

Technical and Vocational Education and Training:  
Issues, Concerns and Prospects 19

Rupert Maclean  
Shanti Jagannathan  
Jouko Sarvi *Editors*

# Skills Development for Inclusive and Sustainable Growth in Developing Asia-Pacific



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## Technical and Vocational Education and Training: Issues, Concerns and Prospects

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### Volume 19

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# Skills Development for Inclusive and Sustainable Growth in Developing Asia-Pacific

 Springer

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# Foreword

Appropriate policies and practices for skills development currently occupy a dominant place in development discourse. As countries in Asia and the Pacific recalibrate their growth models to consolidate their positions in the global economy, availability of a highly skilled and technically qualified human resource base will be a crucial determinant of success. In their quest to gain market shares in higher-order manufacturing and services, governments and other stakeholders are paying close attention to developing the requisite technical and scientific capabilities. If emerging economies in Asia and the Pacific are to maintain their robust economic growth rates, they need to respond to the challenges posed by the ascent of knowledge economies. The labor cost advantages in manufacturing of the past are giving way to innovation-intensive competitiveness based on the ability to generate new ideas, products, and processes. Mere cost advantages are no longer sufficient, and companies should have a holistic approach considering economic, social, environmental, and financial aspects. Advancement of societies is predicated on putting knowledge and innovation to work and developing new products and new services. This requires governments to have appropriate policies and incentives to deepen talent pools and to expand access to market-relevant skills development to the disadvantaged sections of the population.

ADB has long collaborated with its developing member countries as a financial and knowledge partner on pressing development challenges. In the area of skills and training, ADB is working with governments to help them simultaneously achieve several interrelated objectives: inclusive economic growth, human capital development, innovation and technology absorption, and social cohesion. ADB attaches great importance to education and skills training, not just for their own merit, but also as enablers to fully realize gains from other key developmental areas, including infrastructure, environment, and finance sector.

ADB convened an international skills forum at its Manila headquarters in December 2011. This was the first in an annual series of annual knowledge sharing events that ADB intends to organize. The forum brought together a diverse group of international experts, CEOs of companies and institutions engaged in skills and workforce development, and representatives of multilateral agencies, government,

and the private sector. This volume compiles their valuable contributions to advance thinking and practice related to skills development. We are deeply grateful to the participating individuals and institutions for sharing their insights and perspectives. This volume reflects our common desire to build a shared understanding of key priorities in the skills sector and more importantly a shared commitment, pooling our knowledge and resources. It is my hope that this volume advances dialogue on effective policies and practices for creating a highly skilled and creative workforce and talent pool that is essential to achieving inclusive economic growth in Asia and the Pacific.

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# Preface

This volume brings together views, perspectives, and insights from policy makers, practitioners, and leading experts on skills development for inclusive and sustainable growth. ADB is privileged to have collaborated with such an eminent group of professionals in this endeavor to put together the combined wisdom and experiences for wider knowledge sharing.

The volume is organized in four parts: the first part provides an introduction to major trends and concerns relating to skills development. The second part addresses prominent issues and strategies that are emerging in the TVET and skills development sector in the countries of Asia and the Pacific region in response to the key challenges confronting them. The third part looks at the link between technical and vocational education and training and the imperatives of greening economies – if and how education and training are responding to green growth. The fourth and the last part draws together prominent trends to articulate an emerging framework for policy and action in the skills and training sector that development partners could consider in their future activities and investments.

Chapter 1 traces the trends and developments associated with skills development and the experiences of Asia in comparison with other parts of the world. Chapter 2 explores the issue of lifelong learning in the context of skills development. Chapter 3 discusses how secondary and tertiary education systems are incorporating vocational education and training. Chapter 4 articulates the important ecosystem that is needed for the successful translation of training into employment and occupations. Chapters 5 and 6 analyze the influence of movement of labor from rural to urban areas and the role of ICT and their implications for skills development.

Chapters 7, 8 and 9 elaborate upon the challenges in moving from technical and vocational education and training (TVET) to workforce development, in measuring skills and qualifications and appropriate models for skills development that permeate the large informal sector that is widespread in many parts of Asia. Chapters 10 and 11 provide insights into recent policy measures to address skill shortages particularly by engaging the private sector in India and in responding to underemployment and migration in South Asia. Chapters 12 and 13 dwell on the challenges



of rural-urban migration and aging populations and the manner in which skills training can mitigate negative consequences of such trends.

Chapters 14, 15, 16, 17, 18, and 19 address a range of issues relating to education and skills development in the context of greening economies, the realignment of curriculum toward green jobs, and the perspectives of employers in terms of skills required in a low-carbon economy.

The last chapter seeks to summarize selected prominent issues of discourse in the skills and training arena and outlines a draft framework for policy and action for skills development in Asia and the Pacific. As the discourse moves forward in the 2012 and 2013 skills forum, this framework is expected to further evolve and become more practically oriented.

On behalf of ADB, we are deeply appreciative of the contributions made by leading experts to this volume.

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## Series Editors' Introduction

Skills development for employability (often referred to as technical and vocational education and training) has been identified by countries in Asia-Pacific as a priority area for educational policy and practice. This is not surprising since there is overwhelming evidence to demonstrate that TVET can play an essential role in promoting sustainable economic growth and the socioeconomic development of countries, with benefits for individuals, their families, local communities, and society in general. Improving education for the world of work can help improve the incomes of poverty-stricken farmers, provide citizens with more choices in their lives, help alleviate poverty, and help empower individuals who would otherwise be marginalized. Technical and vocational education and training therefore has a major role to play in achieving inclusive and sustainable growth in developing Asia-Pacific.

One of the key skills challenges facing TVET concerns the greening of economies, as countries seek to address problems such as climate change and ways to best achieve sustainable, long-term development. The recent Rio+20 conference reminds us that despite the urgent nature of the problems faced, it is extremely difficult to achieve an international consensus on how best to address pressing issues such as global warming. The various chapters in this book examine research, policy, and practice concerning key skills challenges with particular reference to TVET, inclusive and sustainable growth, and the greening of economies.

For instance, climate change is generating economic and environmental dislocations with these pressures set to increase in the coming years. The Asian Development Bank estimates that the economic impact of climate change in Asia will be 2.5 times more severe than the global average by 2100 if carbon emissions continue at their current level. But these threats also provide opportunities to those countries and regions that address climate change by pursuing lower emission technologies since 'going low-carbon' will generate opportunities in green and energy-efficient technologies and applications.

Such actions will see a reengineering of established production techniques and will increase demand for climate-compatible goods and services. Those places that

best anticipate and respond to these needs will be positioned for significant positive growth in the years ahead. The chapters in this book contribute to a better understanding of the types of changes in policy and practice that will be necessary to take advantage of this potential. As ADB argues, a key factor in reducing the risks from climate change is better government and industry policy with regard to better coordination between agencies and between central and local government, and better research by all countries.

This book examines the theory and practice needed to enhance policy making to promote 'green skills' for 'greener economies' in countries throughout Asia-Pacific, especially through skills development for employability regarding technical and vocational education and training. The chapters identify green economy potential and associated workforce skills that are needed for countries in Asia-Pacific to create new and alternative economic opportunities through a shift to low-carbon technologies, and identify changes in TVET policy and management that are needed to respond to the skills needs of industry resulting from climate change. Taken together, the contributors help identify where existing occupations need to adapt as a result of sustainable development issues such as climate change and where new occupations will emerge. Based on these changes, future requirements for technical and vocational education and training can be identified.

Pathways to a low-carbon economy are often seen as a technical issue, requiring engineering knowledge and skills. However, the development of appropriate competencies in the general workforce to undertake other tasks that are the lifeblood of economies is also very important in meeting the challenge at hand. As industries and industry sectors reengineer their resource and energy inputs, supply chain management, logistics, design and construction of the build environment, production processes, services, water and waste management practices all have to be significantly altered to reduce carbon emissions. For these changes to economic practice to be achievable and sustained over a long period, the training of the general labor force must be a priority.

The Hong Kong Institute of Education  
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Rupert Maclean

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Rupert Maclean  
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**Part I**  
**Major Trends and Concerns**  
**in Skills Development**

# Chapter 1

## Skills Development Issues, Challenges, and Strategies in Asia and the Pacific

Rupert Maclean, Shanti Jagannathan, and Jouko Sarvi

### Introduction

The Asia-Pacific region is renowned for its size, diversity and complexity, whether it be geographical, socioeconomic, cultural, political or developmental, all of which impact on every aspect of life, including employment, labour force considerations, education and training. The region is home to some 63% of the world's population of seven billion. Countries with the largest populations (People's Republic of China, 1.34 billion; India, 1.22 billion) and the most rapidly growing megacities are to be found in the region, as are countries with relatively small populations (Bhutan, 695,000; Niue, 1,398) (UNDESA 2011).

Levels of economic development vary widely, with some of the richest countries (such as Japan) and some of the poorest countries on earth (such as Bangladesh). Asia contains the largest number of poor of any region in the world, the incidence of those living below the poverty line remaining as high as 40% in some countries in Asia (UNESCAP 2011). At the same time, many countries are experiencing a period of great economic growth and development. The growing prominence of Asian economies and corporations, together with globalisation and technological

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innovation, is leading to long-term changes in trade, business and labour markets. There is a rebalancing of power, centred on Asia and the Pacific region.

Asia's economies have achieved remarkable growth rates. If Asia continues to grow on its recent trajectory, it could, by 2050, account for more than 50% of the world Gross Domestic Product (GDP) (compared to 27% in 2010), with a sixfold increase in per capita income, to reach European levels of today. Seven economies – the People's Republic of China (PRC), India, Indonesia, Japan, the Republic of Korea, Thailand and Malaysia – are projected to account for 87% of the GDP growth in Asia and almost 55% of global GDP growth between 2010 and 2050 (ADB 2011b). A number of directions for economic development have been identified in the UNESCAP (2011) report:

- Trade within the region is growing more rapidly than the region's trade with the rest of the world, potentially leading to a deeper level of regional integration.
- Services are an important emerging sector, and various developing Asia-Pacific economies are leading the recovery in exports of commercial services, with the group recording on average a growth rate of more than 20% in 2010. There is scope to expand intraregional trade in some services.
- Some Asia-Pacific countries are already world leaders in the production and export of climate-smart goods and services.
- It is important to include small and medium-sized enterprises (SMEs) in the exports of Asia-Pacific economies, as they play a crucial role in creating employment.
- An increase in regional cooperation is also viewed as a major avenue for regional development.

However, realising the 'Asia-Pacific Century' is dependent upon countries in the region being able to sustain growth, reduce poverty and ensure inclusiveness in the distribution of gains. On the one hand, it is crucial to address inequities, while on the other, it is important to implement strategies for productivity gains so that countries are not caught in a 'middle-income trap' (World Bank 2007). The notion of a middle-income trap refers to a well-established economic principle whereby a developing nation gets 'trapped' when it reaches a certain, relatively comfortable level of income but cannot seem to take that next big jump into the true big leagues of the world economy, with per capita wealth to match. Every economy in Asia has confronted this 'trap' or is dealing with it now. Breaking out of it is extremely difficult since escaping the 'trap' requires major re-engineering which includes skills development for employability and sustainable livelihoods.

Asia also faces demographic challenges – some economies have a predominantly working age population, while there are economies that will be confronted with an aging, large elder population (UNDESA 2011). The case of the Asian giants, the PRC and India, is particularly interesting and significant. Being the world's two most populous countries, together they represent 36% of the world's population. These populations will continue to increase with India and the PRC having predicted population growth rates of 1.32 and 0.42%, respectively. GDP growth forecasts for India and the PRC in 2012 are 7.5 and 9%, respectively (International Monetary Fund 2011a, b). Large-scale migration to urban areas is a major feature in both countries, this being particularly the case in the PRC. This is fuelled by a desire for

improved employment opportunities and higher standards of living (UN Population Fund 1999).

In Asia, the informal sectors take up 65% of nonagricultural employment. Together with informal employment in agriculture, the proportion of informal employment significantly increases, in India, for example, ‘from 83% of non-agricultural employment to 93% of total employment’ (Asian Development Bank 2011, p. 1). Skills development for the informal sector presents specific challenges to governments.

A deeper level of economic integration, which is required for sustainable development, calls for regional cooperation in skills development. Although challenges for HR development vary from country to country, the overall directions for the region could be identified based on the assumption that countries need to progress towards aligning skills development strategies with socioeconomic goals. The Asian Development Bank has a competitive advantage to support countries in the region in formulating skills development strategies and in increasing regional cooperation in TVET through formulating overall priorities. In this chapter, an example of European Union (EU) regional cooperation in TVET and key challenges and current TVET trends in Asia and the Pacific are considered, and a framework to move forward to support TVET in the region is suggested.

## **Global Issues: Skills Development for Employability (TVET)**

In this chapter, skills development for employability, which stresses practical, technical and vocational, rather than largely academic knowledge, skills and understandings shall be referred to as technical and vocational education and training (TVET).

Over time, and in different countries, various terms have and are being used to describe elements of the field that are now conceived as comprising TVET. These include apprenticeship training, vocational education, industrial arts, technical education, technological-vocational education, occupational education, vocational education and training and career and technical education. At the second International Congress on Technical and Vocational Education, held in the Republic of Korea in 1999, UNESCO and the ILO (in consultation with their respective member states and partner agencies) jointly agreed to use the term technical and vocational education and training (TVET)<sup>1</sup> in future in order to unite the field.

TVET is very much back on the global educational agenda after its virtual disappearance from international aid in the early 1980s, when the World Bank radically shifted its policy from TVET support towards investment in primary education. A return of TVET to the development agenda is partly a reaction to the emerging skills divide with the least developed countries falling further and

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<sup>1</sup> The definition of TVET that has been most widely adopted is ‘Those aspects of the educational process involving, in addition to general education, the study of technologies and related sciences, and the acquisition of practical skills, attitudes, understanding, and knowledge relating to occupants in various sectors of economic and social life’ (UNESCO 1999).

further behind, particularly in sub-Saharan Africa and South Asia. Currently, TVET is regarded as important to achieving relevant and high-quality education for all (EFA), education for sustainable development (ESD) and the Millennium Development Goals (MDGs) and is also viewed as part of the lifelong learning agenda (King 2011).

There is overwhelming evidence to demonstrate that TVET can play an essential role in promoting sustainable poverty alleviation, human development and economic growth, with clear benefits for individuals, their families, local communities and societies in general (Maclean and Wilson 2009, Chapter 1; NORRAG 2003). This is to be expected since it is estimated that some 80% of occupations centre on the application of technical and vocational skills to the world of work (UNESCO-UIS 2006). The World Bank (2010) highlights the importance of skills for individuals and economies as 'skills are at the core of improving individuals' employment outcomes and increasing countries' productivity and growth' (p. 1). UNESCO's strategy on TVET (2008) stated that more and more governments are calling for assistance in TVET development (UNESCO 2011). TVET has been identified by the international community and ADB member states in Asia and the Pacific as a priority area within ADB's range of programme activities.

TVET refers to education and training that prepare people for gainful employment (Finch and Crunkilton 1999). TVET can take place either in formal schools (e.g. from kindergartens to grade 12 or 13) or increasingly in postsecondary community and/or technical colleges or informally by means of training at the workplace and increasingly by distance learning. In many developing countries, most TVET skills development for employability occurs through informal and nonformal means, rather than in formal TVET institutions (UNESCO-UIS 2006; 2010).

Investment in TVET is not without its critics (Maclean and Wilson 2009). Some politicians and policy makers point to the heavy expenses required to develop curricula, training staff and equip classrooms for specialised TVET subjects in secondary schools or postsecondary learning centres, which can generally cost three times more than academic courses. Also the fact is that TVET provides training, but no guarantee for jobs. According to the World Bank report (2010), 'the global imperative for more jobs, and more productive jobs, is a major challenge for development. Global unemployment, estimated by the ILO at 212 million in 2009, is at an all-time high' (p. 1). A jointly prepared ILO and OECD statistical report has noted that 'all G20 countries are facing substantial labour market challenges to promote productive employment and decent work opportunities for all' (ILO and OECD 2011, p. 1). The report has indicated that 'in the context of rapid technological change and globalization, another priority has been to improve labour market prospects for the low-skilled, especially in the more advanced economies' (p. 8). Better integration of youth, women and migrants into the labour market is also viewed as key issues. TVET has moved from beyond the narrow confines of economic planning and become part of a larger vision for promoting sustainable development in the region.

## An Example of Regional Cooperation: EU

The ADB Asia 2050 report identified a number of reasons for the growing importance of regional cooperation for Asia and exemplified areas that would benefit from cooperation (e.g. transport, health, food security). The move towards economic cooperation needs to be accompanied by HRD strategies and skills development. Systematic developments in TVET cooperation in Europe could serve as an example of such cooperation, although strong supranational institutions in Europe are unique. Systematic strategies at the policy level, and the development of common tools and principles for TVET, are an indication of the recognised value of cooperation on common priorities. The need to ensure the quality and relevance of education and training has been reflected in policy development since 2002 when the ministers responsible for TVET and social partners committed themselves to cooperation in TVET, making TVET in the EU region the best in the world.

There has been a change in EU region priorities, reflects the change of HRD policy orientation and the setting of goals. The most visible part of the Copenhagen process concerns the development and implementation of European TVET tools. Such instruments as Europass (a framework for transparency of qualifications and competencies), EQF (the European Qualifications Framework) and ECVET (the European credit system for vocational education and training) have impacted transparency, comparability and the quality of TVET. In particular, the EQF serves as a common European reference system that is aimed at linking different countries' national qualifications systems and frameworks together, so it can function as a mapping device helping learners and workers to 'move between countries or change jobs or move between educational institutions at home' (EC 2008, p. 3).

The European Qualifications Framework classifies 'knowledge', 'skills' and 'competence' into eight levels. Common reference points help Europeans to collect reliable statistics to be able to forecast skills demands. The EQF provides a means of comparing qualifications in different European countries.

Almost all EU and European Economic Area (EEA) countries have indicated their intention to introduce NQFs covering all parts of their education, training and qualifications system.<sup>2</sup> One of the main reasons for the development of NQFs was the establishment of the European Qualifications Framework for Lifelong Learning. This was adopted in 2008 by the European Parliament and Council. Since the mid-2000s, NQFs in Europe have become the key instruments for reforming education, training and qualifications systems. The majority of EU, EEA and candidate countries are now working on the development and implementation of national frameworks. In Belgium, Flanders, Estonia, Lithuania, Malta and Portugal, formal

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<sup>2</sup> According to the CEDEFOP (2010) report, of the 32 countries having signed up to the EQF, Lichtenstein is not developing NQF for LL. Lichtenstein is, however, developing a framework for HE in line with the Bologna process. A total of 34 NQFs are covered by the analysis. The UK has separate NQFs for England/Northern Ireland, Wales and Scotland, and Belgium is developing separate frameworks for Flanders and the French-speaking community.

adoption has been achieved. The UK, Ireland and France, which are the countries with established frameworks, have carried out, or are in the process of carrying out, reviews (CEDEFOP 2010).

The development of NQFs confirms that the EQF is regarded as an important reference system for individual countries. Most countries have (or will) use an eight-level structure and have used the EQF level descriptors as the starting point for their national work. While NQFs are important to achieve European objectives, they are also regarded as a means of achieving national objectives. NQFs are generally seen as a means of clarifying the relations between the different parts of a national system. The objective is to make national qualifications easier for national citizens and migrants to understand. Experience in Europe has shown that NQF development is a highly political process that can result in conflicting interests (CEDEFOP 2010).

To what extent European experience could be applicable to Asia-Pacific as the socioeconomic challenges are different in these regions? For Europe, a forecast on skills demand and supply up to 2020 identified three major requests:

- Developments in skills supply towards a more highly qualified workforce
- Continued sector trends towards jobs in services
- Dominance of knowledge and skills intensive jobs (CEDEFOP 2010)

For Asia and the Pacific, skills demand and supply vary greatly within subregions since they are facing different challenges (such as higher urbanisation rates in East and North East Asia; unemployment has been highest in North and Central Asia; poverty is most severe in South and South West Asia (UNESCAP 2011)).

Although the socioeconomic challenges in Europe and Asia are not the same and the demand for changing skills needs is somewhat different, overall directions towards regional cooperation could provide a long-term goal for TVET development in Asia. This involves such needs for TVET development as:

- Reinforcing links with the labour market
- Improving the effectiveness of governance and financing of TVET
- Raising the attractiveness of TVET
- Increasing access to TVET by addressing equity issues
- Lifelong learning through TVET
- Improving the quality of TVET
- Improving available statistics and performance indicators for evidence-based decision making

These matters are just as relevant to Asia as they are to Europe. Therefore, the European model provides a useful example of a regional framework for cooperation which can be a role model for Asia-Pacific, with necessary changes or adjustments being made to accommodate local contexts.



## Main Issues, Concerns and Challenges Regarding TVET in Asia and the Pacific

### *An Overview*

The critical importance of investing in TVET to promote social, economic and ecological development has been acknowledged in the region. Therefore, recent developments and concerns in TVET can be viewed through a prism of TVET's *economic, social and environmental relevance and its internal efficiency and quality*. Main achievements in TVET are observed in policy development and planning that address the issues of the relevance and efficiency of TVET. Governments in the region have recognised the need to create comprehensive skills development and training policies that include initial, and continuous, TVET to meet the needs of the labour market and to enhance economic growth. The governments of Pakistan, Timor-Leste and India have developed and adopted national skills policies along these lines. The governments of Bangladesh, Mongolia, Tajikistan and Pakistan are in the process of developing comprehensive skills strategies (ILO 2011).

Countries at different stages of economic development require different levels of skills development. UNESCO's statistics demonstrate the relative importance of *formal* TVET in the context of education system at the upper secondary and tertiary levels (Table 1.1).

The share of TVET students at the upper secondary and tertiary levels over the past 10 years has changed and is related to specific pathways of economic development in each country (such as the rapid expansion of knowledge-led sectors, e.g. the PRC; industrialisation, e.g. Viet Nam; the lack of employment opportunities after secondary TVET, e.g. Lao PDR). Due to the increasing emphasis many countries put on TVET, they also set very high targets for enrolment in secondary vocational programmes (UNESCO 2012). For Indonesia and the PRC, these targets were 70 and 60%, respectively (Copenhagen Development Consult A/S 2005, p. 7), India (12.6% in 1999) targeted 25% (World Bank 2006b), and Bangladesh (0.7% in 1999) set a target of 20% of all secondary students to be enrolled in the vocational/technical secondary

**Table 1.1** Countries with highest and lowest TVET enrolments at secondary and tertiary levels

Upper secondary				Tertiary (5B)			
Highest countries		Lowest countries		Highest countries		Lowest countries	
Uzbekistan	81.0	Lao PDR	1.1	Lao PDR	60.9	Mongolia	2.4
PRC	42.6	Nepal	1.7	PRC	44.6	Pakistan	5.1
Thailand	39.9	India	1.8	Malaysia	43.3	Philippines	9.6
Indonesia	37.2	Afghanistan	2.7	Singapore	42.3	Kyrgyz Republic	14.7
Kazakhstan	26.0	Bangladesh	8.1	Viet Nam	33.5	Thailand	15.5

Source: UNESCO-UIS Database (2010) and UNESCO (2012)

Note: Lao PDR = Lao People's Democratic Republic; PRC = People's Republic of China.

stream (World Bank 2007a). Pakistan has planned to add technical vocational streams in secondary education with a 50% target (World Bank 2006a). Implementation challenges associated with these reforms need to be carefully planned to be successful. In 2009, the PRC, with its highly planned economy, achieved 47.1% of TVET enrolment.

Although a formal, school-based training is getting more attention from governments, it enrolls fewer trainees than either nonformal training or enterprise-based training (ADB 2009a). Considering the importance of informal employment in Asia,<sup>3</sup> it is possible to suggest that nonformal training is playing, and will continue to play, an important role in skills development in the region.

The recent UNESCO Bangkok report on the regional development of TVET in Asia and the Pacific (UNESCO 2012) identified a *progress towards strategic alignment of TVET with national socioeconomic goals* in terms of expansion of government TVET strategies and a movement from a supply-driven to a demand-driven TVET system, as the major directions of TVET development in the region.

The World Bank (Powell and Lindsay 2010) confirms these findings. The World Bank analysed the success stories of Singapore, Hong Kong, China, Republic of Korea and Viet Nam and noted that certain economic conditions such as:

- Macroeconomic stability
- Sustained growth in productivity
- Significant investment in technology
- Continued investments in human resources development

should be present for a country's economic development. However, while these qualities may be necessary for rapid growth, they in no way ensure rapid growth, or even ensure any growth at all, of a national economy. Many other nations also share these macroeconomic characteristics, but they have not yet experienced similar growth trajectories.

*The importance of specific government guidance, planning, policies and interventions is essential.* Markets alone 'cannot in a timely manner coordinate education and training for people so that skilled workers are available in the labour market when employers need them. Markets fare even worse when planning for long-term future needs is necessary, not just in terms of what skills are going to be in demand in the labour market, but what sectors will be the growth sectors in the medium and long term and what skills will be needed by them then' (Powell and Lindsay 2010, p. 16).

Hence, there is a need to support governments in skills development planning and policy formulation, aligned with socioeconomic development, which is essential for the ADB action agenda.

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<sup>3</sup> Among five countries that concentrate three-quarters of the total informal employment estimated for the group of 46 medium- and low-income countries globally (ILO 2011), three are from Asia – India, Viet Nam and Pakistan.

**Box 1** Success Stories from East Asia

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Success stories from the East Asia (Powell and Lindsay 2010) provide examples of achievements by the countries:

*Singapore*

Though Singapore is a unique country, other nations can use Singapore as an example to assist them in designing their skills development and catch up strategies, because that is exactly what Singapore did. Singapore looked very closely at where they wanted to go, which sectors they wanted to focus on and what assets they had as a nation. They then used off-the-shelf education, skills development and industrial promotion policies, which they adapted to their national context, to very rapidly develop and catch up with more developed countries

*Hong Kong, China*

The way in which courses are funded also has an impact on student supply. For instance, where there is high economic demand for a particular programme of study and one that requires high capital investment, tuition fees will be paid by the state. However, in subject areas where demand is high and there is no capital investment, such as accounting or business studies, the state will not pay tuition fees. This strategy ensures that state investment occurs in strategic skills areas that the private sector would not support.

*Republic of Korea*

The experiences gained provide notable policy implications for other countries which aim to transform their economies and industrial structure. These are the following: (1) There must be close congruence between skills development systems, government's role and the stages in economic development. (2) While it is difficult and inefficient for government to directly control the whole process of skills development, government does have a role to promote the behaviour of stakeholders to the advantage of social and national goals. (3) Participation of social partnership between stakeholders is becoming more important; skills development systems exclusively regulated by the state fail to meet actual needs of firms. (4) Higher education for the masses was achieved without significant secondary level VET. This illustrates that late specialisation is possible and that a combination of general education and in-plant training may be efficient models in a high growth economy. (5) Maintaining a balance between quantitative expansion of the skills base and issues of equity and growth is possible.

## ***Key Issues in Asia and the Pacific Region***

Given the very broad coverage of skills development for employability with regard to the issues, concerns and challenges confronting policy makers, practitioners and researchers,<sup>4</sup> a survey was conducted by The Hong Kong Institute of Education (August 2011),<sup>5</sup> of internationally renowned TVET experts, to ascertain their views on what they regarded as being the key issues concerning TVET in the Asia-Pacific region. These main issues were discussed at the ADB International Forum in Manila, 12 and 13 December 2011. These challenges are referred to in the section below and are examined in a comprehensive way in the various chapters that appear in this book.

### **Public–Private Partnerships (PPP) and the Financing of Skills Development for Employability Including Responses to Demand-Side Forces and Industry Partnerships**

Although the role of governments is extremely important in setting up policies for skills development, it is essential to include public–private partnerships in TVET development and delivery. Analysis by ADB (2010) identified a wide range of public–private partnerships in use in education and training. The growth of PPPs in Asia and the Pacific can be observed in the region, as the private providers help governments to improve the quality of skills development, increase access for the disadvantaged and enhance relevance and the linkages of TVET to labour market needs. As analysed by ADB (2010), many governments are exploring options and developing mechanisms to involve the private sector in both the supply and demand sides of TVET provision. From the supply side, the public sector funds the operation of private TVET institutions (vouchers, subsidies, grants, stipends), while from the demand side, the mechanisms to promote parental choice, competition and accountability are in place. These measures ensure increasing enrolments, improving educational outcomes and enhancing equality in access. To boost the PPPs, the governments need to strengthen the capacities of their public agencies to regulate, monitor and contract private TVET providers; develop the capacities of private providers to deliver quality TVET by facilitating access to capital; improve

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<sup>4</sup>The most comprehensive overview to date of the content of TVET is provided in Maclean and Wilson (2009) and Rauner and Maclean (2008).

<sup>5</sup>Those surveyed were: Kenneth King, University of Edinburgh; Steven Lamb, University of Melbourne; Shyamal Majundar, UNESCO-UNEVOC International Centre; Young, UNESCO Bangkok; Chris Chinien, Workforce Development Consulting, Canada; Director and staff, Colombo Plan Staff Training College; Margarita Pavlova, Griffith University; Karina Veal, International Consultant on TVET.

educational and management practices, and create structures/institutions that assist in establishing and the implementation of PPPs.

Based on its experience in the region, ADB (2010) identified the following lessons learned from empirical evidence in Asia and the Pacific:

- Improve the perception of the role that private sector plays for the public benefit.
- Allow not-for-profit and for-profit education and training providers to operate.
- Promote and facilitate foreign direct investment in education.
- Develop clear and objective establishment criteria and streamline processes for registering private education providers.
- Provide subsidies to the private education and training sector.

Strengthening of PPPs would be also helpful for developing skills for the innovation and technology sectors. Skills development for employability is an important area for PPPs as it is essential to adopt a multidimensional approach to TVET to increase quality, effectiveness and access.

## **National Vocational Qualifications Frameworks and Sector Skills Councils**

Governments in over 100 countries are designing, implementing or considering national qualification frameworks (NQFs) or are involved with regional qualifications frameworks (Allais 2010). The development of NQFs is underpinned by the idea that all qualifications can (and should) be expressed in terms of outcomes, without a prescribed learning pathway. International interest in NQFs has arisen because of issues concerning the relevance, flexibility and portability of skills and training and the effects on employment opportunities. Countries have adopted different approaches to NQFs, but the underlying motives driving the process are usually similar. These include the need to strengthen links between education, training and the labour market; the need to ease the process of labour mobility across employment sectors, regions and countries, including lifelong education and training; recognising prior learning experience and credits; setting standards based on learning outcomes; facilitating quality assurance; and improving the perceived status of TVET (Allais 2010).

In the mid 1990s, Australia, UK, New Zealand and South Africa initiated work on NQFs. In the late 1990s and early 2000s, some Caribbean and Latin American countries developed NQFs, usually using the UK model. In the late 1990s, considerable work in the EU was achieved, led by the Bologna Process of harmonising higher education systems (Austrian Federal Ministry of Science and Research 2009). This process removes specialist educational institutions from the centre of the system and places the learner, and the opportunity to gain qualifications, at the centre. One key difference between NQFs and traditional systems in terms of implementation is that they are designed independently of delivery and are based

on a set of levels, standards and outcomes. An outcome-based framework is really an assessment system and does not relate to provision. Most people within the system need guidance and the provision of education, and hence, this requires institutional arrangements with associated curriculum, teaching and learning.

NQFs do not arise from specific needs, but as a result of a decision to develop a framework that encompasses as large a proportion of the population as possible and covers many sectors. *These are top-down frameworks that must be driven by governments and government agencies.* Hence, there is need to support governments in this reform.

Many ASEAN countries are experiencing the challenges of rapid development, structural reform and high levels of labour mobility. These can only be met through flexible education and training systems with efficient skills recognition processes. Most ASEAN countries lack comprehensive NQFs, although Singapore, Indonesia, Thailand and Malaysia have developed full or partial frameworks which are broadly similar to each other and Australia's NQF. The absence of comparable NQFs prevents efficient qualification recognition across borders, which in turn limits trade and investment in services, including education services and the movement of migrant workers. This negative impact is greatest in the least developed economies which particularly need to build human capital through the provision of quality education and subsequent skills and widely accepted qualifications. Beyond the ASEAN countries in Asia and the Pacific, Hong Kong, China, Australia and New Zealand have implemented NQFs. The Republic of Korea is in the process of implementing NQFs, and five other nations have NQFs under development or consideration (APEC Human Resources Development Working Group 2009).

Regional Model Competency Standards have been developed and implemented in Bangladesh, Indonesia, Lao PDR and Thailand to foster mutual recognition of skills and qualifications. A number of countries have used Regional Model Competency Standards in key sectors (manufacturing, tourism, construction, agriculture) (ILO 2006).

The *Mapping of Qualifications Frameworks across APEC Economies* report concluded that the NQFs in APEC economies were diverse in their structure, coverage, operational purposes and governance. They all aimed to provide greater transparency for qualifications, support for skills standards systems, and a means of managing quality assurance and to facilitate the international recognition of qualifications. Some economies used the NQFs as a basis for credit systems for transfer across education and training levels and institutions. Five APEC countries have NQFs covering senior secondary, vocational education and higher education qualifications, but there were differences in the framework across the sectors. In Singapore, the framework applied only to vocational education and in Thailand to higher education. In 2007, India made the decision to limit the framework to the TVET sector, rather than develop a more inclusive NQF (World Bank and ILO 2011).

The education and labour departments of governments usually take responsibility for qualifications. In several countries, NQFs have emerged from the TVET sector associated with the developments of industry skills standards and