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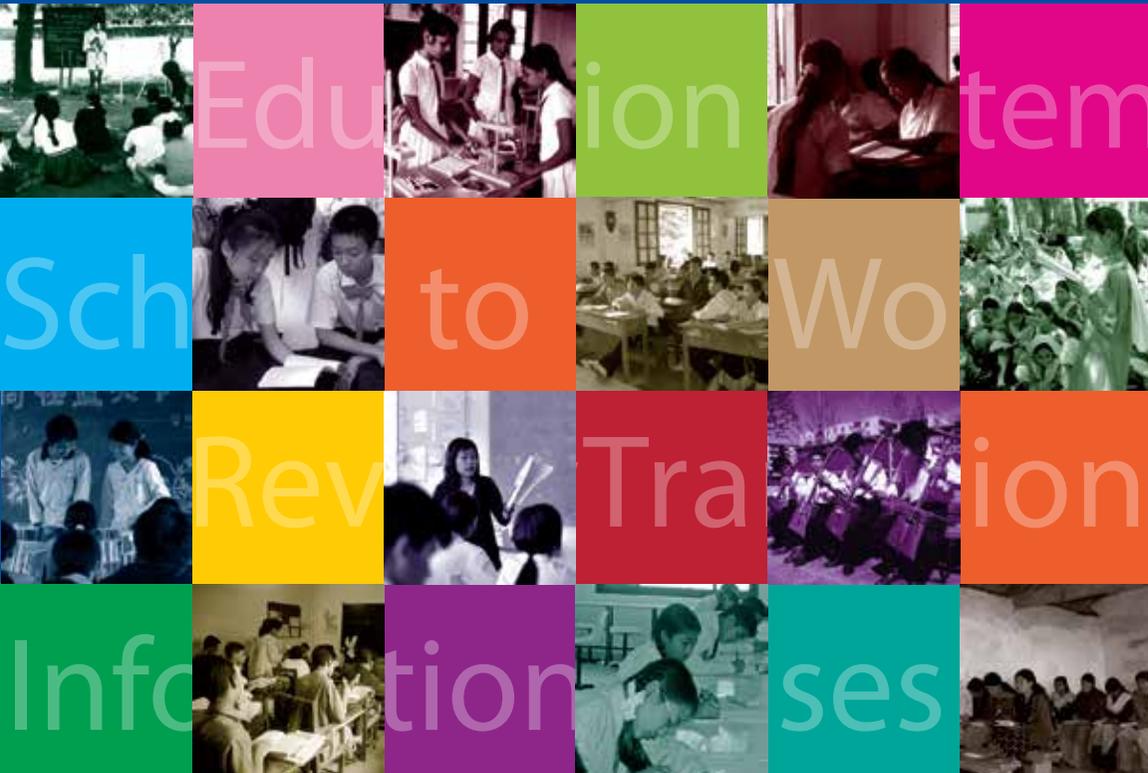
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# 6 Asia-Pacific Education System Review Series

## School-to-Work Transition Information Bases



*Asia-Pacific  
Education System Review Series No. 6*

# **School-to-Work Transition Information Bases**

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## Preface to the Series

The Asia-Pacific Education System Review Series is published by the Education Policy and Reform Unit of the UNESCO Asia and Pacific Regional Bureau for Education (UNESCO Bangkok). The series aims to summarize what is known, based on research, about selected contemporary policy issues relating to the national education systems of countries in the Asia-Pacific region.

The series provides practice-oriented guidance for those engaged in the review of education policy and systems as well as in the implementation of reforms related to the specific topics that the booklets address.

The booklets are designed to serve as rapid and credible reference material for education policy makers, planners and managers, offering busy readers (a) an overview and quick analysis of pertinent education issues; (b) a choice of approaches and options to address these issues, based on experiences of countries in the region; and (c) a set of recommendations or guiding questions to consider when preparing a sector or sub-sector review and reform.





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## List of Abbreviations

ADB	Asian Development Bank
AVET	Agency for Vocational Education and Training
BBS	Bangladesh Bureau of Statistics
BLES	Bureau of Labor and Employment Statistics
BITS	BLES Integrated Survey
CAMFEBA	Cambodia Federation of Employers and Business Associations
CVTS	Continuous Vocational Training Survey
DGE&T	Directorate of Employment and Training
DOLE-BLES	Department of Labor and Employment–Bureau of Labor of Employment and Statistics
EFA	Education For All
GDS	Graduate Destination Survey
GTS	Graduate Tracer Study
GIZ	The Deutsche Gesellschaft für Internationale Zusammenarbeit
GTZ	The Deutsche Gesellschaft für Technische Zusammenarbeit
IAMR	Institute of Applied Manpower Research
ICT	Information and Communication Technology
ILO	International Labour Organization
IT	Information Technology
JICA	Japan International Cooperation Agency
JOLTS	Job Openings and Labour Turnover Survey
KOICA	Korea International Cooperation Agency
MCA	Millennium Challenge Account
MoLVT	Ministry of Labor and Vocational Training
NBTS	National Baseline Tracer Study
NEA	National Employment Agency
NESS	National Employer Skills Survey
NGS	National Graduates Survey

NSCB	National Statistical Coordination Board
NSDC	National Skills Development Corporation
NSSO	National Sample Survey Organization
NTB	National Training Board
NTC	National Training Council
PES	Public Employment Service
PPP	Public-Private Partnership
PSSCIVE	Pandit Sunderlal Sharma Central Institute of Vocational Education
PTESDC	Provincial Technical Education and Skills Development Committees
QCI	Quality Council of India
RTESDC	Regional Technical Education and Skills Development Committee
SIDA	Swedish International Development Cooperation Agency
STW	School-to-work
TESDA	Technical Education and Skills Development Authority
TVET	Technical and Vocational Education and Training
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific, and Cultural Organization
UNEVOC	UNESCO International Centre for Technical and Vocational Education and Training
UNFPA	United Nations Population Fund

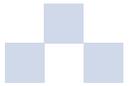


## Acknowledgements

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## Foreword

The main purpose of Technical and Vocational Education and Training (TVET) is to provide its participants with practical knowledge and skills which are required by the world of work. The relevance of TVET systems therefore needs to be assessed in terms of the success of TVET participants' transition from the world of learning to the world of work following the completion of their education and training.

If school-to-work transition is the cornerstone of TVET, then effective TVET policy rests on robust school-to-work transition information bases. These information systems seek to enhance the relevance of TVET and ultimately increase the employability of TVET graduates. School-to-work transition information bases can be comprised of a rich variety of sources, ranging from labour force surveys to graduate tracer studies to analyses of existing employer engagement practices with governments and TVET institutions at various levels. All these data and information can give us greater insight into the complex dynamics of TVET systems and inform policy making decisions.

This booklet analyzes the information system supporting school-to-work transition in selected countries in the Asia-Pacific region. The rationale for the study is underpinned by the importance of accurate and reliable information as the starting point of successful TVET policy. The booklet explores key policy issues and challenges currently confronting governments, and likewise provides a set of recommendations for policy makers to address these issues, drawing from examples of countries in the region.

This publication fills a long-standing need for a clear and comprehensive analysis of a pressing policy issue that has not been sufficiently explored previously. It is hoped then that it will serve as a key resource for policy makers, practitioners and stakeholders and contribute to informed decision making and progress in TVET policy, research and practice.

Gwang-Jo Kim  
Director  
UNESCO Bangkok



## **Section 1:**

# **Introduction**

Rapid expansion of education has been observed in the Asia-Pacific region in recent years in the context of the Education for All (EFA) movement. The South and West Asia regions, in particular, have registered tremendous progress towards universal primary education, with the participation rate of primary school children increasing from 75 per cent in 1999 to 86 per cent in 2008. Furthermore, in 2008, around 99 per cent of primary school graduates in Central Asia, 91 per cent in East Asia and the Pacific, and 86 per cent in South and West Asia continued on to general secondary education.<sup>1</sup> These figures indicate excellent progress towards the achievement of the EFA goals. While this can be judged as a positive advancement, it should be noted, however, that greater access to education has not automatically led to better employment prospects for graduates. For example, in the Republic of Korea, a country with one of the highest tertiary level enrolment rates in the world, it has been reported that around four out of every 10 university graduates (40 per cent) are not able to find jobs upon graduation.

While expansion of access to education enables everyone to reach their education potential, it is necessary to address the issues relating to the mismatch between labour demand and labour supply in order for educated youths to find suitable employment and contribute meaningfully to socio-economic development. Thus, it is necessary to pay attention to the relationship between the education system and the labour market, at the same time as continuing efforts to expand access to education. In this regard, the school-to-work (STW) information approach is useful in evaluating the effectiveness of the education system in terms of how successful school graduates are in entering the labour market from the education system. This approach is particularly useful with regard to graduates of technical and vocational education and training (TVET), considering that the purpose of TVET is to prepare its participants with the practical knowledge and skills required by the technical and vocational sectors of the labour market.

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<sup>1</sup> UNESCO and UNICEF, 2012.

A clear understanding is required regarding the knowledge and skills needed among employers in the labour market in order for TVET institutions to ensure that participants receive a relevant education. In addition, information is needed regarding how successful TVET graduates are in the labour market, in order to determine the direction of TVET systems and policy, and whether any reforms are necessary. In an effort to support countries to develop more effective TVET systems, UNESCO Bangkok, in cooperation with the UNESCO International Centre for Technical and Vocational Education and Training (UNEVOC) conducted a thematic study on the information infrastructure supporting school-to-work transition in nine selected countries in Asia. Experts from nine participating countries compiled reports on the situations in their countries with regard to the existing information bases and the key challenges and barriers to the development of such information bases.

The study was initiated in recognition of the importance of accurate and reliable information as the starting point of successful TVET policy. Specifically, the study aimed to (1) examine existing information bases related to the school-to-work transition process in nine countries: Bangladesh, Cambodia, Lao PDR, India, Indonesia, Kazakhstan, Mongolia, the Philippines and Viet Nam; (2) identify key barriers to the development of these information bases; and (3) identify possible areas of intervention for UNESCO and other related organizations.

The study examined the situation in the selected countries with regard to three questions. First, what kinds of policies and practices are being adopted to detect the skills and labour demands from industry? Second, what kinds of policies and practices are being used to track the labour market performance of school graduates in general and TVET graduates in particular? Third, what kinds of policies and practices are being put in place to capture the detailed skills requirements from employers? With regard to the third question, the emphasis was on examining the kinds of policies and practices being implemented to ensure employers are taking part in discussions with education authorities to provide concrete information on the knowledge and skills they require.

Among the nine selected countries, Bangladesh, Cambodia, Lao PDR, and Viet Nam were chosen as representing low-income countries, while the Philippines and Indonesia (in Southeast Asia) were selected to represent middle income countries, and India, Kazakhstan and Mongolia were chosen to more comprehensively represent the geographic sub-regions in Asia. This categorization ensured that information was collected relating to TVET systems from a range of economy types, and that each part of Asia was represented.

The study was carried out in four stages. First, the current status relating to the TVET system and key challenges in the nine selected countries were identified. Second, nine country experts were identified and provided with the current report format. These experts conducted research on their country situation based on this format. Third, a workshop was held in Bangkok that brought together the nine country experts, along with representatives from UNESCO Bangkok and Field Offices, to discuss and compare the situations in the selected countries with regard to information bases and the issues relating to the development of these bases, and to identify the key policy challenges and possible ways of addressing them. In the fourth stage of the study, the country experts provided feedback on the draft version of the current report.

This report is organized into six sections. This Introduction section presents the background to the study. Section 2 provides an overview of the concept of the school-to-work information base, including the definition, the benefits of such an information base, the types of information that are required and the methods for the collection of that information. The following two sections, Section 3 and Section 4, present analyses of the findings of the study with regard to the policies, practices and challenges faced in the nine selected countries in compiling information about the skills required by the labour market, i.e. labour demand, and about the types of employment graduates obtain after graduation, i.e. labour supply. Section 5 describes the types of policies, practices and challenges that exist in the nine countries with regard to engagement of employers in determining the kinds of TVET courses offered by educational institutions. Section 6 summarizes the challenges that are faced and presents a number of policy recommendations.



## **Section 2:**

# **School-to-Work Information Bases: Overview**

### ***What is a School-to-Work Information Base?***

A school-to-work (STW) information base refers to a set of policies and practices for collecting information about the skills needed by employers and about the types of employment found by TVET graduates.

### ***What are the Benefits of a School-to-Work Information Base?***

A well-developed school-to-work information base has benefits for governments, TVET institutions and, ultimately, for TVET students and graduates, as described below.

- ***Benefits for governments***

Through the collection and analysis of information about the needs of employers and the types of jobs graduates are being employed in, examined in view of the courses being offered by TVET institutions, governments can identify any mismatches between demand and supply and prepare strategies to minimize those mismatches. Furthermore, STW information bases enable governments to evaluate the overall performance of the education system as well as the performance of individual TVET institutions in terms of the relevance of their courses to the demands of the labour market. Thus, STW information systems enable governments to enhance the relevance of technical and vocational education and training (TVET) and ultimately increase the employability of TVET graduates.

- ***Benefits for TVET institutions***

The information compiled in STW information bases enables TVET institutions to objectively assess the effectiveness of their education programmes in terms of preparing graduates for employment, and enable comparison with the performance of other education institutions. Thus, STW information bases can assist educational institutions to identify the areas in which improvement is needed and adjust their education programmes accordingly.

- ***Benefits for TVET students and graduates***

For individual TVET students and graduates, the information provided through STW information bases enables them to develop a clear understanding of which skills are in demand and what kinds of jobs are available for graduates, and therefore make appropriate choices in terms of their study and career decisions.

## ***What Information is Needed for STW Transition Analysis?***

In order to conduct STW transition analysis, three main sets of information are required:

- Quantitative information on the demand for skills
- Quantitative information on the available supply of skills
- Qualitative information on the skills demanded and supplied

These information sets are described below.

### ***Quantitative information on the demand for skills***

The first set of information required for school-to-work transition analysis is quantitative information on the types of skills demanded by employers and the number of available jobs for each skill set. More specifically, information is required on the level of current employment, by industry and occupation, and the dynamics over time, showing changing demands for labour and skills. These changing demands are a result of economic, technological and social changes. For example, the increase in the number of jobs available in the field of information and communication technology (ICT) and the decrease in the number of jobs available for manual workers is a reflection of the widespread penetration of ICT in almost every economic sector and the automation of office and factory works.

To supplement information about the “stock” aspect of labour demand, such as the total number of people employed in any one occupation over a period of time, information is also required about “flows” in labour demand, including replacement demand, in order to capture changing demand for skills. While the level and share of total employment by industry and occupation show long-term changes in labour demand, such data do not provide information about the number of posts currently open to graduates (new labour market entrants). For example, there may be demand for “replacement” staff

to substitute a retiring workforce, but total employment figures will not show this as the number will stay the same.

In addition, it is necessary to collect data on job vacancies. This is necessary because employment data only provide information about “realized labour demand”, i.e. the demand that is matched by labour supply. Employment data do not provide information about vacant posts not taken by job applicants.

Furthermore, information must be collected on changing requirements for occupations in terms of knowledge and skills. Employment data is classified by occupational classifications and, in spite of fundamental changes over time in the skills required for many occupations, the titles of occupations generally stay the same. For instance, in many countries the title of the occupation of “secretary” has not changed since the 1960s, but the skills required for this job have changed significantly over the past 50 years, especially in recent decades with the increasing use of computers and other new forms of ICT.

### ***Quantitative information on the supply of skills available***

The second set of information required for school-to-work transition analysis is quantitative information on the availability (supply) of labour and skills. This information set includes data such as the number of people available with a specific qualification or academic degree. Two kinds of stock data are needed: i) the total number of potential workers available and ii) data on the economically active population; that is, the size of the current workforce already in the labour market, including both the employed and unemployed. These data provide an overall picture of the size, composition and long-term trends in the labour supply. The kind of flow data needed includes information about the skills and qualifications of new entrants to the labour market (graduates), and education statistics such as the number of students and number of graduates. These basic flow data indicate the potential number of new entrants to the labour market.

Information is also required about the perceptions and behaviour of new graduates. This information will indicate whether or not the graduates will enter the labour market and, if they enter the labour market, when they will do so, and which occupations they will seek. In addition, detailed information is required on the features of the transition process in the youth labour market, including the share

of employment, the speed with which graduates find jobs, working conditions, job mobility and career pathways. This information enables analysis and comparison of the labour market outcomes of each individual education institution and programme.

It is also necessary to compile information about why particular jobs have many vacancies. Certain jobs may be avoided by graduates not because the graduates are insufficiently qualified for them but because these jobs offer a very low wage, unacceptable working conditions or unattractive career prospects. In such cases, policies should include measures to improve the wages and working conditions in such jobs and make these jobs more attractive to youths.

### ***Qualitative information on the skills demanded and supplied***

Information must also be collected about such aspects as the specific skill requirements of the labour market and the specific types of qualifications required by employers. That is, as well as collecting data on the number of, for example, IT specialists demanded by employers, it is necessary to also collect information about which particular fields and levels of IT specialists are needed (qualitative data). Since such specific information is often quite diverse, it is almost impossible to collect it through statistical surveys. This is because such surveys use a simplified questionnaire with a limited number of questions, which makes it difficult to capture the diversity of real life in full detail. This becomes even more difficult when it is necessary to meet norms of standardization, to secure comparability across different respondent groups and periods. Thus, while some qualitative information can be obtained through statistical surveys, often other means must also be used.

## ***Methods of Collecting Information***

### ***Methods of collecting information on the skills needed by the labour market***

Employment data is mainly compiled through the implementation of labour force surveys (LFS). Currently LFS are guided by the 1982 International Labour Organization (ILO) Resolution on LFS, which aims to ensure internationally comparable employment data and has been adopted by 179 countries. Through household surveys with relatively short periodicity (in many cases monthly or quarterly), LFS provide

timely information on the labour market activity of the population and indicate the number of employed, unemployed and economically inactive people, as well as other basic information that is useful for analysis of the labour market. It should be noted that LFS have limitations in presenting detailed information such as income level and working hours by industry and occupation due to the difficulty of obtaining correct responses for these aspects through household surveys.

Detailed information about employers, including the number of employees, wages and working hours, segregated by industry, size of establishments and occupations is collected using an “employer survey”, which directly asks employers for information. This survey provides useful information but can only be used for formal employers, as employers that are not officially registered are either not surveyed or may refuse to participate in an official government survey. Thus, in developing countries with large informal sectors, employer surveys cannot provide the whole picture of the employment situation.

With regard to measuring “unrealized” labour demand, vacancy statistics can be compiled through administrative processes or statistical surveys. In countries with a developed Public Employment Service (PES), official vacancy statistics are compiled from lists of officially registered vacant posts produced by companies that are recruiting employees. Some examples of statistical surveys that compile information about vacancies are the Job Openings and Labor Turnover Survey (JOLTS) in the United States of America (USA) and the National Employer Skills Survey (NESS) in the UK. In JOLTS, vacancy data are collected along with other information related to labour mobility, such as separation, quits and layoffs. NESS more clearly targets skills issues, applying concepts like skills shortages and skills gaps, and trying to separate vacancies stemming from skills issues from those that stem from non-skills issues.

Another way of measuring the skills needs of employers is to analyze the training investments of employers, as in the Continuous Vocational Training Survey (CVTS), implemented by Eurostat. This approach can be seen as more objective in terms of assessing employers’ skills needs, since if employers perceive the skills issue as real challenge for their business, they will invest resources to address that problem. Due to

the reluctance of employers to reveal detailed information about their training investments and different accounting methods applied to record such investments, however, it can be difficult to concretely track specific skills needs, except for basic information about the overall investment in training and the key features of training practices adopted by employers.

### ***Methods of tracking employment of graduates in the labour market***

While information can be collected from the records kept by school administrations that follow the pathways of graduates after graduation, the main tool used to track the employment of graduates in the labour market is a graduate survey or tracer survey. This survey enables the collection of information about graduates' labour market status (e.g. employed or unemployed), continuing study and job search behaviour (seeking employment or not), previous education history and other relevant data, including perceptions of the quality of the courses they graduated from. The target group of this type of survey is all newly qualified graduates from schools or higher education institutions, or samples of graduates or youths selected from the list of all graduates.

Graduate surveys can be conducted by both individual education institutions and government agencies. Such surveys are restricted to the collection of basic information, however, and have limited reliability when there is misreporting by respondents and difficulty in applying rigorous definitions, as well as a low response rate. Furthermore, the results of such surveys can often have limited comparability with other survey results. When the surveys are carried out by well-experienced evaluators, detailed and reliable information can be collected, however. Examples of prominent graduate (tracer) studies include those carried out by Australia, Canada and Malaysia. Malaysia has made participation in its tracer survey, the Online Higher Learning Institution Tracer Study, compulsory for graduates. The Malaysian Ministry of Higher Education conducts the study and since 2006 the survey has been implemented using an online system. The survey mainly measures the rate of employability of university graduates and the effectiveness of academic programmes.



Another tool, the household tracer survey, is designed to collect information about sampled selections of youth of specific age groups. These samples are taken from households rather than from the list of graduates. This tool enables the collection of information about graduates that cannot be surveyed through the graduate survey. This type of survey can obtain the required information to assess the overall performance of the education system but it does not necessarily permit the evaluation of the performance of individual schools and programmes. A household tracer survey can be implemented as supplementary survey to the LFS or as special cross-sectional survey or panel/longitudinal survey. Like the graduate survey, the household tracer survey requires substantial investment and highly skilled evaluators for its implementation.

### ***Methods of collecting qualitative information***

Detailed qualitative information about employers' needs (in terms of the types and qualifications of employees) cannot be adequately captured through statistical surveys; therefore such information is often collected through interviews or discussions with employers, in which they are asked questions about their specific needs. It can be difficult to obtain this information from employers unless employers are motivated to participate. Although this information enables government agencies and education institutions to identify which courses should be offered in the short-term, it is not always possible to formulate long-term plans based on such information as employers' needs may change frequently.

Employer engagement in such surveys is of two types: institutionalized engagement and informal engagement. Institutionalized engagement is generally carried out by government agencies. Instances include the United Kingdom's Sector Skills Councils and Australia's Industry Skills Councils. Informal engagement is generally conducted through cooperation and exchange between individual companies and education institutions. For instance, Japanese companies have long-term relationships with educational institutions regarding the recruitment of new graduates and these companies provide information about their skills needs directly to the educational institutions.

### Section 3:

## Trends and Challenges in Tracking Skills Demanded by the Labour Market

### Overview

All of nine countries that participated in this study collect data about employers' skills needs through conducting a labour force survey (LFS) and most also use this survey to compile data on employment. While all countries conduct LFS, some countries, such as Bangladesh, Cambodia and Lao PDR, do not conduct them regularly. In the countries that conduct regular surveys, some have only been engaged in national level data collection for between five and ten years. Some countries also use the population census to collect employment data, and also for collection of information about the labour market.

Few countries conduct national level employer surveys about skills needs. Most of the existing surveys that compile detailed and specific information about the skills needs of industry have been conducted by external donors and are implemented on an ad hoc basis, focusing on a certain sector or on a particular region of the country. Recently, however, some countries, such as Mongolia, have made efforts to expand such surveys to cover wider geographical areas or more industries and have made efforts to regularize such surveys. See Table 1 for a summary of the types of surveys used in the nine selected countries for tracking employers' skills needs (labour demand).

**Table 1: Types of Surveys for Tracking Skills Needs, by Country**

Country	Census	Labour Force Survey	Skills Needs Survey	Others
Bangladesh	X	▲	X	▲
Cambodia	●	▲	X	●
India	X	●	▲	●
Indonesia	●	●	▲	●
Kazakhstan	X	●	X	▲
Lao PDR	●	▲	▲	▲
Mongolia	●	●	▲	X
Philippines	●	●	●	●
Viet Nam	●	●	X	X

**Key:** ● conducted regularly ▲ conducted irregularly (ad hoc basis) X not implemented

## ***Current Policies and Practices***

### ***Key features of current practices***

All of nine participating countries have legislation or regulations governing the collection and utilization of data and information; most are related to national statistics and the mandate of the national statistics office. In some countries, additional legislation or regulations govern how particular departments or ministries collect and utilize labour market and employment data. For example, in Cambodia the National Employment Agency (NEA) has been assigned a legal mandate, by sub-decree, on the collection and compilation of labour market information. Likewise, in Indonesia the Ministry of Health has regulations to support the collection of skills needs data and its utilization, while in the Philippines the Department of Labor and Employment – Bureau of Labor and Employment Statistics (DOLE-BLES) implements its own survey, called the BLES Integrated Survey (BITS). Section 21 of Executive Order No. 126 “Reorganizing the Ministry of Labor and Employment and For Other Purposes” governs the activities of DOLE-BLES.

In terms of the coverage and respondents surveyed, most labour force surveys and population censuses implemented in the nine selected countries are conducted nationwide. In some cases, there is data collection in selected districts, but these surveys are not systematic enough to compare data across districts. Most employer surveys about specific skills needs are limited to certain regions or sectors.

In all countries, the national statistics agency is responsible for the surveys; these agencies include the Bangladesh Bureau of Statistics (BBS), the National Institute of Statistics in Cambodia, the National Sample Survey Organization (NSSO) in India, the National Statistics Office in the Philippines, and the General Statistics Office in Viet Nam. The activities of these national statistics agencies are governed according to the legislation and regulations on national statistics and are funded by the central government. In Cambodia, India and the Philippines, additional agencies exist to conduct surveys or research for the collection of specialized labour market data and information on the status of technical and vocational education and training. These agencies are Cambodia’s National Employment Agency (NEA); India’s Pandit Sunderlal Sharma Central Institute of Vocational Education

(PSSCIVE), India's Institute of Applied Manpower Research (IAMR), Directorate of Employment & Training (DGE&T), Quality Council of India (QCI), and National Skills Development Corporation (NSDC); and the Philippines' Department of Labor and Employment - Bureau of Labor and Employment Statistics.

Most countries apply broadly defined classifications of industries, occupations and provinces, with data generally divided into the 10 major industry groups and into the A-U level occupation groups. While this provides a broad idea of changes in labour demand, this does not easily permit identification of specific changes in skills needs by industry, occupation or province.

The frequency of the surveys varies considerably among countries. In Indonesia, Kazakhstan, Mongolia and the Philippines, labour force surveys are conducted quarterly, and these countries therefore always have up-to-date labour market information. On the other hand, population censuses in these countries are only conducted every 10 years. India has conducted a labour market survey, the employment and unemployment survey, every five years since 1972/73. While the survey is conducted regularly, the five-year interval between surveys does not allow stakeholders to monitor rapid changes in the labour market. In some countries, these surveys are only conducted on an ad hoc basis, such as when they are part of donor-funded projects. For example, labour force surveys were conducted in Cambodia in 2000 and 2001 under separate projects. Similarly, Indonesia's Family Life Surveys have been conducted four times so far, but at irregular intervals (in 1993, 1997, 2000 and 2007).

### **Box 1: Bureau of Labor and Employment Statistics Integrated Survey**

The Bureau of Labor and Employment Statistics in the Department of Labor and Employment in the Philippines has implemented the BLES Integrated Survey (BITS) every two years since 1987. The survey covers every region of the country, but the report only presents national data (no regional disaggregation). A total of 6,788 establishments participate in the survey, including all major industry groups and occupations. Survey results and analysis are published on the website of the National Statistics Office ([www.census.gov.ph](http://www.census.gov.ph)) and on the DOLE-BLES website ([www.bles.dole.gov.ph](http://www.bles.dole.gov.ph)).

In many countries, funding of surveys is through both the national government budget and international donors and banks, including the United Nations Population Fund (UNFPA), the United Nations Development Programme (UNDP), the Swedish International Development Cooperation Agency (SIDA), the Japan International Cooperation Agency (JICA), the German Agency for International Cooperation (GIZ)<sup>2</sup>, the Asian Development Bank (ADB) and the World Bank. Since surveys funded by donors and banks are often carried out as part of projects, most of them are conducted on an ad hoc basis or are limited to certain industries or provinces.

In most of the nine selected countries, nationwide employer surveys on specific skills needs, such as vacancy surveys, are rare or are conducted irregularly, or are only conducted in certain provinces or sectors. For example, in Lao PDR, the 2005 national training needs analysis covered only seven provinces and the 2010 labour market survey (funded by ADB-PPTA) only covered eight provinces. However, in the Philippines, the BITS is carried out every two years (see Box 1).

### **Box 2: Skills Gap Studies in India**

India has conducted several skills gap studies, which specifically focus on skills needs in selected sectors. These studies were implemented by the National Skills Development Corporation (NSDC) and industry associations in 2010 at the national level, covering 20 high-growth industrial sectors and the informal sector. These studies represent one of the first efforts to make public-private partnerships (PPP) in the field of TVET in India.

The sectors investigated include the automobile, banking and financial service, chemicals and pharmaceuticals, construction, education, electronics, information technology, food processing, and tourism sectors. Programmes were established to enable the growing Indian workforce to develop and update their skills through skills training. Most of the efforts focused on developing skills in the informal sector in India. The programmes promoted TVET, and involved in-depth research to discover skill gaps.

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2 The Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH was formed on 1 January 2011. It brings together the long-standing expertise of the Deutscher Entwicklungsdienst (DED) gGmbH (German development service), the Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) GmbH (German technical cooperation) and Inwent – Capacity Building International, Germany. ([www.gtz.de/en/689.htm](http://www.gtz.de/en/689.htm), accessed on 9 May 2012).

Most of the nine participating countries have a short history of conducting employment and skills needs surveys. Only India, Indonesia and the Philippines have conducted such surveys for longer period of time. India has a relatively long history of conducting employment surveys at the national level. The first surveys were conducted in the 1950s, while the surveys with the current design have been conducted since the early 1970s. Indonesia's two main surveys, the national labour force survey and the national socio-economic survey began in 1976 and 1963, respectively. In the Philippines, collection of labour resource statistics began in 1941. Even though it is not clear to what extent the "labour resource statistics" are compatible with the current labour force survey, it appears that the history of this type of national data collection is longer in the Philippines than in most countries in Asia.

### ***Recent policies***

The nine countries vary significantly in their policies relating to tracking skills needs. Bangladesh initiated the process of formulating a skills development policy in 2010 and the Cambodian Government recently announced efforts to conduct labour force surveys. In Indonesia, no specific action has yet been taken by policy makers to track the school-to-work transition process. This may change, however, with the start of a new project, the "Sustainable economic development - technical and vocational education and training" (SED-TVET) project, funded by the German Agency for International Cooperation (GIZ). The project aims to improve the employability of TVET graduates in Indonesia through fostering public-private cooperation in TVET delivery to ensure that employers' skills needs are taken into consideration in decisions about TVET planning and that job-seekers have appropriate labour market information.

Mongolia, like Indonesia, has no particular policy in place to conduct statistical surveys on skills needs. International donors have recommended the strengthening of capacity for analysis and policy-relevant reporting in the responsible agencies, while the ADB has recommended the establishment of a labour market assessment system and a system to track labour market demand.

The Government of the Philippines, on the other hand, has a 22-point labour and employment agenda that guides the government's employment-related programmes. Also, to improve the reliability

of statistical data, the Philippine National Statistical Coordination Board has created an Inter-Agency Committee on Labour, Income and Productivity Statistics. This is expected to be a roundtable for exchanging opinions about the reliability and acceptability of survey results and is likely to lead to improvements in the reliability of statistical data.

Although Kazakhstan does not have a skills needs tracking system in place, the country has several strategies and programmes that recognize the importance of having good education statistics and an integrated database, as well as systematic monitoring of educational outcomes and social effects. For instance, one of the main objectives of the Kazakhstan State Program of Education Development 2010-2020 is to improve the monitoring of education development through the development of national educational statistics in accordance with international standards.

## **Challenges**

Despite efforts to collect more and reliable information about skills needs, there remain several challenges in the nine countries studied. First, the implementation of regular household surveys such as the LFS is difficult in countries in which the population is scattered across small islands or in remote areas, as it is difficult for national agencies to reach everyone, and thus the surveys have only limited coverage or are only undertaken at long intervals, such as once per year.

Secondly, when implementing employer surveys, a significant challenge is that many employers are small or medium sized and some operate informally, without proper registration. Thus, it is not always possible to correctly identify the population of employers and to find respondent employers. For example, in Viet Nam difficulty was experienced in convincing employers to respond to skills needs surveys. Furthermore, for some enterprises, the collection of accurate information has proven to be difficult because some employers do not fully understand the survey questionnaires.

Thirdly, while the importance of labour market information has been widely accepted, there is limited awareness among national policy makers of the necessity of collecting more detailed skills needs data through employer surveys. Also, in cases of ad hoc employer surveys,

the methods used, the definitions of words such as “skills” and the ways of identifying skills needs vary from survey to survey, so comparisons cannot be made between them.

Fourthly, all of the nine countries lack sufficient financial resources and human capacity to carry out surveys regularly and professionally. Even countries that have established specialized agencies for monitoring skills needs lack the financial resources and technical expertise to conduct surveys effectively. Thus, it is necessary to increase policy inputs in this area. At the same time, external support should be considered as supplementing internal, national support, and not replacing it.

## Section 4:

# Trends and Challenges in Tracking Graduates' Performance in the Labour Market

## Overview

Information about the labour market performance of students can be obtained through tracer surveys, i.e. statistical surveys using well-defined questionnaires or school administrative processes recording basic information about employment situation of graduates. Among the nine selected countries, tracer surveys are being conducted in six of them. These are mostly conducted by education institutions, using their lists of graduates, and the frequency and coverage of these surveys vary between institutions and countries. Very few countries are collecting information on the labour market situation of students through school administrative processes. See Table 2 for a summary of the types of surveys used in each of the nine countries.

**Table 2: Surveys to Track the Labour Market, by Type and Country**

Country	Tracer Survey	Administrative Process
Bangladesh	X	X
Cambodia	▲	●
India	▲	●
Indonesia	▲	▲
Kazakhstan	X	X
Lao PDR	▲	X
Mongolia	▲	X
Philippines	●	X
Viet Nam	X	X

**Key:** ● conducted regularly ▲ conducted irregularly (ad hoc basis) X not implemented

## ***Current Policies and Practices***

### ***Key features of current practices***

In general, in the nine countries tracer surveys are conducted incidentally as a part of international donor projects. In most cases, those tracer surveys have limited coverage and do not collect nationwide data. For example, Cambodia's Voucher Skills Training Programme (VSTP), funded by ADB and implemented in 2008, involved conducting tracer surveys only once, at commune level, and only for trainees who completed specific training courses in the provinces covered by the project.

In Lao PDR, tracer studies were conducted to follow the graduates of the Lao-Korean Vocational Training Centre, with support from the Korea International Cooperation Agency (KOICA), in 2009, and graduates of Pakpasack Technical College, as part of the International Labour Organization's (ILO) Know About Your Business (KAB) programme (2009). The National Baseline Tracer Study (NBTS) was conducted with support from the Lao-German Human Resource Development for a Market Economy (HRDME) programme in nine provinces, across the three regions (northern, central and southern) of Lao PDR, in 2005 and 2009. The NBTS survey covered almost 400 employers from a range of sectors. The sample sizes were 1,140 in 2005 and 920 in 2009.

The Philippines is an exceptional case. The country's Technical Education and Skills Development Authority (TESDA) has conducted five nationwide graduate tracer studies since 2000. Section 14.a.3 of Republic Act 7796 provides the basis for conducting these studies and others, such as Labour Market Intelligence Reports. It states that TESDA Planning Office shall "conduct research, studies and develop information systems for effective and efficient planning and policymaking within the sector".

### Box 3: Graduate Tracer Studies Conducted by TESDA

Between 2000 and 2012, the Technical Education and Skills Development Authority conducted five graduate tracer studies. The study in 2008 covered 216,940 TVET graduates, from all 17 regions of the Philippines. The results of the study indicate that these graduates are employed in almost every employment sector and occupation type. Data is disaggregated by region, by mode of delivery, by sex, by occupation and by higher educational attainment.

For the survey, TESDA selects respondents from the TVET programme terminal reports (containing the names of graduates) compiled by the TESDA regional and provincial offices. The survey is then implemented by conducting personal interviews with the selected TVET graduates using a questionnaire. If the identified person is not available, the survey allows the interview of key informants such as parents, children, spouse or siblings of the graduates.

Nine people work in the Policy Research and Evaluation Division (PRED) of TESDA's Planning Office. In addition to the graduate tracer studies, the PRED group also develops Labour Market Intelligence Reports, Employer Evaluation Survey, and the data component of the National Technical Education and Skills Development Plan.

In Cambodia, the Cambodia Federation of Employers and Business Associations (CAMFEBA), with the support of the ILO, carried out a Youth and Employment Survey in 2007, which surveyed a sample of youth (at school, employed, unemployed) and employers from Phnom Penh in four provinces of the country.

In several of the nine selected countries, some TVET training providers and universities keep administrative records regarding their graduates' employment information. While these records often do not cover a representative sample of graduates, this data is regarded as providing a very basic picture of the labour market situation of graduates. Thus, some governments actively request TVET institutions to collect this kind of data. For example, in Indonesia, education institutions are required to regularly report information about graduates to the National Ministry of Education via the local education administrative body. It has been observed, however, that the staff capacity for data processing is not sufficient to publicly circulate the data. The situation is similar in Mongolia, where each TVET school is required to have their own database on the current employment situation of graduates. These databases are not comprehensive, however, and most schools do not have even elementary administrative records of the employment situation of their graduates.

## ***Recent policies***

In many of the nine countries, there are few examples of sustained programmes to track graduates. Cambodia and Mongolia do not have systematic tracer surveys, but attempts are underway to institutionalize these surveys. Indonesia is also planning activities in this area and the SED-TVET project, mentioned earlier, is expected to improve the Indonesian labour market information system in relation to tracking of graduates.

Countries that have policies and programmes in place to track graduates in the labour market, face problems in the implementation. Cambodia, for instance, has adopted basic legislation and regulations in support of the collection of TVET school-to-work data and its utilization but, in spite of having an adequate legal framework implementation, is hindered by a lack of resources and low capacity for data collection. In the early 2000s, TVET institutions in Viet Nam began to have an interest in tracer surveys for tracking their graduates as a means to measure their performance in relation to other institutions. But, owing to the lack of expertise among staff of the institutions in conducting this kind of survey and growing demand for TVET courses, institution managers are now becoming reluctant to conduct this type of survey. Furthermore, with no government funding designated for conducting tracer surveys, TVET schools have no incentive to continue them.

## ***Challenges***

With many countries in the Asian region beginning to pay more attention to the importance of collecting information about graduates' labour market performance, more data is being compiled today than in the past, but several challenges remain, as outlined below.

Firstly, there is a lack of awareness among some governments of the need for data and therefore lack of commitment to collecting data. In some countries there is a lack of strong commitment by the government for the collection of data, resulting in few studies and a lack of progress in terms of improving the employability of TVET graduates. In many of these countries, there is an expectation that the expansion of education opportunities and improvements in the provision of TVET will automatically lead to the improved employability of youths.



Secondly, there is a lack of perceived need for data collection among TVET institutions. In some countries, TVET institutions are not motivated to conduct tracer studies as they do not understand the benefits of those studies. Such institutions are operating at their maximum capacity given the rapidly growing demand for education in countries. These institutions do not need to compete with other institutions or show evidence of their superiority. Thus, without being compelled to conduct tracer studies by the government, such organizations do not see the need to undertake them.

Thirdly, there is a lack of human capacity for conducting the necessary data collection. Some national employment agencies have very few staff available to conduct the surveys under their jurisdiction and many of their staff members have no experience or training in preparing and conducting surveys, in analyzing and disseminating the findings, or making recommendations for action, even among those staff members with impressive education credentials from overseas. When these agencies do not produce recommended actions for education institutions and when the results of the surveys are not posted on public websites, there seems little point in conducting such surveys as they are of little benefit to TVET institutions.

Fourthly, a shortage of funding prevents the implementation of frequent tracer studies. The lack of funding is the major cause for the shortage of staff and lack of expertise of staff in conducting surveys.

## Section 5:

# Trends and Challenges in Employer Engagement

## Overview

Employer engagement in this context refers to any of the following:

- National level cooperation between the government and employer associations.
- Regional or sectoral cooperation between ministries or the regional government and some employers.
- Individual cooperation between a TVET institution and some employers.

The most prevalent type of employer engagement (public-private partnership) reported in the nine participating countries was partnership meetings in which councils or boards would be convened to examine trends in employment, referred to as “Council/Board” in Table 3. Another common type of employer engagement in the nine participating countries is “consultation”; these are more informal meetings between employers and educators. Other types of engagement reported in the nine countries (categorized together under the heading “others”) include surveys (e.g. employer satisfaction surveys) and projects to gather information about skills needs from employers. See Table 3 for a summary of the types of employer engagement in the nine selected countries. Refer to Annex 4 for a list of examples of employer engagement in the nine countries.

**Table 3: Summary of Employer Engagement Types, by Country**

Country	Council/Board	Consultation	Others
Bangladesh	•	X	X
Cambodia	•	X	X
India	•	X	X
Indonesia	•	X	X
Kazakhstan	•	▲	▲
Lao PDR	•	▲	X
Mongolia	X	X	•
Philippines	•	•	•
Viet Nam	X	X	▲

**Key:** • conducted regularly ▲ conducted irregularly (ad hoc basis) x not implemented

## ***Examination of Current Policies***

As noted above, the study found that in many of the nine countries the focus of partnerships between employers and education institutions lies in official boards or councils. Some countries, such as Cambodia, Indonesia, India and the Philippines, have specific legislation and regulations for the relevant boards and councils that specify the membership, responsibility, activities and mandates for employer engagement. The boards and councils often have strong decision making power on key TVET issues. Some countries have shown better progress than others in the establishment of legislation for councils and the operation of councils by government, thus accelerating employer engagement in those countries.

In terms of concrete approaches adopted by each country, in Bangladesh, the National Skills Development Council (NSDC) was established in 2008 as an important high-level tripartite forum where representatives of the government, employers, workers and civil society (including national youth organizations and disability groups) can provide leadership and clear direction to skills development in Bangladesh. The Prime Minister of Bangladesh is the Chairperson of the NSDC. Bangladesh has also established Industry Skill Councils (ISC), which take into account the views of employers in four industries: leather and leather goods, agro-food processing, information technology and transport equipment. Initiatives have also been taken to include other important industries, such as building and construction, light engineering and ready-made garments.

In Cambodia, the National Training Board (NTB), established in 2005, is the foremost TVET policy-making body. This board is chaired by the Deputy Prime Minister and the Minister in charge of the Office of the Council of Ministers, with representatives from all relevant government ministries in TVET provision. The board has representatives from all sectors: government, industry, trade unions, TVET educators, donors and NGOs, with a total of 36 members, of which 20 are government representatives, seven are employer representatives, two are representatives of trade unions, four are representatives of training providers and two are representatives of donors and NGOs (ADB and ILO). The mandate of the NTB is to develop the private sector, promote growth in employment and accelerate an expanded skills base and pool of skilled manpower through TVET. Cambodia's National Training

Board meetings are convened at the national level, but meetings are also held at the provincial level. An issue observed in Cambodia is that although the subjects discussed in the NTB are directly related to employers' interests, some of the employers are not particularly interested in participating in proposed skills related activities.

India has a longer history of TVET efforts than most of the other countries covered in the study. The *Apprentices Act*, enacted in 1961, facilitates not only employer-employee relations but also employer-education cooperation. The National Skills Development Corporation (NSDC) is a non-profit company set up by the Ministry of Finance to promote skills development in the informal sector. The establishment of the NSDC was one of the activities under the National Skills Development Mission in the XI Five Year Plan (2007-2012). Since 2003, meetings have been held between government and business sector representatives, as convened by the Directorate General of Employment and Training under the Ministry of Labour and Employment. Those meetings were initiated upon the request of the manufacturing sector as they had been experiencing significant mismatch between skills demand and supply. Positive changes over the intervening years have shown that greater involvement of industry associations in decision making on TVET has advantages for all the stakeholders.

In Indonesia, efforts to improve employer engagement brought about the establishment of the National Vocational Education Council, the Provincial Vocational Education Council and the School Council, as well as the issuance, in 2003, of the revised *Education Act* (UU 20/2003) and the *Manpower Act* (UU 13/2003). The *Education Act* requests education institutions to cooperate with business in planning courses, while the *Manpower Act* stipulates the development of a national training system. Earlier, in 1992, the Decree of the Education Minister No. 0490/1992 was introduced to encourage cooperation between vocational schools and industry to ensure the development of vocational programmes that meet industry skills needs. In addition, legal regulations were enacted to form Tripartite Cooperation Forums (Lembaga Kerjasama Tripartit – LKS Tripartit) which are held at the national, provincial and district levels to facilitate communication and consultation on issues relating to employment. These forums are composed of representatives from the government, employers, and trade unions.

In Kazakhstan, a national council for the development of technical and vocational education and training was established in 2009, along with regional and sectoral councils for training in priority sectors of the economy. The aim of the national council is to promote the implementation of public policy and workforce development to ensure the provision of qualified personnel at the national level. The council is headed by the Prime Minister of the Republic of Kazakhstan. Council meetings are held at least once every six months and council decisions are made by a majority vote of all members participating in the meeting. Seven sectoral councils have been established in the rail, road and water transport, civil aviation, communications and media, tourism and agricultural sectors. Sectoral councils in Kazakhstan work in collaboration with sectoral authorities to determine labour market needs in specific enterprises and interact with industry to create modern professional standards. The activities of these councils include: the promotion of partnerships in personnel training; support for interaction between educators and employers; and quality improvement, monitoring and methodical support of educational processes. In addition, regional councils on TVET development operate to improve interaction between representatives of regional labour markets (business communities), educators and local authorities.

The Government of Lao PDR has made significant changes in the senior governance of TVET and skills development through the National Training Council (NTC). Trade working groups have been active and effective in making real changes in the field but the NTC does not take into consideration opinions from the private sector during the decision making process as representatives from the trade working groups do not have voting rights in meetings. Even though several employers participate in the NTC meetings, the meetings are organized more like government meetings, with representatives of the private sector invited as guests. Thus, they do not take an active role or contribute to decision making.

In the Philippines, involvement of the private sector (employers and industry associations), in decision making regarding the training of skilled workers has been encouraged for many years. Even before the current TVET system was established in 1994, the government set up the National Manpower Youth Council (TESDA's predecessor), which implemented projects to strengthen the capacity of industry

associations. The creation of TESDA further strengthened private sector participation in TVET decision making. The TESDA Board, the highest decision making body in the TVET field has more private sector representatives (14 out of 22) than government representatives. There are also more private sector representatives than government representatives in the regional and provincial technical education and skills development committees. TESDA Board members usually represent organizations based in the national capital region, while the regional level committees represent organizations in their respective provinces. Accordingly, TESDA Board meetings cover national TVET issues, while regional committees cover the local agenda. The new Philippine Development Plan (2011-2016) includes a strategy to improve the effectiveness of the demand-supply match for critical skills and high-level professions through tighter industry-academic links and better dissemination of labour market information (as well as career guidance). The Philippines' employers and industry associations participate strongly in meetings. They are willing to share information about their industry and even identify and nominate experts to help TESDA in updating training regulations.

Thus, the roles of participants in boards and councils vary across countries. While all members, including those from the private sector, are supposed to take an active role in decision making, and the legislation and mandates specify and request this participation, there are different degrees of participation and varied progress in terms of partnerships. For example, in Cambodia, India and the Philippines, participants from industry have relatively substantial decision making power compared to their counterparts in the other six countries. In Kazakhstan, Lao PDR and Viet Nam, representatives from the private sector generally attend the meetings only as observers. But even in those countries with relatively strong empowerment of employers in boards and councils, employer participation does not always have a significant impact.

#### **Box 4: Public-private Partnership in Indonesia**

In Indonesia there is some formalized engagement and practical cooperation between individual schools and employers. For example, there are some quite well-run cooperation activities involving companies, TVET schools and local governments. The companies and vocational schools work closely together to ensure school graduates have the competencies and skills that meet the requirements of the respective companies. After leaving the TVET schools, most of the graduates are employed by the companies that the schools have cooperated with, and even those not hired by these companies can easily find a job owing to their well-developed competencies and skills.

#### **Box 5: Public-private Partnership in Mongolia**

The Millennium Challenge Account (MCA) Mongolia TVET project is implementing national “competitive grant” programmes to encourage public-private partnerships (PPP) in TVET so as to promote best practices in vocational education and training. So far, 27 TVET schools have received funding to implement cooperative initiatives in partnership with employers. In general, the TVET schools have focused on the improvement of the quality of vocational training programmes. Activities include labour market studies, employer assessments of graduates, establishing new training and practice workshops, developing competency-based curricula, and programme development. Apart from employer forums and the MCA-Mongolia TVET project, there are only incidental cases of cooperation to improve PPP in TVET in Mongolia.

#### **Box 6: Public-private Partnership in Kazakhstan**

In Kazakhstan, there is increasing interaction between industry employers and vocational schools, and these schools are adapting quickly into the changing needs of the labour market. For example, Saiman, a company engaged in the production of electricity in Almaty, has close links with universities and colleges, especially with the energy college. The director of the company is the Chairman of the Examination Commission for final examinations. Accordingly, at least 10 graduates are employed with Saiman every year. In addition, students who wish to work for Saiman and show good progress in their studies, are awarded scholarships by the company. With such a close interaction with the company, graduates become attuned to their needs and only need a short period of professional adaptation when they join the workforce.

## Challenges

While many of the nine countries have implemented policies for employer engagement, the implementation of such policies has not always been as extensive as expected. The absence or delay of employer engagement is caused by several factors, as described below.

The absence of relevant legislation, or ineffective implementation of legislation, serves as a challenge to the engagement of employers in TVET decision making. Another factor delaying the full implementation of policies to engage employers in TVET decision making is that some governments are not fully convinced of its necessity and importance. In some countries, the ministries of education have arranged meetings between employers and TVET schools, but the meetings have not resulted in changes in the TVET field. Thus, in some countries, while the legal framework, initiatives and strategies are well set up for employer engagement, actual policy implementation does not automatically follow. A related constraint is that in some countries the government does not fully empower the private sector to be involved in the decision making process.

Another constraint is that the private sector itself is often not committed enough to be closely involved in policy dialogue relating to TVET. In particular, small businesses do not perceive a need for skilled workers in their businesses, which leads to limited participation in policy dialogue with representatives of the government and education providers about skills issues.

A factor that limits the interest of employers in participating more in the improvement of TVET provision is that many firms do not see the direct benefit. Therefore, it is critical to establish a plan to sustain the interest and commitment of the private sector even after employer engagement projects have ended. Without accompanying institutional changes, such as the introduction of financial incentives for continued participation, employers may not continue their participation as actively as they currently do in some countries.

A further challenge is the limited expertise among the concerned stakeholders with regard to participating in the council or board meetings. Even in cases where firms have sufficient staff to be able to send a representative to meetings (e.g. India and Cambodia), the limited

expertise of the staff can have a negative impact on the productivity of these meetings. In an effort to address this issue, the Kazakhstan Government has organized an annual forum on “Vocational Education and Business: Dialogue of Partners” since 2008. In addition, the government created an Internet portal as a platform for sharing best practices, and for gaining access to news and resources, to enhance the awareness and improve the expertise of all stakeholders.

A lack of sufficient funding of the relevant government bodies also serves as a challenge to employer engagement as funding is necessary for the government to be able to sustain the responsible organization and hold regular meetings. Furthermore, a shortage of funding prevents the hiring of well-qualified staff and limits opportunities for training of existing staff.

## **Section 6:**

# **Key Policy Challenges and Recommendations**

### ***Summary of Challenges***

From examining aspects of information bases in school-to-work transition (tracking skills needs, tracking the labour market situation and employer engagement) in the nine selected countries, the study identified existing policies and key challenges. Common challenges include a lack of advocacy, a lack of long-term strategies, a lack of funding and limited experience and expertise in collecting and utilizing school-to-work transition data.

The importance of employment data is well-understood by the participating countries and employment surveys are being implemented in most countries. However, few countries are currently implementing employer surveys to track skills needs, and even worse, on an irregular basis. The main obstacles to implementing such surveys on a regular basis include: low participation of employers in filling in skills needs surveys, lack of financial resources, lack of skilled human resources, the failure of government authorities to reflect the results of surveys in education policy, low reliability of data and a lack of long-term series data.

In the nine selected countries, the importance of tracer studies is widely understood and most countries are implementing them in some form, but these surveys are not being implemented systematically. Rather, tracer studies are conducted irregularly and on an ad hoc basis. Most countries lack a concrete policy intervention to guide how to implement these surveys and how to utilize the tracer study results. The major challenges in terms of tracking graduates in the labour market include: the lack of awareness and commitment on the part of the government, the shortage of funding and the lack of human capacity.

Employer engagement was also well-understood in most of the nine countries included in the study and was regarded by most as essential to improving the employability of TVET graduates. Several countries have formal nationwide government-industry councils but without active representation of small and medium sized and/or informal

sector employers. The main challenges to the progress of employer engagement include the lack of awareness in some government agencies of the need for such engagement, the lack of empowerment of the private sector in decision making, the lack of commitment of the private sector to engage in policy dialogue of this kind, ineffective implementation of relevant legislation, lack of sufficient funds and limited expertise.

## ***Policy Recommendations***

Two types of recommendations are provided here. First, general recommendations are given, which relate to the overall information base. Second, specific recommendations are given, which relate to each aspect of the information base.

### ***General recommendations***

- ***Increase commitment to improving the school-to-work information base***

The improvement of school-to-work information bases requires substantial policy inputs such as considerable financial resources and institutional changes. However, the impacts of such improvements, at least in the short run, cannot be easily observed. For instance, the impacts of increasing the number of schools can be readily recognized from the perspective of expanding access to education. However, the benefits of improved skills needs monitoring cannot be immediately felt or experienced. That is, the increased employability of school graduates cannot be easily attributed to improved skills needs monitoring since graduates' employability per se is highly dependent on countries' economic and labour market conditions. Thus, despite strong advocacy for the importance of sound school-to-work information bases, it has been difficult to attract the commitment of policy makers who prefer to see their investments yield immediate and tangible returns.

While clearly recognizing such difficulty, it is necessary to scale up efforts to solicit the long-term commitment of policy makers to developing STW information bases. While the involvement of education-related policy makers is critical to this endeavor, the commitment of those responsible for labour market and economic policy is equally needed. The benefits of developing the STW

information base should be explained to all the stakeholders, including those in the private sector, TVET school management and those responsible for the budget. Examining the experiences of more economically developed countries can be useful in this regard.

- ***Prepare a long-term strategy***

The fragmented development of certain areas of STW information bases will not bring about satisfactory results despite substantive policy efforts. For example, labour demand data alone would not be very useful in assessing the performance of current education systems without an analysis of the patterns and dynamics of youth labour market participation. Also, inconsistent statistical data collected by different agencies using different methodologies makes it impossible to get a bigger picture of current labour market and education conditions.

A long-term and comprehensive national strategy for the development of STW information bases will ensure that right decisions are made over time. Policy entities such as the Ministry of Education and the Ministry of Labour, who are responsible for planning educational and economic policies, need to work together to develop an appropriate strategy for ensuring that their countries have relevant quantitative and qualitative information for decision making. Concrete policy needs, areas of cooperation and the roles of stakeholders need to be defined through intensive policy dialogues. Such forward-looking strategy will increase the complementarity of interventions and reduce the risks of duplicated efforts and wasted investments.

- ***Increase policy research and capacity development for practitioners***

More rigorous policy research is necessary to elaborate concrete ways of developing STW information bases, and for linking the STW information bases with other policy issues. These studies should take into account how best to apply their findings to reform education policies. Also, robust research will contribute to the further development of information bases through the identification of gaps which cannot be addressed by current systems.

This is particularly important in developing countries since, due to limited internal research capacity, they are compelled to depend on external experts who may not have a clear understanding of country-specific contexts. Appropriate training should thus be given to national policy implementation practitioners as well as those at the provincial and school level (management) since proper analysis of specific local contexts is necessary in improving overall national education policy. Training programmes should explain how to gather data, consolidate and analyze it.

### ***Specific recommendations***

- ***Track skills needs***

As the first step in developing a statistical system for tracking skills needs, it is necessary to undertake regular labour force surveys. These surveys should be conducted at least every quarter in order to monitor short-term fluctuations in the labour market. For this implementation, it is useful to follow the ILO guidelines on labour force surveys. Second, regular employer surveys need to be implemented to gather comprehensive data about employer needs and labour turnover. If possible, employer surveys for informal sector employers should be undertaken in order to capture the entire picture of the labour market. Government officials should cooperate with the business sector to encourage employers to participate. If it is not possible to effectively implement employer surveys in the informal sector, two other surveys should be considered: sectoral (or provincial level) employer surveys and household surveys.

- ***Track the performance of graduates in the labour market***

To track the performance of TVET school graduates in the labour market, it is necessary to conduct regular tracer studies, both at the school level and the system level. In school level evaluation, careful survey organization is required (in each school or national authority), and it is necessary to carefully consider the survey method (self-reporting by graduates or mail/telephone survey, etc.) and survey timing (six months, two years, etc), and establish a system for monitoring the credibility of survey results (considering the high likelihood of distortion of the results by individual schools). In addition, it is necessary to carefully consider the utilization of survey

results. For system level evaluation, the survey objectives should be clarified and kept in mind during the design and implementation of the surveys. Vague objectives may lead to inefficient use of resources and result in political objections. The surveys should include detailed questions about the labour market transition process, including the speed of gaining employment, the degree of job match, the contribution of education and job stability. The widespread use of survey results should be encouraged through, for example, the organization of conferences on the analysis of the survey results. For those countries with limited institutional capacity for implementing tracer studies at the school level, a household survey could be considered as an alternative, with a special focus on youths. In this case, the respondents would be asked about their overall educational background and labour market situation. This kind of survey is useful in obtaining an overview of the position of youth in the labour market and the overall effectiveness of the education system. This survey type cannot provide detailed information about the effectiveness of specific educational institutions and programmes, however.

- ***Increase employer engagement***

Both formal and informal employer engagement should be encouraged. Strong political commitment of all of the stakeholders (government agencies, TVET schools and employers in the private sector) is necessary as a precondition for promoting employer engagement. To avoid any potential conflict between representatives of industry and education, the government should act as a mediator. For example, the representatives from employer associations may not have strong commitment to skills development, but rather be more interested in pursuing a cost-saving strategy. Therefore, careful intervention and mediation by the national government is required in directing discussions and identifying the skills required by employers. In addition, a detailed and feasible plan should be developed for strengthening the role of employers. It is important to find ways to deliver (however small) concrete results to employers so as to attract their continued participation. Then, there should be a kind of “directed development process” according to the plan, coupled with capacity development activities for all the participating stakeholders. This capacity building should focus on ensuring ease of communication

between the stakeholders. If education sector representatives understand why employers need employees with skills in modern technology, for example, sustained engagement between education and industry representatives is possible.

## Annex 1:

# Skills Needs Surveys Conducted in the Nine Participating Countries

The table below lists the skills needs surveys that each of the nine participating countries has reported.

**Table 1: Skills Needs Surveys Conducted in Nine Participating Countries**

Country	Skills Needs Surveys
Bangladesh	<ul style="list-style-type: none"><li>- Household Income and Expenditure Survey</li><li>- Labour Force Survey</li><li>- Survey of Manufacturing Industries</li><li>- Multiple Indicators Cluster Survey</li><li>- National Child Labour Survey</li></ul>
Cambodia	<ul style="list-style-type: none"><li>- Cambodia Socio-Economic Survey (CSES); a household survey conducted since 1993/94, and conducted every year since 2007</li><li>- Population Census (since 1998, every 10 years)</li><li>- Cambodia Inter-Censal Population Survey (CIPS); since 2004, between censuses</li><li>- Establishment/Economic Census (since 2011, every 10 years)</li></ul> <p>The below surveys were not conducted on a regular basis:</p> <ul style="list-style-type: none"><li>- Labour Force Survey (2000, 2001, 2012)</li><li>- Child Labour Survey (2001)</li><li>- Child Domestic Worker Survey (2003)</li><li>- Establishment Survey (2000)</li><li>- Establishment Listing (2009)</li></ul>
India	<ul style="list-style-type: none"><li>- Employment and unemployment surveys (conducted between July 1977 and June 1978; between January 1983 and December 1983; and between July 1987 and June 1988)</li><li>- Skills needs survey (1955, 1977/78, 1983/84, 1987/88)</li><li>- District vocational surveys (since 1988)</li><li>- Skills need surveys by the Institute of Applied Manpower Research</li><li>- Selected government ministries carry out analysis of manpower required in specific industry sectors</li><li>- The National Skills Development Corporation (NSDC) had conducted skills gap surveys in 20 high-growth sectors and the informal sector. The NSDC plans to carry out surveys every three years.</li></ul>

Country	Skills Needs Surveys
Indonesia	<ul style="list-style-type: none"> <li>- National Labour Force Survey/Survei Angkatan Kerja Nasional (since 1976, two to four times per year)</li> <li>- National Social Economic Survey/Survei Sosial Ekonomi Nasional (since 1963/64, every one or two years)</li> <li>- Integrated Business Survey/Survey Usaha Terintegrasi (since 1998, conducted irregularly)</li> <li>- Indonesia Family Life Survey/Survei Kehidupan Keluarga Indonesia (1993, 1997, 2000, 2007)</li> <li>- Sector-specific activities (e.g. Ministry of Health conducts a survey every three years)</li> <li>- Data collection by the local labour administration</li> <li>- Population census/Sensus Penduduk (conducted every 10 years, plus intercensal population survey five years after population census). Includes age data, but no skills or skills needs data.</li> <li>- Skills needs surveys can be found in some provinces, but not on a regular basis (just as funding permits).</li> </ul>
Kazakhstan	<ul style="list-style-type: none"> <li>- Labour Force Survey (since 2001, conducted quarterly)</li> <li>- Small studies/research conducted under international and national projects</li> </ul>
Lao PDR	<ul style="list-style-type: none"> <li>- National training needs analysis by GTZ (2005, conducted once)</li> <li>- National Census (since 2005, every 10 years)</li> <li>- Labour Market Assessment supported by ADB (2010, conducted once)</li> </ul>
Mongolia	<ul style="list-style-type: none"> <li>- Population and housing census (under the responsibility of the NSO).</li> <li>- Surveys (under the responsibility of NSO): Labour Force Survey; Survey on Wages, Working Hours and Labour Cost; Household Income and Expenditure Survey; Living Standard Measurement Survey; Establishment census.</li> <li>- Administrative records on: registration at employment offices (by the employment offices, L&amp;SWSO); Survey on Employment of Population (data collected by Bagh governors); Newly created jobs (data collected by Bagh governors); Occupational injuries (by the SSSA); Foreign migrant workers in Mongolia (reported by employers); Labour migrants recruited by intermediary agencies (reported by intermediary agencies); Immigrant work permits; Border card information.</li> </ul>
Philippines	<ul style="list-style-type: none"> <li>- Labour Force Survey (similar statistics collection begun in 1941, conducted quarterly)</li> <li>- BLES Integrated Survey (BITS) (relevant legislation approved in 1987, every 2 years).</li> </ul>
Viet Nam	<ul style="list-style-type: none"> <li>- Labour force survey.</li> <li>- Population census.</li> <li>- The national survey of agriculture and fisheries and the national survey of enterprises, public- administration and public services.</li> <li>- National jobs and labour surveys.</li> </ul>

## Annex 2:

# Surveys Conducted to Obtain Additional Quantitative Information

Besides skills needs surveys, the nine participating countries also compile quantitative information relating to skills needs through alternative sources. These studies and sources of quantitative information for each of the nine countries are listed in the table below.

**Table 2: Additional Surveys Conducted in Nine Participating Countries**

Country	Additional Surveys
Bangladesh	<ul style="list-style-type: none"><li>- Needs based studies have been carried out by the World Bank, the Asian Development Bank, International Labour Organization, Swiss Agency for Development and Cooperation, and the United Nations Educational, Scientific and Cultural Organization.</li><li>- Studies have been carried out under the "TVET Reform Project" and "The Decent Work Country Programme" since 2006.</li></ul>
Cambodia	<ul style="list-style-type: none"><li>- Job vacancy and jobseekers data is collected by the National Employment Agency (since 2010, collect daily data)</li><li>- The Ministry of Labour and Vocational Training (MoLVT) has collected data on the number of establishments and workers, registered jobseekers, workers working overseas, foreign workers and TVET students (since 2010, on a monthly basis)</li><li>- The Ministry of Tourism (MoT) has collected data on the tourism labour force (since 2010, on a monthly basis)</li><li>- The Council for the Development of Cambodia (CDC) has begun collection of data on the labour demand for qualified investment projects.</li></ul>
India	<ul style="list-style-type: none"><li>- Bulletin on job opportunities in India.</li><li>- Trade apprenticeship training statistics under the Apprenticeship Training Scheme.</li><li>- Occupational – educational pattern of employees in India.</li><li>- Employment market information programme (once every two years).</li></ul>
Indonesia	<ul style="list-style-type: none"><li>- TVET skills needs survey in selected industries by the Indonesian Institute of Sciences (since 2009).</li><li>- Several studies on the Indonesian labour market, which partly contain information on school-to-work transition conducted by the ILO and the World Bank.</li><li>- Job vacancy and jobseekers data collected by regional labour administrations.</li></ul>
Kazakhstan	<ul style="list-style-type: none"><li>- Statistics of youth unemployment, tracked in the frame of the LFS.</li><li>- Departmental records of unemployment by the Ministry of Labour and Social Protection, on the basis of registration of the unemployed at employment centres.</li></ul>

Country	Additional Surveys
Lao PDR	- No information available
Mongolia	<ul style="list-style-type: none"> <li>- Business register database</li> <li>- Labour Barometer Bulletin published by LSWSO (not regular)</li> <li>- Labour market needs information data collected by Mongolian Employers' Federation.</li> <li>- Labour market needs analysis surveys piloted in 1998-1999, 2002-2003 by the European Training Foundation and National Observatory, and implemented by the Skills Development and Entrepreneurship Sub-project in 2003-2005.</li> <li>- Mongolia's Labour and Social Welfare Service Agency conducted Labour market needs analysis surveys in various selected sectors in 2003, 2004, 2005, 2006, 2007, 2008 and 2009.</li> <li>- Some TVET schools also conduct labour market needs analysis surveys in the local area. Financing is provided by the Employment promotion Fund.</li> <li>- In 2010 the MCA-TVET project implemented a nationwide LMS.</li> </ul>
Philippines	<ul style="list-style-type: none"> <li>- Labour Market Intelligence Report</li> <li>- Job Orders</li> <li>- Industry Roadmaps</li> </ul>
Viet Nam	<ul style="list-style-type: none"> <li>- Business register at provincial agencies</li> <li>- Information about labour for enterprises in the industrial zone/park.</li> </ul>

### Annex 3:

## Surveys for Tracking Employment of Graduates

The table below lists the surveys or administrative processes that each country uses to monitor the employment situation of TVET graduates or school leavers.

**Table 3: Surveys for Tracking Graduate Employment in Nine Participating Countries**

Country	Surveys for Tracking Employment of Graduates
Bangladesh	<ul style="list-style-type: none"><li>- No relevant survey conducted yet.</li></ul>
Cambodia	<ul style="list-style-type: none"><li>- 2008 Voucher Skills Training Programme (VSTP) tracer survey run by the Ministry of Labor and Vocational Training (MoLVT) (conducted once).</li><li>- 2007 Cambodia Federation of Employers and Business Associations youth and employment survey (conducted once).</li><li>- National Employment Agency administrative records on labour market information, including TVET graduate employment information (daily basis).</li></ul>
India	<ul style="list-style-type: none"><li>- “Evaluation Report of the Centrally Sponsored Scheme on Vocationalization of Secondary Education” was conducted by the Operational Research Group in 1996.</li><li>- National Technical Manpower Information System (NTMIS) conducted Technical manpower surveys (annually).</li><li>- 2003 study of graduates of apprenticeship training programmes by the Directorate General of Employment and Training (DGE &amp; T).</li><li>- Craftsman Training and Employment conducted by the DGE&amp;T in 2005 in three states.</li><li>- 2006 ITI Institutional Census and the ITI Tracer Study conducted by DGE&amp;T</li><li>- Performance Evaluation of Industrial Training Institutes/Industrial Training Centres) conducted in 2010 by the Quality Council of India.</li></ul>
Indonesia	<ul style="list-style-type: none"><li>- Disnaker (labour administration) conducts a yearly training needs survey in selected districts to identify the need for employee training in public training institutions.</li><li>- Schools regularly report information about graduates to the National Ministry of Education via the local Education Administration (Dinas Pendidikan).</li><li>- Every educational institution conducts some activities related to alumni tracking.</li></ul>
Kazakhstan	<ul style="list-style-type: none"><li>- No relevant survey conducted yet.</li><li>- The State Plan “Education 2020” states the aim to conduct regular tracer surveys.</li></ul>

Country	Surveys for Tracking Employment of Graduates
Lao PDR	<ul style="list-style-type: none"> <li>- National Baseline Tracer Study (NBTS) by GTZ-HRDME (2005, 2007, 2009)</li> <li>- Tracer study for Lao-Korean Vocational Training Centre under support of KOICA (2009)</li> <li>- ILO – Know About Your Business (KAB) programme students of Pakpasack Technical College (2009)</li> </ul>
Mongolia	<ul style="list-style-type: none"> <li>- The Agency for Vocational Education and Training plans to conduct regular tracer surveys of TVET graduates.</li> </ul>
Philippines	<ul style="list-style-type: none"> <li>- Graduate tracer studies by TESDA (Since 2000, 2002, 2005, 2008, 2011).</li> </ul>
Viet Nam	<ul style="list-style-type: none"> <li>- No relevant survey conducted yet.</li> </ul>

## Annex 4:

# Cooperative Arrangements with Employers in the Nine Countries

The table below lists the public and private partnerships for TVET.

**Table 4: Cooperative Arrangements with Employers in Nine Participating Countries**

Country	Cooperative Arrangements
Bangladesh	<ul style="list-style-type: none"><li>- National Council for Skills Development and Training, first convened in 1974; later changed to the National Skill Development Council in 2008.</li></ul>
Cambodia	<ul style="list-style-type: none"><li>- National Training Board meets annually since 2006.</li><li>- Provincial Training Board.</li></ul>
India	<ul style="list-style-type: none"><li>- Working Groups chaired by the Secretary of Labour or Joint Secretary of Labour.</li><li>- National Council on Skills Development.</li><li>- National Skills Development Coordination Board.</li><li>- National Skills Development Corporation and Sector Skill Councils.</li></ul>
Indonesia	<ul style="list-style-type: none"><li>- National Vocational Education Council.</li><li>- Provincial Vocational Education Council.</li><li>- School Council.</li><li>- Tripartite Cooperation Forums at the national, provincial, district/city levels.</li><li>- Informal engagement.</li></ul>
Kazakhstan	<ul style="list-style-type: none"><li>- Social Partnership in the TVET RK project, 2008-2010.</li><li>- Relevant activities including employers and TVET increased in 2009-2010.</li></ul>
Lao PDR	<ul style="list-style-type: none"><li>- National Training Council (NTC) established in 2002.</li><li>- Trade Working Groups.</li></ul>
Mongolia	<ul style="list-style-type: none"><li>- MCA-Mongolia TVET project: establishment of National Council with equal government and private sector participation, establishment of AVET under the Prime Minister Cabinet for linking the TVET system with the economic development policy of Mongolia and create demand driven TVET system (2009).</li></ul>
Philippines	<ul style="list-style-type: none"><li>- TESDA Board established in 1994.</li><li>- Regional and Provincial Technical Education and Skills Development Committees.</li><li>- Industry consultation.</li><li>- Employer Satisfaction Survey.</li></ul>
Viet Nam	<ul style="list-style-type: none"><li>- Meetings between employers and TVET institutions (in 2007, 2008 and 2009).</li></ul>

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# School-to-Work Transition Information Bases

This booklet was prepared within the framework of a regional thematic study conducted by UNESCO Bangkok in collaboration with the UNESCO-UNEVOC International Centre for Technical and Vocational Education and Training.

The booklet analyzes the information systems on school-to-work transition in selected countries in the Asia-Pacific region. The case studies featured here provide country specific examples of the issues and challenges currently confronting governments in implementing these critical information systems. Furthermore, recommendations are made to inform the decision-making of government officials, practitioners and stakeholders and to reinforce the synergy between TVET policy, research and practice.



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