Skills Shortages and Skills Gaps in the Cambodian Labour Market: Evidence from Employer Skills Needs Survey 2014

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Executive Summary

This report attempts to explore the skills gaps and shortages problems in the Cambodian labour market using evidence from the employer skills needs survey as well as the Cambodian population census and various sources of macroeconomic data. .

The employer skills needs survey 2014 is the key primary data source on employer demand for and investment in skills. There were 528 establishments interviewed at the national level across 10 important sectors, which were major driving engines for employment generation as well as having a greater share in Cambodian GDP. The 10 sectors investigated include Food and Beverages; Garment, Apparel and Footwear; Rubber and Plastics; Construction; Finance and Insurance; Accommodation; Transportation, Warehouse and Logistics; Human Health; Education; and Information and Communication Technology (ICT). Regarding the size of the establishment, the survey covered establishments with more than 10 employees because those establishments are more likely to provide accurate data on jobs and employment turnover by occupation and are able to provide a rough estimate of future skills demands.

The survey covered topics such as the work readiness of first time job seekers, recruitment difficulties, skills shortages, skills gaps, workforce training, and business strategies. Additionally, using the findings from this study, we try to seek and suggest policy recommendations for the skills mismatch and skills formation problems occurring in Cambodia from short-term mismatch perspectives and also from long-run development perspectives.

Headline findings of the study are provided below.

Aims of the study

Cambodia experienced rapid and accelerated growth (9.5% for the 1998–2008 period) but observed a sudden stop of this growth during the global financial crisis in 2008 (0.1% in 2009) due to the related stagnation of world demand for Cambodian garment exports. Although the country has recovered rapidly from this crisis (7.1% for the 2010–2013 period), the experience has reminded the policy makers to reconsider the current growth engines and the needs to diversify the structure of the economy in order to sustain medium- and long-term growth, and to reduce poverty. This also reinforces the need for sustainable and stable growth, which requires robust and relevant (demand-meeting) supply of skills. Furthermore, the mismatch or shortage of skills supply implies lost opportunities of full utilization of FDI due to the unmet demands for labour by foreign investors, which is another engine of potential growth of Cambodia. Thus, solving the skills mismatch problems is of utmost importance in promoting sustainable growth and development in Cambodia.

Background information of Cambodian labour market

It is acknowledged that there is a shortfall in the current supply of human resources or skills, whether measured by education and skills attainment of Cambodian population, in the necessary sectors. This phenomenon is occurring in most developing countries. However, Cambodia's problems seem to have their own features.

First, due to the massacres that occurred during the Khmer Rouge regime, Cambodia has been experiencing a demographic transition, with unique demographic compositional changes such that the group of experienced middle-aged workers is very small while the young baby-boom generation group is rapidly expanding. This has created a lack of skilled middle-aged workers in workplaces. Additionally, Cambodia has faced two notable challenges: the rapid expansion of a working age population (demand for employment) and the extraordinary increase in training age population (demand for education and training).

Second, Cambodian education is still affected by considerable structural problems, especially in rural areas. Infrastructure is still lacking, and in many cases the quality of education is extremely poor, classes are overcrowded, and there are still insufficient students. Therefore, although endowed with a labour surplus, Cambodia's labour force is still characterized by low education levels and low skills (58.8% of the total population aged 25 and above have no schooling or have not completed primary education). People with low education levels therefore tend to stay in the labour force for many years.

Third, vocational training programmes more concentrate on short-term programmes (in particular for the agricultural sector) rather than long-term ones in industry sectors. Furthermore, the curriculum design of higher education (bachelor's degree) seems to be biased toward only some selected majors. Thus, it seems evident that the TVET system is still far from capable of responding to the demands of the market in providing the human resources necessary for basic sectors of the economy (agriculture, garments, and tourism), or of promoting social development and economic growth.

Fourth, despite notable growth in the modern economic sectors, Cambodia remains primarily an agricultural country. In 2013, agricultural employment amounted to more than 5.2 million workers, representing around two-thirds (64.3%) of total employment. By occupation, 62.9% of the employed were in occupations connected with agriculture, forestry and fishery and 6.0% in elementary occupations. These two major occupations registered a very high percentage of people with low education levels. Although employment growth in the modern sectors was very pronounced in percentage terms during 2008–2013, but was not sufficient to meet the increase in potential labour supply generated by the increase in the working-age population (WAP), which in turn was the consequence of the demographic transition that is affecting Cambodia. In this situation, the agriculture sector acted as a sponge, providing shelter and subsistence to many young people who could not find employment in modern sectors.

Fifth, in the near future, with GDP growth forecast to stay at around 7% for 2012–2018; and increased inflow of FDI in product assembly, agro-processing and tourism-related sectors, Hyeok Jeong (2013) projects that total average employment growth between 2012 and 2015 will be 11.5% per annum. By sector, employment in agriculture and services will grow by 8.2% and 14.1% per annum respectively, while employment in the industry sector will register the highest annual growth rate of 16.1%.

Characteristics of the population establishments

The 528 establishments interviewed translate to an estimate of approximately 3,172 establishments, accounting for 445,007 employees.

The sectorial structure of Cambodia is relatively young, with an average age of 11.2 years, but the number of establishments opening for business has been progressively increasing. The rubber and plastics sector was the youngest sector, with an average age of 7.2 years, while the average age of establishment in other sectors ranged between the maximum age of 15.8 years in logistics and 7.8 years in the garment sector.

The most common type of business was individual proprietor (33.5% of total establishments), followed by private limited companies, 25.1%.

Almost a third of the establishments were foreign-owned, and of those almost half were owned by Chinese and ASEAN entities. The highest proportion of foreign owned establishments was found in the garment sector (50.7%), followed by the finance and insurance sector (47.6%).

The majority of establishments (45.3%) operated in the national market, 36.6% limited their activities to the local market and 18.0% were active in the international market. By sector, more than half of establishments in education, logistics, accommodation, and human health operated their businesses on the local market. At the same time, sectors active in the national market belonged to ICT, finance, food and beverages, construction, and the rubber and plastics sectors. Garment sector is an exported oriented sector, which definitely depended on the international market.

About half of establishments (49.4%) were small sized establishments (10–19 employees), 34.7% were medium sized establishments (20–99 employees), while only 15.9% were large establishments (100+ employees). More than two-thirds of all establishments were concentrated in garments; finance and insurance; accommodation; human health; and food and beverages. However, at the other extreme, the garment sector alone represented 74.5% of total employment.

Market development and capacity utilization among the existing workforce

Market development

All establishments were more likely to evaluate the demand for goods and services as slightly increased in 2014 compared to 2013, and expected that demand would further expand in 2015. Regarding the size of the establishment, the medium sized establishments seemed to be more optimistic than small and large establishments in 2015.

Finance, human health, education and ICT sectors reported that they had experienced an increase of demand in 2013 and 2014. Also, they expected that demand would continue to increase in 2015.

Rubber and plastic; food and beverages; and the accommodation sectors experiencing high demand in 2013 reported unchanged demand in 2014. However, they estimated that there would be significant expansion of demand in 2015. The garment and logistics sectors were the only two sectors that were pessimistic about future demand in 2015, after they experienced a decrease in demand in 2014 compared to 2013.

Capacity utilization among the existing workforce

The overall establishments indicated that capacity utilization in the existing workforce was about 86.3%. There was no difference between different sizes of establishments. By sectors, the highest level of capacity utilization was found in the finance and insurance sector with a value of 92.3%. The other sectors varied from a minimum value of 81.8% in accommodation to a value of 88.3% in the logistics sector.

Employment structure and turnover rate

Employment level and structure in 2013

The total number of employees in the sampled establishments amounted to 112,642 employees, which translated to an estimated 445,007 employees. Around 85.8% of total employees were concentrated in the large sized establishments, followed by medium sized establishments (9.6%) and small sized establishments (4.6%). The average size of overall establishments was 140 employees.

The majority of employees were in the garment, footwear, and apparel sector, representing 74.5% of total employment. The shares of the other sectors were between 4.6% in the finance and insurance sector and a minimum of 1.1% in the ICT sector.

About 73.1% of the employees were women. However, the percentage varied greatly from one sector to another, from a maximum of 85.4% in the garment, apparel, and footwear sector to a minimum of 13.8% in the logistics, warehousing, and transportation sector.

Analysis by ISCO major occupation shows that the skills level required for jobs was quite low. Craft and related trades workers, accounting for 55.3%, had the largest share, followed by elementary occupations with 12.5%. Plant and machine operators accounted for 2.9% of the total employed. Among occupations requiring at least a high school diploma, technicians accounted for 5.8% of total employed, professionals 8.2%, and managers 4.9%. The proportion of female employed varied greatly in different types of major occupation. Women represented 95.7% of craft and related workers, 66.9% of clerical support workers, 51.5% of elementary occupations, and 48.8% of services and sales workers.

By sector, the more educated segment of the labour force (highly skilled) played a major role in human health, education, ICT, and the finance and insurance sectors. Skilled non-manual was predominant in accommodation, and played a consistent role in the ICT, finance and insurance, and logistics sectors. The garment and construction sectors specialized in skilled manual workers, whilst unskilled labour represented the majority of those employed in the rubber and plastics, and food and beverage sectors.

Employment growth

One noteworthy observation that emerged from the survey was the positive trend in employment growth between 2011 and 2014 with an average growth rate of 7.4% per year. In terms of absolute value, the total employment increased from 367,827 in 2011 to approximately 454,447 in 2014.

In terms of sectors, between 2011 and 2014, the total employment level of ten sectors has increased by a very significant 23.5%. The sector that has reported the biggest percentage increase was the construction sector (40.8%), followed by the finance and insurance sector (38.0%), and the food and beverage sector (32.1%). The garment, footwear and apparel sector, with the largest share of employment, also registered consistent growth of 25.9%. The other sectors, except ICT, have also experienced positive growth; however they have remained below the average, with a range from 8.0% in the rubber and plastics sector to 13.6% in the education sector. The largest contribution to employment growth came from the garment, footwear and apparel sector (78.9%), followed by finance and insurance (7.6%), and food and beverage (3.9%).

Overall, total female employment increased by 23.7% or 63,714 between 2011 and 2014. The share of female employment remained stable at around 73% during the same period.

Between 2012 and August 2014 (the date of interview), total employment across all sectors covered by the survey increased by approximately 48,682 jobs (or a growth rate of 12.2%). The three ISCO major groups experienced above average growth: technical and associated professionals (14.8%), craft and related trades workers (14.3%), and clerical support workers (12.9%). Other ISCO major groups had increased growth rates ranging between 6.0% in skilled agricultural workers and 11.0% in plant and machine operators. During the same period, when we consider the contribution made by each ISCO major group to growth in employment (additional demand), the first ranking was the craft and related trades workers (62.2%), followed by elementary occupations, which accounted for 8.5%. The highly skilled occupations, which are composed of managers, professionals, and technicians, accounted for 17.9% of total additional jobs, whilst skilled non-manual occupations including clerical and support workers, and service and sales workers represented 7.5%. Other skilled manual occupations including skilled agricultural, forestry, and fishery workers; and plant and machine operators, and assemblers contributed only 3.8% during the same period.

The average turnover rate of the ten investigated sectors was quite high, 26.1% on average during 2013 and 2014. At the same time, the highest turnover rate (30.9%) was found in the garment, footwear, and apparel sector, followed by rubber and plastics (23.7%). There were four sectors in which the turnover rate was fairly high: the accommodation sector (18.5%), food and beverage (17.8%), ICT (16.8%), and construction (15.6%). Other sectors reported the turnover rate as quite low and ranged between 7.2% in finance and insurance, and a minimum of 4.5% in the human health sector. Given the high turnover rate, the establishments recruited on average 31.5% of the total employees during 2013 and 2014 in order to replace the employees leaving and to sustain their production or operations. In the same pattern as for turnover, the highest recruitment rate was found in the garment sector with 36.2%, and the lowest recruitment rate was in the human health sector with 6.7%.

In 2015, the establishments estimated that the number of employees left would decrease and on average the turnover rate would drop to 14.8%. The decrease would be found in every sector, particularly in rubber and plastics (2.6% in 2015). This data suggest that the establishments would take action to improve the working conditions and/or provide additional incentives to their employees, although it could also imply that the establishments failed to forecast the turnover rate

of employees. At the same time, the establishments expected to recruit about 17.6% of total employees.

As result, overall employment expects to increase with a growth rate of 6.1% or the creation of about 28,000 additional jobs in 2015. The sectors that will register a double-digit employment growth rate are the rubber and plastics sector with a growth rate of 11.1%, and food and beverage of 10.4%. Given the high capacity utilization among existing staff, the finance and insurance sector will recruit 7.4% additional staff in order to respond to the increase of business activities in 2015. The accommodation sector also reported employment expansion with a growth rate of 6.7%. At the same time, other sectors also reported an increase in employment with a growth rate of between 5.9% in the garment sector and 2.9% in the human health and ICT sectors. In terms of absolute value, garment, footwear, and apparel reported 19,466 additional recruits or 70.4% of total employment generation in 2015. While, other sectors expect to augment employment by between 1,872 [workers] in rubber and plastics and a minimum of 147 [workers] in the ICT sector.

Employers' perception of first time jobseekers with at least upper secondary school [education]

At the time of the survey, about half of all establishments had recruited first time jobseekers coming directly from the education system. About one third had hired higher education graduates, while only 17.8% had hired young people coming from TVET. Upper-secondary school graduates had been hired by one fifth of all establishments (20.9%).

The finance and insurance sector (86.2%) presented the highest percentage of establishments hiring first time jobseekers with at least secondary school education, followed by education sector (70.4%). More than half of establishments in the ICT, construction and accommodation sectors had also hired first time jobseekers. The percentages of other sectors ranged from 41.5 % for human health to the minimum of 17.0% for the garment sector. Notably, the percentages of the three industrial sectors were much lower and quite similar: 25.4% for rubber and plastics, 18.2% for food and beverages, and 17.0% for garment.

In general, establishments recruiting those first time jobseekers expressed positive views of their preparedness for the job. The perception of employers toward the preparedness of first time [employers] was also slightly improved compared to 2012. Only 10.3% of the establishments considered that new entrants from upper secondary school were poorly or very poorly prepared. At the same time, only 7.4% and 6.8% of establishments found that first time jobseekers from TVET and higher education students were poorly or very poorly prepared respectively. Where first time jobseekers were found to be poorly or very poorly prepared for work three areas were most commonly pointed to: lack of life experience and maturity; lack of technical or job specific skills; and poor attitude/lack of motivation.

Current recruitment situation

Incidence and density of vacancies

More than half of all establishments (51.4%) declared vacancies: 81.9% of establishments in the finance and insurance sector declared vacancies, followed by 78.4% in education and 70.8% in ICT.

In the other sectors, the percentage of establishments declaring vacancies ranged between 60.1% for accommodation and a minimum percentage of 18.3% for logistics, warehousing and transportation. In the garment sector, the main employment generation sector for Cambodian people, particularly female workers in rural areas, only 33.3% of establishments reported having vacancies.

At the time of the survey, the sampled establishments were seeking almost 8,047 workers, a figure that represented almost 7.0% of their total employment: 43.9% for craft and related trades workers, 24.7% for elementary occupations, 8.1% for services and sales workers, and the remaining 23.3% of vacancies were distributed between the other six ISCO major groups.

Recruitment difficulties and skills shortages vacancies

The labour market is more able to meet the recruitment requirements of establishments compared to 2012, however a third of establishments with vacancies faced problems with recruitment, and about a quarter of all vacancies (23.0%) were considered hard to fill in 2014.

The highest percentage of hard-to-fill vacancies was in the ICT sector (74.2%), followed by the food and beverage, and logistics sectors, with values of 35.4% and 31.4% respectively. In the garment, accommodation, and education sectors, the proportion of hard-to-fill vacancies was just above the average. The rubber and plastics, and human health sectors followed with 19.0% and 17.6% respectively, while the finance and construction sectors seemed to enjoy a much better situation, with only 13.4% and 11.6% respectively.

About 44.0% of all hard-to-fill vacancies were concentrated in the craft and related workers. Elementary occupations ranked second at 22.8%. The percentages of other ISCO major groups were all below 9.0%.

Vacancies that were proving hard to fill due to a difficulty in finding applicants with the skills, qualifications, and experience required for the role, equated to 11.8% of all vacancies and were issues reported by above one quarter of establishments with vacancies (28.6%). It was amongst highly skilled occupations, including managers, professionals, and technician and associated professionals, where employers experienced the greatest difficulties in meeting their demand for skills from the available market. Skills shortage vacancies were most common among establishments in the ICT, food and beverage, logistics, human health and education sectors, and were also prevalent (i.e. the highest proportion of all vacancies) in the garment, footwear and apparel sector.

Employers generally reported that most applicants lacked: technical or practical skills, foreign language skills, and basic computer literacy/IT use.

Whilst these recruitment difficulties are not common issues for all establishments, where they do exist their impacts can be significant. Almost two-thirds (63.6%) indicated that these problems caused a delay in the development of new products, almost half reported having difficulties meeting customer services, and above two-fifths of establishments experienced an increased workload for other staff. This data concluded that the problem, at the macro level, could potentially lead to

deterioration in overall competitiveness, in addition to lowering productivity, preventing investment, and developing the skills intensive sector.

An array of measures has been adopted in order to try to fill vacancies. The two most common measures were to: (i) increase the training given to the existing workforce, and (ii) salary (both were cited by two-fifths of establishments with hard-to-fill vacancies).

Skills gaps

Skills gaps are defined when the existing staff cannot perform up to the level required by employers. About a third (32.1%) of the establishments declared that their employees did not perform the jobs at the required level, and this proportion decreased from 54.5% in 2012.

The incidence of this problem appeared to be particularly acute in education, accommodation, and food and beverage, but was also felt by around 36% of establishments in the rubber and plastics, ICT, construction, and garment sectors. For the other sectors, this proportion is quite modest and below the average value, particularly in the human health and finance sectors.

Despite the high incidence of establishments experiencing skills gaps, about 12,205 workers or 2.7% of the total workforce were considered to have skills gaps. Food and beverage and ICT (both 8.0%) were the sectors with the highest proportion of workers described as having skills gaps. The skills gaps were least prevalent in the finance and human health sectors, where only 1.3% and 1.8% of total employment respectively were considered to have skills gaps.

Skills gaps tended to be most concentrated among plant and machine operators, as 4.6% of the total employees in this occupation were perceived to be not fully proficient. Additionally, 3.7% of employees in services and sales, and 2.7% of elementary occupations were considered to have skills gaps. The unskilled and skilled workers (both manual and non manual) were seen as more likely to have skills gaps than the highly skilled occupations that might require higher qualifications, cited as managers, professionals and technicians and associated professionals.

If the data is narrowed to only the establishments and occupations affected by the skills gaps, the proportion of employees with skills gaps in the plant and machine operators was quite high, as 44.9% of employees in this occupation were considered to have skills gaps. The managers ranked second, with 29.5% of employees in this occupation perceived to be not fully proficient. At the same time, only 7.2% of workers in craft and related trades were considered to have skills gaps, while in other occupations, the proportion of employees with skills gaps varied between 24.1% in technical and associated professions and 18.6% in clerical support workers.

Rather surprisingly, the main reason behind poor performance, indicated by establishments in all sectors was lack of motivation. This reason was cited for three-quarters (75.3%) of all occupations with skills gaps. The second reason, cited for 27.3% of skills gaps occupations, was due to the fact that workers were new to the role. This reason could be either because they recently started the job (first time jobseeker) or have recently been promoted to a higher position. Additionally, the three following causes of skills gaps were related to training: not receiving the appropriate training (17.2%), training proving to be ineffective (16.0%), and staff training being only partially completed (12.2%).

Regarding skills that needed to be improved, five skills were cited by more than 20% of the establishments, in the following order: job specific skills, oral communication, teamwork, knowledge of a foreign language, and customer management. The pattern of skills that needs to be improved is similar to skills shortages among jobseekers in the previous session.

As for hard-to-fill vacancies, establishments with skills gaps found that skills gaps prohibit their business developing or growing specifically through: delay in developing new products/services (61.0%), loss of business or orders to competitors (48.8%), having difficulties meeting customer objectives (43.4%), and having difficulties meeting quality standards (29.4%). Additionally, a third believed that skills gaps lead to increase workload for other staff and a quarter found they encountered the problem of an increase in the cost of operation.

Given that most establishments said that the skills gaps were having impacts, it was clear that the vast majority did take specific measures to address these issues, while only 3.5% of establishments with skills gaps did not take any action.

Staff lacking motivation was the key causes of skills gaps, but the data suggested that employers were not willing to provide additional incentives including financial and non-financial aspects to overcome these problems (3.9% of establishments with skills gaps).

Incidentally, the most likely measures to overcome the skills gaps were to implement the mentor/buddying scheme and increase their supervision of staff, which were taken by 42.6% and 41.2% of establishments affected by skills gaps respectively. Additionally, two-fifths increased staff appraisals or reviews, and a third increased training activities or expanded the training programmes.

Workforce development and business strategies

Workforce development

During the 12 months preceding the survey, a half of establishments (49.8%) had funds or arranged forms of training for their employees; 39.6% of small establishments, 60.5% of medium-sized establishments, and 58.2% of large establishments provided training.

In the finance sector, 88.4% of establishments provided some form of training. In education sector, training was provided by around 78.3% of establishments, in ICT by 64.1%, in human health by 63.8%, and in construction by 52.4%, while in other sectors, the proportion that provided training to employees was below 50% and ranged between 43.7% in the rubber and plastics sector and 22.8% in the logistics sector.

Below half of establishments providing training to their employees had both training plans and budget that specified in advance the level and types of training that would be needed in the coming year. Almost a third (31.6%) had only a training plan and about 2.9% had only a budget for expenditure on training. At the same time, about one-fifth (20.4%) that had provided training in the last 12 months did not have both a training plan and budget, and training clearly quite often took place on an ad hoc basis without being formally planned.

The most common type of training provided by employers were technical and practical skills (40.1% of establishments that trained employees in the last 12 months), which were the most cited skills shortages, followed by customer management skills (36.7%). About a third had funded or arranged strategic management and office management [training] (30.7% and 30.0% respectively). The other types of training, provided by more than 20% of all establishments were: problem solving skills (27.7%); planning and organization (27.1%); accounting and finance (26.9%); human resource management (26.1%); oral communication (25.4%); and teamwork (24.4%).

Around 12.3% of establishments providing training reported difficulties in organizing training courses and/or finding trainers, with the problem especially acute in logistics (44.6%), followed by ICT (43.9%), education (24.5%), human health (17.7%), accommodation (15.2%), garment (12.8%), and other sectors (less than the average value). Regarding the reasons for difficulty in organizing training, 54.3% indicated no or poor information on course/trainer, 50.9% no or lack of courses/trainers, and again 39.9% the low quality of courses/trainers.

Business development strategies

The last part of the questionnaire aimed to ascertain the willingness of establishments to innovate in product development, services and technologies, and to acquire new markets in the next year. This willingness was stated by 62.1% of all the establishments.

The ICT and education sectors appeared to be the sectors in which there were the highest proportions of establishments reporting the plan to introduce new products, services and technologies and to acquire new market, with 93.2% and 93.0% respectively. The other sectors with the percentage above average were: finance and insurance (88.2%); construction (74.8%); human health (67.8%); and rubber and plastics (65.1%). In other sectors, the proportion differed between 59.0% in accommodation and 31.7% in logistics.

Exploring the policies that establishments intended to adopt in order to expand their business or acquire new market, the survey found that 59.7% of them planned to train their existing staff, 54.1% planned to hire additional staff, and 45.8% planned to reorganize their organization in order to better use available staff and their competencies.

Abbreviations

ASEAN	Association of Southeast Asian Nations
EMIS	Education Management Information System
ESNS	Employers' Skills Needs Survey
GDP	Gross Domestic Product
ILO	International Labour Organization
ISCO	International Standard Classification of Occupations
ISIC	International Standard Industrial Classification
MOEYS	Ministry of Education, Youth, and Sport
MOLVT	Ministry of Labour and Vocational Training
NEA	National Employment Agency
NEP	National Employment Policy
NIS	National Institute of Statistics
NSDP	National Strategic Development Plan
NTB	National Training Board
SIDA	Swedish International Development Cooperation Agency
TAP	Training Age Population
TVET	Technical and Vocational Education and Training
UNDP	United Nations Development Programme
WAP	Working Age Population

1. Introduction

1.1. Rationale and Objectives of the Study

Workforce skills development plays an important role in the quality of a nation's performance in terms of economic development, poverty reduction, and job creation. Investment in labour force skills development not only contributes to higher productivity and enhanced competitiveness but also provides employment and more inclusive growth (World Bank, 2012). Given the important roles played by workforce skills development, the Royal Government of Cambodia seeks to promote skills development through the Rectangular Strategy Phase III 2014–2018, and its implementation plan, the National Strategic Development Plan (NSDP) 2014–2018 in order to better prepare a labour force that responded not only to the industrial process, but also to fully exploit the benefits from the free flow of labour in the ASEAN Economic Community in 2015.

Cambodia experienced rapid and accelerated growth (9.5% for the 1998–2008 period) but observed a sudden stop of such growth during the global financial crisis of 2008 (0.1% in 2009) due to the related stagnation of world demand for Cambodian garment exports, which has been one of the major driving engines of the previous rapid growth. Although the country has recovered rapidly from this crisis (7.1% for the 2010–2012 period), the experience has reminded the policy markers to reconsider current growth engines and the need to diversify the structure of the economy in order to sustain medium- and long-term growth, and poverty reduction. This reinforces the need for sustainable and stable growth, which requires a sound skills development policy and national employment policy in order to ensure the robust supply of relevant skills (meeting demand).

However, the lack of up to date and comprehensive labour market information is a key constraint in the development of those policies. In this regard, the National Employment Agency (NEA) of the National Training Board (NTB) carried out the first Employers' Skills Needs Survey (ESNS) in 2012 with financial and technical support from the International Labour Organization (ILO). This survey focused on skills issues in six major sectors (high growth or large share of employment). The six sectors investigated comprised three manufacturing sectors (food and beverage; garment, apparel and footwear; and rubber and plastic); construction; and two service sectors (finance and insurance, and accommodation). The findings are also useful in evaluating the effectiveness of the education system in terms of how successful school graduates were in entering the labour market from the education system. In addition to this, a clear understanding is required regarding the knowledge and skills needed among employers in the labour market in order for the education system to ensure that participants acquire relevant skills. Hence, this information is very vital to determine the direction of skills development policy, specifically the TVET system and whether any reforms are necessary.

In an effort to support the government to develop a more effective TVET system and policies, NEA, in cooperation with the Swedish International Development Cooperation Agency (SIDA), conducted a second study of ESNS in 2014. This study was aimed at the collection of more detailed information in various aspects of employment and skills such as employers' perceptions of first time job seekers, employment structure, skills gaps, hard-to-fill vacancies, skills shortages, training issues, and so on. More importantly, this survey was designed to collect data in order to build an occupational barometer, which is one of the most important labour market indicators as well as crucial information for career counselling.

This survey was also designed to get an understanding of employers' perceptions in order to tackle labour market problems from the perspective of the demand side. Hence, in order to be able to explain the nature of Cambodia's labour market from the demand side, more than 500 establishments were interviewed at the national level across 10 sectors, which have high growth potential, are major drivers of employment generation, and as well as having greater value in Cambodia's GDP. The sectors investigated include food and beverage; garment, apparel and footwear; rubber and plastics; construction; finance and insurance; accommodation; transportation, warehouse and logistics; human health; education; and information and communication technology (ICT).

The main objectives of this survey are to contribute towards an effective employment and skills development policy by providing the necessary information required to:

- Analyse the current Cambodian labour market situation
- Explore employers' perceptions of first time job seekers
- Determine the employment structure in terms of stock and flow
- Assess the skills shortages and skills gaps by ISCO major occupations in each selected sector
- Build a short term occupational barometer
- Contribute to skills development programmes coherent with the future labour demand by ISCO major group
- Allow designing and implementing of the employment and labour policies needed by the Cambodian economy
- Develop the labour market information system in Cambodia.

1.2. Structure of the Report

In order to provide structural and concise information, this report is organized into five parts. This introductory section presents the background and rationale of the study. Part 2 provides an overview of the concept of the ESNS information base, the key terminologies, the sampling methodology, the design of the questionnaire and the limitations of the study. Part 3 provides a brief summary of some basic information about the Cambodian labour market covering the macro economic situation, demographic trends as well as the most relevant elements of labour demand and supply. Part 4 focuses on the main findings of the employers' skills needs survey: (i) characteristics of establishment, (ii) market development and capacity utilization within the existing workforce, (iii) employment structure and turnover, (iv) employers' perceptions of first time jobseekers with at least upper secondary education, (v) current situation of recruitment and skills shortages, (vi) skills gaps, and (vii) workforce training, and business strategies. In the last section, by using the findings from this study, we try to seek and suggest policy recommendations for the skills mismatch and skills formation problems in Cambodia from the short-term mismatch perspectives as well as from the long-term development perspectives.

2. Research Methodology

2.1. Operational Terminologies and Concepts

Although skills gaps and skills shortages have been studied all over the world, such studies are new in developing countries. In addition, the lack of uniformity of definition has been a major problem in the study of skills shortages and skills gaps. In this report the following terms will be defined: skills, skills shortages, recruitment difficulties, and skills gaps in order to provide conformity to the international study, particularly to the user guide to develop an employer survey on the skills needs of CEDEFOP.

The term "skills" is defined as "the ability to perform specified tasks" (Holt, Sawicki, & Sloan, 2010), or to perform "a productive task at a certain level of competence" (Shah & Burke, 2003; Trendle, 2008). In practice, skills are classified into two dimensions, according to: 1) what the particular tasks are, and 2) the level of ability that is needed. This implies that jobs are classified into occupation on that basis *(see Appendix A – International Standard Classification of Occupation)*. Skills can be acquired through either practical experience or study undertaken by the students. Skills needs are defined in terms of the jobs that employers require to be done (Holt, Sawicki, & Sloan, 2010).

From a microeconomic perspective, skills shortages are generated from "excess demand" and the inability of employers to switch their demand composition or to substitute production factors (e.g. sourcing labour from different locations or sectors) in the short term due to asymmetric information on applicants' ability, or due to vested interests in hiring decisions that could lead to risk aversion and hence skills shortages (Shah & Burke, 2003). Skills shortages also refer to a lack of available skilled people, which results in recruitment difficulties (Strietska-Ilina, 2008). Skills shortages arise in a situation in which employers face difficulties in recruiting staff that have the skills needed. This can be due to a significant geographical imbalance and shortfall in the number of skilled people (Strietska-Ilina, 2008). More practically, "skills shortage vacancies" are hard-to-fill vacancies due to a lack of skills, lack of qualifications, and lack of experience, as shown in figure 2-1. On the other hand, those hard-to-fill vacancies that arise due to poor attitude or personality, lack of motivation, or insufficient number of applicants are not skills-shortage vacancies. Skills-shortage vacancies are, therefore, a subset of hard-to-fill vacancies defined by the three reasons noted above.

Recruitment difficulties cover all forms of recruitment problems faced by employers (Strietska-Ilina, 2008), including the situation in which employers are unable to hire qualified candidates to perform given tasks even though there is a sufficient supply of labour in the market (Shah & Burke, 2003).

Skills gaps refer to a situation in which employers are hiring workers whom they consider under-skilled, or their existing workforce are under-skilled relative to some desired levels (Shah & Burke, 2003). Skills gaps exist where employers feel that their existing workforce have inadequate skills types or levels to meet their business objectives, or where new entrants appear to be qualified but

in fact are not (Strietska-Ilina, 2008). Practically, skills gaps are where employees are not fully proficient, that is, they are not able to perform their jobs to the required level (UKCES, 2012)[1].

Figure 2-1 Skills-shortage vacancies "route map"
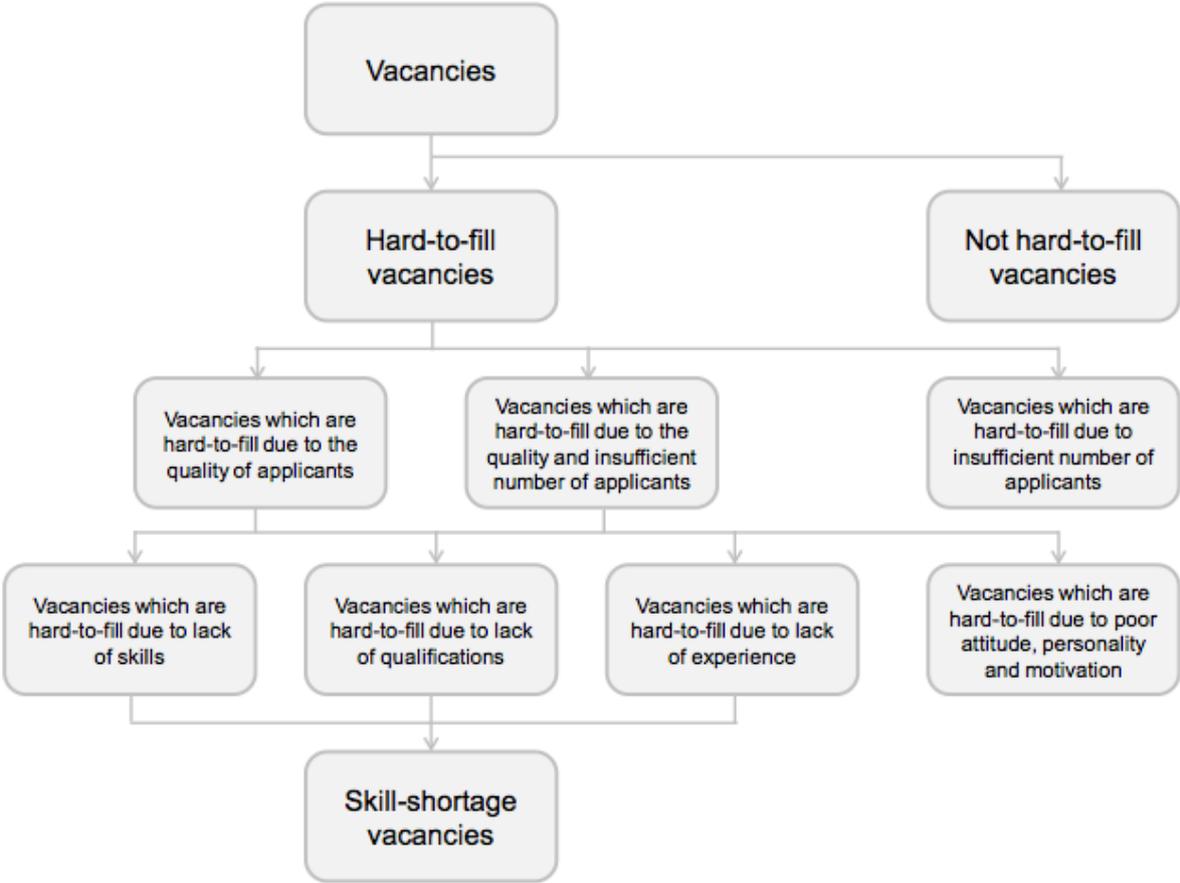
Source: (UKCES, 2012, p. 48)

2.2. Sampling

The main purpose of the sampling is to provide findings that are representative for the selected sectors. The survey had to be conducted in a randomly selected set of establishments within selected sectors. Hence, the sampling method ensured a sample size that was statistically large enough to represent each sector. To ensure regular replication of the survey, a stratified random sample design was used.[2] In the sampling design process, the sample was divided into a number of cells defined by the size of the employment and economic activities *(see appendix B: International Standard of Industrial Classification)*. The main aims of the stratification of the workforce by size was to avoid the large majority of interviews being conducted in small establishments since the number of small establishments were considerably higher than the number of medium-sized or large

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[1] To identify the incidence of employees with skills gaps, the respondents were asked: Do you have any problems related to your employees who do not perform jobs at the required level? Could you please indicate, in which occupations, the number of people that do not perform jobs at the required level, and the total number of employees in that occupation? (See appendix D: Employers' Skills Needs Survey Questionnaires 2014).

[2] This sampling methodology is strongly recommended for Employer Survey (CEDEFOP, 2013).

establishments in most sectors.[3] In terms of employment impact, the medium-sized and large establishments are more substantive than the small ones. In addition to this, the medium-sized and large establishments are more likely to provide accurate data on jobs and employment turnover by occupation for the previous 24 months, and are able to provide a rough estimation of future skills demands for the next 12 months. Hence, the sample was drawn based on stratified random sampling, with probability proportionate to the number of establishments in each sector, and distribution proportional to the size of the workforce (10–19, 20–99, 100+), as shown in table 2-1.

The study expanded on the previous study in 2012 from six to ten sectors which have high growth potential and are major drivers of employment generation, and whose VA shares are important in Cambodian GDP in order to be able to explain the dynamic of the Cambodian labour market from the demand side. The sectors investigated include food and beverage; garments; apparel and footwear; rubber and plastics; construction; finance and insurance; accommodation; transportation, warehouse and logistics; human health; education; and ICT *(see appendix B: International Standard of Industrial Classification).*

The samples were first drawn from the Establishment Census 2011 conducted by the National Institute of Statistics (NIS), with some additional establishments updated from the *Yellow Pages 2013* and administrative records of the Ministry of Labour and Vocational Training (MoLVT) in order to complete the sample frame (table 2-1).

Table 2-1 Sample distribution by sector and size of employment

	10–19 workers	20–99 workers	100+ workers	Total
Accommodation	34	42	27	103
Construction	37	44	14	95
Education	11	27	26	64
Finance and Insurance	16	76	20	112
Food and Beverages	42	37	17	96
Garments, Footwear, and Apparel	22	25	74	121
Human Health	9	25	20	54
ICT	1	9	13	23
Logistics, Warehousing and Transportation	2	14	11	27
Rubber and Plastics	15	39	17	71
Total	189	338	239	766

However, it transpired that some enterprises were no longer in existence, and some information is out of date. To deal with these potential pitfalls of sample selection and attrition, all the selected establishments were called to check their existence, confirm the sector operating, and update the number of employees and the contact address.

Moreover, to ensure comparability with the previous study and other studies conducted in other countries, the International Standard Industrial Classification (see appendix B) and the International Standard Classification of Occupations (see appendix A) were used to identify the subsectors and occupation types relevant for the analysis.

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[3] According to Cambodian Economic Census 2011, the establishments employing 10-19 people covered 63.0% of total establishments employing more than or equal 10, while the establishments with 20-99 people and the establishments with more than or equal 100 represented 32.1% and 4.9%, respectively.

2.3. Questionnaire Design

The core questionnaire was designed in several stages, with the co-operation of the Swedish experts. There existed several pressures on the questionnaire regarding balancing the content of the questionnaire so it covered important issues and the over burdening of employers due to a lengthy questionnaire.

The design of the questionnaire followed the United Kingdom Commission Employer Skills Survey questionnaire. It was used in the previous ESNS in 2012 and adapted to meet the specific features of the Cambodian economy and employment structure. In addition to this, some additional questions were added based on the Swedish Employer Survey in order to obtain the data necessary to build the occupational barometer.

The questionnaire was translated into the Khmer language in order to assist the interviewers and the employers. Before the final questionnaire was put into use, it was tested through a pilot survey, to determine if the questions were properly worded, sequenced, and could be understood. The pilot survey revealed important issues that were not covered by the initial formulation, and tested the skip pattern for inconsistencies and errors. The questionnaire was re-examined and revised again by Swedish experts before being put in place.

As mentioned above, in order to provide a comprehensive picture of the ten sectors included in the survey, the questionnaire covered a number of issues – mainly, but not uniquely, from a labour market perspective. The first part of the questionnaire aimed to collect data that identified the persons interviewed and the background of establishment. The main body of the questionnaire was structured into seven parts, with a total of 46 questions, covering the following areas *(see Appendix D)*:

(a) *General information of the establishment (questions A1–A8)*. This first section aimed at collecting information on the date on which the establishments started the business, to ascertain whether or not the establishment was legally registered, the type of business entity, the type of ownership, their main activities and products, and the extent of the market.

(b) *Market development and capacity (questions B1–B2):* This section aimed at evaluating the demand for goods or services of sampled establishments as well as identifying free capacity utilization among personnel.

(c) *Employment (questions C1–C3)*. In this section, each establishment was asked to report and estimate the total number of workers from 2011 to 2015. In addition to this, each establishment was asked to indicate the number of people that have been or are expected to be recruited or leave from 2013 to 2015 in order to determine the staff turnover rate. Importantly, this section aimed also to outline the evolution of the employment level by ISCO major group from 2012 to the present.

(d) *Employers' perceptions of the first time job seekers (questions D1–D5)*. In this section, the questions aimed to evaluate how many establishments have recruited first time job seekers

who were coming from: 1) upper secondary schools; 2) technical and vocational schools (TVET); or 3) university or other higher education institutions. It tried, moreover, to evaluate the level of preparation of the newly hired and the weak areas in their preparation.

(e) *Skills gaps and workforce training (questions E1–E11).* After having ascertained whether the establishments were facing problems of the existing staff not performing jobs up to the requirements of employer, the following set of questions aimed to find out which proportion of staff was inadequate in the five more relevant occupations of the establishments, which factors were responsible for the situation, and which skills need to be improved. A second set of questions concerned training programmes provided by the company. The first question aimed to find out if the staff of the establishments did take part in any training programmes, and eventually if the establishments did finance it, completely or partially. The following questions aimed to understand if the establishments found any difficulties in organizing the courses and if so what the reasons were and in which fields of training they found shortages or low quality of courses and/or trainers.

(f) *Vacancies (questions F1–F4).* This set of questions was the heart of the survey and it was devoted to the issue of vacancies and to occupational forecasting. In particular, it focuses on:

- The number of employees that are or will be recruited by establishments in the next six months,
- The current recruitment situation as well as the number of vacancies with a lack of potential employees or recruitment difficulty,
- Whether and in which occupations the vacancies are hard to fill, what the reasons are and which skills are presently lacking on the Cambodian labour market, and
- The wage offered by establishment in each occupation,
- Finally, the establishment was asked whether the hard-to-fill vacancies had negative effects and, in that case, what the establishment was doing to overcome the difficulty.

(g) *Business strategy (questions F1–F2).* This last section attempted to ascertain whether the establishments planned to introduce new products, services, or technologies, or to expand or switch to new markets. In this case, the questionnaire inquired whether the establishment would complement the innovation process with training, reorganization, and/or recruitment of new staff.

2.4. Fieldwork

The owners, human resource managers, directors, and senior managers were interviewed face-to-face using the structured questionnaire. The advantage of this approach was that it allowed the collection of both quantitative and qualitative data on skills gaps and skills shortages in occupation types. The fieldwork was carried out between the 4th and 22rd of August 2014 across 15 provinces and Phnom Penh capital (figure 2-2). The average length of the interview was around 30 minutes.

Figure 2-2 Sample distribution by province
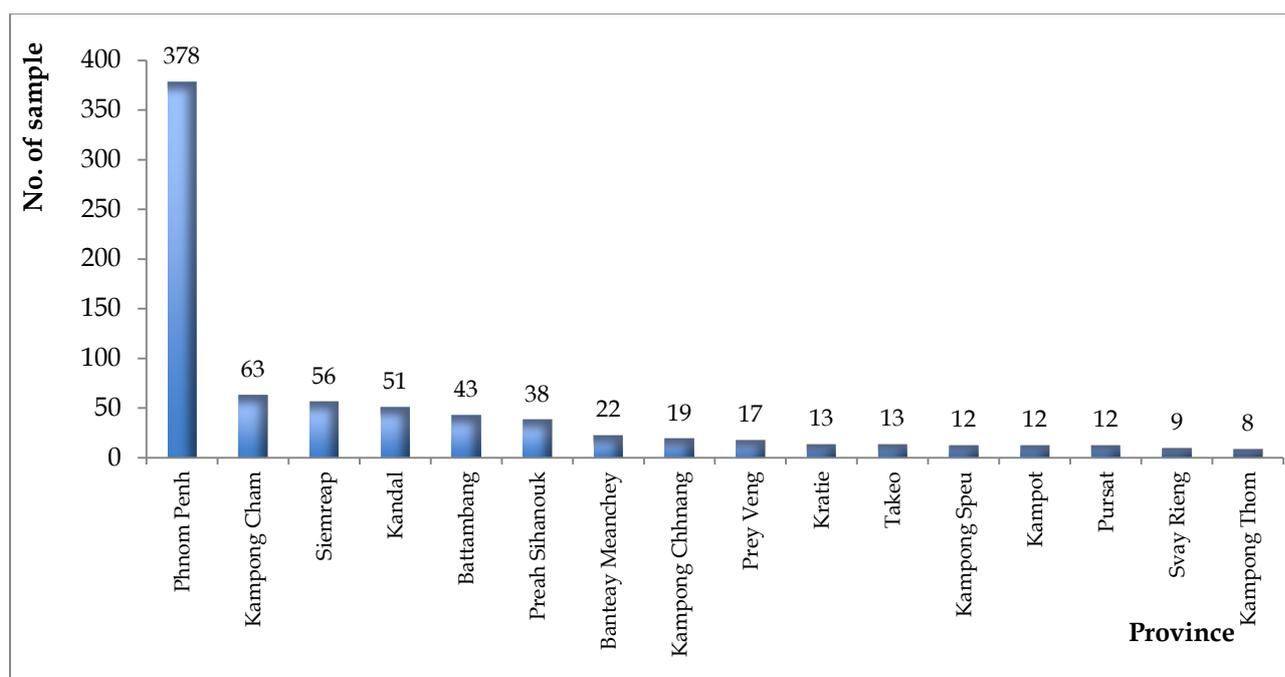
Prior to the fieldwork, the preparation of a fieldwork operation manual for the enumerators and survey team leaders was undertaken in order to ensure that all both enumerators and survey team leaders thoroughly understood the survey instruments, and that they were consistent with each other. Moreover, to properly conduct the nationwide employers' survey, intensive training programmes were arranged for the five survey team leaders and enumerators. The training covered the general instruction of interviewing techniques, fieldwork procedures, and a detailed discussion of each question in the questionnaire, particularly on frequently asked questions/situations.

To ensure that the survey went smoothly, the selected establishments were called directly and also received formal letters to inform, make appointments, and seek close collaboration. The overall response rate for the survey was 68.9%, calculated as "the number of achieved interviews" as a proportion of "the total sample". The response rate slightly improved compared to the previous survey in 2012, to 67.8%. A detailed breakdown of survey outcomes is shown in Table 2-2 and Table 2-3:

Table 2-2 Response rate

	Absolute value	Percentage
Total sample	766	100.0
Achieved interviews	528	68.9
Respondent refusal	101	13.2
Unobtainable/Invalid contact number	78	10.2
Bankrupt	24	3.1
Employed less than 10	13	1.7
Not available during fieldwork	10	1.3
Other reasons	12	1.6

Response rates were seen by sector as follows:

Table 2-3 Response rate by sector

Sector	Interviews	Response rate
Accommodation	78	75.7
Construction	58	61.1
Education	48	75.0
Finance and Insurance	98	87.5
Food and Beverage	68	70.8
Garments, Footwear, and Apparel	69	57.0
Human Health	39	72.2
ICT	9	39.1
Logistics, Warehousing and Transportation	14	51.9
Rubber and Plastics	47	66.2

During the field survey, the interviews were monitored by survey team leaders who were responsible for tracking the survey and quality control. Completed questionnaires were checked and rechecked by the technical team before they were approved.

2.5. Data Entry and Data Analysis

The Epidata application was used for data entry. This allowed for the creation of a questionnaire form and to establish possible correlations and skipped codes (logical relations between answers in different questions) and to check for data error. In order to ensure the data were corrected, the double entry technique was adopted. By using Epidata, the survey database could be exported into the Stata and Excel application for analysis and to make the necessary tabulation.

2.6. Weighting

Data for the survey was weighted and grossed up to estimate the total number of establishments and the total number of employment. The weighting was designed on an interlocking grid of sector by group size of employment. The sampling weights, by definition, are nothing other than the inverse of sampling fractions. Separate weights have been undertaken in order to present the finding based on the number of establishments and the number of employees.

2.7. Problems Countered and Solutions Adopted

Even though this survey is the second large-scale skills survey conducted by NEA, there was no doubt that the lack of experience and technical capacity were challenges for the team in carrying out the study, but at the same time it provided a very important opportunity to learn the basic techniques for labour-market analysis.

The second problem was the lack of updated list of establishments for the sampling frame. In addition to this, some of the names and addresses of the establishments listed by the NIS were obsolete. It was therefore time-consuming to locate the establishments, contact them, and schedule

meetings. As a result, more time and resources were spent than initially estimated for the fieldwork (10.2% of total samples could not be interviewed due to invalid contact numbers).

The third difficulty is regarding the questionnaire's design due to the lack of previous information or guides to help in designing an appropriate questionnaire. Hence it is difficult to adapt the questionnaire from developed countries to the Cambodian context because of the different structure of the economy, technology, education, policy goals/purposes, etc. These posed problems during data collection and analysis.

Moreover, the lack of clear working definitions of key terms, e.g. skills, skills shortages, skills gaps, etc. resulted in difficulties in designing questionnaire and measurement.

Last but not least, occupation (ISCO), industry (ISIC), and education classification standards (ISCED) are not widely used and understood, particularly among employers.

3. Current Situation of Cambodian Labour Market

Before starting to analyse the results of the survey, it seems relevant to briefly summarize some basic information about Cambodian's macro economy and demographic trends as well as the most relevant elements of labour demand and supply. The objective is to provide the background information necessary to better interpret the results of the survey and then outlines policy measures.

## 3.1. Cambodian Macro Economic Overview

After regaining peace and stability nationwide in 1998, the Cambodian economy began to pick up and grew at a remarkably high rate driven mainly by an export led and opened trade policy. For the 1998–2008 periods before the global economic crisis, Cambodia's GDP grew at an average annual rate of 9.5%. During this period, the industry sector registered the highest growth with an average annual rate of 15.3%, and was followed by the service sector of 10.4% and the agriculture sector of only 4.5%, as shown in table 3-1. This contributed to the doubling of GDP per capita during the same period, bringing the country close to the rank of lower middle income. The poverty rate has decreased dramatically from 47.8% in 2007 to 19.8% in 2011. The growth has resulted in a reduction in the poverty rate of an average of about 7 percentage points per year.

Table 3-1 Cambodian GDP growth rate and forecast; 1993-2018

Sector	1993–2012	1993–1998	1998–2008	2008–2009	2009–2013	2013–2018
Agriculture	4.5%	5.0%	4.5%	5.4%	3.3%	4.0%
Industry	12.7%	12.1%	15.3%	-9.5%	12.1%	8.4%
Services	7.8%	5.2%	10.4%	2.3%	6.3%	7.3%
Total GDP	7.7%	6.3%	9.5%	0.1%	7.0%	7.0%

Source: Ministry of Economic and Finance, 2014

Figure 3-1 Cambodian GDP share by sector; 1993–2018
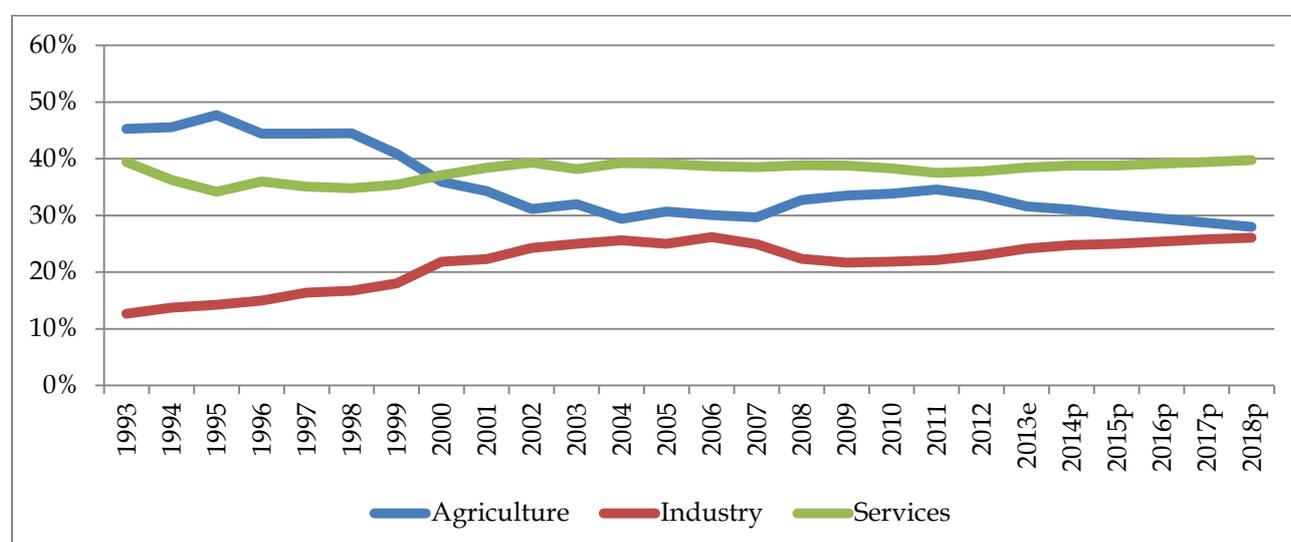
Source: Ministry of Economic and Finance, 2014

With this expansion, transformation of the structure of the economy has also taken place, as

witnessed by the increase of the share of industrial output from 13% in 1993 to 23% in 2012, while the share of agriculture output declined from 45% to 33.5%, and that of service output remained relatively stable at around 38% during the same period, as shown in figure 3-1.

However, the base of Cambodia is still concentrated in a few sectors, that is, crops, garments, construction, and tourism. This small-based growth is vulnerable to external shock as became evident during the global financial crisis in 2008, and has posed a threat for the country to further industrialize and successfully move up into middle-income status. Although the country recovered rapidly from this shock, registering a growth rate of 6% in 2010 and 7.1% in 2011, the experience has reminded policy makers to reconsider the current growth engines and needs to diversify the structure.

In this context, Cambodia needs to embark on a faster paced industrialization process by diversification into higher value added and more labour intensive sectors, as well as improving the productivity and competitiveness of the existing industries. To achieve this, strategies and policies for the country's economic and industrial development and transition for the medium and long term need to be devised. In their support for the success of these policies and strategies, skills development will play a vital role.

3.2. Labour Supply

3.2.1. Demographic Trend

Cambodia is now in the "demographic transition" phase from being a high fertility–mortality rate [country] to a low fertility–mortality one. After the war, the country experienced a baby boom in the 1980s and 1990s, which has registered an annual increase of the number of new births from about 401,000 in 1980–1985 to 417,000 in 1990–1995. As a result, the total population has increased from about 6.7 million in 1980 to an estimated 15.7 million in 2015. Because of the significant increase in the population during the last three decades, Cambodia has faced two notable challenges: the employment challenge due to the expansion the working age population (WAP), aged 15–64, and the education challenge due to the extraordinary increase in training age population (TAP), aged 6–23.

The country's WAP increased from about 4 million in 1980 to an estimated 10 million in 2015. However, the annual increase in WAP had already passed its peak of about 275,000 in 1995–2000 (Figure 3-2). Its annual growth rate has declined steadily from 5.1% in 1995–2000 to 1.5% in 2010–2015. With the continuing decline in both population generational entries and balances, Cambodia WAP is projected to stop increasing in the next 30 years, and start decreasing in the next 60 years (figure 3-2).