. The government endeavours to support enrolees through the various training fund assistance and scholarship programmes outlined earlier. Other than the TESDA scholarship programmes, some other scholarship programmes are offered by local governments, private NGOs, religious groups, schools and others.

3.5. Official development assistance

ODA has contributed to the development and progress of the Philippine TVET system, specifically in helping to achieve reforms to respond to the challenges of international/regional globalization and the development of DTS. TESDA has signed various technical cooperation bilateral agreements for implementing reforms in TVET in the areas of capability-building, infrastructure and systems development.

According to OECD statistics (see **Table 8**), the Philippines received on average US$2.9 million per year between 2006 and 2015, with substantial variations in 2012 and 2014. The ODA came in the form of grants, predominantly from OECD Development Assistance Committee (DAC) countries, with Germany being the major donor (36 per cent of all ODA since 2006).

Table 8 Total ODA invested in vocational training and advanced technical and managerial training from 2006 to 2015 (US$ million, constant prices) in the Philippines

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total ODA	**2.543**	**2.487**	**3.236**	**1.023**	**2.457**	**1.447**	**5.185**	**2.522**	**6.443**	**1.885**
Per type of training										
Vocational training	2.296	1.938	3.038	0.863	1.584	1.003	4.588	2.079	2.090	1.464
Advanced technical/managerial training	0.247	0.549	0.198	0.160	0.873	0.444	0.597	0.443	4.353	0.421
Per type of donor and training										
Vocational training	2.296	1.938	3.038	0.863	1.584	1.003	4.588	2.079	2.090	1.464
- DAC countries	*2.296*	*1.938*	*3.038*	*0.863*	*1.584*	*1.003*	*4.577*	*2.077*	*2.090*	*1.464*
Belgium	..	..	0.120	0.113	0.115	0.128	0.095	0.096	..	..
Canada	..	..	0.306	..	0.038	..	..	..	..	..
Finland	..	..	..	..	..	..	..	0.074	..	0.009
Germany	1.764	1.303	0.793	0.496	0.469	0.112	0.552	1.166	0.897	..
Ireland	..	..	..	..	..	0.022	..	..	..	..
Italy	..	..	0.022	..	..	..	0.296	0.203	0.097	0.025
Japan	0.438	0.240	0.232	0.253	0.199	0.239	0.132	0.068	0.382	..
Republic of Korea	0.094	0.051	0.725	..	0.142	..	3.125	0.195	0.545	1.212
Spain	..	0.344	0.841	..	0.621	0.502	0.376	0.275	0.169	0.111
- Multilateral donors	..	..	..	..	..	..	*0.011*	*0.002*	..	..
ILO	..	..	..	..	..	..	0.011	0.002	..	..
Advanced technical / managerial training	0.247	0.549	0.198	0.160	0.873	0.444	0.597	0.443	4.353	0.421
- DAC countries	0.247	0.549	0.198	0.160	0.873	0.444	0.597	0.443	4.353	0.421
- Multilateral donors	..	..	..	..	..	..	..	..	..	..

Source: http://stats.oecd.org, data from 22 May 2017.

4. Perspectives in the setting-up of a training fund

In 1998, TESDA commissioned a study on financing TVET in the Philippines, aiming at analysing TVET financing in both the public and private sectors, and providing recommendations for improving cost recovery and the cost-efficiency of the TVET system. Among the financing schemes recommended was the implementation of a levy scheme. This was included in Section 5 of the TESDA Law, which identified a levy and grant scheme as a potential source of financing TVET. However, such a national levy system does not yet exist: there was a sense of resistance among employers, most of which are SMEs, to such a system as it may not be appropriate for their scale of activity.

In a study mission on TVET financing and levy grant systems in selected Asian countries conducted in the early 1990s, it was observed that a scheme resembling the Malaysian levy grant system could be appropriate in the Philippines. The levy system adopted by the Malaysian Human Resources Development Fund could be studied to see its applicability given the present situation of the Philippine economy. There are established industry associations in various sectors. After more than 20 years since the first study, the establishment of a levy system could be explored and put on the table for discussion with these associations.

5. Concluding remarks

The Filipino case study has several interesting aspects:

- The very high involvement of companies in the governance of the TVET system, on TESDA's board, where employers represent the majority of the members, but also in regional TESD committees and in the design of training regulations, which improves the relevance of training.
- An open, competency-based TVET system, based on a qualifications framework that creates a borderless system of education, where the delineation between initial and continuing training no longer exist, that allows for the recognition of competencies based on the recognition of prior learning, and that enables lifelong learning of individuals.
- Based on the identified priority sectors/industries, TESDA's scholarship budget is primarily allocated to qualified TVET providers – public or private – adopting a training voucher system (in other words, it is a trainee-based approach to funding).TESDA is continuously improving the implementation of the scholarship programmes to ensure they are efficient and effective.
- It is worth noting that TVET provision in the Philippines is mainly private (90 per cent) and that funding is provided mainly through scholarships. Funding is therefore mainly supported by families, since only 14 per cent of students were scholars in 2015.
- Companies also contribute to funding, notably through enterprise-based training, where they not only provide training to students, but also pay them 75 per cent of the minimum wage. Given the positive results of the DTS both for the firms and the trainees, TESDA considers that the government should seriously review its policy in order to promote and sustain the implementation of the DTS.
- No training fund has yet been implemented in the Philippines, although one is provided for in the section 5 of the TESDA Law. The experience gathered from neighbouring countries and international experience should provide insights on how to develop a specific approach that would suit the Filipino context. To date while a one-time lump sum appropriation from the national government as stated in the law was not realized, there exists a TESDA Development Fund (TDF) that is being sourced from donations, grants and endowments, and other bequests and gifts.
- It is also worth noting that the Philippines has implemented training schemes that respond to country-specific constraints, such as mobile training laboratories and TESDA online programmes to reach far-flung communities and overseas Filipino workers. By mobilizing information technology, TESDA was able to train 755,000 individuals in three years.

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COUNTRY BRIEF N°4. FINANCING TVET IN THE REPUBLIC OF KOREA

The Korean Country brief for the Republic of Korea was produced as part of the global study “Financing TVET: a comparative analysis in six Asian countries”, AFD-UNESCO, by Mr Sung Joon Paik, KDI School of Public Policy and Management, with contributions from Mrs Christine Uhder Gonçalves (AFD) and Ms Anahat Kaur (AFD).

1. Socio-economic context

The Korean case study reflects a strategic approach to skills development, where the government has developed a sequential education and TVET expansion strategy along with corresponding funding tools that support the national economic development plans.

After the Korean War (1950–53), the government of the Republic of Korea started with a six-year Plan for Completing Primary Education (1954–59) with the investment of around 80 per cent of the Ministry of Education budget, an education tax and local education grants, which contributed to supplying quality manual workers to labour-intensive light manufacturing in the 1960s. After universalizing primary education, the government shifted its investment focus to secondary education in the 1960s and 1970s to supply skilled workers to the heavy and chemical industry sectors. It shifted to higher education in the 1980s and 1990s as Korea’s economy moved to a more advanced level.

Realizing that the regular education system alone could not supply the workforce needed to implement the economic development plans, the government introduced a vocational training system in 1967 and a training levy system in 1976. This training levy system was replaced by the Employment Insurance System (EIS) in 1995 to meet lifelong learning demand. These two systems – education and vocational training – have played a crucial role in Korea’s skills development.

In the Republic of Korea, as in most countries, growth rate in gross domestic product (GDP) has been slowing down (from 4.25 per cent in 2001–11 to 2.75 per cent post 2011) and the unemployment rate (3.6 per cent overall in 2011) especially for young people (9.2 per cent) has been on the rise. An estimated 99.9 per cent of all companies in Korea are small and medium-sized enterprises (SMEs). Despite 88 per cent of active Koreans being employed in SMEs, their productivity remains low**.** Similarly, even though the service sector provides the largest portion of employment, its productivity is

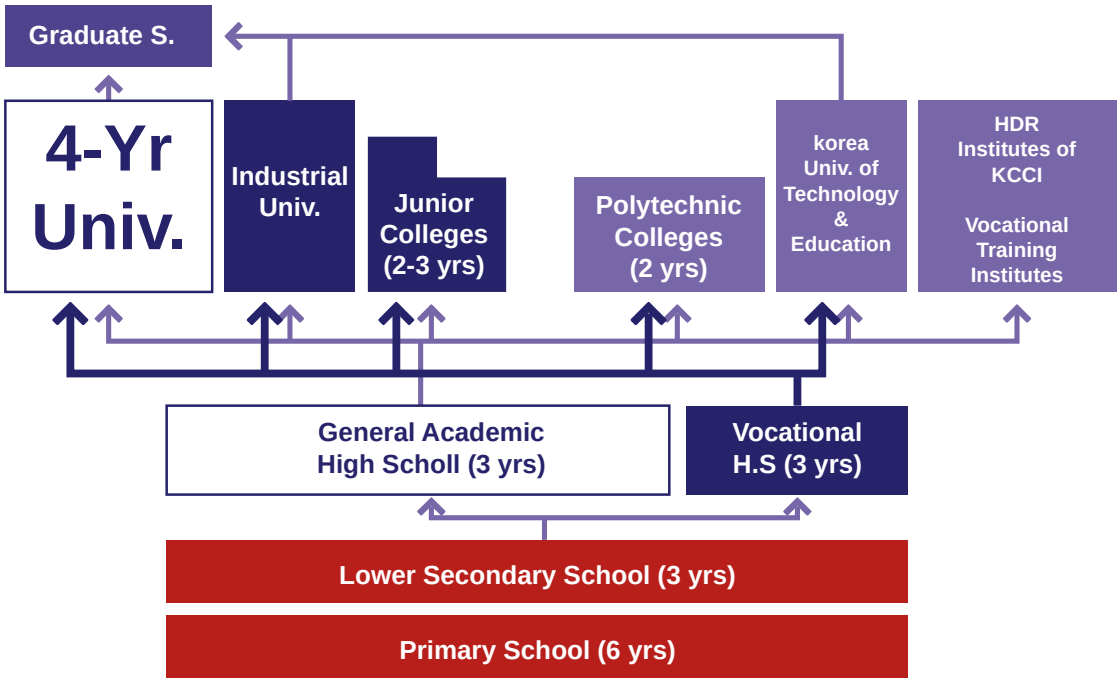
lower than the manufacturing sector in terms of the employment ratio. With 17.4 per cent of the labour force, the manufacturing sector contributed 38 per cent of GDP, while the service sector, employing 77.5 per cent of the labour force, contributed only 59.7 per cent.

A rapidly ageing population and a lowering fertility rate are leading to a sharp decline in the working-age population, causing significant changes in the policy environment. There is a consciousness of the need for closer linkages in the education and technical and vocational education and training (TVET) system, and for industry to increase productivity and maintain the national economy in a sustainable manner. In that sense, it is critical for Korea to improve the effectiveness of its education and TVET systems through close linkages with industry to provide lifelong education and training opportunities to workers. The government has also tried various policy measures specifically to target SME needs, such as support to startups, technology innovation and SME employee training.

2. Structure and main figures of the TVET system

Korea has a 6–3–3–4 schooling system as shown in **Figure 1**. Primary and secondary education are universalized.

Figure 1 Schooling structure in the Republic of Korea



Source: KDI.

Enrolment rates (2014) are high from elementary school level (96.4 per cent) to high school level (93.7 per cent), and for higher education they are also high in comparison with other countries. Vocational education is provided from high school onwards.

The employment rate is higher for TVET graduates than for those leaving general education: in 2013, the employment rate for vocational high school graduates was 68.2 per cent, compared with 4.9 per cent for academic high school (KEDI, 2014). At the higher education level, the employment rate of four-year university graduates is the lowest, reaching 55.6 per cent in 2013 against 61.4 per cent for those graduating from junior colleges. The low employment rate of university graduates can be attributed to the oversupply of graduates and skill mismatches.

In the Republic of Korea, two ministries are in charge of TVET. The Ministry of Education (MoE) is responsible for vocational education at secondary and tertiary education level through vocational high schools, junior colleges and industrial universities. The Ministry of Employment and Labour (MoEL) is in charge of providing vocational training to new entrants to the labour market, workers currently employed and the unemployed. Polytechnic colleges, human resource development (HRD) institutes of the Korea Chamber of Commerce and Industry (KCCI), Korea University of Technology and Education (KoreaTech), and private vocational training institutes are the major providers.

After multiple phases of restructuring the vocational education sector, according to 2015 figures there were 538 vocational high schools (23 per cent of all high schools) and 138 junior colleges (40.7 per cent of all higher education institutions) supplying technicians to sectors such as engineering, agriculture, forestry, marine and fisheries. Industrial universities provide higher education opportunities to high school and junior college-level graduate workers. There were nineteen in 2003, but this reduced to two in 2012 as demand from workers decreased and most industrial universities were transformed into regular four-year academic universities.

Currently, the vocational education system and its operations are governed by the legal framework of the Elementary and Secondary Education Act, Higher Education Act and Lifelong Learning Act.

2.1. Initial training

Initial training is provided mainly by vocational high schools, junior colleges, industrial universities, polytechnic colleges, KoreaTech, HRD institutes of KCCI, and other vocational training institutes.

In 2015, there were two types of vocational high school at the upper secondary level in Korea:

- Specialized vocational high schools can be defined as high schools designed to train high-quality skilled workers for specific industries and occupation areas. Practical training in the work place is delivered in collaboration with firms.
- Meister high schools, categorized as 'special purpose high schools', provide high-level professional vocational education tailor-made in strategic areas through close school–industry collaboration, to train and supply young Meisters.

The private and public share in specialized vocational high schools is quite balanced. In 2015, there were 297,701 students (158,129 public, 139,572 private) in 498 specialized vocational high schools (277 public, 221 private) (Korean Education Statistics Service, 2016). In 2015, forty Meister high schools had education and employment contracts (for 8,597 students) with 3,645 companies[25].

- Junior colleges are short-term higher education institutions that provide 2–3-year vocational education programmes with the aim to train mid- and high-level technicians for the national economy. Private junior colleges notably have played a great role in expanding educational opportunities: in 2015, 93.5 per cent of the 138 junior colleges were private. The total number of students trained through junior colleges reached 720,466.
- Industrial universities were 4-year higher education institutions whose main objective was first to provide workers with high school diplomas or associate bachelor's degree. They were later transformed into regular four-year universities.
- Polytechnic colleges provide various training programmes tailored to the skill needs of industry and specific firms.
- KCCI's HRD institutes have the main purpose of training and supplying technical workers to SMEs.
- KoreaTech offers undergraduate and graduate programmes that cover mechatronics, engineering, industrial design, computer science, materials and chemical engineering, energy, techno HRD and industrial management.

[25] See: www.meister.go.kr/index.jsp (Accessed 16 September 2016).

Table 1 Summary of vocational education and training institutes

Training inst.	Entry level	Length of training	Certification	Delivery mode/ link with Industry	Supervising ministry	Finance
Vocational high school	Middle school graduate	3 years	High school diploma	School-based + practical training in workplace	Ministry of Education	Publicly supported
Junior college	High school graduate	2–3 years	Associate BA	School-based + practical training in workplace	Ministry of Education	Mainly by student tuition + government support
Industrial university	High school or junior college graduate	2–4 years	BA		Ministry of Education	Student tuition for private
Polytechnic college	- High school graduate - Worker -Unemployed	Degree programmes: 2 years Non-degree programmes: varies	Associate .A	School-based + practical training in workplace	Ministry of Employment and Labour	Mainly by the government
HRD Institute of KCCI	- Grade 3 in academic high school - Worker	- for Grade 3 in academic high school: 1 year - otherwise varies	Technical certificate	Institute-based	Ministry of Employment and Labour	By the government
KoreaTech	High school graduate	4 years	BA	School-based		Mainly by the government

Source: Author's elaboration.

2.2. Continuing training

Continuing training is provided mainly by polytechnic colleges, HRD institutes of KCCI, employers, employer organizations and private vocational training institutes.[26] In the present vocational training system, any institutes, whether public or private, can apply for approval to provide vocational training to MoEL. Polytechnic colleges design and provide practical training programmes tailored to the skill needs of industry and specific firms (under the Workplace Practical Skill-focused Factory Learning System)[27] and the employment rate of graduates has reached 85.8 per cent, compared with 61.4 per cent in junior colleges and 54.8 per cent in four-year universities in 2015.[28] Of a total of 78,220 trainees in 2015, 51,000 (65 per cent) were enrolled in upgrading/continuing

[26] Private training institutes include privately-owned training institutes, in-company training centres, training centres in diverse types of school and others.

[27] See www.kopo.ac.kr/content.do?menu=110 (Accessed 21 October 2016).

[28] See www.kopo.ac.kr/content.do?menu=108 (Accessed 21 October 2016).

training for incumbent workers, while the rest were majorly enrolled in initial training programmes.

3. TVET funding

3.1. Funding of vocational education under MoE

In Korea, education, including vocational education (in vocational high schools, junior colleges and industrial universities) has four different funding sources: the State (MoE and local governments), companies, private school foundations, and parents and students. The country's education budget in 2015 amounted to KW 55,132.2 billion (approx. US$46.99 billion[29]), which equated to 3.5 per cent of GDP and 14.7 per cent of the national budget. The ratio of the MoE budget to GDP and the national budget remained more or less stable from 2013 to 2015.

- Vocational high schools

The education budget is managed at local level through seventeen local offices of education, which receive 71.7 per cent of the MoE budget through a local education grant.[30] The rest is procured from the general account for local administration, tuition fees, and other sources.[31] For vocational education in secondary schools, the local offices of education use an input-based allocation method (unit cost per school, class and student by level and type of school). MoE also provides financial subsidies to implement the ministry's own policies. For this, project proposals submitted by local offices of education are reviewed by the MoE, which selects projects based on a scoring system.

- Junior colleges

Unlike vocational high schools, the government does not provide the recurrent operating budget to junior colleges. The major revenue source for junior colleges is tuition fees collected from students, most of which is spent to maintain routine school operations. This means that most junior colleges do not have enough budget to promptly develop new innovative curricula and programmes that can meet rapid changes in skill demands from industry.

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[29] KW1,000 = US$0.852337 as of 14 November 2016.

[30] The local education grant consists of general and special grants. Sources of the general grant are (i) 96/100 of 20.27 per cent of internal tax revenue and (ii) a national education tax (a special tax to improve the educational environment – it is collected as a form of surtax on existing taxes like property and automobile taxes). The general grant is transferred as a block grant to the seventeen local offices of education for Kindergarten, elementary and secondary education, and lifelong learning for adults. The local offices of education have autonomy in managing the general grant. The amount of the general grant to each local office of education is decided based on the difference between standard fiscal revenue and standard fiscal demand.

[31] The local education budget is managed by the special account for local education. The local education grant from MoE and other budgets from the general account of local government are transferred to the special account for local education. The superintendent (head of the local office of education) is responsible for making and implementing an education budget plan.

The government contributes to their funding through specific projects aiming at implementing its own policies, notably the Project for Developing Industry–College Cooperation-centred Junior College (2012-2015) and 'Leader in Industry–College Cooperation (2012–2016)'. In 2014, MoE introduced a new financial support policy called 'Specialized College of Korea' (SCK) to induce junior colleges to restructure their departments, programmes and curricula with a focus on specialized major areas in which they have comparative advantages in links to certain industry sectors. Allocations are made based on a selection process through a performance-based finance mechanism to maximize the cost-effectiveness. Although it is too early to assess the effect of the SCK policy, the results of the mid-term evaluation in 2016[32] show the policy plays a positive role in enhancing indices of major performance indicators such as the employment rate (19.7 percentage points increase), entrepreneurship education index in specialized major areas (3.7 percentage points increase), the rate of completing practical training in workplaces (13.3 percentage points increase), and the proportion of the National Competency Standards-based curriculum (12.3 percentage points increase).[33]

In 2015, the total revenue budget of junior colleges was KW 5,060.9 billion (approx. US$4.31 billion), 99.7 per cent of which was for private junior colleges. For private junior colleges, 58 per cent came from tuition and other fees paid by students (KW 2,928.5 billion, approx. US$2.496 billion) and 19.5 per cent from national subsidy (KW 986 billion, approx. US$840 million).[34]

For vocational education at higher education level, MoE provides general operating expenses including salaries of faculty and staff to national institutes, but not to private institutes. For private institutes, MoE does not provide annual core funding but rather provides financial subsidy through specific projects aiming at implementing its own policies.

3.2. Funding of vocational training (under MoEL)

MoEL provides a budget for vocational training through the general account of the MoEL budget and the Employment Insurance Fund (EIF). The MoEL budget in 2015 was KW 375,777 million (approx. €30,359 million) for vocational training, as part of the general account budget of KW 1,897,785 million), which covers:

[32] Mid-term evaluation measures the progress in (i) core performance indicators (employment, the ratio of students number to enrolment quota, system of assessing the level of job skills and company's satisfaction, entrepreneurship education), (ii) the implementation of the college plan (the relevance of specialized major areas to industry, the appropriateness of budget management, overall performance of college plan), (iii) the NCS-based curriculum (development and application of the NCS-based curriculum) and (iv) the soundness of college budget management (mobilization of revenue from external sources, the ratio of tuition to education expenditure, scholarship).

[33] Press release on the Mid-term Evaluation Results of the SCK Project, Ministry of Education (2016.6).

[34] http://kess.kedi.re.kr/index (Accessed 1 October 2016.)

- vocational training of unemployed young people not covered by the employment insurance system (EIS) (KW 63,209 million, approx. US$53.83 million) and out-of-school young people at risk (KW 2,227 million, approx. US$1.896 million)
- financial support to the operation of HRDKorea (KW 93,505 million – approx. US$79.636 million), Korea polytechnic colleges (KW 171,430 million, approx. US$146.049 million), and KoreaTech (KW 45,270 million, approx. US$38.57 million)
- the management of national and private qualifications (KW 136 million, approx. US$0.115 million) (Korea, 2014a, pp.15, 22–3).

In 2014, MoEL spent KW 315,507 million (approx. US$268.705 million) for vocational training in its general account budget (which totalled KW 1,970,024 million, approx. US$1,678.53 million).

MoEL set the 2015 budget of the EIF at KW 1,621,675 million (US$1,381.85 million) for the purpose of vocational training. In 2014, MoEL spent KW 1,459,653 million (US$1,244 million) from the EIF (Korea, 2014*b,* pp. 40–5).

3.3. Families and students' contribution to TVET

An important private source of funding is tuition fees paid by students and their families. However, a large number of students and trainees have their tuition waived or paid by the government. The government has provided full tuition scholarships to all students in all public and private specialized vocational high schools[35] since 2011. In Meister high schools, whether public or private, the government provides full tuition scholarships and dormitory fees. The unemployed who receive training in training institutes use training vouchers provided by the government.

Students in private junior colleges paid tuition fees in a range of KW 5.5–6.5 million (approx. US$4,687–5,540), while those in public junior college paid around KW2.7 million (approx. US$2,301) in 2015. Tuition at polytechnic colleges ranges from KW 2.0–2.4 million (approx. US$1,704–2,045), which is much lower (HERI, n.d.). This is because MoEL subsidies the polytechnic colleges. Tuition at KoreaTech ranges from KW 3.3 million (approx. US$2,812) for humanity and social science departments to KW 4.75 million (US$4,048) for engineering departments.[36]

[35] Students who have already received other types of scholarship or financial subsidy are excluded.
[36] http://univ.hayani.net/100162.html (Accessed 29 September 2016.)

4. Continuing training of workers and lifelong learning system

Despite its effort to align its initial training offer to labour market needs in the early 1960s, the Korean government realized that its regular education system alone could not supply the labour needed to implement its five-year economic development plans, and that it needed an alternative system that had flexibility and efficiency in designing curricula, recruiting trainers, selecting trainees and providing training programmes so that it could promptly supply skilled labour at the right time. In addition, the government recognized that Korea needed institutional mechanisms that could make employers participate actively in training their employees (mainly new entrants).

Thus, the government through the Ministry of Labour introduced the vocational training system through the Vocational Training Act in 1967. The main purposes of the system were to secure the supply of skilled labour needed for industrialization and enhance the employability of individuals. The Vocational Training Act specified the establishment of public vocational training institutes and in-company training facilities, qualification and training of vocational training instructors, provision of public training and bearing the costs of training institutes and training.

As the labour shortage problem persisted owing to the successful implementation of the economic development plans, a construction boom in the domestic housing market and the Middle East, and employers' reluctance to train employees[37] in the 1970s, the government mandated employers to provide their employees (new entrants) with vocational training by enacting a Special Act for Vocational Training in 1974, which was reinforced in 1976 through integrating the Vocational Training Act and the Special Act for Vocational Training into the Basic Law of Vocational Training. According to the Basic Law for Vocational Training, private firms with 300 employees or more were required to provide in-plant training. Target firms were expanded further to firms with 200 or more in 1989 and firms with 150 or more in 1992. This compulsory vocational training system with a focus on pre-employment training contributed to supplying skilled labour (Lee, 2007, pp. 55–6). During the Fourth Five-Year Economic Development Plan period, 68.1 per cent of trainees were trained by in-plant training as shown in **Table 2**.

[37] At that time, employers provided training on a voluntary basis. Employers tended to scout skilled workers from other companies instead of investing in training.

Table 2 Number of trainees by training type for the Fourth Five-year Economic Development Plan period

	Total (%)	1977	1978	1979	1980	1981
Total	495,616 (100.0)	83,027	100,425	129,297	104,502	78,365
Public training	119,994 (24.2)	14,878	19,201	28,488	31,153	26,274
In-plant training	337,388 (68.1)	58,739	73,038	90,992	66,213	48,406
Authorized training institutes	38,234 (7.7)	9,410	8,186	9,817	7,136	3,685

Source: Ra and Kang (2012, p.33).

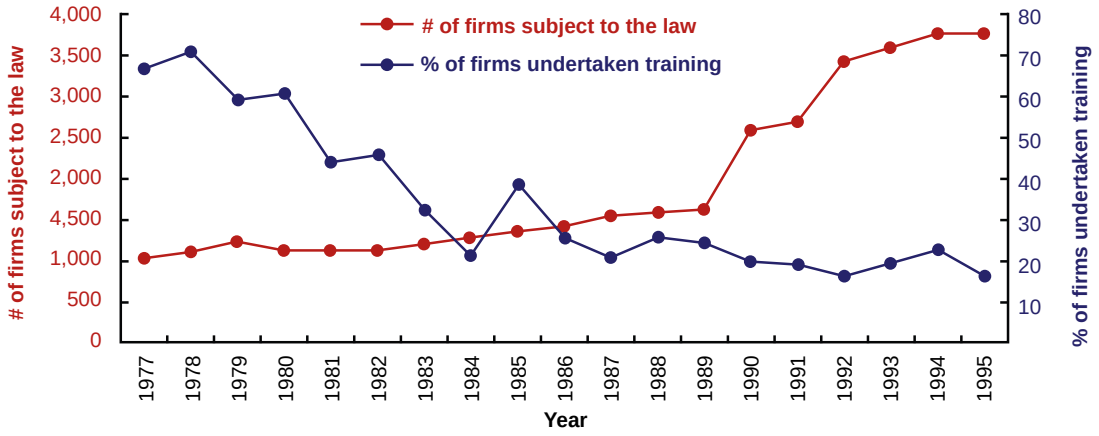
Note: 1) Public training: training provided by public corporations, government agencies like the Central Vocational Training Institute, and local governments; and 2) authorized training institutes: private training institutes recognized by the Ministry of Labour to provide training within the framework of the Vocational Training Promotion Fund system.

Along with it, a levy system[38] was introduced, through which employers could either pay a levy to the Vocational Training Promotion Fund[39] or provide in-plant training to employees. Through this approach, commonly known as a 'train or pay system', more than 70 per cent of companies mandated to provide in-plant training by the Basic Law for Vocational Training provided training in 1978, while the rest chose to pay the levy. Over the years, since the amount of levy that companies had to pay was smaller than the actual cost of in-plant training, a larger number of companies have preferred to pay the levy, and the percentage of companies that undertook in-plant training kept decreasing after 1978.

[38] The levy was estimated by the standard training cost per trainee per month and the proportion of trainees imposed by the government until 1986 and by a certain percentage of total wage of employees from 1987 to 1998.

[39] The government enacted the Vocational Training Promotion Fund Act in 1976, to provide a budget for (i) training of workers and trainees, (ii) curriculum development, instructor training and research, (iii) the operation of the Korea Manpower Agency (the present HRDKorea – conducting research on vocational training, developing vocational standards and qualification standards, and providing training), and (iv) loans for equipment and facilities to firms.

Figure 2 Implementation results of the compulsory training and levy system



Source: Sung Joon Paik (2014).

Because of the decrease in the youth population, ageing, and rapid technological advancement, which together caused a chronic shortage of quality labour in the 1990s, Korea needed to upgrade the skills of its workers. In this urgent policy context, Korea introduced the EIS, which became the backbone of the nation's continuing TVET system in 1995. With the new EIS, Korea shifted its vocational training focus from initial training to re-training of employed workers, through the implementing the Vocational Competency Development Program (VCDP).

The EIS is a comprehensive social insurance system that covers an employment security programme, the VCDP and unemployment benefit. While unemployment insurance is just an ex post and passive social insurance system of providing financial support to the unemployed, employment insurance (EI) is a preparatory and active labour market policy tool that aims to prevent unemployment and promote reemployment by providing vocational training (Korea, 2015*b*, p. 74). The EIS manages the EIF which was established based on the Employment Insurance Act 1993.

4.1. Employment Insurance Fund

The main purpose of the EIF is to secure and use financial resources needed for operating the unemployment benefit programme, employment security programme and VCDP. Under the Fund, an employment insurance fee has been levied on every workplace with one worker or more since October 1998. As of 2014, more than 1.9 million workplaces and 11.9 million workers were in the EIS (Korea, 2015*b*, pp. 60–1). EIF plays a critical role in promoting and providing vocational training for workers and the unemployed, which represents a major part of the national skills strategy as indicated in **Table 3.**

Table 3 Workplaces and workers in the Employment Insurance System

(unit: 1,000 places, 1,000 persons)

	2002	2005	2010	2011	2012	2013	2014
Workplaces	826	1,148	1,408	1,508	1,611	1,748	1,935
Workers Insured	7,171	7,966	10,131	10,675	11,152	11,571	11,931

Source: Korea (2015*b*, p.61).

The EIF for VCDP covers all industry sectors and occupations. It is used to provide financial support to employers for their employees' training, and to individual employees and the unemployed for their vocational training.

The EIF is governed by MoEL under the National Finance Act. MOEL manages EIF via HRDKorea, which is responsible for receiving and reviewing the refund requests from employers and reimbursing the training costs. EIF's yearly plan is prepared by MOEL and has to be approved by EI committees which consist of representatives of employers, workers, the government and someone who can represent the public good. The approved plan is tuned by Ministry of Strategy and Finance to fit the overall national budget plan, and finally submitted to Congress for approval.

4.2. EIF revenue and provision of subsidy

EIF money is collected from the following sources: i) employment insurance fees collected from employers and employees based on each individual worker's average monthly earnings; ii) instalment savings (a precaution should there be massive unemployment),[40] iii) profits from fund investments; iv) other sources such as additional dues, arrearage, and fines for default.

For employment security and VCDP, employers pay insurance fees to the EIF according to the rates of their employees' total wages determined by the government, which range from 0.25 per cent for enterprises with 1–149 employees to 0.65 per cent for enterprises with 150–999 employees (a lower rate of 0.45 per cent is charged to priority support enterprises) and 0.85 per cent for bigger enterprises (see **Table 4**). The national health insurance service is the fee-collecting agent for EIF.

[40] Under the EI Act, the minister of employment and labour should secure part of the EI fees collected for an 'installment saving' that amounts to less than 1.5 times the expenditure for the employment security and VCDP and 1.5–2.0 times the expenditure for unemployment benefit.

Table 4 Employment insurance fee rates

		Employee	Employer
Employment Security & VCDP	Enterprises with 1–149 employees	-	0.25% of payroll
	Priority support enterprises with 150 employees or more	-	0.45% of payroll
	Enterprises with 150–999 employees except priority support enterprises	-	0.65% of payroll
	Enterprises with 1,000 employees+	-	0.85% of payroll
Unemployment benefit		0.65% of payroll	0.65% of payroll

The revenue collected as an EI fee has been increasing gradually owing to the increasing number of insured workers. The EI fund for the unemployment benefit has seen a more significant increase resulting from equal contributions from employees. As of 2014, KW 8,039.7 billion had been collected in total, of which KW 2.281.1 billion (28.4 per cent of the total) was for the Employment Security Programme and VCDP, while KW 5,758.6 billion was for the unemployment benefit programme (71.6 per cent).

Table 5 Amount of insurance fees collected by programme

(unit: billion KW, %)

	2010		2011		2012		2013		2014	
	Fees	Δ	Fees	Δ	Fees	Δ	Fees	Δ	Fees	Δ
Total	4,247.8 (100.0)	0.7	5,071.7 (100.0)	19.4	6,328.1 (100.)	24.8	6,989.4 (100.0)	10.5	8,039.7 (100.0)	15.0
Unemployment benefit	2,736.2 (64.4)	0.8	3,416.3 (67.4)	24.9	4,298.4 (67.9)	25.8	4,864.1 (69.6)	13.2	5,758.6 (71.6)	18.4
Employment security	1,511.6 (35.6)	0.6	1,655.5 (32.6)	9.5	2,029.6 (32.1)	22.6	2,125.3 (30.4)	4.7	2,281.1 (28.4)	7.3
VCDP										
Collection rate	94.0		94.8		94.8		94.0		93.8	

Source: Korea (2015b, pp.112, 114).

Note: collection rate is the ratio of fund collected to the amount of fund expected to be collected.

In 2014, KW 1,207.5 billion was spent on the VCDP, of which KW 697.4 billion (57.8 per cent of the total subsidy) was for subsidizing the training of workers (3,674,000 trainees), KW 430.2 billion (35.6 per cent) for training the unemployed (284,000 trainees), and KW 79.9 billion (6.6 per cent) for public training (37,000 trainees).

4.3. EIF schemes

Several training schemes are financed under VCDP, which covers continuing training, pre-employment training and training of the unemployed.

→ **Financial support to employers**

- **Support to employer-provided training**: part of the training cost is reimbursed to employers that insure their employees with the EIS when they provide vocational training approved by MOEL. Employers either provide in-plant vocational training by themselves or commission training from external TVET providers. Vocational training is delivered in the form of group training, workplace-based training, distance training (via the internet or mail) or blended training.
- **Support to paid-leave vocational training**: EIF provides support to employers that allow paid leave to employees for mid-term and long-term vocational training (part of the training cost and trainees' wages, plus part of substitute workers' wages according to length of training and priority sectors).
- **Loans for vocational training facilities and equipment**: MoEL provides loans to employers, employer organizations, worker organizations, training foundations and training institutes designated by MoEL, for installing vocational training facilities and equipment. The maximum that can be paid is KW 6 billion (approx. US$5,114 million).

→ **Financial support to individual workers**

- **Training vouchers**: MoEL provides 'worker training vouchers' to individual employees who are insured by EIS and who choose to take vocational training, for training programmes recognized by MOEL. MoEL supports training expenses up to KW 2 million per employee per year (50–100 per cent of the actual training cost, with a ceiling of KW 5 million over five years).
- **Workers' vocational competency development**: MoEL provides financial subsidy to insured workers in the priority-support enterprises, short-term contracted workers, and self-employed insured workers when they take training courses at their own expense.

→ **Financial support to SMEs**

Additionally there is a special focus on providing financial support to SMEs through special schemes like the National HRD Consortium Project, which aims at providing customized vocational training to SME employees through a 'joint training centre' combining service providers, enterprises and higher education institutions. Other

initiatives in this regard include the establishment of industry-initiated HRD systems based on regional labour demand, in which MoEL provides financial support to vocational training programmes designed and implemented by the regional councils;[41] the creation of a SME learning infrastructure to accumulate and disseminate job-related knowledge; and providing support for core competency training programmes and apprenticeship training programmes.

→ **Financial support to apprenticeships**

MoEL supports companies that participate in government-initiated apprenticeship training programmes, and apprentices in these companies who take apprentice training for from 6 months to 4 years.

→ **Financial support to the unemployed**

MoEL issues vocational training accounts to job-seekers. Through this account, the MoEL provides a job-seeker with training costs up to KW 2 million per year (20–50 per cent of the training cost is paid by the trainee) and a training incentive if trainees attend more than 80 per cent of training days (Korea, 2015a, pp.15–16). For the unemployed who worked in companies that paid EI fees, EIS provides financial support, while the MoEL budget covers other disadvantaged unemployed.

4.4. Monitoring and evaluation

VCDP employs a market mechanism by comparing performances of TVET providers and providing information to beneficiaries to help them make informed decisions. This alone however does not ensure the efficiency of the system. The EIF Evaluation Centre, which has members such as the Korea Labour Institute, Korea Research Institute for Vocational Education and Training, private institutes and universities, conducts comprehensive evaluations of EIS performance to monitor the implementation and results of individual programmes and make proposals to improve their efficiency and effectiveness.

Since 2010–11, there has been an increasing effort to match the training offer with demand at the regional level. VCDP introduced a support policy for SME participation, exercising control on the number of training vouchers issued for the unemployed and increasing investment in the training and information infrastructure.

[41] By 2015, sixteen regional councils had been formed and were functioning. Each regional council consists of representatives of the local chamber of commerce and employers' organizations, workers' organizations, the local office of labour, the Small & Medium Business Agency, and the local office of education.

5. To conclude: evidence of the impact of Korea's main financing schemes

The existing TVET strategies and programmes reflect a paradigm shift in favour of continuing training of incumbent workers and the unemployed, instead of initial training, to improve the productivity of workers. A significant increase in the number of VCDP trainees is mostly a result of an increase in trainees enrolled for upgrading training (from an estimated 1,250,000 in 2000 to around 4,250,000 in 2010). The training sector has further opened up to make room for new actors and encourage school–industry cooperation. The transition in Korea's TVET strategies has taken place in the following ways:

- The training market is now open to private training providers as opposed to only government providers.
- The introduction of private players, government evaluations and financial incentives aimed at activating market mechanisms. The supply-based approach was replaced by a demand-oriented approach from the perspective of firms and industries, which indirectly also strengthened school–industry cooperation.
- The market-oriented approach in turn led to improved quality of training providers and empowered beneficiaries to take informed decisions.
- There is also a focus on increasing employability of marginalized groups, especially the aged, women, young people and the unemployed.
- The programmes place a strong emphasis on vocational training directed towards SMEs which would otherwise lack the financial resources to undertake worker training. Training hours on average have increased significantly post support from the EIS, for both SMEs and large enterprises. Furthermore, there has also been an observed decrease in training costs in companies, small and large, since 2010. However, companies benefiting from EIS support tend to demonstrate significantly higher training costs (between four and six times higher) than those not supported. Additionally, training costs in SMEs remained smaller than for large companies between 2010 and 2014. This indicates that the SMEs still struggle to provide training to their employees despite government efforts.
- The programmes target all industries and not only the manufacturing sector.
- The TVET focus is on strengthening school–industry linkages. The restructuring and downsizing of the vocational high schools (categorized into specialized and Meister high schools) through the employment-oriented and competency-based curriculum approach, together with the new financing mechanisms, seems to have brought about increased efficiency. The

employment ratio of vocational high school graduates increased from 19.2 per cent in 2010 to 35.4 per cent in 2013.

- For higher education, the focus of school–industry cooperation has changed from theory/research-based to commercialization-focused, with an emphasis on practical job skills training.

The role of employers continues to increase, with the school and industry linkage efforts and provision of vocational training to incumbent employees in cooperation with the government and TVET providers. There is not much mention of any significant role of trade unions except a brief mention in the Workers Vocational Skills Development Act about providing vocational training to employees. At the same time, the role of local government has remained limited to providing vocational training programmes in response to local market demand. Coordination of local and central government policy requires further work.

Despite significant reforms and progress, the Korean TVET system faces some foreseeable challenges. A decreasing high-school-age cohort size over the next 20 years caused by lower fertility rates will lead to a significant decrease in students in vocational high schools, junior colleges and university technology departments. This presents an important challenge in light of an anticipated increase in demand for technicians and engineers, while demand for workers with high school diplomas is expected to remain constant.

These changes in the policy environment indicate the urgent need for the Republic of Korea to enhance the productivity of workers to maintain national competitiveness in a sustainable manner. For this, it is integral to enhance the effectiveness of the national TVET system through close linkages between industries (employers and employees), TVET providers, and central and local governments with an integrated and comprehensive skills development framework, including financial mechanisms.

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COUNTRY BRIEF N°5. FINANCING TVET IN THAILAND

The Country brief on Thailand was produced as part of the global study “Financing TVET: a comparative analysis in six Asian countries”, AFD-UNESCO, by Mrs Siripan Choomnoom, independent consultant, with contributions from Mrs Christine Uhder Gonçalves (AFD) and Ms Anahat Kaur (AFD).

1. Socio-economic context

Of a total population of 67.24 million, 37.68 million persons or 56.9 per cent formed the labour force of Thailand in 2016. Children and young people aged between 3–21 are estimated at about 13 million. In 2016, of the total active labour force, 75.52 per cent had had primary or secondary education. The portion of the labour force with technical and vocational education and training (TVET) qualifications (vocational secondary or technical education) was only 3 million persons or about 8.45 per cent, while the remainder (16.03 per cent) had higher education qualifications (see **Table 1**).

Table 1 Employment rate and level of education in Thailand, 2012–16

	2012	2013	2014	2015	2016
Total labour force *(millions)*	39.58	38.31	38.26	38.37	37.68
Unemployment (%)	0.47	0.66	0.61	0.80	0.97
Education of labour force					
- Primary (%)	51.92	49.69	48.57	47.46	46.80
- Lower secondary (%)	16.54	15.94	16.04	15.90	16.10
- Upper secondary (%)	11.23	11.34	11.94	12.44	12.62
- Vocational secondary	3.16	3.46	3.52	3.39	3.55
- Technical	4.65	4.71	4.67	5.01	4.90
- Higher	12.29	14.86	15.25	15.80	16.03

Note: Figures for 2012–15 are the fourth quarter report, Figures for 2016 are the first quarter report

Sources: Thailand (2016c), NESDB (2016c).

During 2016, 0.97 per cent of the labour force was unemployed. The unemployment rate[42] increased from 0.47 per cent in 2012 to 0.97 per cent in 2016, which may be a result of recession in the world economy, Thailand's domestic flooding problem in 2012 and drought in 2014–15, and political problems during that period.

The agriculture sector, industrial sector, and service sector made up 29.72 per cent, 23.89 per cent and 46.18 per cent respectively of the labour force in 2016 (see **Table 2**). Agricultural products declined from 11.51 per cent of the national product in 2012 to 9.14 per cent in 2016 owing to drought and economic recession during the previous few years. The share of the industrial sector in the national product also declined from 28.13 per cent in 2012 to 26.99 per cent in 2015. The service sector was the only sector that recorded an annual average increase, of 6.68 per cent from 2012 to 2015, mainly attributed to the growth in the tourism industry.

Table 2 Employed persons by sector, 2013–16 (in millions)

	2013	2014	2015	2016
Total labour force	38.31	38.26	38.37	37.68
• Agriculture	13.00	12.70	12.30	11.20
• Non-agriculture	25.31	25.56	26.07	26.48
- Manufacturing	6.3	6.4	6.5	6.4
- Construction	2.4	2.3	2.3	2.6
- Wholesale/retailing	6.2	6.2	6.2	6.4
- Hotel/restaurant	2.5	2.6	2.6	2.7
- Logistics	1.0	1.2	1.2	1.3
- Education	1.2	1.2	1.2	1.2
- Others	5.6	5.6	6.0	5.8

Sources: NESDB (2016*d*), National Statistics Office (2016).

Most companies in Thailand are small and medium-sized (SMEs): the number of SMEs increased from 2.72 million in 2014 to 2.74 million in 2015, most of them being in the service, retail, and manufacturing/production sectors.

Although the labour force employed in the formal sector increased from 37.7 per cent in 2012 to 42.3 per cent in 2014, the majority of the labour force is still active in the informal sector (see **Table 3**).

[42] Unemployment includes seasonal unemployment in the agricultural sector.

Table 3 Labour force in the formal and informal sectors, 2012–14

	2012	2013	2014
Total labour force (millions)	39.58	38.31	38.26
Formal sector (millions) (%)	14.8 (37.7)	14.0 (36.5)	16.3 (42.3)
Informal sector (millions) (%)	24.8 (62.3)	24.3 (63.5)	21.9 (57.7)

Source: National Statistics Office (2014).

Persistent problems faced by the labour force in Thailand are:

- low productivity (notably related to the high share of informal employment);
- skills mismatch with the needs of industries, especially shortages of English, information and communications technology (ICT), mathematics, communication and technical skills.

The problem of skills mismatch is seen as a result of a lack of information on skill demand, limited education and career choices for young people, and a lack of incentive to training providers to ensure quality. Furthermore, a lack of incentive for firms to innovate and collaborate with the education and training system points to a missing link between skill demand and skill supply.

The main challenges for Thailand in strengthening its technical and vocational education and training (TVET) system are:

- improvement of quality, especially through training of teachers
- working in collaboration with industries
- implementation of competency standards
- improving TVET's public image
- strengthening STEM (science, technology, engineering and maths) and transversal skills.

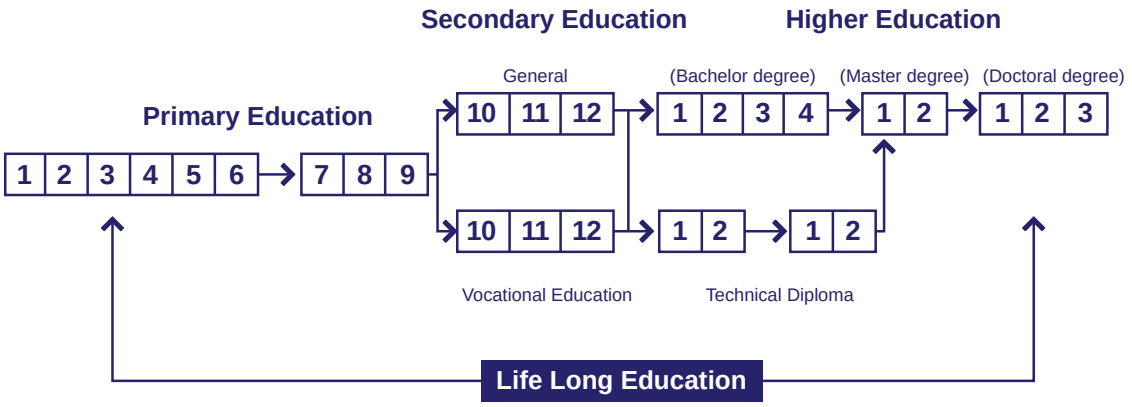
2. Structure and main figures of the TVET system

The Ministry of Education (MoE) is the main agency responsible for initial TVET. More specifically, the Office of the Vocational Education Commission (OVEC) is in charge of developing policy and strategies, qualifications, and controlling the national TVET qualifications framework. TVET programmes are offered by both public and private institutions. Additionally, other agencies and institutions offer specialized programmes outside MoE to help meet their labour needs, such as the military service, health service and other technical occupations.

In the 6–3–3–4 Thai education system, after three years of lower secondary schooling a student can continue education for three years in a general upper secondary or vocational secondary school. After completion of general or vocational secondary

education, students can further their education in a 2-year programme of technical education (see **Figure 1**). Short courses for vocational training are also provided by TVET institutions and local non-formal education centres of the MoE. Lifelong education programmes are provided through non-formal education, informal education, accumulative credit hours and validation of experience.

Figure 1 The Thai education system



A transition from general secondary to a technical education programme is uncommon. TVET is generally considered as a fallback option for families in Thailand. General secondary is generally considered more prestigious by parents and students as it is easier to continue to higher education. As in most countries, a university degree is preferred over a technical diploma. Furthermore, the poor-quality training delivered in TVET institutes, the lack of qualified staff and quality equipment, have resulted in a failure to attract students to TVET.

2.1. Initial training

Initial TVET is offered by both public and private institutions, and includes four types of qualification: short-course vocational training certificate, vocational secondary certificate, technical diploma and bachelor's degree. In 2016, OVEC supervised 426 public TVET institutions and 463 private TVET institutions with a total student population of 2,159,980 (as presented in **Table 4**).

Table 4 Number of TVET students and public and private institutions under the supervision of OVEC, 2016

	Total	Public	Private
Number of training institutions	889	426 (47.92%)	463 (52.08%)
Number of students			
Formal system	1,010,684	722,925 (71.53%)	287,759 (28.47%)
- Vocational secondary	677,400	475,501 (70.20%)	201,899 (29.80%)
- Technical education	328,597	242,737 (73.87%)	85,860 (26.13%)
- Bachelor	4,687	4,687	-
Non-formal/short-course trainees	1,149,296*	1,149,296	-

* This number of trainees does not include those in the short-course vocational training delivered by other agencies such as non-formal education centres of the MoE, Skill Development Centres of the Ministry of Labour, other private and NGO training providers.

Source: OVEC (2016).

Private training providers represent 52.08 per cent of all training providers, and train 28.47 per cent of students in the formal system (at vocational secondary, technical education and bachelor levels). They are mainly located in Bangkok (there are more than 100 private TVET institutions in Bangkok compared with only twenty-one public TVET colleges). Most public TVET institutions are located in provinces and rural areas (in each province, there are from three to five public TVET institutions depending of the size of the population), which has resulted from targeted efforts of the government to increase access to training for less privileged students in rural areas. This contributed to an increase of 2.9 per cent in labour productivity between 2011 and 2015 and an increase in the average years of education from 7.9 years in 2007 to 8.5 in 2015. Public TVET colleges offer mainly industry-oriented programmes, while 70 per cent of private TVET colleges offer business and commerce programmes. Agriculture and fishery TVET programmes are offered only by public institutions. The thirteen main types of public TVET institution are listed in **Table 5**.

Table 5 Types of TVET institution under OVEC

Type of public TVET institution	Nb.	Supervising ministry	Area of teaching	Level of certification / qualifications provided
Technical colleges	120	MoE	Industry	Secondary/post-secondary
Industrial and community colleges	137	MoE	Every area except agriculture	Secondary/post-secondary/ short courses
Polytechnic colleges	52	MoE	Every area except agriculture	short courses
Colleges of agriculture and technology	44	MoE	Agriculture	Secondary/post-secondary/ short courses
Vocational colleges	38	MoE	Home economics, arts and business	Secondary/post-secondary
Technology and management colleges	17	MoE	Every area except agriculture	Secondary/post-secondary
Commercial colleges	5	MoE	Business and tourism	Secondary/post-secondary
Ship building and technology colleges	3	MoE	Industry	Secondary/post-secondary
Colleges of business administration and tourism	3	MoE	Business and tourism	Secondary/post-secondary
Fishery colleges	3	MoE	Fishery	Secondary/post-secondary/ short courses
Arts and crafts colleges	2	MoE	Arts	Secondary/post-secondary
Goldsmith college	1	MoE	Jewellery and ornament	Secondary/post-secondary
Science-based technology vocational college	1	MoE	Industry	Secondary

Source: OVEC statistics, 2016, techno.vec.go.th

Public technical colleges mainly offer trade and industry-oriented programmes, while industrial and community colleges, located mostly in rural areas, provide vocational secondary and post-secondary training, and short-course vocational training for local people. Polytechnic colleges focus on short-course vocational training, and vocational colleges offer home economics, business and arts programmes. The rest offer programmes as indicated by their college names.

Private TVET institutions offer the same qualifications and programmes as public institutions. They were moved in 2015 from the supervision of the Office of Private Education under the Permanent Secretary Office to be under the supervision of OVEC.

Private TVET institutions have to comply with the National Vocational Education Qualifications Framework and are assessed by a committee from OVEC to make sure they fulfil all requirements, and in order to be accredited through the MoE Internal Quality Assurance System and the External Quality Assurance System of the Office of National Education Standards Quality Assessment of the Prime Minister Office. This process is the same as for public TVET institutions in order to strengthen the quality of TVET, whether public or private. Most private institutions are small and provide training in only a few areas.

The number of TVET students in 2015 was 674,544, 55 per cent of whom were in industry programmes and 33 per cent in business/commerce programmes. Students in agricultural programmes made up 3 per cent (see **Table 6**). A 2.8 per cent increase in the number of students in 2016 can be attributed to the encouragement given to the private sector to participate in improving TVET quality.

Table 6 Number of TVET students in public TVET institutes, 2015/16 academic year

TVET programme		Qualifications			
		Vocational secondary certificate	**Technical education diploma**	**Degree**	**Total**
- Industry	2015	241,457	126,124	2,421	370,002
	2016	247,420	130,413	4021	381,854
- Business/commerce	2015	136,829	85,199	729	222,757
	2016	134,947	85,823	1684	222,454
- Arts	2015	10,009	1,728	90	11,827
	2016	11,033	1,815	106	12,954
- Home economics	2015	13,907	5,096	55	19,058
	2016	14,718	5,988	222	20,928
- Agriculture	2015	13,449	8,200	69	21,718
	2016	14,447	8,246	193	22,886
- Fishery	2015	520	1,129	-	1,649
	2016	420	1,084	64	1,568
- Tourism	2015	15,670	4,762	229	20,661
	2016	17,463	5,639	343	23,445
- Textile	2015	279	64	-	343
	2016	270	87	-	357
- ICT	2015	2,689	3,557	283	6,529
	2016	3,606	3,642	193	7,441
Total	**2015**	**434,809**	**235,859**	**3,786**	**674,544**
	2016	**444,324**	**242,737**	**6,826**	**693,887**

Source: OVEC Statistics, 2016, techno.vec.go.th

Every student in both secondary and post-secondary must spend at least one semester in a work-based learning programme. Several different models exist in Thailand:

- Formal programmes, with one semester spent training/learning in an enterprise.
- Dual vocational training programmes, in which students spend most of their time in enterprises under an apprenticeship system. Every programme in both secondary and post-secondary vocational education can be delivered under the dual education mode. The number of students enrolled in dual training depends on the availability of placements. The learning periods in TVET institutions and in the workplace depends on the agreement between the industry and the training institutions, as well as students and parents: students may spend two days at college and three days in the workplace, or might alternate week by week.
- Accumulative programmes or non-formal TVET programmes, which are offered to those out of the schooling system : OVEC defines rules and regulations for the validation of learning and experience. A maximum of two-thirds of total credit hours can be accredited for prior learning. One out of three assessors must be an industry representative. Trainees are provided with additional courses after validation of their experience or assessment of prior learning.

The number of industries offering apprenticeship training has been increasing fast, accompanied by a significant increase in the proportion of students doing apprenticeships (from 5.6 per cent of all students in 2012 to 16.1 per cent or 111,821 students in 2016). There were 3,826 companies involved in apprenticeship training in 2012, which multiplied by more than 2.5 to reach 13,686 industries in 2016. This number was expected to reach 17,791 in 2017. This has resulted from the government policy on public and private partnerships for TVET, and an incentive of 100 per cent tax exemption for apprenticeship expenditure, subsidy for training expenditures, and involvement of the private sector as leader in solving problems and developing TVET policy and delivery system, as well as the need of industries for qualified technicians.

Table 7 Number of dual vocational/apprenticeships under OVEC, 2012–16

Academic year	Number of Apprenticeship and total students					Number of organizations involved
	Secondary	Post-secondary	Total	Total students	% of apprenticeships	
2012	22,257	15,437	37,694	661,326	5.7	3,826
2013	24,292	19,076	43,368	652,584	6.6	7,826
2014	32,129	29,155	61,284	652,817	9.4	8,098
2015	42,968	48,480	91,448	674,544	13.6	10,527
2016	54,520	57,301	111,821	693,887	16.1	13,686

Sources: OVEC (2016), National Education Council (2016).

Table 8 indicates that work-based training has mainly developed in the trade and industry sectors (61.7 per cent of students in 2016), followed by the business sector (22 per cent of students). TVET institutions that are located near a strong industrial and business environment, such as those in Bangkok and on the Eastern Seaboard, have more easily developed apprenticeships. OVEC provides guidelines and related documents for training institutions to work collaboratively with industry. Trainers in companies must be qualified according to the standards of the apprenticeship programme to supervise an apprentice.

Table 8 Comparison of apprenticeship training by areas of study, 2016

Areas	Secondary	Post-secondary	Total	%
Total	50,804	61,017	111,821	100
Trade and industry	30,963	37,975	68,938	60.6
Business	8,971	15,638	24,609	21.4
Arts	3,933	298	4,231	3.7
Home economics	1,054	2,123	3,177	2.8
Fishery	75	390	465	0.4
Tourism	5,550	3,949	9,499	8.5%
Textile	62	9	71	0.1%
ICT	196	635	831	0.7%

Source: http://datacenter.vec.go.th (Accessed 22 June 2016.)

2.2. Continuing training

Continuing training and lifelong learning are promoted extensively in Thailand. These are relevant not just to those who failed to complete 12 years of formal education, but also to those who want to upgrade their skills.

Non-formal education is provided by non-formal education centres under MoE, mostly for drop-out students who did not complete 9 years of compulsory education or 12 years of free education, and also by the Skill Development Department of the Ministry of Labour (MoL). Individuals have the opportunity to take skill standard testing to obtain a skill certificate to qualify for jobs, upgrade their skills, and acquire new skills for changing jobs. Individuals who completed TVET at secondary level can also continue their education to prepare for a technical diploma, and later a degree.

Continuing training is offered by most public and private institutions, mostly in weekend and evening classes, especially in provinces where industries and service businesses are located. Assessment of prior learning can also be carried out. Non-formal TVET or short-course vocational training was delivered to 1,149,296 students in 2016. These short courses are provided by OVEC public TVET institutions, particularly by the fifty-two polytechnic colleges and 137 industrial and community colleges.

The MoL Department of Skill Development (DSD) is responsible for skill training for out-of-school young people, in the form of pre-employment training, skill upgrading, and training for changing jobs. National skill standard testing is also offered for those who want to qualify for jobs and obtain the minimum wage. Industries are encouraged to train their own staff and have them take national skill standard testing for certification through funding incentives (see **Section 3**). In 2016 4,031,252 individuals received training through DSD, of whom 3,789,008 took in-house training in companies.

3. TVET funding

3.1. Funding of initial training through the TVET public budget

Of total gross domestic product (GDP), the public budget allocated to education was 4 per cent between 2014 and 2016 (according to MoE figures). The education budget in 2016 was THB 460,277 million or 20.21 per cent of the national budget (which amounted THB 2,720,000 million in 2016). It covered education expenditure by MoE, Bangkok Metropolitan Administration, other local administrations and other agencies and public organizations under MoE.

The budget allotted to OVEC to manage the vocational education system is very small compared with that for higher education. In 2015 24 per cent of the education budget was allocated to higher education (which accounted for 15 per cent of the student population), whereas only 4 per cent of the budget went to vocational education, which accounted for 4 per cent of the student population (see **Table 9**). This is especially interesting as higher education institutions are additionally entitled to charge tuition to students (estimated at THB 30,000–50,000 per student per year, approx. US$840–1,400), contrary to vocational education for which training fees at not applied at secondary level, and only reach THB 10,000–12,000 (US$280–336) per year per student at post-secondary level.

Table 9 Comparison of education budget by level of training in 2015 and 2016 (THB millions)

	Budget 2015	% of education budget	Number of students	% of student population	Budget 2016	% of education budget
Basic education	315,058.3	71.04	9,173,427	79.13%	319,321.0	69.37
Vocational education *(vocational secondary and post-secondary)*	20,952.0	4.72	674,113	4.83%	22,289.8	4.83
Higher education	107,477.9	24.24	1,745,692	15.06%	118,667.7	25.80
Total	***443,488.2***	***100***	***11,593,232***	***100***	***460,277.7***	***100***

Source: Thailand Budget Brief Fiscal year 2016, www.bb.go.th

Government finances TVET at secondary level in both public and private TVET institutions. TVET expenses, amounting to approximately THB 22 billion in 2016, are divided into five categories: personnel (accounting for 43.9 per cent), operation (14.9 per cent), investment (10.9 per cent), subsidy (24.0 per cent) and other expenses (7.5 per cent) (see **Table 10**). The personnel budget was predominant in the past.

The important increase that can be noticed in 2017 is due to the integration of subsidies to private institutions (previously under the MoE's Permanent Secretary Office) into OVEC's budget. Subsidies to private TVET institutions therefore increased from 23–24 per cent during 2013–16 to 36 per cent in 2017.

Capital expenditure (investment in equipment and learning facilities) accounted for 9.2 per cent in 2017. This insufficient budget has caused there to be a lack of the latest and sufficient learning equipment and facilities in many institutions.

Table 10 Expenditure ratios for the TVET budget, 2013–17 (THB)

Expenditures	2013	2014	2015	2016	2017
Total	21,519,866,700	20,773,251,400	20,952,036,900	22,289,800,900	27,383,964,000
- Personnel	9,628,283,700 (44.7%)	8,966,633,300 (43.2%)	9,290,636,400 (44.3%)	9,577,784,400 (43.9%)	10,003,834,900 (36.6%)
- Operation	3,260,861,000 (15.2%)	3,059,943,500 (14.7%)	2,989,108,800 (14.2%)	3,323,573,600 (14.9%)	3,290,239,000 (12.01%)
- Capital	2,342,314,000 (10.8 %)	1,596,308,700 (7.7%)	1,932,399,900 (9.2%)	2,394,083,600 (10.7%)	2,535,874,800 (9.2%)
- Subsidy	4,991,376,400 (23.3 %)	5,002,066,600 (24.1%)	4,933,334,700 (23.5%)	5,363,622,200 (24.0%)	9,850,380,700 (36.0%)
- Other	1,297,051,600 (6.0 %)	2,148,299,300 (10.3%)	1,806,557,100 (8.8%)	1,630,737,100 (7.5%)	1,703,634,600 (6.2%)

Source: OVEC (2016).

Each public institution under OVEC submits a budget based on its needs and/or development plan. OVEC organizes a committee to consider the requests. The Budget Bureau under the Office of Prime Minister sets a ceiling of expenditure for MOE and OVEC, which then must prioritize among the claims. Government policies and MoE policies, including the priorities in the TVET development plan, are taken into consideration in organizing budgeting proposals and allocations.

For secondary and post-secondary public institutions, the TVET budget is calculated based on the following factors:

- past performance: students' results at the Vocational National Education Test (V-Net), internal quality assessment score, external quality assessment score, skill standards testing score, and employability of graduates
- policy of programme development: 'fix-it centres', where students go into the community to provide technical and vocational services (repair, maintenance, to get practical experience, teach people to repair their own machines) or

centres of excellence (automotive, logistics, agriculture), and the inclusion of apprenticeships in curricula are particularly well noted

- number of students and teachers.

The training institutions presenting a good performance during the past year are allocated THB 500,000–2,000,000 (US$14,000–56,000) depending on the public budget available.

Subsidy for TVET private secondary institutions varies by area of study and profile of students. For example, TVET institutions providing training to disadvantaged groups, poor households or disabled students are subsidized higher than for regular students. Subsidy for a three year-vocational secondary programme in a private institution is calculated based on the criteria presented in **Table 11**.

Table 11 Subsidy for TVET students on secondary vocational programmes on private TVET institutions in 2016 (THB)

Subsidy per head per year (for 3-year courses)	Type of student		
	Regular	Charity	Disable
1. Cost per head			
- Industry programmes and ICT	17,031.50	22,822.50	22,822.50
- Commercial programmes and tourism	15,070.50	19,212.50	19,212.50
- Home economics	15,404.50	16,552.50	16,552.50
- Arts	16,379.50	19,302.50	19,302.50
- Agriculture/fishery	16,171.50	20,222.50	20,222.50
- Tourism	15,070.50	19,212.50	19,212.50
- ICT	17,031.50	22,822.50	22,822.50
2. Textbooks	2,000.-	2,000.-	2,000.-
3. Learning equipment	460.-	460.-	460.-
4. Uniform (for first semester)	900.-	900.-	900.-
5. Student quality improvement	950.-	950.-	950.-

Source: Bureau of Policy and Plan, Office of the Vocational Education Commission, 2016.

Monitoring and reporting of public funds is required every three months to ensure the effectiveness and efficient use of the budget. Annual inspections of public fund use are also organized.

3.2. Funding of pre-employment and continuing training through Department of Skills Development

DSD under the MoL also provides funding for skills training (pre-employment, upgrading, and changing job training) and testing. DSD's budget was THB 2,182 million (US$61.174 million) in 2016 (see **Table 12**). The budget is mainly used for pre-employment training, delivered by seventy-seven skill development centres at provincial level, but also for subsidies to companies that provide pre-employment training or apprenticeship.

Companies that organize in-house training according to DSD-approved curricula, and apprenticeship according to OVEC's TVET curriculum, receive the following subsidies:

- expense of trainers: max THB 1,200 (approx. US$34) per hour for not more than 8 hours a day
- transportation of trainees to training locations: reimbursement based on real expenses, and not more than THB 1,000 /trip (approx. US$28) + real expenses for daily transportation, not more than THB 100/day
- daily allowance for trainees: THB 200 (approx. US$6)
- accommodation: max. THB 3,000(US$84)/month or THB 100(US$3)/day
- course uniform: real expenses, not more than THB 2,000 (US$56)
- safety equipment and basic training materials and equipment: real expenses, not more than THB 3,000 /trainee
- accident insurance: THB 3,000 (US$84).

Also, investment in training equipment and machinery leads to 100 per cent income tax exemption on the amount invested.

In 2016, DSD trained 4,031,252 individuals, of whom 3,789,008 were trained in partnership with industry. For in-house training by companies, those figures include pre-employment training, apprenticeship training, and training for existing employees.

Table 12 Number of individuals trained by DSD and in-house training by companies according to the Skill Promotion Law, 2014–16

		2014
Project 1	Strengthening skilled labour for ASEAN Economic Community (AEC)	37,040
Project 2	Skill development for labour market demand	4,294,363
Project 3	Skills development for competitiveness	128,332
Project 4	Training to meet skill standards required for minimum wage	15,469
	Total	**4,475,204**
	of which In-house training by companies	4,220,799
		2015
Project 1	Good governance training project	589
Project 2	Strengthening skilled labour for AEC	151,611
Project 3	Skill training for royal projects	13,342
Project 4	Skill development for labour market demand	4,528,660
	Total	**4,694,202**
	of which In-house training by companies	4,456,177
		2016
Project 1	Good governance training project	200
Project 2	Strengthening skilled labour for AEC	127,435
Project 3	Skill training for royal projects	16,456
Project 4	Skill development for labour market demand	3,887,161
	Total	**4,031,252**
	of which In-house training by companies	3,789,008

Sources: Ministry of labour, Important Labour Information, September 2014, 2015, 2016- www.mol.go.th

DSD also encourages those who need a skill standard certificate to pass national skill standards testing, and provides funding for it. The number of people who took national skill standard testing was 42,392 in 2014, 45,864 in 2015 and 72,025 in 2016.

3.3. Company finance and the Skills Development Fund

Besides the high involvement of companies in delivering pre-employment training and apprenticeship, Thailand has implemented a 'train or pay' approach. The 2002 Skill Development Promotion Act (improved in 2014) aims at encouraging employers to train their employees. According to this Act, companies with 100 employees and more have to provide yearly skill training to at least 50 per cent of their employees. In case of failure to do so, the company is liable to pay 1 per cent of the current legal minimum wage of the past calendar year according to the following calculation: THB 300 per day (approx. US$8.41 in 2016) x 30 x 12 months x number of employees who have not been trained. The amount is paid to a Skills Development Fund to finance training in Thailand. If the company does not comply, it is liable to pay 1.5 per cent of the outstanding contribution per month.

To be allowed under the tax exemption scheme, training organized by companies has to meet certain requirements: i) the curriculum must be approved by DSD; ii) it has to be work-relevant; iii) it should last at least 6 hours for upgrading training and at least 18 hours for changing-job training; iv) the number of trainees should not exceed 50 persons/group for group training, and 25 persons for practical training; v) trainees should attend at least 80 per cent of the whole training session.

The following companies are not subjected to the tax: 1) government sector employers, 2) foundation/charitable organizations, 3) non-profit organizations, 4) employers in cultivation and planting, fishing, forestry, animal husbandry or salt farming, 5) seasonal employers. According to the law, companies can submit their contribution at any skills development centre in cash or cheque. The amount is credited to the 'Skills Development Fund Account', which is an account in the Ministry of Finance separated from government budget and that can be used for the objectives of the Fund.

The Skills Development Fund (SDF) is made up partly from a government contribution and partly from employers' contributions. It aims to serve as a revolving fund for skill development of incumbent workers as well as new or potential workers. The SDF therefore does not subsidize training (it does not make grants to companies), but grants loans.

According to the Skills Development Promotion Law, resources from the SDF may come from the following sources:

- government contribution: resources transferred to the SDF according to the approval of the cabinet and administration of Ministry of Labour and Welfare on Skill Development Fund 1996 (from the previous law)
- tax paid by employers
- funding and property from donations
- interest on investments.

Employers, employees and training centres can obtain a loan from the SDF for training purposes. The loan must be repaid within 12 months with a 1 per cent interest rate.

The SDF is administered by the Skills Development Promotion Committee, chaired by the permanent secretary of the MoL, with sixteen members comprising representatives from the Ministry of Finance, Ministry of Sciences, Technology and Environment, MoE, Ministry of Industry, Budget Bureau, Office of Investment Promotion, Tourism Authority, Chamber of Commerce Federation of Thai Industry, employers, employees, two specialists, and the director general of the Skill Development Department who acts as secretary.

The Department of Skill Development (DSD) has been assigned to manage the Fund and mobilize it according to the following criteria:

- loans to trainees for training expenses according to the Skill Development Promotion Law (the training should last at least 30 days)
- loans to trainers, skill standard assessors, training providers and industry according to the Skill Development Promotion Law
- assisting with or subsidizing other skill development activities according to the policy of the committee
- expenses for fund administration to a maximum of 5 per cent of annual skill development funding.

An annual report on SDF administration must be approved by the Office of the Auditor General of Thailand and submitted to the Cabinet within six months after the end of fiscal year.

In 2016, the resources of the SDF amounted to THB 897 million (approx. US$25.148 million). This is a cumulation of all resources since the creation of the SDF (since its funding is provided in form of a loan). The tax paid by companies that did not provide training amounted THB 61.87 million (approx. US$1.734 million) in 2016. No information was available on the share of various contributors (State, companies and interest).

It is also unclear how many individuals are trained with the loans provided by SDF. No separate data could be obtained on the SDF: the statistics available on the number of trainees are cumulated statistics between the number of trainees supported by SDF and those directly supported by DSD. The number of industries and employers that obtained a loan from the SDF was not available either.

Table 13 Resources of SDF from 2014 to 2016 (THB million)

	2014	2015	2016
Cumulative resources of SDF	767.25	760.58	897.21
Supporting fund (from industries) paid that year	53.93	61.78	61.17
Payment from debtors	36.59	27.53	13.35

Sources: MoL, Important Labor Information, September 2014, 2015, 2016: www.mol.go.th.

3.4. Income-generating activities by training providers

All TVET institutions, public or private, may carry out income-generating activities. Through these, students can help earn money for themselves and for the institution, while developing their own skills. Some institutions also participate in community projects such as small-scale construction, repairing houses and facilities, and electrical wiring, to build student experience of real-life work situations and to develop awareness of the importance and the relevance of TVET in their community.

3.5. Families and students' contribution to TVET

For students at upper-secondary level, 3-year programmes are provided for free in public TVET institutions. Private TVET institutions at secondary level receive subsidies from the government for upper-secondary training, and are allowed to take additional funds from students up to the ceiling fixed by the Budget Bureau (THB 5,000–15,000 / US$140–420) (see **Table 14**).

Table 14 Subsidy for secondary students in private TVET institutions and maximum additional funding from students in 2014-2015 (THB)

	Public TVET subsidy per head	Private TVET subsidy*	Maximum additional funding from students (secondary level)	
Industry	22,492	16,701.50	5,791.50	25.7%
Business	19,910	14,740.50	5,169.50	25.9%
Arts	20,840	16,049.50	4,790.50	22.9%
Agriculture	25,520	15,841.50	9,678.00	37.9%
Home economic	29,970	15,074.50	14,895.00	49.6%
Fishery	25,520	15,841.50	9,678.50	37.9%
Tourism	19,910	14,740.50	5,169.50	25.9%
Textile	22,492.50	16,701.50	5,791	25.7%
ICT	22,492.50	16,701.50	5,791	25.7%

Source: OVEC (2016).

For post-secondary training, students in public training institutions pay tuition fees of THB 10,000–12,000 per year (approx. US$280–560), which is used to buy additional training material and cover teaching expenses. Tuition fees in private training institutions are twice this level or higher.

All TVET students are eligible to apply for an education loan to cover their living allowance at secondary level, and for tuition and living allowance at post-secondary level. This is repayable after graduating and gaining employment.

3.6. Official development assistance

ODA in Thailand is limited. During the past ten years, Thailand received on average US$1.19 million ODA per year, all of which came in the form of grants (see **Table 15**).

Table 15 Total ODA invested in vocational training and advanced technical and managerial training from 2006 to 2015 (in US$ million, constant prices)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total ODA	*1.094*	*2.914*	*1.345*	*1.118*	*1.139*	*0.750*	*0.838*	*1.262*	*0.411*	*1.125*
Vocational training	0.474	0.771	1.089	0.966	0.665	0.262	0.340	0.130	0.198	0.603
Advanced technical /managerial training	0.620	2.143	0.256	0.152	0.474	0.488	0.498	1.132	0.213	0.522
Vocational training	0.474	0.771	1.089	0.966	0.665	0.262	0.340	0.130	0.198	0.603
- DAC countries										
Australia			0.015							
Austria					0.018					
Canada										0.002
France							0.003	0.002	0.005	
Germany			0.014		0.013					
Ireland	..	..	..	..	..	..	0.003	0.004		
Italy	..	..	..	..	..	..	..	..	..	0.037
Japan	0.433	0.771	0.836	0.934	0.625	0.204	0.334	0.128	0.069	0.050
Republic of Korea	0.041	..	0.224	0.032	0.010	..	..	..	0.121	0.511
New Zealand	..	..	..	..	..	..	..	..	..	..
- Multilateral donors										
ILO							0.003			
Advanced technical / managerial training	*0.620*	*2.143*	*0.256*	*0.152*	*0.474*	*0.488*	*0.498*	*1.132*	*0.213*	*0.522*
- DAC countries	0.620	2.143	0.256	0.152	0.474	0.488	0.498	1.132	0.213	0.522
Australia	0.068	0.014	0.034	0.017	0.019	0.018	..	0.006	..	..
Germany	0.019	0.008	..	0.011	..	0.007	..	..	..	..
Japan	0.513	..	..	..	..	..	..	..	..	..
Republic of Korea	0.019	0.042	..	0.051	0.109	0.008	0.018	0.076	0.009	0.005
United Kingdom	..	..	..	..	0.268	0.005	0.005	..	0.004	0.015

Source: http://stats.oecd.org, data from 22 May 2017.

4. To conclude: evidence of impact of Thailand's main financing schemes

MoE has made significant efforts to develop policies for strengthening TVET:

- Linking training provision and labour market demands: a higher budget is being allocated for staff development, curriculum improvement, and integration of occupational competency into existing curricula in response to an increasing demand for labour.
- Development of a national qualification framework: the NQF aims to link education qualifications to occupational standards, and provide opportunities to those who have previous work experience. There is also an effort to develop linkages and comparisons with the ASEAN Qualifications Reference Framework (AQRF). As such, every agency and institution providing TVET programmes is mandated to use the National Vocational Qualifications Framework and seek approval from OVEC.
- Increase in inclusiveness of TVET: DSD financing for skill development of out-of-school individuals at training centres helps them acquire a skill development

certificate and skill standards in order to qualify for minimum wage employment. The impact of such incentives needs to be evaluated.

- Focus on workers in the subsistence economy: The subsistence economy has not been ignored in the financing of TVET in Thailand. Agricultural programmes for example receive higher funding than other programmes. However, monitoring and follow-up of the impact of these schemes is needed in the long run.
- Focus on TVET in rural areas: Thailand's workforce shows high internal mobility from rural areas to cities, particularly Bangkok. Agricultural programme graduates may stay in their local areas, and a small number end up working in the food industry. In 2015, public funding of THB 1,606.62 million was allocated for strengthening rural employment, and water resource development, THB 3,501 million for income generation and agriculture training.
- Practical skills development: In the service sector there is increased financing for English programmes since English-speaking workers (as are many Filipinos) find jobs more easily than Thai workers. An improvement in English competency is also an effort in the direction of facilitating a smooth integration into ASEAN. Furthermore, more than 2,000 workers were trained to work in foreign countries by DSD from 2014 to 2016.

Investments are being made in skills development in emerging sectors such as high-speed trains, robotics and automation, and the aviation industry. These investments are focused on staff development, curriculum development, and strengthening relationships with in-country private-sector and international experts. However, for an upgraded training curriculum to be developed in such emerging technological fields, teachers and instructors also need to be trained to use new technology through participation in selected in-company training programmes. There are also needs to hire experts from in-country companies and design teaching and learning processes abroad. Special new projects for the fiscal year 2017 aimed to finance economic transformation, adoption of new technologies and innovation. The projects involved:

- strengthening TVET labour production in ten industrial key areas from selected institutions: THB 32.7 million
- strengthening TVET centres of excellence: THB 26.7 million
- strengthening ICT for learning and teaching: THB 83.6 million.

These three projects organized by OVEC in cooperation with related industries mainly focus on identifying needed competencies for curriculum development, teacher training in industries, work-based or apprenticeship training, and provision of training equipment in TVET institutions. OVEC finances those projects, and industries take part in providing needed competencies for curriculum development, programmes to provide industrial experience to teachers, work-based learning for students, and guidelines for a competency-based curriculum and delivery process.

There have also been important efforts in the direction of diversification of resources available for TVET by incentivizing private-sector involvement in the sector. TVET colleges located in industrial areas such as Bangkok or nearby provinces, the Eastern Seaboard industrial development area, and other active economic areas, have succeeded in taking advantage of their environment. The statistics presented in this country report shows a very high involvement of industry in delivering in-company training (through the train or pay approach, providing apprenticeships in initial TVET or pre-employment training for young people). Existing examples of partnerships also demonstrate that enterprises participate in curriculum development, teacher upgrading, knowledge and experience sharing, and also in direct funding of TVET institutions. For example, the petrochemical industry group (six companies) of Rayong Province, on the Eastern Seaboard, financed Mataphut Technical College, providing THB 9–10 million (US$280,000) every year from 2008 to 2018. These resources have contributed to providing full scholarships to students, funding additional salaries for teachers and administrators, and additional learning media and resources for quality improvement.

MoE has also made significant efforts aimed at strengthening cooperation with industries for a better matching of supply and demand of TVET. In 2014, a Steering Joint Public and Private Committee for Vocational Education (PPC for VE) was established, as were thirty-three occupational cluster subcommittees to support the central Steering Committee. These subcommittees are chaired by a leader of industrial representatives and comprise representatives of leading industries in Thailand such as automotive, electronics and electricity, ICT, logistics, food processing, tourism, petroleum and petrochemicals. The main objectives of the clusters are to produce twelve operational frameworks: 1) analysis of TVET labour demand; 2) analysis of TVET labour supply; 3) identification of competency standards ; 4) curriculum improvement; 5) selection and implementation of competency-based curricula in pilot institutions, and provision of dual vocational education or apprenticeships; 6) training of teachers and trainers in companies; 7) development of learning and teaching media and equipment; 8) improvement of learning environment; 9) strengthening, testing and assessing the system; 10) monitoring and evaluation; 11) testing occupational standards; 12) promotion of work placement and career path development. PPC for VE Committees comprise industrial representatives, education leaders, teachers, and representatives from related agencies and organizations (skill standard agencies, universities, Federation of Thai Industry, and chambers of commerce). These committees were active and helped improve the quality of TVET, especially, in terms of identification of demand, competency standards for curriculum development, workplace learning experience of teachers, and apprenticeship programmes. The private sector has also played an important role in providing policy guidelines through their participation in the Vocational Education Commission, the National Qualifications

Framework Committee and the Public and Private Joint Committee for Vocational Education.

Finally, OVEC pointed out that funding of training institutions through cost per head, without considering the location or size of the training institution, is not efficient: colleges in dynamic economic areas have greater opportunities to develop partnership with industries, receive subsidies and place their students than smaller colleges based in rural areas. Small colleges with fewer than 500 students experience difficulties in sustaining themselves compared with bigger training institutions. It concluded that the budget allocation process to training institutions should be adapted to consider size, location, and capacity of teachers and administration in developing partnerships, in order to be more efficient.

To conclude, it is important to underline the need to prioritize the following issues:

- Increase investment in basic equipment.
- Location, trainees' profile, environment, and size of training institutions need to be taken into consideration for budget allocation.
- Accountability mechanisms for public funding of TVET need to be established.
- A long-term plan and budget allocation for integration and adaptation of TVET to new technologies and innovation need to be encouraged.

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COUNTRY BRIEF N°6. FINANCING TVET IN VIET NAM

The Viet Nam Country brief was produced as part of the global study “Financing TVET: a comparative analysis in six Asian countries”, AFD-UNESCO, by Mr Tri Dzung Nguyen, managing director of Hung Viet Consultant JSC, with the valuable support of Mr Duong Duc Lan (consultant) and the General Department of Vocational Training (GDVT) and Mrs Christine Uhder Gonçalves (AFD), with contributions from Ms Anahat Kaur (AFD) and Mrs Ana Rosa Gonzalez-Martinez, Ecorys.

1. Socio-economic context

The Vietnamese economy has recently undergone significant structural changes. The *Doi Moi* (political and economic) reforms conducted since 1986 aimed at a greater liberalization of the economy, and progressively led to higher per capita income, turning Viet Nam from a poor country to a lower-middle-income country. Regional and international integration agreements like the Viet Nam-European Union free trade agreement and the Trans-Pacific Partnership agreement should lead to further structural changes to the economy, notably concerning the skills needed to boost its productivity and remain competitive.

As a consequence of the reforms, productivity in Viet Nam has improved significantly (plus 51 per cent between 2010 and 2015) but is still low compared with other ASEAN countries such as Singapore, Malaysia and Thailand. According to International Labour Organization (ILO) statistics (see **Table 1**), ASEAN’s labour productivity in 2015 reached US$20,458 /worker, while Viet Nam’s only reached US$9,431/worker, which was more than Cambodia, but less than Laos. Singapore’s labour productivity is almost fifteen times higher than that of Viet Nam, while those of the Republic of Korea and Malaysia are respectively seven and five times higher than that of Viet Nam.

Table 1 Comparative data on labour productivity in selected countries in Asia

Output per worker (GDP constant 2011 international $ in PPP)	2005	2010	2015
ASEAN	14,789	17,166	20,458
Cambodia	3,922	4,454	5,937
Indonesia	16,259	18,818	22,685
Korea	54,057	62,968	68,655
Laos	6,387	8,276	10,790
Malaysia	44,768	50,229	54,652
Singapore	118,576	133,814	140,993
Thailand	20,271	23,428	26,368
Viet Nam	6,226	7,724	9,431

Source: ILO Stats, retrieved 12 June 2017.

In 2013, Viet Nam had a labour force of 53.2 million (15 and above age group), of whom 48.7 per cent were women. The Vietnamese labour force grows by approximately 1.2 million every year (Viet Nam, 2013). It is disproportionally distributed between rural and urban areas and between socio-economic regions: 69.9 per cent of the labour force live in rural areas and 63.5 per cent are concentrated in three regions of the country (Red River Delta, North Central and Coastal Region, and Mekong River Delta).

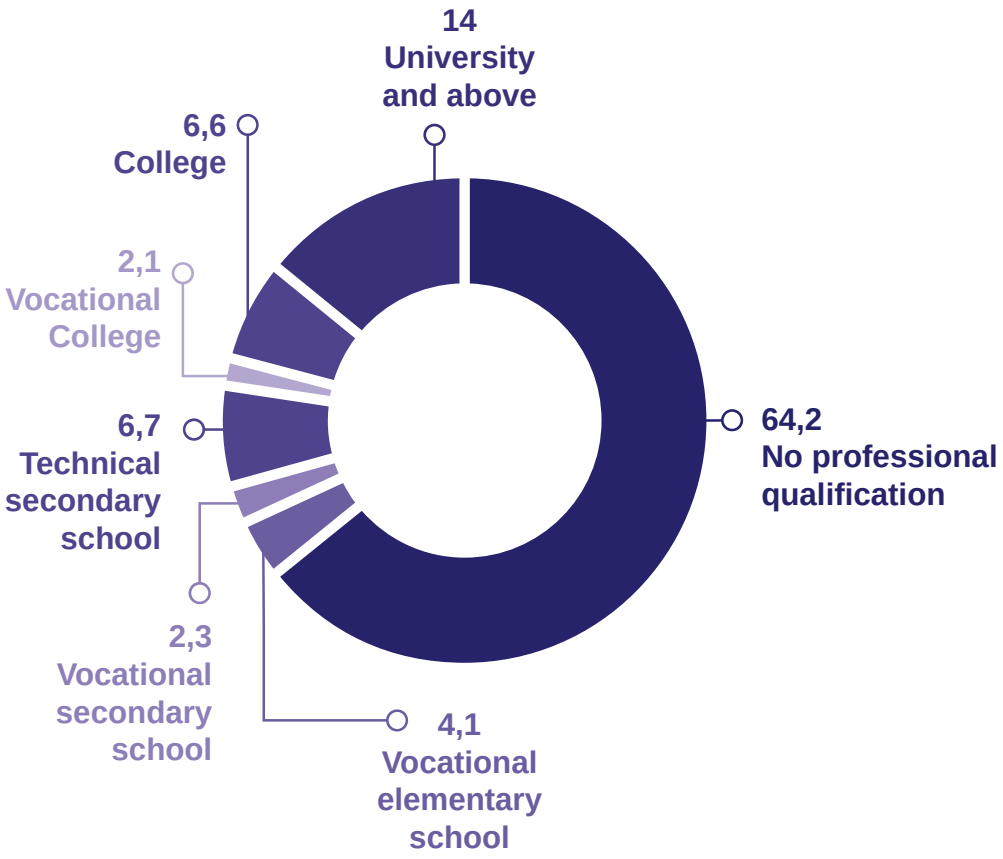
Agriculture, forestry and aquaculture account for the highest proportion of employment at 46.8 per cent; the service sector has 32 per cent, and the industry and construction sector employs 21.2 per cent of the labour force. The service sector is the fastest-growing sector in terms of job creation.

Most employed workers are working in the 'non State' sector, accounting for 86.4 per cent, while 10.2 per cent work in the 'State' sector, and only 3.4 per cent in the 'foreign invested' sector.

A significant 82 per cent share of the employed workforce have no qualifications. Just 17.9 per cent are trained: 8.9 per cent with a college/university/higher degree, 3.7 per cent at professional secondary education level and 5.3 per cent with a vocational training qualification (vocational intermediate or vocational diploma level).

While the unemployment rate has remained low, at 1.9 per cent in 2013, a significant 47 per cent of the unemployed are young people between the ages of 15 and 24. Unemployment primarily hits unqualified people: 64.2 per cent of the unemployed have no qualifications, followed by university graduates (14 per cent of the unemployed). Vocationally trained graduates have the lowest rate of unemployment (2.1 per cent).

Figure 1 Unemployment distributed by qualifications *(unit: %)*



Source: Viet Nam (2013).

Given the above issues, it is evident that there is a huge need for skills development at both initial and continuing training stages. Initial training serves to prepare young people for entry into the labour market, while continuing training is directed towards improving workers' productivity and hence Viet Nam's capacity to face international competition and integration.

2. Structure and main figures of the TVET system

2.1. Policy framework

In 2006, the Vietnamese Parliament approved the Law on Vocational Training. Based on this law, the education and training sector consists of:

- Kindergarten education (including crèche and kindergarten) for children from 3 months to 5 years.
- General education (primary education, lower secondary education, upper secondary education) of which education to lower secondary level is compulsory:

  - primary education from 6 to 11
  - lower secondary education from 12 to 15
  - upper secondary education from 16 to 18.
- Professional education: this is designed for lower-secondary school or upper-secondary school graduates who want to develop competencies to find jobs or prepare to study in colleges and universities. This kind of education rather focuses on theory (60 per cent theory and 40 per cent practice).
- Vocational training: for lower-secondary school or upper-secondary school graduates who want to acquire skills and competencies to work, or prepare to study in vocational colleges or universities. Vocational training rather focuses on practice (70 per cent).
- Higher education (including undergraduate, Master's, PhD).

Vocational training has three qualification levels: vocational elementary level, vocational intermediate level and vocational diploma level.

For short-term training courses that last less than 3 months, the learners receive certificates, but not formally recognized qualifications. For short-term training courses that last from 3 months to less than 1 year, learners are trained at the vocational elementary level as regulated by the Law on Vocational Training.

In particular, vocational training objectives are specified on three levels:

- Elementary level: equip students with the abilities to perform simple tasks required for a particular job.
- Intermediate level: equip students with the abilities to perform elementary-level tasks and some complicated and special tasks; apply technology to jobs, and work independently or in teams.
- College level: equip students with the abilities to perform intermediate-level tasks and some complicated and special tasks; create and apply modern technology to jobs, and instruct and observe other members in their teams in performing the tasks.

These training levels are provided in vocational training institutions (schools), which in turn include:

- Vocational education centres provide elementary-level vocational training, general vocational training and career counselling for students according to compulsory education programmes.
- Vocational training schools provide intermediate-level and elementary-level vocational training.
- Vocational colleges provide college-level, intermediate-level and elementary-level vocational training.

Prior to the enactment of the new TVET Law in 2015 (Law on Vocational Education no. 74/2014/QH13), there were two parallel systems in professional education and vocational training, which were under the separate management of the Ministry of Education and Training (MOET) and the Ministry of Labour, Invalid and Social Affairs (MOLISA). Professional education and vocational training under both bodies had the same structure (vocational education centres, secondary schools and colleges for short, medium and long-term training respectively) but different training contents (including the balance of theory and practice).

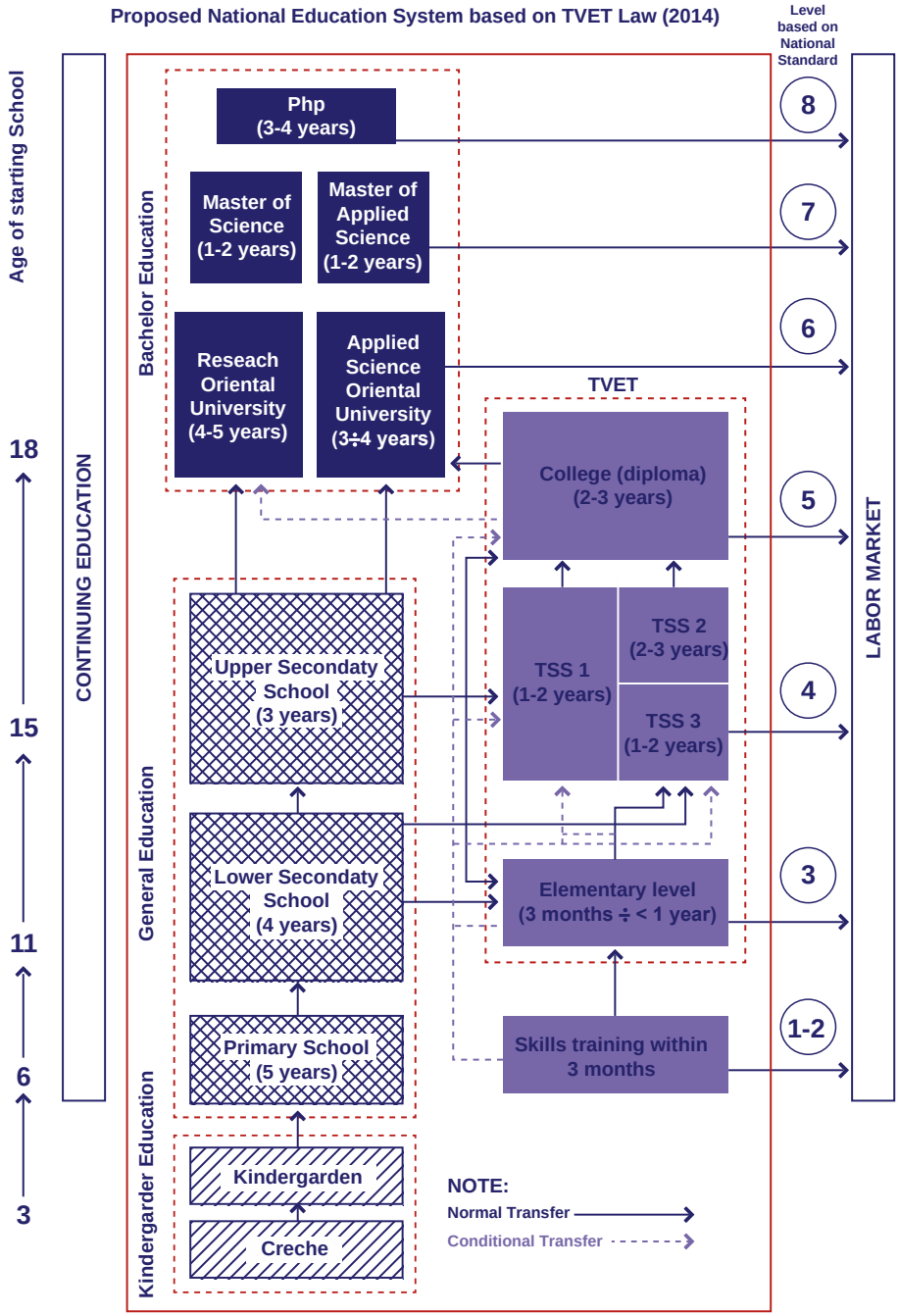
The 2014 Law merged the two TVET systems (formerly under MOET and MOLISA) and put them solely under MOLISA's management. The TVET system is now principally under the responsibility of MOLISA's General Department for Vocational training (GDVT). GDVT is responsible for State management of all vocational training institutions in the country. State management includes strategy, mapping, planning, financing, quality control, certification, and supervising institutions providing technical and vocation education and training.

There are now three levels under MOLISA:

- elementary training – less than 1 year – delivered by vocational centres and above
- intermediate level – 1–2 years – delivered by vocational secondary schools and above
- college level – 2–3 years – delivered by vocational colleges.

Following the 2014 Law, the new national education system structure is as shown in **Figure 2**.

Figure 2 National education system based on the 2014 TVET Law



The TVET system is therefore currently in a transitional period during which professional schools will be transferred from MOET to MOLISA, underlying regulations will be developed to implement the new law, and the national TVET strategy will be adjusted for the remainder of the 2016–20 period.

2.2. TVET offer

In 2015, Viet Nam had 1,467 vocational training institutions: 190 vocational colleges, 280 vocational secondary schools and 997 vocational training centres.

There were 40,600 vocational instructors. From 2011 to 2015, 7,400 vocational instructors had intensive training courses to upgrade their skills, and forty-five vocational colleges were selected for strong investment with the aim of becoming high-quality colleges by 2020. In the four years from 2011 to 2014, 7 million people were trained in vocational institutions: about 88 per cent took short-term (1–3 month) training courses and about 12 per cent trained for intermediate skill levels and vocational diplomas.

There was an increase in enrolment on short-term courses, but enrolment at the intermediate skills and vocational diploma levels slightly decreased. **Table 2** shows enrolment figures from 2011 to 2014 by training level.

Table 2 New enrolment 2011–14 by training level and gender

Levels	2011	2012	2013	2014	Total	% in total
Vocational diploma (VD)	79,737	84,151	87,887	87,988	339,763	4,8%
Vocational intermediate (VI)	141,629	129,189	128,229	132,605	531,652	7,6%
Subtotal (VD+VI)	*221,366*	*213,340*	*216,116*	*220,593*	*871,415*	*12,4%*
Elementary (E)	894,719	909,265	876,788	816,911	3,497,683	49,8%
Under 3 months (V)	657,406	369,974	639,112	985,781	2,652,273	37,8%
Subtotal(V+E)	*1,552,125*	*1,279,239*	*1,515,900*	*1,802,692*	*6,149,956*	*87,6%*
Total (VD+VI+E+V)	**1,773,491**	**1,492,579**	**1,732,016**	**2,023,285**	**7,021,371**	**100,0%**
New enrolment by gender						
Male	1,390,404	1,101,725	1,288,857	1,503,767	5,284,753	75.3%
Female	383,087	390,854	443,159	519,518	1,736,618	24.7%
Total	*1,773,491*	*1,492,579*	*1,732,016*	*2,023,285*	*7,021,371*	*100%*

Source: GDVT.

Annually, lower secondary graduates are channelled into the following streams:

- upper secondary schools
- professional secondary schools
- vocational secondary schools
- enter the labour market or stay at home.

About 80 per cent of lower secondary school graduates enter upper secondary school each year (see **Table 3**). The stream to upper secondary school is therefore still the choice of the majority. The number of lower secondary graduates entering vocational secondary schools and professional secondary schools is very low and getting lower.

Table 3 Streams after lower secondary schools

Streams		2009–10	2010–11	2011–12
Lower secondary school graduates	Number of students	1,258536	1,175,960	1,175,910
Lower secondary school graduates entering upper secondary schools	Number of students	996,151	983,695	944,962
	Rate (%)	79.15	83.65	80.36
Lower secondary school graduates entering professional secondary school	Number of students	26,257	25,657	22,087
	Rate (%)	2.09	2.18	1.88
Lower secondary school graduates entering vocational secondary schools	Number of students	50,521	50,341	47,038
	Rate (%)	4.01	4.28	4.00

Source: School-year statistics, Planning and Personnel Department, Ministry of Education and Training, in GDVT (2015).

3. TVET funding

Historically, education and training, health care, culture and sports in Viet Nam are funded by the government. However, with the increase in the number of students, it became necessary to look for contributions from other stakeholders to supplement the education budget. Therefore from 1995 to 2000 the government started to promote a socialization policy for these sectors, including TVET, through Resolution 90/CP issued on 21 August 1997 and Decree 73/1999/ND-CP issued on 19 August 1999.

Based on the above legal framework, MOLISA issued Decision 1000/2005/QD-BLDTBXH of June 2005 approving a 'Strategy of TVET Socialization till 2010', wherein socialization of TVET is defined as a central strategy to generate resources for the TVET system, and investment and participation in TVET were sought from all strands of society, in particular national and foreign organizations, companies and individuals.

This broader funding of vocational training has not operated to a large extent, so the State budget still remains a major source of funds. Investments in key occupations and high-quality institutions have received more attention but are still insufficient for any breakthrough in training quality. Therefore there is an urgent demand for greater funding for vocational training, with more and better-focused investment and the diversification of funding sources.

3.1. State funding

Funding from the State budget for TVET has increased constantly over the years. Its share of gross domestic product (GDP) increased from 0.39 per cent to 0.46 per cent between 2007 and 2013. TVET's share of the education budget increased from 7.15 per cent to 8.15 per cent between 2007 and 2013, showing the growing relative importance of TVET in funding priorities (see **Table 4**).

Despite this increase, the budget dedicated to TVET remains low compared with the country's demand for vocational training and compared with the State investment in vocational training in many other countries. According to the statistics agency of the European Union, in 2003 (10 years earlier) spending on vocational training was 1.1 per cent of GDP in Finland, 1 per cent of GDP in the Czech Republic, Hungary, the Netherlands and Slovakia, and 0.8 per cent in Switzerland. In absolute terms, Viet

Nam's budget spending on vocational training is tens of times lower than that in developed nations. It is therefore unable to drive the development of vocational training to meet the labour demand of key economic zones and spearhead economic sectors, and the development of vocational training in disadvantaged areas to generate employment, eradicate hunger, reduce poverty and increase income.

Table 4 State spending on vocational training, 2007–13

Year	State spending on TVET (VND billion)	State spending on TVET as % of GDP	State spending on TVET as % of total state spending	State spending on TVET as % of total for education and training
2007	4,993	0.39	1.36	7.15
2008	5.985	0.41	1.47	7.35
2009	6,870	0.45	1.50	7.50
2010	8.937	0.46	1.45	8.53
2011	9.800	0.45	1.63	8.6
2012	10,746	0.47	1.55	8.08
2013	11.784	0.46	1.60	8.15

Source: GDVT

State funding for TVET falls into three categories: regular spending, basic construction capital investment and funding for national target programmes.

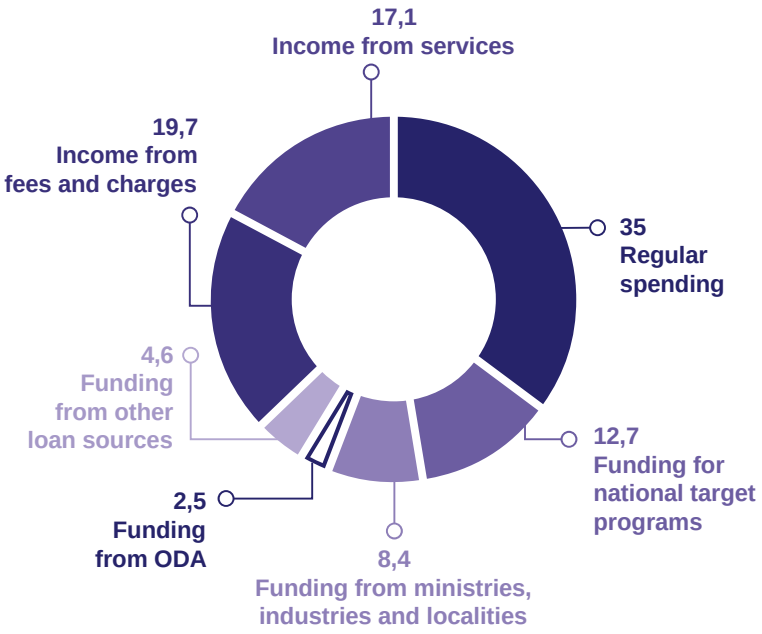
- Regular spending: Funding from the State budget is mainly regular funding (60 per cent) but only sufficient for salaries and insurance payments. Regular spending must be allocated in accordance with the principle of publicity and centralized democracy. It is based on the vocational training scale and socio-economic development conditions of each region, and demonstrates the State's priority policy for popularization of vocational training and development of vocational training in ethnic and specially disadvantaged areas. Regular spending is usually higher than planned in reality, as vocational training institutions often request additional funds for training materials for internships and compensation for tuition exemptions and reductions.
- Capital construction investment: These investments are implemented under the State Budget Law, Construction Law, Tender Law and documents guiding capital construction investment. Annually, the Ministry of Planning and Investment in coordination with the Ministry of Finance allocates funds for capital construction to localities and ministries/industries (including the TVET sector). Specifically, the people's committees of provinces/cities via people's councils decide on the allocation of budget funding to TVET institutions (in the frame of projects). Ministries decide on the allocation of budget funding to the TVET institutions directly under their control.
- National target programmes: from 2011 to 2015 the vocational training sector had two projects under the National Target Programme on Employment and

Vocational Training: the Project for Vocational Training for Rural Labourers and the Project for the Reform and Development of Vocational Training. The main objective of vocational training projects funded by the National Target Programmes is to improve facilities and equipment for vocational training, renew vocational training curricula and textbooks, and train teaching staffs to gradually establish key vocational schools and centres offering training according to regional quality standards. In addition, the Project for Vocational Training for Rural Labourers provides support for vocational training for rural workers, young people from ethnic minorities and people with disabilities.

Furthermore, the prime minister's decision No 761/ QĐ-TTg approved a project for the development of forty-five high-quality vocational training institutions by 2020. The State issued special mechanisms and policies, and provided adequate investment for the selected TVET institutions to reach the level of high-quality institution. At the same time, it implemented mechanisms and policies to encourage other TVET institutions to meet these criteria and be acknowledged as high-quality institutions.

Analysis of the financial situation of these high-quality training institutions shows that their funding mix differs from that of non-targeted institutions. They received targeted investment to help them meet the high-quality criteria. Apart from regular spending, funding came from various sources: national target programme funding, official development assistance (ODA), and funding from ministries, industries and localities. In the funding mix for these institutions, regular State spending made up only 35 per cent of their budget.

Figure 3 Structure of financial sources of selected institutions to become high-quality institutions in 2012 (unit: %)



Source: GDVT 2012.

The analysis of the financial situation of the selected vocational training institutions eligible for high-quality investment reveals that spending from the State budget accounts for 63.2 per cent (higher than the average) and 36.8 per cent is from non-State sources. Regular spending represents 35 per cent of their budget, while other expenditures are specifically targeted on investment in facilities and equipment, further training of teachers, and management reforms to meet the accreditation criteria. Through these targeted initial investments, it is expected that the enrolment rate will rise and that consequently, tuition fees will increase. It is also expected that the training centre will develop capacities to attract industries requiring continuing contract training for their workers. As the training centre diversifies its funding mix by mobilizing other contributors, it is thus expected to progressively reduce its State funding.

3.2. Allocation of public funding

Under the socialization strategy, the government has also sought to improve the cost-efficiency of its resources. It has introduced performance-based funding on a pilot basis with its high-quality vocational training institutions. Under this approach, final payment to training institutions is calculated based on the actual number of trainees, their graduation rate and employment rate. The financial risk for training institutions is mitigated by working closely with industry, to define the training needs at each level and the number of young people that the industry is ready to hire after training.

Government funding is therefore secured to training institutions while encouraging them to enhance their performance. This pilot initiative has been positively assessed by GDVT and will be further implemented under the 2014 Law.

The 2014 TVET law will lead to a number of changes in the future. Public schools are gradually expected to become autonomous concerning the planning of budgets, human resource management, the use of training assets (for income-generating activities) and the level of tuition fees. Schools will also be autonomous regarding their training offer.

In a second phase, GDVT plans to allocate its funding on a competitive basis, through a public tendering of training quotas. This approach will be pilot tested with three high-quality training institutions, which are being supported in their autonomy process. It will then be further extended to all public training institutions. After this transition period, GDVT has indicated that public schools will no longer be eligible for direct State funding. The government and other parent organizations (sectoral ministries and provinces) will allocate funding based on the tendering of training quotas, a system in which both private and public schools will make bids for courses on the intermediate and tertiary levels. Direct funding will only be maintained for schools in remote and/or poor regions.

GDVT and MOLISA's role will be refocused on global system management. Consequently, it seems that direct funding from the State will no longer be ensured as such: the budget will be allocated on a competitive basis. The criteria and the evaluation process on which the State will rely to allocate funding are not know yet. GDVT mentions that all underlying regulations (decrees and circular) of the 2014 TVET still need to be drafted to implement this approach, notably drawing lessons from the pilot initiatives conducted in three schools.

3.3. Contribution of families through tuition fees

Tuition fees paid by trainees and their families are the second most important funding source for TVET, accounting for about 18 per cent of financial resources for vocational training. For private training providers, tuition fees are the principal source of income, since private providers are so far not entitled to direct government funding. There are nevertheless incentive mechanisms from government to private training providers, such as tax exemption and allocation of land, which however take time to be implemented effectively.

Increased tuition fee levels were introduced in 2010 under Decree No. 49/2010/ND-CP. Consequently, the income from vocational training tuition grew strongly in the period 2007–13 (it multiplied nearly 3.6 times, from VND 407 billion in 2007 to around VND 1,478 billion in 2013). The income from tuition fees is mainly used for reinvestment in facilities, which has made a positive contribution to the improved training capacity of vocational training institutions.

Collection of training tuition fees is legalized under Decree No 49/2010/NĐ-CP dated 14/5/2010. Public vocational training institutions use tuition fees in accordance with regulations on autonomy and self-accountability in finance granted to public administrative agencies. Non-public vocational training institutions use tuition fees in accordance with the policy on socialization of activities in education and vocational training.

Furthermore, vocational training institutions offering high-quality programmes have the right to raise the level of tuition fees, but permission has to be granted and the institutions must ensure transparency and publicize the fees to applicants prior to admission.

The government has also a policy on tuition fee exemption for disadvantaged students. In 2010, when the new policy on tuition exemption and reduction was implemented (notably introducing a reduction of 50 per cent tuition for lower-secondary school leavers entering vocational training), the number of apprentices entitled to tuition exemption and reduction increased considerably, accounting for 18–19 per cent (against 15–18 per cent in the previous years).

3.4. Income-generating activities

Income-generating activities and contract training from enterprises or other training institutions account for about 14 per cent of financial resources for vocational training. Their extent mostly depends on the training centres' initiative and capacity to develop their network with local companies.

When State agencies order services and commodity products from training centres, the price per unit is regulated by the relevant State authorities. For products whose price has not been regulated by competent State agencies, the price is determined on the basis of cost estimates appraised, and should be approved by financial agencies at the same authority level.

Concerning services, in the frame of contracts with domestic and international organizations and individuals, as well as joint venture and partnership activities, training institutions have the right to determine receivables and payment levels on the principle of covering costs and allowing accumulation.

3.5. Encouraging private training provision

Under the socialization policy of TVET, GDVT intends to support the expansion of private training provision. The development of private training institutions, which mostly rely on tuition fees for their funding, can be considered as a means of expanding the national training system without mobilizing important public funding. Before 2007, about 28 per cent of training institutions were private. They now represent 34 per cent of all training providers, according to GDVT. GDVT intends to encourage private training provision through:

- the implementation of tax mechanisms (incentives and exemptions)
- an easier process to establish new schools
- technical assistance from GDVT for programme development and staff training
- eligibility for financing from special loans from international donors such as the Asian Development Bank (ADB).

The government intends to not establish new public schools in the near future, but rather make it easier for private training providers to develop.

3.6. ODA

The cumulative amount of ODA in Viet Nam from 2010 to 2015 was US$270 million. ADB is the main donor (with US$65.721 million invested in pre-tertiary vocational training since 2010), followed by Germany (US$65.192 million), the Republic of Korea (US$39.771 million), France (US$29.111 million) and Austria (US$11.237 million). This aid mostly comes in the form of grants, although with substantial variations across the years (from 27 to 100 per cent between 2007 and 2015) *(*see **Table 5**). According to the *Vocational Training Report 2013–2014 in Viet Nam* (GDVT, 2015), ODA

accounted for about 8 per cent of funding for vocational training in the period from 2007 to 2013 (no more recent data was available).

Table 5 Total ODA invested in vocational training and advanced technical and managerial training. 2007–15 (US$ million, constant prices)

	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total ODA	23.191	19.098	56.181	86.899	46.977	45.030	34.670	37.561	20.690
Total ODA vocational training	9.795	13.779	19.950	85.582	29.509	43.661	29.612	3.215	19.952
Austria		7.429				6.817			
Belgium	0.346	0.362	0.35	0.538	0.013	0.325	0.588	0.178	1.374
Canada	0.263	0.169	0.006		0.038			0.06	
Czech Republic						0.073			
Denmark	0.085			0.471		0.01	0.084		
Finland									0.005
France						28.322	0.112	0.666	0.011
Germany	5.165	2.762	5.46	2.323	19.892	5.216	18.291	0.333	13.677
Italy			0.129	0.444	1.221	0.148	0.002	0.003	0.001
Japan		0.693	0.641	0.841	2.601	0.837	0.21	1.053	1.06
Republic of Korea		0.992	11.158	12.661	5.027	1.015	5.42	0.795	3.695
Luxembourg		1.373	2.115	2.356	0.718	0.899	0.457	0.125	0.129
Spain			0.089	0.226					
Asian Development Bank				65.721					
Total ODA advanced technical / managerial training	13.396	5.319	36.231	1.317	17.468	1.369	5.058	34.346	0.738
Austria	0.014	0.62	35.137	0.031	0.018		0.006		
Belgium	8.226								
Canada	0.16	0.609		0.006	0.001				
Czech Republic	2.495				16.275			0.015	0.002
France				0.049					
Germany						0.004			
Greece	0.338	0.616	0.68	0.129	0.003				
Italy								0.019	
Japan					0.028		0.028	0.008	
Republic of Korea	0.096	0.104	0.128	0.115	0.125		0.25		
Luxembourg	0.388	3.37	0.286	0.318	0.008	0.412	3.943	33.458	0.515
Poland	1.679					0.021			
Switzerland					0.452				
United States				0.668	0.558	0.931	0.831	0.847	0.221

Source: Author's elaboration based on http://stats.oecd.org, data from 22.05.2017

Table 6 Type of ODA contributions in Vietnam, 2007–15 (US$ million, constant prices and %)

	2007	2008	2009	2010	2011	2012	2013	2014	2015
ODA vocational training	**9.795**	**13.779**	**19.950**	**85.582**	**29.509**	**43.661**	**29.612**	**3.215**	**19.952**
ODA loans	2.492		11.011	65.721	13.536	27.707	15.548		
Share of ODA loans in ODA voc. training	25,44%	0%	55,19%	76,79%	45,87%	63,46%	52,51%	0%	0%
Share of ODA grants in ODA voc. training	74,56%	100%	44,81%	23,21%	54,13%	36,54%	47,49%	100%	100%
Total ODA Advanced technical and managerial training	**13.396**	**5.319**	**36.231**	**1.317**	**17.468**	**1.369**	**5.058**	**34.346**	**0.738**
ODA loans		3.347							
Share of ODA loans in ODA adv. training	0%	62,93%	0%	0%	0%	0%	0%	0%	0%
Share of ODA grants in ODA adv. training	100%	37%	100%	100%	100%	100%	100%	100%	100%
Total ODA (vocational training and advanced technical)	**23.191**	**19.098**	**56.181**	**86.899**	**46.977**	**45.030**	**34.670**	**37.561**	**20.690**
ODA loans	2.492	3.347	11.011	65.721	13.536	27.707	15.548		
Share of ODA loans in total ODA	10,7%	17,5%	19,6%	75,6%	28,8%	61,5%	44,8%	0,0%	0,0%
Share of ODA grants in total ODA	89,3%	82,5%	80,4%	24,4%	71,2%	38,5%	55,2%	100,0%	100,0%

Source: Author's elaboration based on http://stats.oecd.org, data from 22 May 2017.

3.7. Company funding and perspectives in the setting-up of a training fund or earmarked taxation

Viet Nam has not yet implemented a structured approach to mobilize funding from companies. Currently, companies contribute to the funding of TVET at their own initiative, mainly in kind, by organizing in-plant training of their workers. Some companies have even established their own training centres to meet their needs for skilled labour, as with the Lilama 2 Technical and Technology College, which was established in 1986 by Lilama Corporation, which specializes in manufacturing equipment and steel structures for industry.

On another plan, incentives are implemented to encourage training at company level, notably tax exemption and tax incentives for land and equipment, for either initial training or continuous training. Viet Nam has therefore opted so far for an 'incentive approach' to encourage voluntary involvement of industry, where companies are induced to participate in funding by benefitting from tax incentives or rebates when they provide training.

Companies are also mobilized in the funding of TVET through the progressive implementation of dual cooperative training (DCT). Dual training can be considered as a form of public–private partnership, where the State bears the cost of training that takes place in school, while the industry finances workplace training. DCT has been

pilot-tested since 2015 in two schools, Lilama 2 and Ho Chi Minh Vocational Training College of Technology, with the support of GIZ (the German development agency). Around 50 per cent of the training takes place in the training centre, while the other 50 per cent is delivered in the company.

The introduction of a training levy has been under discussion in Viet Nam but still faces the reluctance of companies, which fear that the levy will not be fully secured to promote continuing training of their workers.

4. Concluding remarks

The State remains the main contributor to TVET funding in Viet Nam. The State budget for TVET was growing in the seven years to 2016, and the share of State funding for TVET in the education budget is high compared with neighbouring countries (8.15 per cent in 2013 in Viet Nam, 4.83 per cent in Thailand and 1.44 per cent in the Philippines). Compared with developed countries, the share of State budget allocated to TVET can however still be improved: in absolute value, Viet Nam's spending on vocational training is tens of times lower than that in various European countries, for example.

Viet Nam has initiated a socialization strategy that aims at mobilizing various stakeholders – families, industry, training centres – in the funding of TVET. While the State maintains its core funding to the TVET system, other contributors are progressively being mobilized: this is especially true for families, which represent the second contributor to TVET (18 per cent of financial resources for vocational training between 2007 and 2013), followed by income from services (14 per cent) and other investments, notably from ODA (8 per cent).

Cost-efficient use of public financial resources in Viet Nam is hampered by the fragmentation of the training offer. Training providers have been established and piloted by many stakeholders (MOLISA, sectoral ministries, local authorities, but also employer or employee organizations, such as the Vietnam General Confederation of Labour (VGCL) and the Vietnam Cooperative Alliance (VCA)).

While the 2014 Law on Vocational Education merged the professional education and vocational training systems (previously under separate management by MOET and MOLISA) under the responsibility of GDVT, it therefore appears that this rationalization process did not concern the funding aspects: funding for TVET still flows through various institutions, such as sectoral ministries, provinces, employer organizations and trade unions. This dispersion of resources is likely to lead to inefficiencies and a waste of resources. One important step towards an efficient management of TVET and its funding relates to the establishment of a strong, reliable and comprehensive statistical information system, consolidating data from all channels receiving public funding (sectoral ministries, provinces, industry and so on). The key purpose is to help monitor the inputs and outputs of the national TVET system and plan resources accordingly.

The Vietnamese government also intends to implement performance-based funding to enhance the cost-efficiency of its resources. GDVT plans to achieve this by allocating its funding through a tendering process, open to public and private training providers. Direct funding will only be maintained for schools in remote and/or poor regions.

The socialization strategy also leads to an increasing autonomy of training centres, and might ultimately lead to their privatization, where training centres will have to bear the pressure to mobilize the required funding to train students. Consequently, it seems that direct funding from the State will no longer be ensured: funding will be allocated on a competitive basis. The criteria and the evaluation process on which the State will rely to allocate its funding are not know yet. GDVT has mentioned that all underlying regulations of the 2014 TVET Law still need to be drafted, notably drawing lessons from the pilot initiatives conducted in three schools.

At this stage, the following recommendations can be suggested, in order to smoothen the transition towards full autonomy of training providers:

- The allocation of funding through a tendering process might lead to deep structural changes in the training market. Training institutions encountered during the mission stated that such an allocation process might lead to a concentration of training providers as they become more competitive. It might also lead to a concentration of training offer in urban areas where it is easier to fulfil the requirements. This new funding approach should therefore be carefully thought through to maintain a sufficient coverage of training offer throughout Viet Nam.
- Careful design of funding criteria: outcomes of TVET providers may be affected by various factors that are not attributable to their own efforts (regional location, fields of training, characteristics of students enrolled). Countries that have implemented result-based funding have introduced control factors to take into account such differences and mitigate risks (for example, factors related to regional location and students' social background can be taken into account through a coefficient system that neutralizes their impact on training centres' performance). Result-based criteria should be aligned with the national TVET strategy and defined in consultation with training providers and industry.
- Generalization of the autonomy status of training institutions should be gradual, starting with schools with high autonomy, then schools with good current enrolment, and lastly schools that are currently having difficulty in student recruitment. The pilot initiative with the three training providers should be followed up carefully to identify difficulties in the tendering allocation process, in order to develop adequate support mechanisms.
- Managing boards of training institutions should be trained to develop entrepreneurial skills to adapt to this new funding approach.

- Finally, the implementation of performance-based funding should go hand in hand with the implementation of an independent body (public or private) that will be in charge of the quality assurance and accreditation process for training providers.

The analysis of the Vietnamese context also shows that no structured approach has yet been implemented to mobilize companies in the funding of TVET. A first possible approach consists in supporting the development of dual cooperative training, which presents various advantages:

- It reduces the cost of training for the State (since a substantial part of the training is organized by companies).
- It improves the relevance of training and consequently trainees' employability.
- It is beneficial for companies in terms of productivity of apprentices, saved cost of external recruitment and unsuccessful recruitments, saved costs of retraining new staff and avoidance of vacancies in the production process, and so on.

Companies often underestimate benefits of dual training. To augment the offer of such in-company training programmes, it is important to raise awareness in companies, notably by showing that the benefits brought by trainees (through their productivity, saved costs of recruitment and so on) outweigh the actual cost of apprenticeship for the company. Countries neighbouring Viet Nam, such as the Philippines, have conducted cost-benefit studies on apprenticeship as a tool to raise awareness of companies on the net profit generated by apprenticeship.

It is also worth noting that, under the socialization strategy for TVET, GDVT intends to support the expansion of private training provision through various incentives (tax mechanisms, eligibility for funding from foreign investments and public funding, and so on). While the mobilization of private training provision is cost-efficient, because it helps extend the training system without heavy investment from the State, it must be kept in mind that private training provision tends to develop where training activities are the most profitable and require little initial investment (in dynamic economic regions, and targeted at the service sector, for instance). Special attention must therefore be paid to maintain a quality-training provision in remote areas and in trades for which training requires heavy investment that cannot be supported by the private sector.

Finally, the introduction of a training levy should help Viet Nam raise the productivity of its labourers and consequently remain competitive in the ASEAN region. Ecorys led some prospective work for the purpose of this study to estimate the resources that could be generated through the implementation of a training levy in Viet Nam according to various scenarios (various levels of training levies and various categories of taxable companies – see Section 5.3 of main report "Estimating the potential revenue raised through a levy system in Viet Nam"). The simulation exercise shows that in the most

optimistic scenario, the amount of revenue that could be raised by means of a 2 per cent training levy could represents around a third of the total budget allocated to TVET in 2013. This prospective work was designed to fuel Viet Nam's reflection on the setting-up of a training levy and discussions with industry. The levy rate and the designation of taxable companies should be the result of an in-depth consultation with social partners. The design of the future levy system should also take into account the level of taxation and labour costs compared with neighbouring countries.

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COUNTRY BRIEF N°7. FINANCING TVET IN CAMBODIA

This Country Brief was drafted by Mrs Huazhen Wu (UNESCO) as a synthesis of two reports produced on the Cambodian TVET system, respectively: ADB/MLVT. 2013. TVET financing Framework 2014–2018 and UNESCO. 2013. Policy Review of TVET in Cambodia.

1. Socio-economic context

UNESCO (2013) argues that Cambodia's economy has been growing and has been restructured. The growth rate of Cambodia's gross domestic product (GDP) slowed down during the global financial crisis (to 0.09 per cent in 2009) but has now recovered and stabilized at around 7 per cent per year.[43] Both the overall and the youth unemployment rate were decreasing in the ten years to 2014, even during the crisis, and remained at a low level (respectively 0.4 per cent overall[44] and 0.9 per cent for young people[45] in 2014). At the same time, Cambodia has a large proportion of the population that is active in the workforce (the participation rate was approximately 85 per cent in 2014[46]).

The majority of employment is in the primary sector (72.3 per cent in 2008) (UNESCO, 2013), while the secondary and tertiary sectors provide only 8.5 per cent and 19.2 per cent respectively. The World Bank (2010) forecasts an increasing demand for skills in Cambodia, especially soft skills and a mix of soft and technical skills. UNESCO (2013) also recommends that Cambodia should gradually improve the quality of skill training as demand grows.

In addition, Cambodia has a large population working overseas (14,924 workers in 2009). This leads to concerns about diasporas, brain drain and brain gain, returning migrants, knowledge and technology transfer. It also underlines the necessity for Cambodia to participate in the ASEAN Regional Qualification Framework.

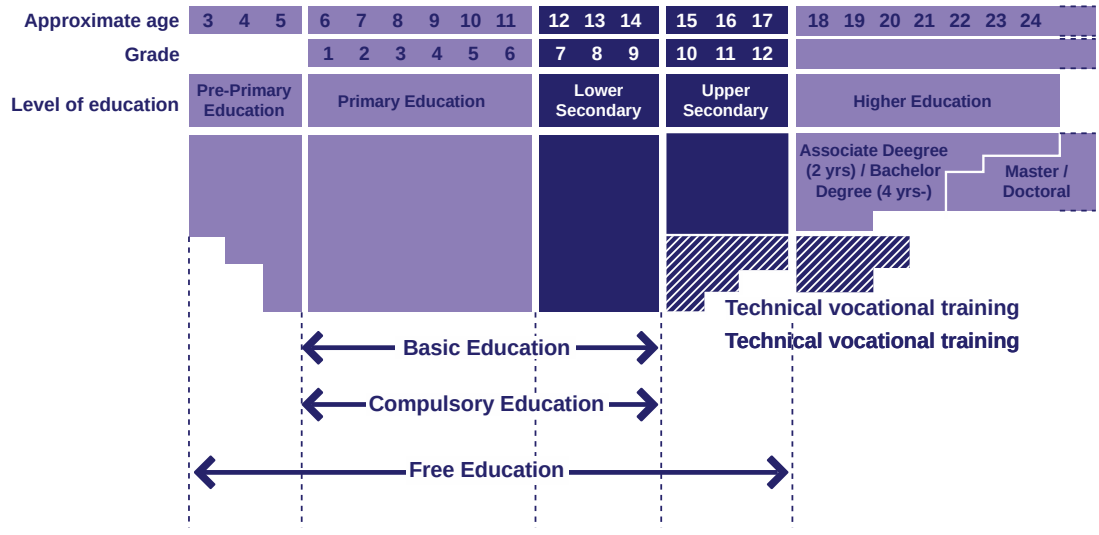
[43] World Bank calculation, available at: http://data.worldbank.org/
[44] ILO modelled calculation, available at: http://www.ilo.org/ilostat/faces/ilostat-home
[45] ILO modelled calculation, available at: http://www.ilo.org/ilostat/faces/ilostat-home
[46] ILO modelled calculation, available at: http://www.ilo.org/ilostat/faces/ilostat-home

The level of education of Cambodia's labour force is low, although it has been improving. What is worse, there are mismatches between education attainment and income, which discourage people from participating in education. To transform economic growth, provide good jobs for young people and create benefits for society, UNESCO (2013) argues that Cambodia should implement an integrated set of public policies, including skill training and life-long learning.

2. Structure and main figures of the TVET system

Cambodia has a five-level education system as shown in **Figure 1**. Technical and vocational education and training (TVET) is provided at certificate level, diploma level, higher diploma level and bachelor level, all of which are mainly delivered by polytechnics and technical institutes. Data on enrolment is only available for public institutions. According to Directorate General of Technical and Vocational Education and Training (DGVET) in 2010, 1,981 individuals were enrolled at the bachelor and higher diploma levels, 3,308 people were enrolled at diploma level, and only 746 people were enrolled at certificate level (see **Table 1**). Short non-formal training programmes for the enhancement of rural income also represent a major part of TVET provision. They are mainly provided by provincial training centres (PTCs). On average, approximately 20,000 people were trained by PTCs per year from 2006 to 2008.[47] There are also in-company training programmes, however these are not regulated and little information is available on them.

Figure 1 Schooling structure in Cambodia



Source: UIS, 2008.

[47] ADB calculation, 2011.

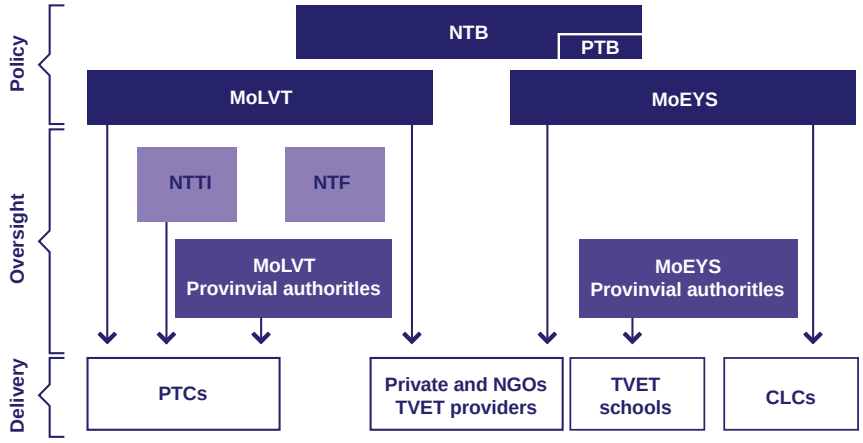
Table 1 Enrolment for TVET by qualification level in 2010

Qualification level	Enrolment		
	Male	Female	Total
Bachelor + upper	1,523	458	1,981
Diploma	2,466	842	3,308
Certificate I, Ii, III	404	342	746

Source: DGVET.

As is shown in **Figure 2**, Cambodia's TVET governance is organized on three levels: policy, oversight and delivery. The National Training Board (NTB) is the most important policy-setting authority, and sets performance standards for all TVET system participants. The Ministry of Labour and Vocational Training (MLVT) is in charge of regulating formal and non-formal TVET. The Directorate General of TVET (DGTVET) of MLVT serves as a secretariat to the NTB. Other ministries, especially the Ministry of Education, Youth and Sport, are also involved in the oversight procedures. For the delivery phase, in the absence of a ministry in charge of coordination and certification, a myriad of institutions and programmes are operating without regulation.

Figure 2 TVET governance arrangements



Source: UNESCO (2013).

UNESCO (2013) highlights the need for fundamental changes in the governance of Cambodia's TVET system. One key issue is that policy and oversight are performed by the same group of government authorities, creating conflicts of interests, and leading to ineffective monitoring and unfulfilled objectives. There is also the need to mobilize employers in the governance of the system to improve the relevance of the offer. Another issue is the lack of coordination and related disorganization of TVET programmes, which causes repetitions and inefficiency.

Aiming at social equity and a demand-driven TVET system, the Cambodian government established a National TVET Development Plan (NTDP) 2006–2010,

outlining strategies in three aspects: better productivity or basic self-employment, commune-based skills training, and informal apprenticeships. In 2011, a Circular on Quality TVET underlined the principle of equity and prioritized marginalized groups, and favoured more support for short-term and non-institutional courses. Donors and international organizations have also been participating in defining the role of TVET. For example, the Asian Development Bank (ADB) (2009) points out that TVET is crucial but Cambodia lacks the capacity to respond to the demand. The World Bank (2010) advocates preparing young people with integrated skills. UNESCO (2013) suggests Cambodia should improve the quality of its TVET provision.

3. TVET funding

In Cambodia, the major sources of funding for TVET institutions are government recurrent expenditure, international donors and the private sector. With an increasing number of private TVET organizations and an increasing ratio of private financing, the general direction of TVET policy is trending towards privatization. MLVT has committed to diversify and mobilize resources for TVET. However, there is insufficient data on TVET financing and provision, bringing difficulties for analysing and developing a national skills development approach for Cambodia.

3.1. Funding of vocational education under MLVT

The Royal Government of Cambodia (RGC) has a low expenditure on TVET, both in terms of the expenditure-to-GDP ratio and the absolute value compared with other ASEAN countries. The statistics are however likely to be misleading, because they do not include TVET expenditure from ministries other than MLVT.

Since the establishment of MLVT in 2005, its expenditure on TVET has been growing steadily. From 2005 to 2010, the expenditure increased by about 45 per cent per annum. In 2011 the government outlay was approximately US$3.3 million, and it reached approximately US$8.8 million in 2012. Within these outlays, RGC provides recurrent financing to both private and public providers, through a National Training Fund (NTF). One source of MLTV outlays is the non-programme budget (NPB), funded mainly through ADB loan programmes. The *Third Education Sector Development Program 2* (ESDP 2) provided US$4.95 million over five years to 2011, and the Strengthening Technical and Vocational Education and Training project 1 (STVET 1) provided US$5.2 million in 2011 and 4.5 million in 2012.

Despite the huge increase, there are some underlying issues. It is not clear whether the levels of funding will be maintained. Furthermore, most of the expenditure has been on improving the existing system, instead of providing new training places. Also, the input from DGTVET into central planning and budget processes to advocate for increased investment in TVET seems weak.

3.2. Funding of TVET by international donors

As mentioned in **section 3.1**, RGC receives TVET grants and concessional loans from several sources, including ADB, French Development Agency (AFD) and the governments of the Republic of Korea, India, Japan and Germany. Apart from STVET, funding has been for single projects or of relatively small amounts. STVET has included substantial programme funding to address poverty alleviation in rural areas through the Voucher Skills Training Program (VSTP). Nevertheless, the majority of funding has been directed at system and capability development to improve the quality and relevance of formal middle-level training in strengthened TVET institutions, with a focus on working with industry stakeholders in target industry sectors. The DGTVET recurrent budget has had trouble in absorbing and continuing the VSTP.

3.3. Funding of TVET by industry and families

Households, industry associations and enterprises, and private TVET providers are major private stakeholders in TVET. Tuition fees paid by households are developing into an important source of income for MLVT's TVET institutions. According to unsubstantiated statistics, private contributions, in the form of tuition fees, cover about 70–90 per cent of the total annual recurrent costs of long-course institutes, while government funding provides the rest. In the absence of a centrally developed policy on tuition fees, marginalized households, monitoring and evaluation of institutional income, and equity and quality training have not been given proper consideration.

Private training provision is also very important. Its level of activity and outputs in terms of the number of graduates in most industry sectors exceed those of the DGTVET institutions (public institutions) overseen by MLVT. In 2012, for TVET courses of less than 3 months, 60,339 people enrolled with private providers out of 91,622 in total. Private providers are also dominant in providing short courses, long courses at certificate level and very long courses at associate level or higher. (In 2012, the corresponding private enrolment rates were 34,676 /79,622, 5,258/5,959, and 153,536/167,286.) Despite the large market share, private TVET providers are not regulated and not transparent about their financial situations.

Industry associations and enterprises claim to have invested a significant amount of money in workplace TVET, although there is little information to verify this.

3.4. Funding of vocational education under cooperation

There have been some attempts to encourage cooperate between stakeholders. Industry associations have been trying to introduce a national levy/grant system but failed several times, because concerns were raised about the use of the levy and because the quality of existing training is not satisfactory. Instead of a national system, Cambodian industries tend to favour an industry-by-industry levy/grant system approach.

ADB's STVET 2 project is proposing a study of levy-grant systems from other developing countries to identify the system elements for a levy-grant system in Cambodia. The following set of principles, based on the expressed view of industry and the experience from the several previous attempts to implement a levy grant system, could be taken into consideration:

- An industry by industry approach could address the specific needs of each industry sector and the economic context within which it operates.
- A levy grant system will be most effective when it is designed, supported and managed by the relevant industry sector.
- A levy grant system derived from levying a comprehensive national skill 'tax' to support middle-level skill formation with disbursement and application managed by government could work if the returns from the levy grant system are directed to enterprises, and the levy is part of balanced taxation arrangements for industry that address the total impact of taxation on enterprises.
- The strengthening of public TVET providers is primarily a responsibility of government from existing revenue sources.

Two approaches are currently under discussion. The first is to establish a sectoral levy system with government participation. Members of the levy system would make self-imposed contributions, to be managed by both government and members. The second approach is to promote direct partnerships between enterprises and TVET institutions.

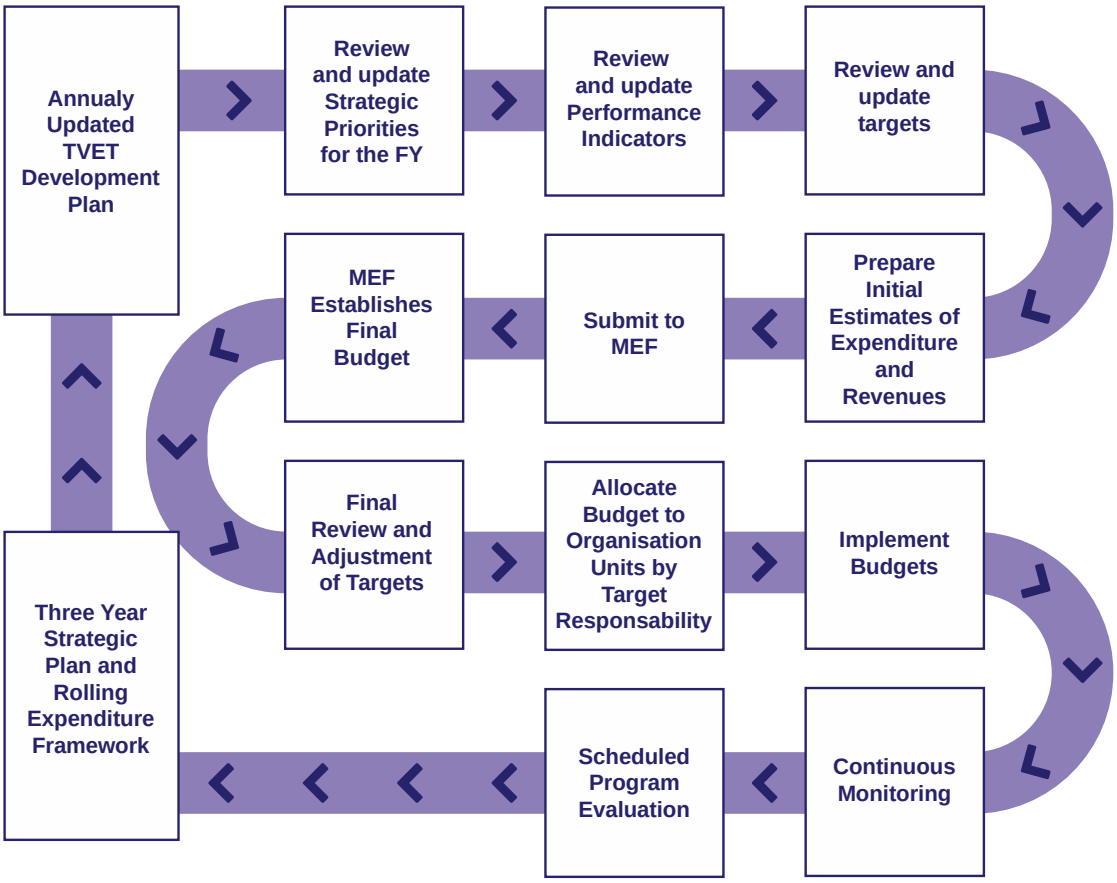
More information on public–private partnerships (PPP) for TVET is available in Smith-Corbyn (2011) and UNESCO (2013).

4. DGTVET budget and processes

4.1. DGTVET budget

The intended approach of programme budgeting, which complies with Ministry of Economics and Finance (MEF) requirements, is outlined in **Figure 3**. It outlines the process used to develop the MLVT and therefore DGTVET budget.

Figure 3 Approach of programme budgeting



Source: ADB/MLTV report.

Under this system, MLVT prepares a strategic budget plan (SBP), which includes outlines of achievements, challenges, and solutions for next year's implementation, policy objectives, strategies towards the policy objective, performance indicators and targets, expenditure requirements, and projected outcomes. The SBP is translated into Programme Budget (PB) format and allocated to administrative units within DGTVET and DGTVET institutions, and then submitted to MEF.

Despite the advantages such a mechanism can offer, much more work needs to be done. The policy objective and strategies from the SBP are poorly translated into the PB structure. The PB structure does not provide an effective accountability mechanism. Little progress has been made in implementing PB. Substantial areas of expenditure are included in PB. And the feedback loops (as the diagram shows) to update SBP and the National TVET Development Plan (NTDP) have not been updated since 2008. Moreover, monitoring and evaluation has not yet been carried out.

4.2. Resource allocation to DGTVET

The resource allocation (RA) mechanism is theoretically output-based and should be an instrument of government policy. Budget is allocated at the sub-programme level and further divided into actions. However, in reality, the RA process in Cambodia moves without a focus on the declared goals. The RA reports provide limited information on accountability. They detail how much money is spent, whether a programme has been delivered, and relatively basic data on gender and number of enrolees and graduates. Nevertheless, they do not include a cost-efficiency analysis, and the RA process does not cover all the funds available to the institutions.

There are five underlying issues in funding TVET:

- DGTVET institutions lack financial autonomy and a micro-management system of expenditure, both of which impede their flexibility and planning, making it difficult for them to respond to student and industry demand.
- The RA process does not cover all the funds available to the institution.
- Institutions' financial reports focus on how much money has been spent and overlook cost-efficiency.
- The RA process is not consistent with the predetermined goals;
- GTVET institutions have insecure sources of funding. That is because, first, competition between public and private providers is making DGTVET institutions financially unsustainable, especially when the private providers reduce their fees. Second, fee-for-service work for industry by DGTVET institutions is limited, because of their low levels of expertise in such work and the disincentives caused by the budget process. Third, the government funding is also problematic, because it comes from a diversity of sources with different levels of accountability and timing and is not consistent with actual costs.

4.3. Lessons learned from financing DGTVET

The Policy Framework outlines several key learnings in terms of governance, performance, funding, and qualifications and their relevance:

- DGTVET should give more autonomy to its institutions while engaging stakeholders more actively.
- DGTVET should focus on improving the effectiveness and efficiency of its institutions. In addition, institutions themselves should improve their capacity in terms of curriculum, product and service development, financial management, flexibility and leadership.
- A move to outcome-based funding is unnecessary at this moment. The difficult estimation of unit cost impedes planning and monitoring of funding. However, the financing model of DGTVET should be demand-driven and in line with

policy objectives. In the meanwhile, the RA process should be unified and simplified.

- More data and a quality assurance framework (QAF) are needed to help match the TVET system with market demand.

5. Developing a financing model for DGTVET

5.1. Outline of the financing model

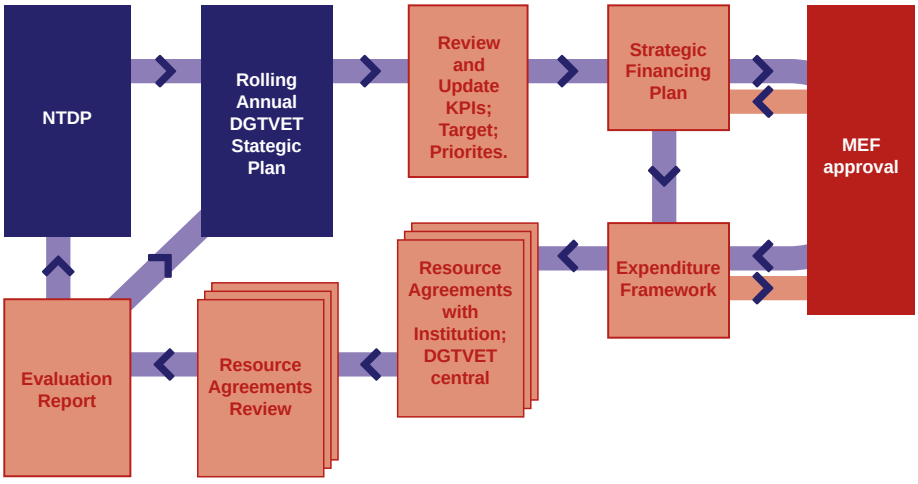
A finance model for DGTVET consists of a planning cycle and a budget cycle. Currently, the two cycles do not match each other, and both contain missing or outdated elements. Furthermore, as mentioned above, DGTVET has cumbersome processes, shortage of revenue, improper design of tuition fees, and limited data, all of which limit its ability to fulfil TVET needs from enterprises and students.

Based on the current situation, the Policy Framework recommends an achievable development process for the financing model with the following key elements:

- a triennial National TVET Development Plan
- a rolling triennial DGTVET Strategic Plan
- a rolling annual Strategic Financial Plan (SFP)
- an expenditure framework incorporating an annualized budget in programme budgeting format
- an RA process with monitoring and evaluation
- a resource agreement between central office and more autonomous institutions.

Interactions among these elements are depicted in **Figure 4.**

Figure 4 Interactions among elements with the financing model



Source: ADB/MLVT (2013).

Besides modifications to the modelling process, changes to the public DGTVET system in MLVT are also necessary. DGTVET central office should be authorized as a separate administrative unit with its own budget, a clear mandate and responsibility of managing the finance model and institutions. DGTVET institutions should have more autonomy. A QAF should be built based on the existing *Quality Assurance Handbook*. Operational data collection should incorporate a TVET management information system (TVETMIS) and labour market information system (LMIS). In addition, TVET financial and regulatory laws need amendment to facilitate reforms.

5.2. Inputs to the financing model

Key inputs of the financing model are:

1. Strategic planning: The strategic planning cycle produces a National TVET Development Plan and a Strategic Plan.
2. Market demand: a LMIS is an important starting point to assess TVET demand, although it needs to be developed to the level of detail that determines which TVET courses should be offered and what numbers of students should be targeted for enrolment. A first step could be to prioritize industry sectors and then refer to LMI data on skills shortage by sector, by skill type and by skill level. Further, the Policy Framework suggests central office should determine the overall market demand while institutions determine local demand from both enterprises and students. In addition, details of target markets and characteristics of students in targeted markets are vital for aligning TVET products with demand. To facilitate the above steps, policy-makers should ensure funding resources match demand from targeted market groups. In detail, the government provides subsidies for entry-level and bridging training while taking care of demand from the poor; employers pay for their employees while also helping the poor get non-formal training; and individuals pay tuition for formal courses while securing self-finance for skill upgrading.
3. Possible sources of funding: DGTVET has funding resources from households, government, international donors, the private sector and PPPs. In addition to these existing resources, the Policy Framework suggests establishing a market-driven skill development fund (SDF). STVET Project Preparatory Technical Assistance (PPTA) has produced a lengthy analysis of SDF, including aspects such as functions, management and governance, financial contributions, partnerships, the relationship to broader economic policy and operation of SDF. It is committed to further work.

5.3. Key elements of the financing model

The key elements of the financing models are:

→ **Strategic Financial Plan (SFP)**

An SFP outlines how to mobilize and allocate resources. It also assigns responsibility for different levels of administrative units within DGTVET. To this end, the SFP should cover the following analyses:

- Investigating context: a SFP should first follow the guidance of the government's Rectangular Strategy, while considering economic, social and environmental factors. Data from LMIS and TVETMIS are useful sources for this purpose.
- Defining objectives: for the SFP to be in line with the Strategic Plan and give directions for TVET development, objectives should set goals for, but not limited to, TVET outputs, system management and system development.
- Determining key results areas (KRAs) and projecting costs.
- Determining priorities and gaps.
- Designing a financing plan: this should include revenue from all sources, including the State budget, tuition fees, donors and any other possible channels. In addition, it should separately identify funding that has been formally guaranteed and revenue targets. Potential options for financing and forward plans are also needed.
- Designing an action plan: the plan should include actions to ensure cost-efficiency, service delivery, resource utilization, sustainability, capacity-building for staff, system and infrastructure development, implementation of plans and strategies, and so on.

→ **Expenditure Framework (EF)**

An EF states the annualized budget in programme budget terms for the current and past years for DGTVET central office and the annualized budget available for allocation to DGTVET institutions. It adds a level of detail in the form of specific actions under KRAs that are assigned to administrative units in DGTVET central office or to DGTVET institutions. In conjunction with the SFP it:

- Sets forward estimates to ensure that priorities are expressed.
- Records the budget and activities for DGTVET central office separately as an overhead to the cost of providing TVET for the purposes of determining a unit cost for TVET.
- Ensures priorities can be continued under different resource mobilization regimes.

- Allows for new activities to be designed, piloted, implemented and sustained.
- Ensures existing activities are evaluated and sustained or resources redirected to other activities.

→ **RA to DGTVET institutions**

An effective RA system will help achieve outputs that benefit end users and guide the development of DGTVET institutions. However, the current RA system does not function well. To make it effective, DGTVET central office and institutions should negotiate an annual agreement, in order to produce a coherent approach for objective delivery. The negotiation of an agreement takes two steps – agreement on next year's RA and review of the previous year's performance. The agreement should cover TVET products and services to be delivered, outputs to be achieved, performance indicators to be measured, the monitoring and reporting process, consequences to institutions of high or low achievement, and contributions to institutions from programme budget and revenue.

6. Looking ahead: what is to be done

6.1. Building on STVET

As discussed above, the STVET programme provides a strong basis on which a model for sustainable financing of TVET can be built. STVET 1 facilitated a significant number of systemic development reforms. In summary, they include:

- the development of systems and infrastructure to underpin high-quality formal DGTVET programmes including the Cambodian Qualifications Framework
- competency standards and assessment processes for middle-level TVET to meet the needs of priority industries
- a Quality Assurance Handbook
- systems for data collection and management in TVETMIS and LMIS
- the successful piloting and delivery of non-formal programmes
- strengthening the operational management of DGTVET institutions in governance, planning, quality assurance, stakeholder engagement and through the development of regional clusters.

With the improvement of DGTVET recommended in Section 4, the STVET 2 (commenced in 2015) aims at:

- addressing the issue of access to formal TVET for the 63 per cent who have not completed year 9 and the 94 per cent who have not completed year 12 by changing entry requirements
- building flexible pathways to TVET from school and from informal learning

- using recognition of prior learning and bridging programmes
- improving assessment
- introducing more scholarships
- improving on-the-job training through apprenticeships
- improving the quality and relevance of TVET through developing a quality assurance system
- forming industry advisory groups related to new centres of excellence
- establishing sector skill councils
- capacity-building of national technical training institutes to ensure that trainers have up-to-date knowledge of industry requirements
- capacity-building of providers
- investigating a skills development fund for skilling the existing workforce and front-line managers
- strengthening governance and management of PPPs in TVET by addressing the capacity of the NTB to lead, coordinate and work with major enterprises beyond their involvement in setting standards and developing curricula.

6.2. Building a financing model in DGTVET for 2014–18

→ **Roles and responsibilities**

Currently roles and responsibilities in the DGTVET system are not clear. To change this, DGTVET central office should operate as a separate administrative unit, with the functions of strategic policy formation exercised through its role as secretariat for the NTB, purchaser of TVET, 'owner' of DGTVET institutions, quality regulator of all TVET, and data collection and management for all TVET. At the same time, DGTVET institutions need greater autonomy. Possible models are a State-owned company, special operating authority and/or regional clusters.

→ **A quality assurance framework (QAF)**

Smith-Corbyn (2010) argues that a QAF helps raise the overall professionalism of a national TVET system. In the process, the involvement of industry is vital for maintaining the relevance of TVET to industry and ensuring the efficiency of provision. In fact, DGTVET should only purchase or fund TVET products and services that meet the needs of industry and individuals, and are delivered to quality standards that ensure the students have acquired the skills necessary for the qualification. The QAF should have two functions: accreditation of TVET institutions to certify that they meet quality education standards, and accreditation of TVET products and services that lead to a qualification under the Cambodia Quality Framework (CQF) and meet competency standards developed by DGTVET. Cambodia already has the basis for developing the

QAF. It has a *Quality Assurance Handbook*, registration of DGTVET institutions in accordance with it, the CQF, and competency standards under STVET.

→ **Data management**

At present, TVET data in Cambodia is collected and stored, often manually, by individuals and by separate administrative units. The ability to undertake analysis of public data, to access data for any purpose and to manage accountability and performance measurement processes effectively is severely constrained. Those implementing the financing model will have to make assumptions on missing data and simulate approximate value.

The most critical missing link for implementing a financing model is the absence of an accurate unit cost for TVET. It is essential for efficiency benchmarking, cost accuracy in the planning and budget cycles, and allocation of DGTVET resources. A specific project to develop an agreed model for defining unit cost and collecting existing data based on assumptions is an urgent priority. The following principles could form the terms of reference for the project:

- The unit should be an activity measure.
- A number of units should be able to be aggregated to define an output.
- The cost of a unit should be segmented within a total unit cost.
- The cost segments should be central DGVET administration, institutional administration, teaching, and course materials and consumables.
- Capital and equipment investments should be excluded.
- Unit costs should be developed at an average system level, a discipline level and individual course level.
- Weights should be applied to measure the difference in unit cost between disciplines.

→ **Implementation**

Incorporating strategic financial planning and expenditure framework into the implementation of a financing model for DGTVET is a ‘wicked problem’. A key issue involved is the number of components that are missing, not functioning well or in an early stage of development. They include an up-to-date and effective system planning cycle producing an NTDP and a Strategic Plan; key policy decisions on financing and skills development; availability within DGTVET of economic projections; an understanding of forward estimates; quality data on costs, outputs and performance; transparency on tuition fees; and limited strategies in relation to generating other income. This issue tends to affect quality and potential investors’ perceptions of DGTVET, and thus aggravate the pressure of increasing investment.

To solved the 'wicked problem', in the process of developing the financial model, DGTVET has to engage stakeholders and central government agencies through an action learning process, reconstructing a strategic planning and financial management approach. The Policy Framework suggests forming an internal group assigned to implementation, with mentorship by recognized experts. Further, the Policy Framework underlines the necessity to identify the potential consequences and responding strategies through an agile process. In addition, the Policy Framework recommends change be adopted gradually with pilots.

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Annex 1: Short description of the methodology used in the Filipino cost–benefit study

To conduct the Filipino cost–benefit study, D. S. Mapa and colleagues used the methodology of the German cost–benefit surveys that have been conducted by the Federal Institute for Vocational Education and Training (*Bundesinstitut für Berufsbildung*, BIBB) since the early 1980s. The general methodology is provided by Jansen et. al. (2015). Applying the concept in the Filipino context, the cost–benefit survey was calculated as follows (Mapa et al., 2016; Jansen et al., 2015):

→ Calculation of gross costs of training

These are divided into three cost categories:

(a) Personal costs for the trainees: which consist of the monthly training allowance and other additional voluntary or obligatory social benefits such as health insurance, clothing, lodging, transportation and meal allowance. The total personal costs for the trainees were computed monthly and expressed in Philippine pesos.

(b) Costs for the trainers: these cover the wages of the trainers when providing orientation and training to the trainees. The calculation differentiates between full-time, part-time and external trainers. Part-time trainers fulfil their training tasks alongside other employment in a company. Their training activity becomes relevant for the calculation of training costs only when it reduces their productivity in their other work tasks. In the interviews carried out, both time spent on training activities and the reduction in productivity during this time were recorded. For external training personnel, fees, travel and overnight stays were taken into account. The total cost for the trainers is expressed in pesos per month per trainee.

(c) Physical costs: these include costs for tools and equipment for trainees, plus training workshops or in-company teaching, including consumables required for teaching purposes. Also part of the physical costs are teaching and learning materials, external course fees, and the costs of the training administration in the firm. The total physical cost is expressed in pesos per month per trainee.

→ Calculation of benefits

These are divided into two categories:

Short-term benefits: include the productivity and seasonal benefits derived by the firms from the trainees.

Long-term benefits: these occur when the student stays with the firm after the training. They include the savings to the company as a result of not requiring to carry out a search process for new employees, including recruitment advertisements;

personnel costs related to processing job applications, both internal and external; orientation activities, covering both staff time expended for preparing and carrying out orientation activities, and materials used; and the benefit from the productivity differential between the workers trained through the dual training system and externally recruited workers.

→ Sampling of surveyed firms

Since costs and benefits relate to a particular occupation and vary across regions, the sampling aimed to collect information from firms in four different regions (National Capital Region, Region 3 (Central Luzon), Region 4A (Calarbazon) and Region 10 (Northern Mindanao) and from a variety of economic sectors (manufacturing sector 40 per cent, wholesale and retail trade sector 15 per cent , hospitality sector 11 per cent and construction sector 8 per cent).

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Annex 2. Summary of intersectoral training funds in Subsaharan Africa

This table summarizes the results of a survey conducted in 2014 on 13 inter-sectoral training funds (Walther, R. and Uhder, C. 2014. The financing of vocational training in Africa: roles and specificities of vocational training funds. French Development Agency (AFD) for Association for the Development of Education in Africa (ADEA). **http://hdl.voced.edu.au/10707/400516** Accessed 27 April 2018.)

	FODEFCA (Benin)	FAFPA (Burkina Faso)	FDFP (Ivory Coast)	ONFPP (Guinea)	FAFPA (Mali)	NTF (Maurice)	FAP-FTP (Mauritania)
Name of fund	Development Fund for Continuing Vocational Training and Apprenticeship	Vocational Training and Apprenticeship Support Fund	Vocational Training Development Fund	National Office for Training and Development	Vocational Training and Apprenticeship Support Fund	National Training Fund	Autonomous Fund for the Promotion of Technical and Vocational Training
Size of enterprise (number of employees trained)	■ Small and very small enterprises (1 to 10 employees): 1,411. ■ Enterprises with more than 10 employees: 1,697.	■ Self-employed: 11,413. ■ Small and very small enterprises (1 to 10 employees): 171. ■ Enterprises with more than 10 employees: 8,986.	■ Self-employed: 130. ■ Small and very small enterprises (1 to 10 employees): 3,476. ■ Enterprises with more than 10 employees: 42,744.	n/a	Forecast for 2015: ■ Rural and informal: 400 training projects with on average 3 training actions and 25 beneficiaries/plan. ■ Structured enterprises: 100 training plans with 5	n/a	■ Self-employed:150. ■ Small and very small enterprises (1 to 10 employees): approx. 10,000. ■ Enterprises with more than 10 employees: approx. 3,000.

					training actions for 20 workers on average. ■ 50 collective projects (intra-enterprise, professional groupings). ■ Others: 90 special projects (one-off training actions).		
Sectors of activity (number of employees trained)	■ Industry (including mining): 340. ■ Services: 2,392. ■ Agricultural: 366.	■ Industry (including mining): ■ Services: 1,096. ■ Agricultural: 714. ■ Other: 18,760.	■ Industry (including mining): 13,710. ■ Services: 18,407. ■ Agricultural: 9,577. ■ Other: 4,526.	n/a	n/a	n/a	■ Industry (including mining): 2,300. ■ Services: 7,800. ■ Agricultural: 1,800. ■ Other: 1,100.
Training providers	■ Professional organizations in the informal sector (craft/trade, agriculture). ■Enterprises in the formal sector.	■ Professional organizations (associations, groupings, cooperative federations). ■ Training centres. ■ Local/regional authorities. ■ Enterprises. ■ Chambers of commerce.	■ Enterprises for the training plans. ■ Ivory Coast *Moulins Modernes* (apprenticeship training for production workers). ■ Adzopé Local Development Programme (job training project). ■ CHRIST ROI approved Training Centre in Bondoukou (training for SME managers).	n/a	n/a	n/a	■ Enterprises. ■ Professional organizations. ■ Any organization able to take on youngsters.

Goals of the training courses	■ Modern sector: development of technical or managerial skills, new working practices. ■ Informal sector: skills improvement for craft workers, knowledge of the dual system. ■ Agricultural sector: food production and processing techniques, collective marketing system.	■ Adaptation to enable people to do specific jobs. ■ Mobility within the enterprise. ■ Avoiding job losses in the event of reorganization. ■ Qualification and employability. ■ Integrating and reintegrating people who have difficulties accessing training and employment. ■ Improvement of traditional apprenticeship schemes. ■ Health and safety, environmental issues.	■ Adaptation to enable people to do specific jobs. ■ Skills development. ■ Retraining.	n/a	n/a	■ Adapting to new technologies. ■ Building of knowledge and skills to improve efficiency. ■ Promote apprenticeship training. ■ Help employees to improve their qualifications. ■ Train a qualified workforce in specific areas, identified on the basis of surveys on gaps in the workforce.	■ Skills development. ■ Integration of young people.
Outcomes achieved	■ Improved technical and managerial skills, increased productivity, help to adapt to career changes. ■ Ensure long-term future of small and very small firms.	■ 20,570 people trained in 13 regions.regions ■ Improvements in productivity/ competitiveness /capacity for innovation. ■ Improved product quality. ■ Self-employment/job creation.	■ The beneficiaries are satisfied and apply the skills acquired.	n/a	n/a	■ In 2014: 41,258 people trained under the different schemes funded by the NTF: - Foreign expertise scheme: 2,589 people trained. - Initial training: 709 people	■ High rate of employer satisfaction. ■ Career development of beneficiaries. ■ Job training: 60% find work.

						trained. - Multimedia facilities scheme: 9 organizations supported. - Training needs analysis scheme: 5 organizations supported. - In-house training scheme: 23,728 people trained. - Overseas training scheme: 241 people trained. - Institutional training scheme: 41,258 people trained.	
Pre-employment training schemes	■ Dual apprenticeship schemes leading to the CQP (*Certificat de qualification professionnelle – professional qualification certificate*): 1879 (in 2014) in 13 craft trades. ■ Skills certificate (CC: *Certificat de*	■ Dual apprenticeship schemes leading to CQP: 2,638. ■ Modular skills training: 11,413 young people.	■ Apprenticeship (leading to CC skills certificate): 28. ■ Skills training (leading to the CC skills certificate): 25.	n/a	n/a	■ Apprenticeship: 1,278 young people trained to levels 2, 3 and 4. ■ Since the creation of the Apprenticeship Scheme in 1996, inspired	■ Apprenticeship: 160. ■ Dual training: 600. ■ Skills training: 6,000. ■ Other: 6,500.

	compétences): 3108 beneficiaries (1045 in the informal non-agricultural sector, 366 in the agricultural sector 1697 in the modern sector)					by the German system, 13,000 young people trained in 26 different sectors.	
Outcomes achieved	■ CQP: admission (success?) rate of at least 90%	■ CQP: 2,638 young people trained, success rate of 90%, 85% work with their apprenticeship master.	■ 53 young people trained at the request of an enterprise, all found work after their training.	n/a	n/a	■ Success rate in gaining desired diploma: 71.4% ■ % of apprentices who entered employment: 83.1%.	■ Success rate in obtaining desired qualification: >80%. ■ % entering employment. 60%.
Target categories	■ People working in modern sector enterprises, apprentices, craftspeople and farmers. ■ No unemployed people trained, FODEFCA only trains people who are employed or young apprentices. ■ 142 disabled people and people with social problems trained in 2014 at the request of the Ministry for Families.	■ In formal jobs: 906 people trained. ■ In informal jobs: 8,251 people trained. ■ Unemployed: 11,413 people trained. ■ Excluded: n/a	■ In formal jobs: 46,248. ■ In informal jobs: 25. ■ Unemployed: n/a. ■ Excluded: n/a.	/	■ People working in modern sector enterprises and craftspeople. ■ People working in rural areas. ■ Apprentices and young people who have dropped out of school, or who are qualified but in retraining and have a firm job offer, or	/	■ In formal jobs:1,500. ■ In informal jobs : 5,500. ■ Unemployed: 6,000.

					who have a job-finding project funded from another source.		
Types of training course	■ Qualification: 1,879 prepared for the CQP. ■ Qualification leading to jobs: 3,108 of which 1,697 in the modern sector, 1,045 in the craft/trade sector and 366 in the agricultural sector.	■ Certification: 2,638 people trained for the CQP. ■ Qualification leading to jobs: 14,051 people trained. ■ Others: 5,613 people trained.	■ Diploma: 1,173. ■ Qualification leading to jobs: 44,442. ■ Others: 605.	n/a	n/a	■ Certification: 1,278 people trained at levels 2, 3 and 4.	■ Qualification /leading to jobs: 6,000. ■ Others: 7,000.
Changes to be introduced to improve fund management by all public and private partners	■ Definition of a forward vision through the drafting of a strategic development plan. ■ Introduction of internal management tools. ■ Better use of partnership potential.	■ Decentralization and devolution of the financing scheme.	■ N/a: the three-way management works well,	■ Improvement of the information system and data collection (setting-up of a database).	n/a	■ A committee has been set up to manage the use of the funds and to analyse the criteria for reimbursing training costs. It has representatives from the public and private sectors	■ Lack of a strategic vision for HR development in the enterprises and professional organizations. ■ Suggestion: workers' representatives should be involved in management of the funds.
How is better needs analysis encouraged?	■ Update existing tools.	■ Train providers to identify needs. ■ Train advisers in training design and development.	■ Provide simple tools that SMEs can use.	■ Train advisers.	n/a	■ A training needs analysis tool has been put in place to encourage employers to provide training	■ Provide funding for enterprises to analyse their skills needs.

						that corresponds to the needs identified. Not many employers use it. Employers need to be made aware of this tool so that needs analysis can be improved.	
How is better identification of priority objectives and target groups encouraged?	■ Drafting of a strategic development plan, especially in continuous vocational training (CVT).	■ Train advisers in strategic planning.	■ N/a: the financing of FDFP activities is initiated on the basis of a rolling annual action plan.	n/a	n/a	n/a	■ Carry out training needs analyses by sector.
How is greater efficiency/equity of application procedures encouraged?	■ Update the manual of procedures and management tools. ■ Shorten processing times.	■ Train the advisers and managers in the use of procurement/award procedures. ■ Introduce efficiency and equity criteria.	■ Update the FDFP procedures manual in 2016.	■ Put in place a procedures manual.	n/a	■ The selection procedure is fair and transparent. However it has been observed that not many SMEs make use of the NTF. NTF intends to draw up tailor-made procedures to encourage SMEs to make greater use.	■ Simplification of procedures. ■ Results-driven management.

How is better monitoring and evaluation of training encouraged?	■ Impact studies at regular intervals to improve the quality of training courses.	■ Train the advisers and managers in use of monitoring and evaluation techniques. ■ Involve the providers in monitoring and evaluation.	■ Modernize and optimize the information system (online management of training courses, from assessment of the applications to the payment of training expenses).	n/a	n/a	■ Monitoring of actions funded needs to be improved. Shortage of staff means monitoring is currently carried out on the basis of a sample of actions funded. Increasing the number of staff responsible for monitoring would help to improve the quality of the monitoring.	■ Put in place a monitoring system which uses efficient tools.
Where does the fund's budget come from?	■ Repayment of tax. ■ Increase of the State subsidy. ■ Mobilization of technical and financial partners.	■ Repayment of employers' apprenticeship tax. ■ Mobilization of TFPs. ■ Development of `public-private partnerships	■ No change to the financial arrangements in force, which have enabled FDFP to achieve its objectives.	n/a		n/a	■ Repayment of tax. ■ Increase of State subsidy.
How is the anticipation of budget needs and the programming of measures encouraged?	■ Train managers in cost accounting.	■ Release the subsidy in a single payment. ■ Implement budget programmes. ■ Close monitoring of expenditure.	■ Put in place a system to ensure that funds collected cover everything.	n/a	n/a	n/a	■ The annual budget and work programme are drawn up and approved by the Funding Allocation Committee (CAF).

How is greater transparency in the way funds are allocated encouraged?	■ Fund given the necessary tools to enable it to achieve a balanced budget.	■ 35% allocated to administrative expenses and 65% to training.	n/a	n/a	n/a	n/a	■ The funds are allocated in line with the procedures manual and following approval by the CA.F
How is better traceability of the tax encouraged?	n/a	n/a	■ N/A: the FDFP has two offices to enable resources from the two taxes to be traced.	■ Review legislation	n/a	n/a	■ The Apprenticeship tax is collected and managed by the Finance Ministry.
How is better identification of the priority needs of the economy encouraged?	■ Better collaboration between vocational training policies and the fund.	■ Promote a national vocational VT policy and action plan. ■ Have it taken on board. ■ Feasibility studies on the design and development of training aids.	n/a	■ Study of employment market needs.	n/a	n/a	■ Actions are financed only in response to requests from enterprises. CAF approves funding for actions which it deems a priority for the economy.
How is better cost efficiency of the training achieved?	■ Draw up a list of training costs.	■ Draw up a list of training costs. ■ Define eligibility criteria for training projects.	n/a	n/a	n/a	n/a	■ N/a: the average costs of funded actions are below the threshold authorized by the procedures manual.
How is better coordination between vocational training policies encouraged?		■ Synergies with public VT structures, the funds of the Youth, Vocational Training and Employment Ministry.	■ Through its management bodies: The FDFP Management Committee includes 4 representatives of the State Authorities.	n/a	n/a	■ The management of NTF comes under the remit of the Human Resources Development Council (HRDC), a public body under the authority of the	■ Through its decision-making bodies: there is parity of representation between the State authorities and the private sector on the Fund's decision-making body.

						Ministry for Education.	
How is better cooperation with the economic and social partners encouraged?	■ Compliance with management and selection rules and procedures so as to guarantee transparency and equity with different stakeholders.	■ Organization of workshops to share best practice.	■ Through its management bodies: The FDFP Management Committee includes 4 private sector representatives and 4 trade union representatives.	■ Organization of open days and workshops in order to reinforce the partners' engagement.	n/a	■ HRDC is made up of representatives from the private and public sectors. Sector committees have been set to facilitate the needs analysis of the different economic sectors.	■ Through its decision-making bodies: there is parity of representation between the enterprises and their professional organizations on the Fund's decision-making body.
How can the fund participate in further developing vocational training systems?	■ Update the curricula especially with regard to technological developments.	■ Establish a TVET negotiation framework. ■ Set up a monitoring committee (providers, operators, beneficiaries, funds).	■ TFDFP is responsible for managing revenue from the apprenticeship tax. It has organized several discussions on how to improve partners' access to the apprenticeship tax.	n/a	n/a	■ NTF finances an apprenticeship scheme. This is run by an Apprenticeship Committee, which oversees the scheme's policies and management.	■ The fund finances dual training courses and apprenticeship schemes at the request of enterprises, and supports a number of State training establishments in developing different modes of training with the enterprises.

	FAFPCA (Niger)	ACFPE (Central African Republic)	FFFPT (Senegal)	ONFPP (Senegal)	FONAP (Chad)	FNAFPP (Togo)
Name of fund	Continuing Vocational Training and Apprenticeship Support Fund	Central African Vocational Training and Employment Agency		National Vocational Training Bureau	National Vocational Training Support Fund	National Apprenticeship, Vocational Training and Continuing Training Fund
Size of enterprise *(number of employees trained)*	■ Small and very small enterprises (1 to 10 employees): 4,618. ■ Enterprises with more than 10 employees: 595.	In 2014: ■ NGOs: 364. ■ Small enterprises: 444. ■ Large enterprises: 351.	In 2014: ■ Very small enterprises: 280. ■ SMEs: 2,216. ■ Large enterprises: 1,985.	In 2014: ■ Total: 8,103 workers and job-seekers trained, of which: - 2,199 individual request. - 5,904 from formal or informal enterprises.	Data unavailable: the monitoring and evaluation department has only just been created.	■ Self-employment: n/a ■ Small and very small enterprises (1 to 10 employees): 462. ■ Enterprises with more than 10 employees: 1,481.
Sectors of activity *(number of employees trained)*	■ Industry (including mining): 4,138. ■ Services: 595. ■ Rural development: 480.	In 2014: ■ Primary /agricultural: 0. ■ Secondary /industrial: 351. ■ Tertiary/Services: 364.	■ Agri-food: 485 ■ Public works/ water/ energy/ various industries/ maritime: 1,334. ■ Tertiary/Services: 2,662.	■ Agri-food/agriculture/ farming/fisheries: 3,072. ■ Chemistry/ construction and public works/ electrical engineering: 888. ■ Tertiary/Services (management / commerce/ICT/ art / catering/ textiles/ hairdressing/ languages/ transport/ journalism/ environment/ furniture-making): 4,143.	n/a	■ Industry (including mining): 288. ■ Services: 740. ■ Agricultural: 294. ■ Other : 1,277.
Training providers	■ Training companies. ■ Professional organizations/trade unions.	■ ACFPE itself provides this training, on the basis of needs expressed by the enterprises		■ Individuals. ■ Enterprises. ■ Professional organizations, EIGs, associations.	n/a	■ Enterprises. ■ NGOs. ■ Economic operators. ■ Chambers of

	■ Economic interest groups, farmers' organizations. ■ Local and regional authorities. ■ Training centres	and NGOs, and the needs analysis it carries out with the enterprises.				Trade. ■ Agricultural training centres.
Goals of the training courses	■ Skills development. ■ Anticipation of emerging professions. ■ Pre-employment and job training.	■ Skills developmen.t ■ Adaptation to enable people to do specific jobs. ■ Familiarization with a new tool.	■ Skills development. ■ Job training.	■ Qualifications for job-seekers. ■ Skills development for those in work.	n/a	■ Skills development.
Outcomes achieved	■ No impact studies undertaken.	■ Satisfaction rate of 85% to 90% (evaluation forms completed by beneficiaries at the end of a training course). ■ Impact is difficult to measure because of the low rate of response to the survey.	■ Evaluation on the basis of questionnaires sent to HR managers in the companies (Enterprise satisfaction survey). ■ Objectives of the training course achieved: satisfaction rate 90%. ■ Quality of the teaching: satisfaction rate 90%. ■ Quality of the teaching documents and practical organization: satisfaction rate 79%. ■ Compliance with specifications: satisfaction rate 87%.	■ Improvement in working conditions. ■ Greater awareness of health & safety and quality. ■ Increase in productivity. ■ Sustainable revenues. ■ Openness to opportunities for financing activities. ■ Development of entrepreneurship.	n/a	■ Post-training monitoring reports being drawn up.
Pre-employment training schemes	■ Apprenticeship (CQM): 1,281. ■ Dual apprenticeship (CQB): 1,126. ■ Agricultural	■ Apprenticeship (initial training of 6 months leading to the CQP): 72. ■ Additional training of 30 hours on	■ The FFFPT is not currently responsible for pre-employment training, ■ Three concepts to come: specialization contracts, apprenticeship contracts, job	■ Job training programmes leading to occupational qualifications recognized by collective sector agreements or	Between 2000 and 2015: ■ 8 apprenticeship projects for 153 beneficiaries. ■ 9 job training	■ FNAFPP does not invest in pre-employment training for the time being ■ a cooperative dual training scheme

	apprenticeship (CQB): 480. ■ Initial training leading to a qualification: 2,138.	average to improve the employability of job-seekers: 1,119.	training contracts.	certificates: 463 young people (345 in the context of the opening of a mining company, 118 in the context of a road-building project).	projects for 236 beneficiaries.	was planned from December 2015.
Outcomes achieves	n/a	■ Success rate: 94%.	n/a	n/a	n/a	n/a
Types of trainees	■ Company employees: 595. ■ Craftspeople: 1,017. ■ Young people not in education or who have dropped out of school: 3,025. ■ People with disabilities: 75. ■ Women's groups: 501.	■ Company employees (NB: only employees of companies and NGOs regularly registered with the ACFPE and up to date with payment of employer's contributions can benefit). ■ Job-seekers.	n/a	■ Employees in all sectors (public, private, modern, informal, rural, craft). ■ Individuals or groups (especially young people and women) of job-seekers or who are involved in job training projects. ■ State or private investment programmes linked to a national priority. ■ Local authorities, in the framework of Act III of the decentralization process.	Between 2000 and 2015: ■ 1,274 training plans for 14,831 employees. ■ 1,560 group projects for 26,142 members of groups and associations. ■ 8 apprenticeship projects for 153 people. ■ 9 job training projects for 236 people.	■ In formal employment: 1,481 people trained. ■ In informal employment: 754 people trained. ■ Unemployed: n/a ■ Exclusion: n/a
Types of training course	n/a	■ Continuing training. ■ Training through apprenticeship for young people who have dropped out of school. ■ Further training for job-seekers.		■ Job training leading to qualifications: 463 young people trained.	n/a	■ Training leading to certificates: n/a. ■ Training leading to qualifications: 2 599.

Difficulties and changes to be introduced to improve fund management by all public and private partners	■ Lack of structured organization and of standard costs for the services provided. ■ Draw up lists of costs and fixed charges and charges for the different services provided.	■ Institutional difficulties: the Agency has to submit an employment programme to the Prime Minister before incurring any expenditure → restricts the Agency's autonomy and has a negative impact on the implementation of its annual action plan.	■ Lack of a strategic vision and well-defined positioning in the vocational training sphere. ■ Re-launch and reorganization. ■ Constant involvement by social partners.	n/a	■ Need to train all the partners involved in the management of the training funds.	n/a
How is better needs analysis encouraged?	■ Give priority to funding properly designed training plans.	n/a	n/a	■ Difficulties linked to the lack of comprehensive data on employment market needs.	■ Train company HR managers and training advisers.	■ Help the providers to identify training needs.
How is better identification of priority objectives and target groups encouraged?	■ Carry out surveys among target groups, especially in the non-structured sector.	n/a		■ Difficulties linked to the lack of comprehensive data on employment market needs.	■ Provide training for the advisers so that they can better determine training needs depending on the category of people concerned.	■ Help the providers.

How is greater efficiency/ equity of application procedures encouraged?	n/a	n/a	Difficulties: ■ Lack of differentiated and specific procedures, especially in the strategy for approaching targets (sector demand, local demand, State establishment and companies) (large enterprises, SMEs and very small enterprises). ■ Application deadlines are too short. ■ No division of operators into categories according to level of satisfaction of the training providers who have used their services. Suggestions from companies: ■ Reduce the time taken to process applications. ■ Communicate the dates to the CSA at the start of each year. ■ Organize outreach activities and meetings between providers.	n/a	■ Define indicators on quality, performance and outcomes.	■ As from 2016, limited consultation procedures introduced more widely.
How is better monitoring and evaluation of training encouraged?	■ Strengthen monitoring and evaluation processes and introduce an information and management system.	n/a	■ Systematic monitoring during and after the training.	n/a	■ Have suitable indicators for monitoring.	■ Every two years, carry out impact studies on the actions financed.
Where does the fund's budget come	■ Direct collection and receipt of the funds raised by	■ No major difficulty in securing resources long term:	■ Increase in government financial support through increase in the share of the	■ Insufficient resources allocated to ONFP under company contribution	■ Improving recovery rate for the tax.	■ Appeal to increase financial resources.

from?	apprenticeship tax. ■ Diversify financial resources for example by introducing parafiscal taxes.	ACFPE directly collects the employers' contribution (which represents over 95% of its resources). ■ Nevertheless, budget is insufficient for the ACFPE's many missions (public employment service and the vocational training fund).	Consolidated Investment Budget (BCI) allocated to the FFFPT. ■ Payment of an increased share of CFCE. ■ Identification of new sources of financing, in particular in the private sector and from financial institutions, through job training and development programme budgets (Employment/Training/ Occupations) for young people, apprentices and the unemployed.	CFCE *(contribution forfaitaire à la charge des employeurs*) (only 5%). ■ Need to significantly increase this budget by doubling the rate and generating additional resources by offering services. ■ Creation of other innovative financing mechanisms.		■ Identification of additional resources.
How is the anticipation of budget needs and the programming of measures encouraged?	n/a	n/a	n/a	n/a	■ Make systematic use of a scorecard for planning and for reporting.	■ It is not possible to improve the programming of activities because the payment the tax is irregular
How is greater transparency in the way funds are allocated encouraged?	■ Introduce a transparent information system with regard to companies' status as far as the training is concerned (which companies have paid, which haven't, share of funds invested directly, etc.).	n/a	n/a	n/a	■ Rigorous allocation of resources with a ceiling rate of 20% on the operating budget.	■ N/a: FNAFPP's budget complies with this requirement.

How is better traceability the tax encouraged?	n/a	N/a – ACFPE collects the employer's contribution directly.	n/a	n/a	■ Monitor approved training actions rigorously and only pay training expenses after presentation of receipts.	■The tax is collected by the tax department, therefore there is no control over traceability.
How is better identification of the priority needs of the economy encouraged?	■ Develop ways to ensure that training is demand-led	n/a	■ Have the R&D department identify and take responsibility for the new problems and concerns of companies, in particular to deal with the key challenges of competitiveness, management and new technologies.	n/a	■ Anticipate training needs with HR directors every six months.	■ Train training advisers and hire more of them.
How is better cost-efficiency of the training achieved?	n/a	n/a	■ Weak dialogue with operators, which among other things criticize the upper limit of the financing rate and low fees for providing training. ■ Failure to take into account training providers' wishes in the selection of providers. <u>Suggestions</u>: ■ Raise the financing limit for large companies. ■ Involve providers in the choice of operators. ■ Require the involvement of trainers proposed during technical and financial negotiations.	n/a	■ Difficult to envisage as there are not enough good training providers.	■ Have consultancies compete with one another.

How is better coordination between vocational training policies encouraged?	■ Ensure that the funds' missions are fairly well known and disseminate information regularly on what are they achieve.	■ Good relations between the ministry responsible and the auditor of the companies and public offices. ■ The ministry responsible is represented on the managing board. ■ Close cooperation between the employment and vocational training departments within the ministry.	■ Appeal to public authorities and Parliament for more effective support of vocational training.	■ ONFP strategy is linked to the national vocational training strategy, which is targeted at the labour market with a view to improving the economy's competitiveness.	■ Achieved in the framework of the Education and training strategy.	■ Improve the funds' visibility and regularly report to supervisory bodies on the actions financed.
How is better cooperation with the economic and social partners encouraged?	■ Fully involve the economic, professional and social partners in training programmes. ■ Develop public–private partnerships in training.	■ ACFPE regularly participates in meetings with the economic partners, which forges a relationship based on trust. ■ The social partners are primarily represented on the managing board and are therefore closely involved in overseeing activities.		n/a	■ Achievement in the framework of the Education and Training strategy.	■ Discussion meetings, open days and sponsoring.
How can the fund participate in further developing vocational training systems?	■ Help for the design and development of training and apprenticeship and for the development of apprenticeship management tools.	■ The national TVET system is currently subject to approval: the ACFPE has participated in its development.	■ Subsidize training leading to qualifications	n/a	■ Under development.	■ Adapt the training system to labour market needs.

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