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Skills shortages and skills gaps in the Cambodian labour market: Evidence from employer skills needs survey

Michele Bruni, LikananLuch and SomeanKuoch
National Employment Agency
November 2013



Country Office for Thailand, Cambodia
and Lao People's Democratic Republic

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Preface

“To address the labour market challenges, the Royal Government will further deepen reforms of policy, and regulatory and institutional frameworks to ensure that all the components of the labour market are collectively consistent, responsive and reinforcing each other [...] to boost economic growth, create jobs and promote livelihoods.”

Rectangular Strategy Phase III (2013-2018), Royal Government of Cambodia, paragraph 107

The International Labour Organization’s tripartite constituents in Asia and the Pacific - governments, employers’ and workers’ organizations - have committed themselves to an “Asia-Pacific Decent Work Decade 2006-2015”. In doing so they reaffirmed their commitment to achieving full, productive and decent employment for their people. The commitment shown by the Royal Government of Cambodia in developing a national employment policy with a focus on young women and men forms part of the policy efforts toward attaining the goals of Cambodia to consolidate its future development path, as well as those of Asia-Pacific Decent Work Decade 2006-2015.

Cambodia has grown at a remarkable average annual rate of over nine per cent during the decade prior to the onset of global financial crisis in 2008. Since then, the economy has recovered well, albeit more modestly than in the pre-crisis period, with the economy growing at little less than seven per cent on average between 2010 and 2012. While a decade of rapid growth has notably improved the livelihoods of the Cambodian people, with the headcount poverty rate falling from 39 per cent in 1994 to 30 per cent in 2007, poverty remained pervasive in the rural areas at 35 per cent in 2007. At the same time, employment has grown at 4 per cent per year between 1998 and 2008, but much of this growth has been in the rural areas and in the informal segments of the economy. Furthermore, productivity, as measured by output per worker, has been one of the lowest in the region and grew only modestly in the late 2000s. In 2010, output per worker in Cambodia was less than 4,000 in constant purchasing power parity dollars; this was two-third that of Viet Nam and less than one-fifth of Malaysia’s. As Cambodia grows into a middle income country, as envisaged by statements made in relation to Cambodia’s Vision 2030, there is a recognized need to diversify its economic base and to undertake higher value-added activities. Attaining such aspiration requires strategic policy approach, including an employment policy, to enhance productivity of and returns to work in the existing economic activities and to adequately skill and mobilize workers, particularly those currently engaged in vulnerable forms of employment, toward emerging sectors. This would ensure that the growth process is more equitable, generated through broad-based participation and empowerment of the Cambodian people.

To support the Government in developing an employment policy, the ILO has responded by providing policy advice. This first led to a generation of background analyses in areas that are pertinent to employment outcomes and employment policymaking. The ILO has also supported consultation meetings on the background analyses and their policy recommendations in 2012 and 2013, with active participation of the national stakeholders.

In this regard, we are grateful to the financial support provided by the Sweden-ILO Partnership (2009-2013) that has been contributing to the attainment of ILO’s outcome: *More women and men have access to productive employment, decent work and income opportunities*. It is also closely related to the work

envisaged by the ILO on the areas of critical importance included in the programme and budget for the next biennium (2014-2015), namely *promoting more and better jobs for inclusive growth and jobs and skills for youth*. In conducting this background research, we are also grateful to the strong commitment and support provided by the Employment Policy Department, ILO Geneva.

This paper by the National Employment Agency of the National Training Board in Cambodia represents one of the background analyses. It reports on the findings of the Employer Skills Needs Survey in 2012. This survey – the first of its kind and coverage in Cambodia – is aimed at understanding the needs of employers in finding and hiring workers. Such a knowledge base contributes to understanding how the productivity of an enterprise, as well as employment opportunities within, can be enhanced. It also contributes to understanding how young entrants to the labour market and jobseekers can improve their skills profile, so that they are able to access more productive employment opportunities. The survey covered more than 500 establishments and focused on six growing sectors in Cambodia: accommodation; construction; finance and insurance; food and beverages; garments, apparel, and footwear; and rubber and plastics. The paper reports on the existence of skills shortages in the sectors covered. There is a need to improve skills acquisition in the education and vocational training system to meet the demands of the market, as well as adequately improve wages and working conditions for the vacancies on offer. To overcome the skills shortages and productivity constraints faced by enterprises and workers, a set of short- and long-term policy interventions needs to be in place.

This paper is part of the ILO Asia-Pacific Working Paper Series, which is intended to enhance the body of knowledge, stimulate discussion, and encourage knowledge sharing and further research for the promotion of decent work in Asia and the Pacific.

Maurizio Bussi
Officer-in-Charge
Country Office for Thailand, Cambodia, and
the Lao People's Democratic Republic

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Executive summary

Background of the study

The analysis of employers' perceptions is a new topic in Cambodia, but one that responds to the precise demands of policy-makers while representing a necessary step in the formulation of a National Employment Policy (NEP) that is responsive to both employers' and workers' needs and interests.

This survey was the first to be conducted in Cambodia with the aim of describing and understanding employers' points of view in support of better-informed design, and implementation of, employment and labour market policies.

The survey drew on more than 500 establishments in six sectors. The sectors included three in manufacturing (food and beverages; garments, apparel, and footwear; and rubber and plastics), two in services (finance and insurance, and accommodation), plus construction. The survey covered such topics as skills gaps, skills shortages, difficulties in recruiting, and hard-to-fill vacancies.

The survey was made possible with the financial support of the International Labour Organization (ILO).

Characteristics of the sampled establishments

The industrial structure of Cambodia is relatively young, but the number of establishments opening for business has been progressively increasing. Almost one-third of the establishments interviewed in this survey were foreign-owned, and almost half of them were owned by entities from China or Taiwan, China. One out of five was active in the international market, and more than two-thirds of them were foreign-owned establishments. More than 30 per cent of the establishments in this sample had more than 100 employees.

About the authors

Michele Bruni is an international expert on employment and labour market; and Likanan Luch and Somean Kuoch are advisors to the National Employment Agency. The National Employment Agency of the National Training Board of Cambodia was established in 2009. The Agency aims to provide a one-window service to promote effectiveness in the labour market, enhance participation in the labour market, decrease unemployment, boost growth and employment opportunities, and eventually reduce poverty.

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The foreign-owned establishments were, on average, larger than Cambodian-owned establishments; they represented 56.1 per cent of the large establishments, 14.1 per cent of small establishments, and 24.9 per cent of medium-sized establishments. The majority of large establishments operated in the international market (45.2 per cent), while a significant percentage operated at the national level (38.2 per cent).

The average size of establishments in the food and beverages sector was relatively small, with 90 per cent being Cambodian-owned. At the other extreme, the garments sector was characterized by the presence of large establishments owned mainly by entities from China or Taiwan, China, and operating in the international market. The rubber and plastics sector was in an intermediate position, with most establishments of medium-to-large size and one-third being foreign-owned. The financial sector had a concentration of establishments from Europe and members of the Association of Southeast Asia Nations (ASEAN).

The foreign-owned establishments were usually much larger than Cambodian establishments, with up to 1,200 staff employed by entities from Taiwan, China. Establishments owned by entities from China and the Republic of Korea on average employed around 600 workers.

Employment in sampled establishments

Level and structure

The total number of employees in the sampled establishments was 126,315, and their distribution largely reflected that of the Establishment Census, with garments accounting for almost 70 per cent, and the share of employment in other sectors ranged from 8.1 per cent (rubber) to a minimum of 3.0 per cent (construction).

More than 70 per cent of the employees were women (71.6 per cent). However, the percentage varied greatly between sectors, with female employees accounting for a maximum of 85.2 per cent in garments and a minimum of 16.7 per cent in construction. Employees in the accommodation sector were also mostly women, while in the other three sectors the percentage of women ranged between 35 per cent and 40 per cent.

The overall skills level of employees was quite low: elementary occupations accounted for 55.2 per cent of workers, followed by crafts and related trades with 21.3 per cent. Managerial staff accounted for 2.9 per cent and technicians for 2.5 per cent.

The percentage of women employed in these sectors corresponded negatively to the overall skills level, where occupations requiring low level of skills tended to be covered mainly by women, such as clerical work and service occupations. The percentage of workers employed in elementary occupations exceeded 50 per cent in all six sectors, with small differences between sectors. The finance and insurance sector had the largest share of workers in occupations that require a higher educational level. Clerical and sales occupations were predominant in accommodation and in finance. The garments, construction, food, and rubber sectors employed an above-average percentage of skilled and semi-skilled workers.

Almost 73 per cent of the workers covered by this survey were employed in foreign-owned companies. The percentage of those employed in companies owned by entities from Taiwan, China (37.1 per cent) exceeded

the percentage working in Cambodian-owned companies (28.3 per cent). At the same time, three-quarters of those employed worked in companies that were active in the international market, with 17.1 per cent in companies active in the national market, and only 8.8 per cent in local companies.

Employment growth 2010 to 2012

Between 2010 and 2012, the total number of employees in the sampled sectors saw a dynamic increase, with 19,000 new jobs (17.6 per cent increase). The sector that registered the highest rate of increase in employment during the period was construction (50.4 per cent), followed by finance and insurance (23.2 per cent), and accommodation (19.4 per cent). The other three sectors also registered consistent, although below-average, increases: 16.9 per cent in garments, apparel, and footwear; 12.6 per cent in rubber and plastics; and only 10.7 per cent in food and beverages.

However, once we take into consideration the size of each sector, the largest contribution to growth in total employment in the six sectors came from garments, apparel, and footwear (67.5 per cent), followed by finance (8.2 per cent), and accommodation (8 per cent).

The increase in employment was more pronounced for the companies operating in the national market (22.6 per cent). However, the biggest contribution to employment growth came from the companies operating in the international market, which generated 72.4 per cent of the total number of additional new jobs in the six sectors.

Establishments owned by entities from Taiwan, China, with the largest percentage share in employment, ranked first also in contribution to the increase in employee numbers, followed by Cambodian-owned establishments, whose contribution to additional demand for workers was larger than their share in employment. A similar pattern was exhibited by European-owned establishments and the establishments with owners from “other countries”.

By occupations, the highest rates of increase occurred among service and sales workers, craft workers, professionals, and clerks. Rates of growth were below average for skilled workers in agriculture, machine operators, and in elementary occupations.

Given its size, the garments sector played an extremely relevant role for many occupation categories. Specifically, it generated three-quarters of the additional demand for elementary occupations and almost the total additional demand for craft workers.

Other than the garments sector, the share of increase in elementary occupations, came from the rubber sector (11.0 per cent), followed by construction (5.5 per cent), and food (4.9 per cent).

More than half of the additional demand for sales and service workers was generated by the accommodation sector, followed by garments (34.4 per cent), and finance (7.8 per cent).

Almost half (47.0 per cent) of the additional demand for professionals came from the finance sector, with 32.2 per cent coming from the construction sector, and 11.7 per cent from garments.

The additional demand for technicians mostly occurred in the finance sector (36.9 per cent), but notable increases in employment of technicians also occurred in accommodation (24.1 per cent), garments (19.1 per cent), and construction (13.3 per cent).

The demand for machine operators was quite limited and concentrated in three sectors: rubber, construction, and food. The garments sector was affected by a decline in the number of its employees belonging to this occupation type.

Wages

The wage differential covered in the survey ranged from US\$84 (per month) for elementary occupations in the garments and food sectors, to \$919 in the finance sector. Rubber and plastics displayed the highest differential between occupation types, a manager being paid almost 7.8 times more than a worker in an elementary occupation. In the other sectors, the ratio between the highest- and lowest-paid occupation types ranged from 7.2 times in accommodation to a minimum of 5.3 times in food and beverages.

Across sectors, service and sales workers registered a differential of 2.5 times between the highest- and lowest-paid sectors, followed by craft and related trade workers at 2.4 times and managers at 2.1 times. On average, foreign-owned establishments paid higher wages, especially to managers and service and sales employees.

First-time jobseekers

Around 60 per cent of the establishments in the survey had hired first-time jobseekers coming directly from the education system. Data suggests that smaller establishments tend to prefer people with more work experience, while larger establishments prefer young people that can be better trained to the philosophy and practices of the establishment.

More than half of the sampled establishments had hired higher-education graduates, 42.6 per cent had hired upper-secondary school graduates, while only 21.7 per cent had hired young people coming from a technical or vocational school. Small and medium-sized establishments preferred secondary and higher-education first-time jobseekers, while large establishments concentrated on technical and vocational school graduates.

The finance and accommodation sectors accounted for the highest percentages (89 per cent and 72 per cent, respectively) of establishments hiring first-time jobseekers with at least an upper-secondary school education, followed by construction (67 per cent). The percentages for the three industrial sectors were much lower and quite similar (43 per cent for garments, 39 per cent for rubber, and 35 per cent for food).

Only two sectors showed a strong concentration of hired workers from technical and vocational schools (construction and accommodation), while only the garments sector concentrated on upper-secondary school graduates.

Finally, the percentage of foreign-owned establishments hiring first-time jobseekers with at least an upper-secondary education was higher than that of Cambodian-owned establishments (59.3 per cent versus 55.6 per cent).

Work preparedness of first-time jobseekers

The establishments expressed quite positive sentiments on the preparedness of newly hired first-jobseekers: 53.7 per cent judged their preparation good or very good, while only 12.8 per cent judged it poor or very poor.

First-time jobseekers with higher education received the most positive comments from employers (64.1 per cent of establishments expressed high appreciation of their preparedness, while only 10.3 per cent offered a negative evaluation). This reaction was similar for first-time jobseekers coming directly from technical and vocational schools: 58.1 per cent of the establishments judged them “well or very well prepared”; the worst reactions were those regarding first-time jobseekers from upper-secondary school, with only 39.1 per cent of the establishments judging the newly hired workers at least well prepared, and 17.8 judging them poorly prepared. The most positive reactions came from the rubber and finance sectors; the most critical from construction.

The establishments that complained about the preparedness of first-time jobseekers coming directly from the education system concentrated their criticism mainly in three areas: lack of skills and competencies required, lack of life experience and maturity, and lack of motivation. Lack of skills was indicated especially for those coming from higher education, but also from vocational schools; lack of motivation seemed not to affect university graduates, while lack of experience appeared to be a common problem overall.

Vacancies

At the time of the survey, the sampled establishments were seeking almost 17,500 workers, a figure representing almost 14 per cent of their total employment: 61.0 per cent of the vacancies were in elementary occupations, 21.9 per cent were for craft and related trades workers, and 9.6 per cent were for clerical workers. The remaining 7 per cent of vacancies were distributed between the other six major occupation types.

The shortage of workers was particularly severe in garments, where more than half of the establishments (56 per cent) declared vacancies. The total number of vacancies in the sector represented 18 per cent of its total workforce and 89 per cent of all vacancies in the six sectors. Although the large majority of vacancies were in large establishments, small and medium-sized establishments seemed to be the ones more affected by the problem. Vacancies were concentrated in three major occupation types already indicated: elementary occupations (65.2 per cent), craft occupations (24.1 per cent), and clerical jobs (9 per cent).

Considering the other five sectors together (accounting for less than 11 per cent of all vacancies), elementary occupations still ranked first, but at only 30 per cent of vacancies in this grouping, followed by service and sales workers, and clerks. In these sectors, technicians and professionals accounted for 10.2 per cent and 7.7 per cent of vacancies, respectively.

Hard-to-fill vacancies and the root causes of the problem

Three-quarters of the establishments considered that their vacancies were hard-to-fill. The establishments that faced the most difficult problems with recruitment were in the rubber sector (with 92 per cent of establishments declaring hard-to-fill vacancies), followed by garments and food and beverages, with values just above the total average. Construction and accommodation followed with 67 per cent, while the finance sector seemed to enjoy a much better situation with only 26 per cent of establishments declaring hard-to-fill vacancies.

The vacancies judged more difficult to fill were those requiring skilled workers, machine operators, managers, and craft workers. However – and quite surprisingly for a country that, at least on paper, should have an almost unlimited supply of unskilled labour – vacancies for elementary occupations were considered hard to fill in almost 75 per cent of cases. At the same time, vacancies for which the problem seemed less severe were those requiring a university degree or, especially, an upper-school diploma.

Combining the data, we can deduce that 61.0 per cent of the vacancies were in elementary occupations, followed by craft and related trades with 23.6 per cent, and clerical support occupations with 8.8 per cent.

The two service sectors and construction reported hard-to-fill vacancies in managerial positions, as did establishments in the finance and insurance sector. Machine operators were the hardest to find for establishments in construction and in the three industrial sectors. The same was true for craft workers.

No predominant reason emerged to explain why vacancies were hard to fill. The most cited reasons were, in order: the presence of too much competition from other employers; the low number of applicants with the required skills; and lack of skills as requested by the establishment.

Employers generally felt that they were faced with a lack of supply of qualified workers. However, the first reason cited above could also suggest that employers were not willing to pay more decent wages. Analyzing the answers by sector, the presence of too much competition ranked first for accommodation and for the three industrial sectors. Establishments in the construction sector complained mainly of a lack of experience on the part of applicants, while in the financial sector the main problem was the low number of applicants with the required skills.

At least 40 per cent of establishments indicated the lack of the following skills: lack of technical or practical skills; lack of job-specific skills; and lack of language skills.

Impact of hard-to-fill vacancies and measures taken to remedy the problem

The impact of the vacancies problem seemed to be strongly felt by the surveyed establishments. Almost two-thirds of the establishments stated that the recruitment problem delayed the development of new products; 52 per cent that it increased the workload of other staff; and 43 per cent that it caused the establishment to lose business or orders to competitors.

An array of measures has been adopted in order to try to fill vacancies. The measure most adopted (by 58 per cent of the establishments) was raising wages. Other measures included intervention in recruitment and in reducing the need for new employees. The intervention measures include improvement in advertisements and recruitment spending and methods; the reduction methods include increasing on-the-job training and redefining existing jobs.

Skills gaps

More than half (55 per cent) of the interviewed establishments reported that employees did not perform at the required level. The incidence of this problem appeared to be directly related to the size of the establishment, and therefore mostly affected those operating in the international market. The problem was particularly acute in the rubber sector, in garments, and in accommodation, but was also reported as acute by around 50 per cent of establishments in the other sectors.

On average, the skills and performance problem affected one employee out of five, with a maximum of around three out of ten in the rubber sector. The major occupation types affected by the problem, and in which more technical training was required, were plant and machine operators (where 26 per cent of employees did not perform as expected), service and sales workers, craft workers, and skilled agricultural workers.

Rather surprisingly, the main reason behind poor performance, indicated by establishments in all sectors (with the only exception of the high-paying finance sector), was lack of motivation. This reason was cited by almost two-thirds of the establishments. The second reason, cited by 44 per cent of the establishments, was that workers were new to their role and were inexperienced, a reason that could be connected to the high worker turnover that characterizes the Cambodian labour market. Insufficient training and its limited impact on workers' performance ranked only third. Finally, a limited number of establishments linked the problem to ongoing innovation processes.

Skills that need improvement

Among the array of possibilities for skills improvement (as suggested by the survey's questionnaires), four skills were considered necessary by more than 20 per cent of the establishments: job-specific tasks, oral communication, knowledge of a foreign language, and manual dexterity.

Manual dexterity ranked first in the three industrial sectors and second in construction. Team-working ranked first in construction and second in the food and rubber sectors. The garments sector indicated different skills: specifically, being able to use one's initiative (in second place) and, unexpectedly, public speaking (in third). In accommodation, establishments demanded a better knowledge of foreign languages and improved communication capacities.

In a similar vein, the finance sector required improved communication skills when dealing with clients, but also a better knowledge of job-specific skills.

From the major occupations' perspective, the message was very clear: Establishments needed office workers with a better knowledge of foreign languages, better capacity to communicate with, and deal with, clients, and better knowledge of information technology (IT). For skilled workers, craft workers, and machine operators, the main need was for more manual dexterity and better preparation on job-related tasks.

The needs were similar in higher-level positions. Establishments suggested that managers and professionals should receive training in IT and IT applications, communications, foreign languages, and leadership skills. For technicians they also suggested training in job-specific tasks and in planning and organization.

Training activities

More than 60 per cent of the establishments did provide some training in the year before the survey was conducted. The percentage of establishments providing training was directly related to size, and therefore the foreign-owned establishments and the establishments operating in the international market led the rankings. At the sector level, however, it was finance that provided the most training, while at the other end of the rankings were construction, food, and rubber.

However, when analyzing the type of training, it was found that only one company out of four provided training in new technology

Around 11 per cent of the establishments reported problems in organizing training activities, the problem being especially felt in the rubber sector.

Business strategy

More than 60 per cent of the establishments declared a willingness to innovate in products, services, and technologies, and to acquire new markets. Establishments in the finance sector were the most interested in innovation, while those in garments the least interested. As a consequence, European-, ASEAN-, and Cambodian-owned establishments were more willing to innovate than those owned by entities from China, the Republic of Korea, or Taiwan, China.

In order to pursue innovation, more than 80 per cent of the “innovative establishments” planned to hire additional staff, almost 70 per cent to train existing staff, and 40 per cent to work on improved organization. New hiring was the policy most reported by the larger establishments in the garments sector, and by those in construction. At the other extreme, the finance and accommodation sectors placed special emphasis on training.

Abbreviations

ASEAN	Association of Southeast Asian Nations
EMIS	Information System of the Ministry of Education
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
PPP	purchasing power parity
TVET	technical and vocational education and training
TFR	total fertility rate
UNDP	United Nations Development Programme
WAP	working age population

1. Introduction

As stated in the Rectangular Strategy, Phase II (2009 to 2013), employment and the development of the private sector are one of the four strategic “growth rectangles” in Cambodia’s economic and social development planning. To achieve the Rectangular Strategy, the National Strategic Development Plan (NSDP) was launched in order to spur development and improvement in the labour market in Cambodia. In order to achieve this objective, the plan envisages the establishment of a labour market information system, the strengthening of vocational education, developing skills among jobseekers, and improving the quality of the labour force to meet skills standards and competency.

Consideration of employers’ perceptions is a new area of study in Cambodia, attracting attention from policy-makers over the last few years. To formulate a National Employment Policy that is responsive to both employers’ and workers’ needs and interests, there is a need for a demand-side survey, or employers’ survey. This employers’ perceptions survey is the first survey aimed at understanding the needs of employers, and will be beneficial in tackling labour-market problems in the future.

In order to explain the nature of the Cambodian labour market from the demand side, this survey drew on more than 500 establishments and discussed issues such as skills gaps, skills shortages, difficulties in recruiting, and hard-to-fill vacancies. Prior to this survey, an employers’ perception survey was conducted in 2012 in Siem Reap, which mainly focused on the tourism sector. The current survey drew upon a larger sample across geographic domains and sectors, to provide a bigger picture on employers’ perceptions and needs.

In parallel with this development in the labour-market information system, the National Employment Agency (NEA) of the National Training Board (NTB) conducted an Employer Skills Needs Survey in 2012. The main objective of this survey was to contribute towards an effective employment strategy by providing the necessary information required to improve the matching between skills demand and supply, and improve the knowledge base regarding the Cambodian labour force, in order to increase the employability and productivity of workers, the competitiveness of enterprises, and to increase technological complexity and sustainability in production and services outputs and processes.

More specifically, this survey covered necessary data for skills assessment in the six selected sectors by providing information on employment opportunities in terms of “stock and flow” to:

- (a) analyse the current Cambodian labour-market situation;
- (b) explore employers’ perceptions on first-time jobseekers;
- (c) determine the employment structure in terms of stock and flow;
- (d) verify the quantitative coherence between demand and supply in major occupation types;
- (e) assess the skills shortages and skills gaps in major occupation types in each selected sector; and
- (f) contribute to skills development programmes coherent with future labour demand in major occupation types.

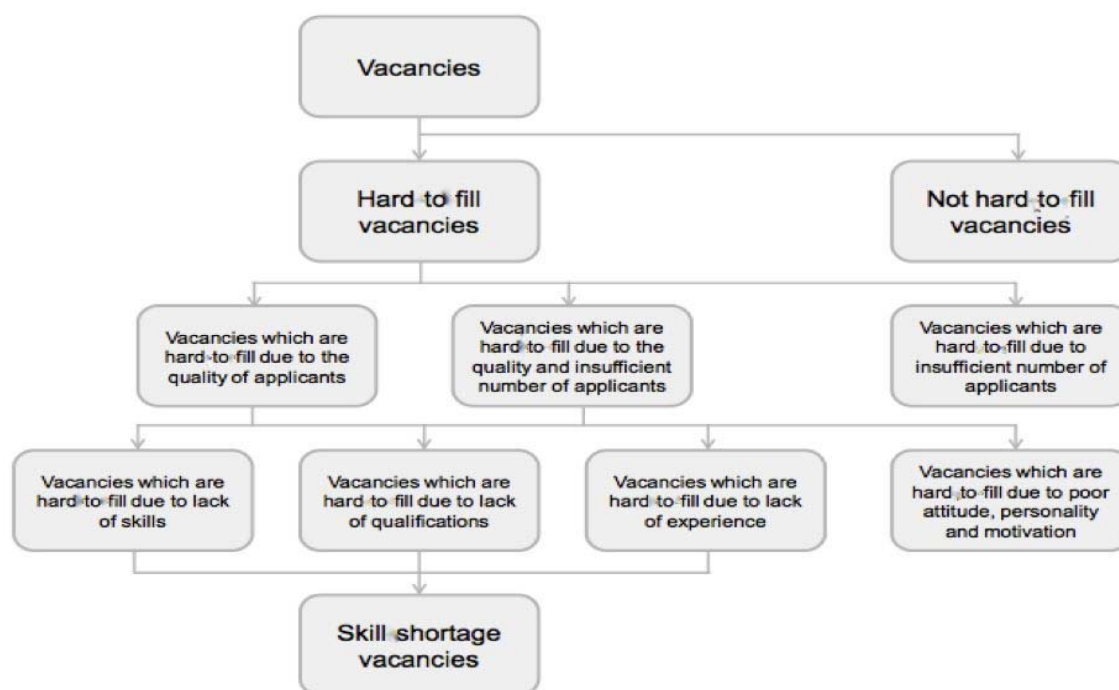
1.1 Definition of skills gaps and skills shortages

Although skills gaps and skills shortages have been studied all over the world, such studies are new in the context of Cambodia. “Skill” is defined as “the ability to perform specified tasks” (United Kingdom Commission Employer Skills Survey, 2010, p.4), or to perform “a productive task at a certain level of competence” (Shah and Burke, 2003, p.15; Trendle, 2008).

Skills shortages from microeconomic perspectives are generated from “excess demand” and the inability of employers to switch their demand composition or substitute factors of production (e.g. sourcing labour from different locations or sectors) in the short term due to asymmetric information on applicants’ ability, or due to vested interest in hiring decisions that could lead to risk aversion and hence skills shortages (Shah and Burke, 2003, p.17; UKCES, 2010, p.4).

Skills shortages also refers to a lack of available skilled people, which results in recruitment difficulties (Strietska-Ilina, 2008, p.8). Skills shortages arise in a situation in which employers face difficulties in recruiting staff with the skills needed. This can be due to a significant geographical imbalance and shortfall in the number of skilled people (Strietska-Ilina, 2008, p.8). More practically, based on the UK Commission’s Employer Skills Survey methodology, “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 1.1. 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 mentioned above.

Figure 1.1. Skills-shortage vacancies “route map”



Source: UK Commission Employer Skills Survey 2011. Wales results.

The literature on the definition of skills gaps is ambiguous. A skills gap refers to “a situation where employers are hiring workers whom they consider under-skilled or that their existing workforce is under-skilled relative to some desired levels” (Shah and Burke, 2003, p.19). But Strietska-Ilina (2008, p.8) emphasizes “the existence” rather than “a situation”. Skills gaps exist where “employers feel that their existing workforce have inadequate skills types/levels to meet their business objectives”, or where new entrants appear to be qualified but actually are not. According to Strietska-Ilina (2008), skills gaps are “used to describe the qualitative mismatch between the supply or availability of human resources and the requirements of the labor market”.

Recruitment difficulties cover all forms of recruitment problems faced by employers (Strietska-Ilina, 2008, p.8), including the situation in which employers cannot hire qualified candidates to perform given tasks even though there is a sufficient supply of labour in the market (Shah and Burke, 2003, p.19).

1.2 Sampling frame and sample selection

This survey focused on establishments that could provide data on jobs and employment turnover by occupation type for the previous 24 months, and provide a rough estimate of future skills demands for the next 12 months. Thus, the procedure was as follows:

- (a) collecting information on the number of establishments operating in each sector by ownership, dimension, type of products, and location;
- (b) deciding which types of establishments were best suited for inclusion in the survey;
- (c) identifying the possible establishments that would respond to the chosen criteria; and
- (d) creating a list of sampled enterprises.

The study focused on six main sectors that could provide an overall picture of the Cambodian labour market structure. They were:

- (a) accommodation;
- (b) construction;
- (c) finance and insurance;
- (d) food and beverages;
- (e) garments, apparel, and footwear; and
- (f) rubber and plastics.

To ensure comparability with other studies conducted in other countries, the International Standard Industrial Classification (Appendix J) and the International Standard Classification of Occupations (Appendix A) were used to identify the subsectors and occupation types relevant for the analysis.

The sampling method ensured a sample size that was statistically large enough to represent each sector. The sample selection was based on the number of establishments and the number of workers in each establishment. The samples were drawn based on stratified random sampling, with probability proportionate to the size of the workforce (10–19, 20–99, 100+), as shown in table 1.1. However, it transpired that some enterprises were no longer in existence, and some others declined to give interviews at the time.

To deal with these potential pitfalls of sample selection and attrition, additional enterprises were selected with the same sampling method to replace the enterprises that declined to participate in the survey. The

samples were first drawn from the Establishment Census 2011 conducted by National Institute of Statistics (NIS), with some additional establishments drawn from the *Yellow Pages 2012* in order to complete the sample frame (table 1.1).

Table 1.1. Sample distribution, by sector and workforce size

	10–19 workers	20–99 workers	100+ workers	Total
Accommodation	35	64	35	134
Construction	50	37	11	98
Finance and insurance	31	79	28	138
Food and beverages	62	49	17	128
Garments, apparel, and footwear	20	48	145	213
Rubber and plastics	19	24	8	51
Total	217	301	244	762

1.3 The questionnaire and tabulation plan

The questionnaire contained basic information on the establishments: the number of past and current workers, the perceptions of employers on first-time jobseekers, skills shortages, skills gaps, and the estimated number of workers that would be recruited over the next 12 months.

The design of the questionnaire followed the United Kingdom Commission Employer Skills Survey questionnaire. It was adapted to meet the specific features of the Cambodian economy and employment structure, particularly on terminology and on “stock and flow data” for employment. The questionnaire was translated into the Khmer language in order to assist the interviewers and the establishments. Before the final questionnaire was put into use, it was tested through ten pilot questionnaires, to determine if the questions were properly worded, sequenced, and could be understood. The pilot questionnaires revealed important issues that were not covered by the initial formulation, and tested the skip pattern for inconsistencies and mistakes. The questionnaire was re-examined and revised before finalization.

As mentioned above, in order to provide a comprehensive picture of the six 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 establishments. The main body of the questionnaire was structured into six parts, with a total of 41 questions, covering the following areas (see Appendix I):

- (a) *General information about the establishment (questions A2–A7).* This first section aimed to collect information on the date on which the establishment started business, to ascertain whether the establishment was legally registered or not, the type of business entity, the type of ownership, the main activities and products, and the extent of the market.
- (b) *The level and structure of the workforce by major occupation types (questions B1–B3).* In this section, each establishment was asked to report the total number of workers for three specific times – at present (the time of the interview), at the end of 2011, and at the end of 2010 – and their representation as defined by nine major occupation types. In summary, this section aimed to outline

the evolution of the employment level from the end of 2010. In the final question, each establishment was asked to specify the present range of wages for each major occupation type.

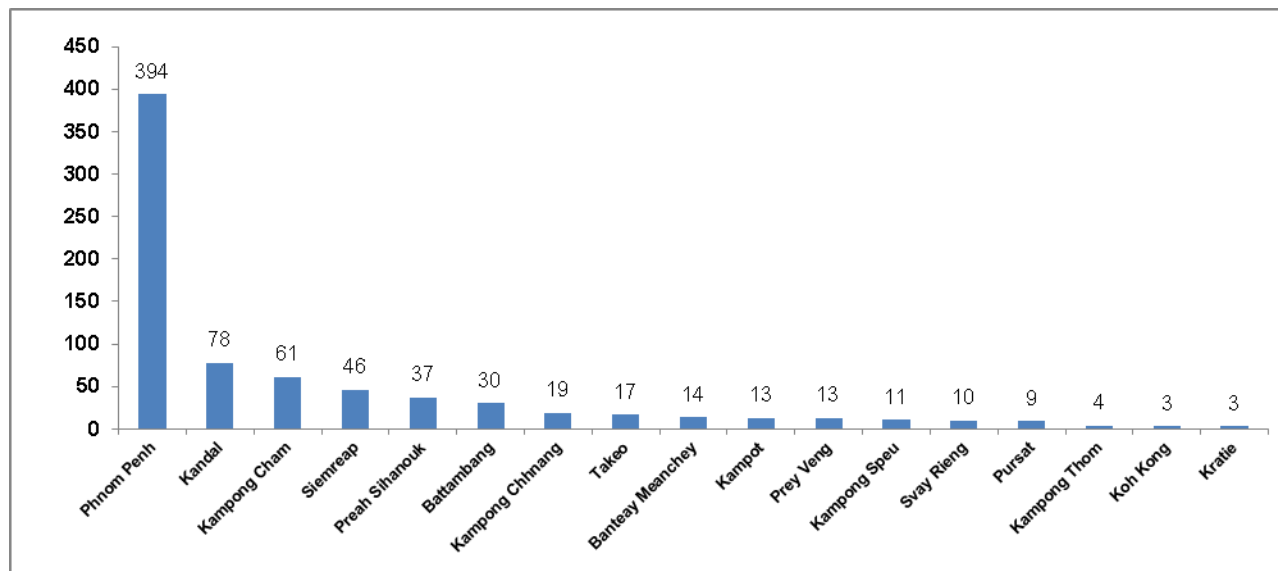
- (c) *Recruitment and turnover (questions C1–C16)*. This was a central part of the questionnaire. Its primary aim was to obtain information on the main flow variables. The first two questions were directed to evaluate the total number of workers hired by the establishment in each of the last three years, and to evaluate how many workers were hired in up to five dominant occupation types. The subsequent questions pursued the same goals for the first-time jobseekers. In this case, however, the questionnaire aimed also to evaluate how many of the first-time jobseekers were coming from upper-secondary schools, technical and vocational schools (TVET), or university or other higher-education institutions. It tried, moreover, to evaluate the level of preparedness of newly hired workers and the weak areas in their preparation. Thus, the first set of questions aimed at estimating the total labour demand in terms of flow, and the second set of questions tried to evaluate the generational labour demand in terms of flow, both from a quantitative and qualitative point of view. The need for new workers was generated by the need to substitute people who had left the establishment and the need to cover newly created positions. In order to evaluate the relative role of the two components of the labour demand in terms of flow, the subsequent questions tried to estimate the total number of exits, and the exits from the five selected main occupation types in the last three years. The last subsection was devoted to the issue of vacancies. In the first place, it attempted to estimate the total number of vacancies, and the occupation types that were most affected by this problem. It then explored whether, and in which occupation types, existing vacancies were hard to fill, the reasons, and the skills presently lacking in the Cambodian labour market. 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.
- (d) *Future hiring (questions D1–D2)*. This short section aimed to understand whether the establishment thought that its employment level would increase in the 12 months after the survey and, if yes, which occupation types would register the highest increase.
- (e) *Skills gaps and workforce training (questions E1–E11)*. After having ascertained whether or not the establishment was facing problems in staff performance, the subsequent set of questions aimed to find out what proportion of the staff was inadequate in the five dominant occupation types in the establishment, which factors were responsible for that situation, and which skills needed to be improved. A second set of questions concerned vocational training. The first questions aimed to find out if the staff did take part in some vocational training, and if the establishment financed such training either wholly or partially. The subsequent subsections aimed to understand if the establishment encountered difficulties in organizing training courses and, if so, the reasons and in which fields of training they found shortages of, or low quality of, courses and/or trainers. Finally, a last question explored the use by the establishment of mentoring practices.
- (f) *Business strategy (questions F1–F2)*. This final, short section attempted to ascertain whether the establishment 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.

1.4 Fieldwork

The study conducted a structured interview in which establishment owners, human resource managers, directors, and senior managers were interviewed face-to-face. 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 in the sample establishments. The fieldwork was carried out between 3 and 21 December 2012, and the average length of the interview was around 45 minutes. The survey consisted of 762 observations across the country (in 17 provinces and Phnom Penh), as shown in figure 1.2.

Figure 1.2. Sample distribution, by province



Prior to the fieldwork, the preparation of an instruction manual for the interviewers, and training of the survey supervisors, was undertaken. The aim was to ensure that all interviewers thoroughly understood the survey instruments and that they were consistent with each other.

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

Table 1.2. Response rate

	Abs. value	Percentage
No. of sample	762	100.00
Response rate	517	67.85
Non-response rate	245	32.15
Companies that declined to be interviewed	113	46.12
Companies that could not be contacted due to	89	36.33
Bankrupt	19	7.76
Other reason	24	9.80

1.5 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 on different questionnaires) and to check for error data. 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 application for analysis and to make the necessary tabulation.

1.6 Problems encountered and solutions adopted

This survey was the first large-scale skills survey conducted in Cambodia. There is no doubt that the lack of previous experience represented a very serious challenge for the team 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 first problem was that some of the names and addresses of the establishments listed by the NIS were incorrect. It was thus 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.

One of the objectives of the questionnaire was to gain estimates of worker entries and exits from the establishments, and therefore of the overall staff turnover. A second problem was related to the questionnaire, particularly on the “stock and flow” of employees over the previous three years, because the monitoring of such turnover was not a standard practice. Some establishments had relevant information, while others were not so well organized. For instance, their internal reports did not present detailed information on gender and occupation types. Data on informal employment was very difficult to detect and verify. In addition, it was also difficult to do data checking on the paper questionnaires during the data collection.

In the survey, there is a clear mathematical relation between tables, specifically on “stock and flow” data. If there were inconsistencies in the mathematical relation, an error of data was reported. The quality control team was responsible for verifying and rechecking data, in cases of errors and numerical inconsistencies in the data. If there was any error, the questionnaire was returned to the interviewee to recheck and verify the data.

2. Background

2.1 Introduction

Despite the outstanding economic performance of the last 15 years, Cambodia is still one of the poorest countries in the world. According to World Bank estimates its gross domestic product (GDP), at purchasing power parity (PPP) of around \$2,400, ranks 140th in the world. However, in the last two decades, poverty headcount ratio declined steadily from 47 per cent in 1993–1994 to 35 per cent (39 per cent in rural areas) in 2004, and to 30 per cent (34 per cent in rural areas) in 2007 (World Bank, 2007, 2009). Nevertheless, poverty and vulnerability to economic shocks will continue to be the most challenging issues in the coming years.

Before starting to analyse the results of the survey, it seems relevant to briefly summarize some basic information about Cambodia's demographic trends, as well as the most relevant elements of the evolution and structure of the education and training systems, and of the labour market. The objective is to provide the background information necessary to better interpret the results of the survey and then to outline policy measures.

2.2 Demographic evolution

Starting at the beginning of the 1980s, Cambodia had to face not only the disastrous economic consequences left in the wake of the Khmer Rouge, but also the impact on the education system and labour market of the demographic transition that had started in earnest only at that time.

Although it has declined from seven to 2.8 children per woman, Cambodia's total fertility rate (TFR) remains the third highest in ASEAN after the Philippines and the Lao People's Democratic Republic.¹ Another indicator that illustrates the delay in Cambodia's socio-economic development is the infant mortality rate (above 60 per 1,000), which remains the highest in ASEAN.

As a consequence of the demographic transition, between 1980 and 2010 the total population increased from 6.5 million to 14.5 million, but more relevant for this analysis is the dynamic of the population of training age and the population of working age.

The population of training age (6–24 years old) more than doubled between 1980 and 2005, when it peaked at 6.3 million. Cambodia's education and vocational training systems not only had to face an initial situation

¹ The TFRs of Singapore, Thailand, Viet Nam, and Myanmar are already below replacement level, while those of Brunei Darussalam and Indonesia are not far from this level.

characterized by an almost total lack of infrastructure and teachers,² but also a very pronounced increase in potential demand. In the same period, the working-age population increased from 3.8 million to more than 9 million, and is still increasing although at a declining rate.

2.3 General education stream

In spite of the notable development registered over the last 30 years, the education system in Cambodia is still affected by considerable structural problems, especially in rural areas. Infrastructures are still lacking, and in many cases their quality is extremely poor; classes are overcrowded, and the educational level of many teachers is still insufficient.

However, some important results have been attained. The rate of illiteracy declined from 37.2 per cent in 1998 to 21.6 per cent in 2008. Although the gender differential has notably decreased, it is still quite high (11 percentage points). However, according to the 2010 United Nations Development Programme (UNDP) data, Cambodia still ranks 133rd in the world with respect to the rate of literacy and, with the exception of the Lao People's Democratic Republic, its situation is far from that of the other ASEAN countries, whose literacy rates are around, or above, 90 per cent.

In 2008, 64.0 per cent of the Cambodian population aged 25 and above had no schooling or had not completed primary education, while only 2.9 per cent had an upper-secondary diploma or higher. The gender differential was quite high, with 73.8 per cent of women having not completed primary education versus 52.3 per cent of men, and only 1.5 per cent of women having at least an upper-secondary diploma versus 4.6 per cent of men. Given the extremely high rate of employment, the educational attainment of the employed does not notably differ from that of the corresponding population.

Presently, total enrolment is already declining as a net result of two opposite tendencies: on one hand, the negative and prevailing demographic trend affecting the training-age population; on the other, a growing rate of participation in lower- and upper-secondary education.

In the school year 2010–11, total enrolment amounted to 3,087,000, with 71.0 per cent of students in primary schools, 18.2 per cent in lower-secondary schools, and the remaining 10.8 per cent in upper-secondary schools.³ Around 19 per cent of students were enrolled in urban areas, and the percentage of urban students increased with the educational level.

Two relevant distortions still affect enrolment: on one hand, repeat enrollers are estimated at 176,000; on the other, over-age students account for almost a quarter of total enrolments.

² During the Khmer Rouge period, the Cambodian education system was systematically abolished. Publishing houses were closed, teaching materials and textbooks were destroyed, and the buildings of schools and universities were put to other uses. Large numbers of qualified teachers, researchers, and technicians either fled the country or died.

³ Enrolment in primary education declined by around 370,000 students over the last six years. Half of the decline was due to the reduction in the number of the repeat enrollers.

From a labour-market perspective, the most relevant information needed about the education system is its “production”.⁴ An education system can be seen as a production process whose aim is to increase knowledge and support the acquisition of operational skills. Its specificity lies in the fact that, different from other production processes, its aim is not the transformation of inputs into substantially different outputs, but the introduction of qualitative changes in the inputs themselves: the output of the education system is in fact represented by the pupils that have entered the system in previous periods, endowed with a greater “quantity” of knowledge and skills. Therefore, the total number of “exits” from the system and their structure by level provides a first gross measure of the production level achieved by an education system.

The number of exits estimated by the Information System of the Ministry of Education (EMIS) clearly overestimates real values, since they are much larger than what is suggested by demographic data. This obliges us to limit the following considerations to percentage values.

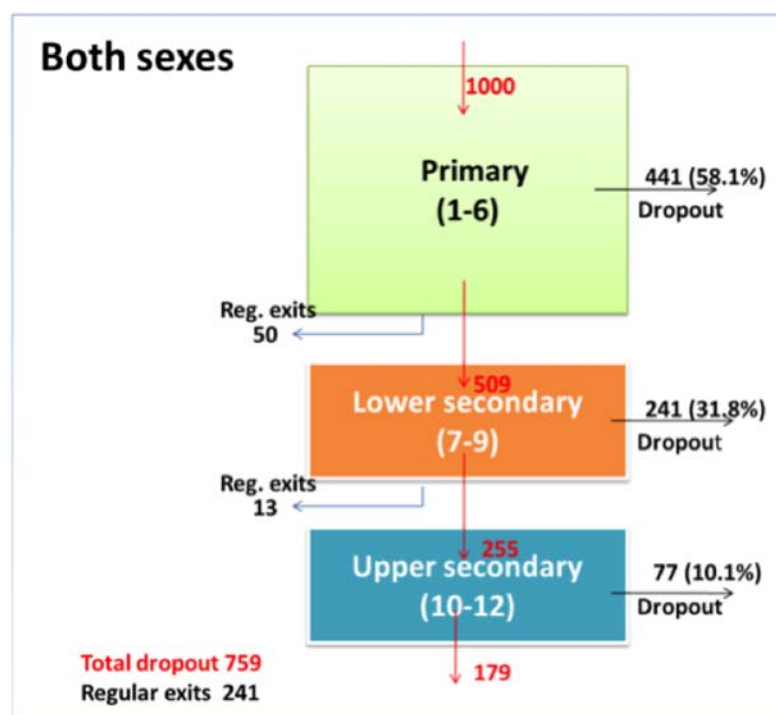
The structure of exits by educational level has been improving, but the situation remains quite dramatic. Those with less than primary education declined from 52.1 per cent (school year 2005–06) to 43.4 per cent (school year 2009–10). Exits at the maximum primary education level have decreased from 84.2 per cent to 73.7 per cent, but the percentage of exits with an upper-secondary diploma has increased from 8.6 per cent to 16.5 per cent. Additionally, the percentage of girls in this last group has slightly increased from 37.9 per cent to 39.6 per cent.

The situation becomes even more dramatic when we consider that in the school year 2005–06 not even 15 per cent of exits were regular exits, i.e. they took place after completion of an educational level. For 2009–10, the percentage increased only to 22.7 per cent. In substance, the percentage of drop-outs represented around 85 per cent of exits in 2006 and 77 per cent in 2010. Moreover, for the school year 2005–06, more than 60 per cent of drop-outs originated from primary schools; for 2009–10 the figure was still above 56 per cent, with lower-secondary contributing around one-third and upper-secondary around 11 per cent, as shown in figure 2.1.

However, the simplest and most direct way to summarize the production of the Cambodian education system is to simulate what would happen to a cohort of 1,000 boys and girls entering at Grade One, assuming that the flow rates registered in the school year 2009–10 would remain constant and allowing for repetition.

⁴ The quantity and quality of production, together with its counterpart wastage, also allows estimation of the efficiency of the system.

Figure 2.1. Exits by educational level and type, of a fictitious cohort of 1,000 pupils at 2009–10 flow indicators



Source: M. Bruni, Heangtharith, 2013. (Forthcoming).

As shown in figure 2.1, of the 1,000 students:

- (a) only 268 successfully complete compulsory education, and 178 obtain a high-school diploma;
- (b) in both cases the percentage of girls is slightly above 50 per cent;
- (c) 50 leave the education system after completing primary education;
- (d) 13 leave the education system after completing compulsory education; and
- (e) 759 leave the education system before completing the level in which they were enrolled – more specifically, 441 (58.1 per cent) leave school during primary education, 241 (31.8 per cent) during lower-secondary education, and 77 (10.1 per cent) during upper-secondary education.

The previous data allows for repetitions. The picture becomes even more dramatic when we consider the completion rates, i.e. the number of students in a given cohort that complete a given grade in the legal time.

Computations show that, at the present rates, out of 1,000 students entering Grade One, only 215 will complete compulsory education in nine years, and only 98 will obtain an upper-education diploma in 12 years. As was expected from results of previous analysis, the performance of girls is slightly better: 228 will complete compulsory education in nine years, and 112 in the 12th year on schedule; the corresponding values for boys being 203 and 88.

Finally, between the school year 2005–06 and the school year 2009–10, completion rates improved substantially, but it is evident that a lot remains to be done, not only to obtain a more productive labour force, but, even more important, to produce more aware citizens.

2.4 Higher Education

Over the last six years, total enrolment in higher education increased from around 95,000 to more than 245,000, while the percentage of female students reached 38.3 per cent from a starting value of 31.7 per cent.

The number of students that obtained a bachelor degree in the academic year 2010–11 can be estimated at between 21,500 and 24,000, and those that obtained an associate degree between 8,000 and 9,000. In conclusion, at present Cambodian universities produce between 29,500 and 33,000 graduates per year, the number of female graduates being between 11,500 and 13,000.

A very negative element in Cambodian higher education is the concentration of students in a very limited number of major subjects, with economics and business administration accounting for more than 50 per cent of total enrolment, while the percentage of enrolments in engineering, medicine, and sciences are all below 4 per cent.

2.5 Vocational training

Lack of adequate statistical information makes it impossible to provide a reliable assessment of the Cambodian vocational training system, and especially its production record. However, it seems evident that the system is still far from capable of responding to the demands of the market in providing the human resources necessary for the basic sectors of the economy (agriculture, garments, and tourism), or of promoting social development and economic growth.

According to the latest estimates (Ministry of Labour and Vocational Training, Baseline Survey 2012), the number of graduates from long-term vocational training courses is less than 2,500, and only one out of every five comes from public institutions. Around 3,600 students were enrolled, 30 per cent of whom were female.

2.6 Labour market

Despite notable growth in the modern economic sectors, Cambodia remains primarily an agricultural country, as shown in table 2.1. In 2008, non-agricultural employment amounted to little more than 1.9 million workers, only 27.9 per cent of total employment. Between 1998 and 2008, total employment grew by around 207,000 jobs per year. However, during this period, Cambodia still had to rely mainly on the agricultural sector to provide new employment: 60 per cent (126,000) of the additional jobs were in fact generated by the primary sector, with the secondary sector contributing 18.4 per cent, and services 21.6 per cent.

Table 2.1. Share of total employment (15+), by sector and sex in 1998 and 2008

	Male		Female		Total		Male	Female	Total
	1998	2008	1998	2008	1998	2008	Change between 1998 and 2008		
Absolute value (in thousands)									
Primary	1 656	2 314	2 020	2 621	3 676	4 935	658	601	1 259
Secondary	117	271	85	315	202	586	154	230	384
Tertiary	545	760	329	560	874	1 320	215	231	446
Not reported	12	0	10	0	21	0	-11	-10	-21
Total	2 330	3 346	2 443	3 495	4 773	6 841	1 016	1 052	2 068
Percentage composition									
Primary	71.1	69.2	82.7	75.0	77.0	72.1	64.8	57.1	60.9
Secondary	5.0	8.1	3.5	9.0	4.2	8.6	15.2	21.9	18.6
Tertiary	23.4	22.7	13.5	16.0	18.3	19.3	21.2	22.0	21.6
Not reported	0.5	0.0	0.4	0.0	0.5	0.0	-1.1	-0.9	-1.0
Total	100.0	100.0	100.0	100.00	100.0	100.0	100.0	100.0	100.0

Source: Bruni and Heangtharith, 2013. (Forthcoming).

It is evident that this exceptional increase in agricultural employment cannot be attributed to an increase in labour demand generated by production. What these data imply, as shown in table 2.2, is that the employment growth in the modern sectors, although very pronounced in percentage terms, was not sufficient to meet the increase in potential labour supply generated by the increase in the working-age population (WAP), which in its 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 the modern sectors.

Table 2.2. Main labour-market variables (in thousands) in 1998 and 2008

	1998	2008	Abs. Var.	Percent Var.
<i>Male</i>				
Working-age pop.	3 009	4 201	1 192	39.62
Labour force	2 444	3 396	953	38.99
Employment	2 330	3 346	1 016	43.58
Unemployment	113	51	-63	-55.40
<i>Female</i>				
Working-age pop.	3 531	4 681	1 150	32.56
Labour force	2 595	3 559	964	37.17
Employment	2 443	3 495	1 052	43.07
Unemployment	152	64	-88	-57.89
<i>Total</i>				
Working-age pop.	6 540	8 882	2 342	35.81
Labour force	5 038	6 956	1 917	38.05
Employment	4 773	6 841	2 068	43.32
Unemployment	265	114	-151	-56.82

Source: M. Bruni, Heangtharith, 2013. (Forthcoming).

The structure of employment by sector differed notably between urban and rural areas. In urban areas, 61.0 per cent of the employed worked in the service sector, 18.7 per cent in manufacturing, 5.7 per cent in construction, and 14.0 per cent in agriculture. In rural areas, 85.0 per cent worked in the primary sector, 10.2 per cent in services, and 6.2 per cent in manufacturing. However, these data concealed the role played by each area in providing employment in the different sectors. While only 3.5 per cent of agricultural workers resided in urban areas, 47.3 per cent of manufacturing workers, 46.3 per cent of construction workers, and 50.4 per cent of service workers resided in rural areas.

The Cambodian population is young; as a consequence, the employed population is still very young, especially in industry, which is the youngest sector of the economy. In 2008, 67.9 per cent of the employed in industry were below 30 years old, versus around 39 per cent in both agriculture and services.

The only correct way to connect the education system to the labour market is to compare, on the one hand, the exits from the education and vocational training systems by level of education, with generational entries into employment by occupation type. As we have already seen, at present, data are not sufficient to completely pursue this goal, but only to produce some interesting indications.

The first element emerging from flow analysis is that during the period between censuses (1998–2008), migrations were more relevant than normally assumed, being equal to around 44,000 per year in the generations that entered working age during this period, and 42,000 per year in the following generations. As a consequence, actual entries in WAP were, on average, slightly less than 300,000 per year, generational exits 64,000, and the total balance of WAP was 231,000.

Entries into the labour force amounted to around 230,000 per year. Given the young age of the Cambodian population, exits were very low, at less than 40,000, so the active population increased by around 193,000 per year. At the same time, every year, 242,000 young people found their first job. This implied an average decline in the unemployment level of around 12,000 per year.

The previous data also show that 81.2 per cent of the people that entered WAP entered into employment, the percentage being slightly higher for men than for women.

Entry into employment can be ascribed to two main factors: the need to replace the workers that permanently leave the labour market (replacement demand) and the creation of additional jobs (additional demand). Of the 242,000 yearly entries into employment, only 35,000 (14.5 per cent) were due to replacement demand, with 207,000 due to additional demand. It must also be underlined that replacement demand played an even more modest role for women, given their lower mortality rates. The marginal role of replacement demand was due to the fact that the older cohorts in the labour market were relatively small. Data analysis also shows that:

- (a) the main age group of entry, both into the active population and employment, is 20–24;
- (b) exits are determined mainly by death, and therefore the number of exits increases with age; and
- (c) women enter into both the active population and employment at a lower age than men.

The average age at which men entered the active population and employment was 22.1 and 22.6, respectively. Women entered at 21.4 and 22.5, respectively. Therefore, the average waiting time to find employment (estimated as the difference between the age of entry into the active population and the age of entry into employment) was slightly longer for women than for men.

Almost two-thirds (62.6 per cent) of young people who found a job between the times of the two censuses, did so in agriculture. Services provided employment to 21.8 per cent, and industry to 16.3 per cent. For men, the relative ratios of employment in agriculture and services were above average (64.7 per cent and 22.8 per cent, respectively) while for women the level of employment in industry was above average (19.3 per cent). Given the limited role of replacement demand, the structure of entries by sector did not differ substantially from the sector share of additional demand.

Entries peaked in the 20–24 age-group both in agriculture and industry, and in the 25–29 age-group in services. For women, entries peaked in the 20–24 age-group in all three sectors. In agriculture, entries were heavily concentrated in the youngest age groups: 74.1 per cent of men and 83.8 per cent of women entered the sector before the age of 25. At the same time, people continued to “work” in this sector until death: data show, in fact, that three-quarters of exits from agriculture were concentrated in the age groups above 64. At the other extreme is the service sector, where only around 52 per cent of men and 50 per cent of women entered before the age of 25. This sector was also characterized by a large number of exits by men in the middle-age group. Assuming data are correct, the only two possible reasons would be movements to other sectors or migration. Industry values were intermediate. The most interesting aspect, however, was the large percentage of female entries to industry below the age of 25 (73.4 per cent).

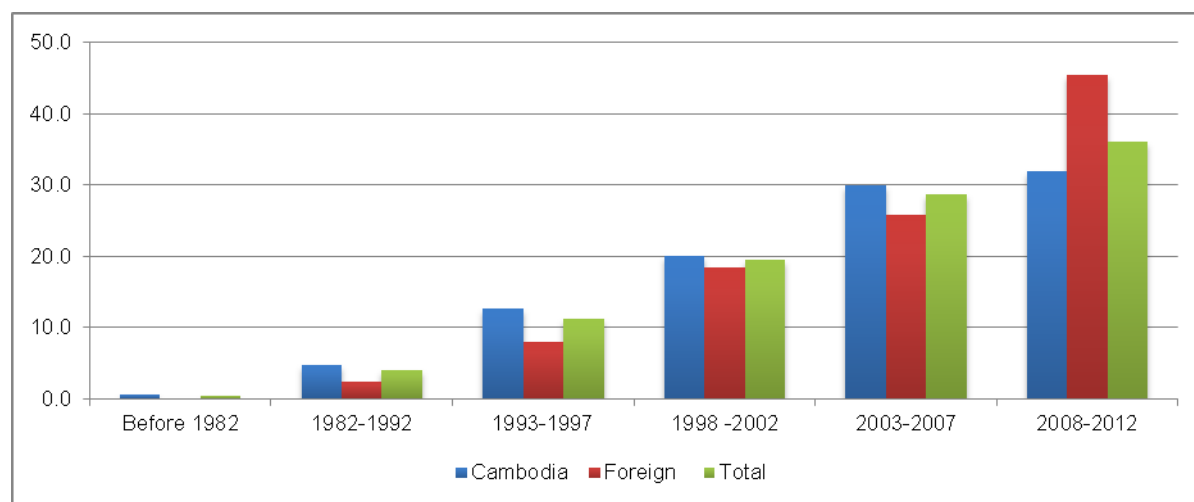
3. Sampled establishments' characteristics

This section presents the main characteristics of the establishments included in the sample, and more specifically their age, business entity type, nationality of ownership, market, size, registration, and sector.

3.1 Ages of sampled establishments

As expected, given Cambodia's modern history, the sampled establishments interviewed were relatively young. Only two started business before 1982, 15.7 per cent started before 1998, while 64.8 per cent were established in the last ten years, as shown in figure 3.1. The number of establishments starting business progressively increased from 101 during the period 1998–2002, to 187 between 2008 and 2012.

Figure 3.1. Share of sampled establishments, by nationality of ownership and date on which they started business

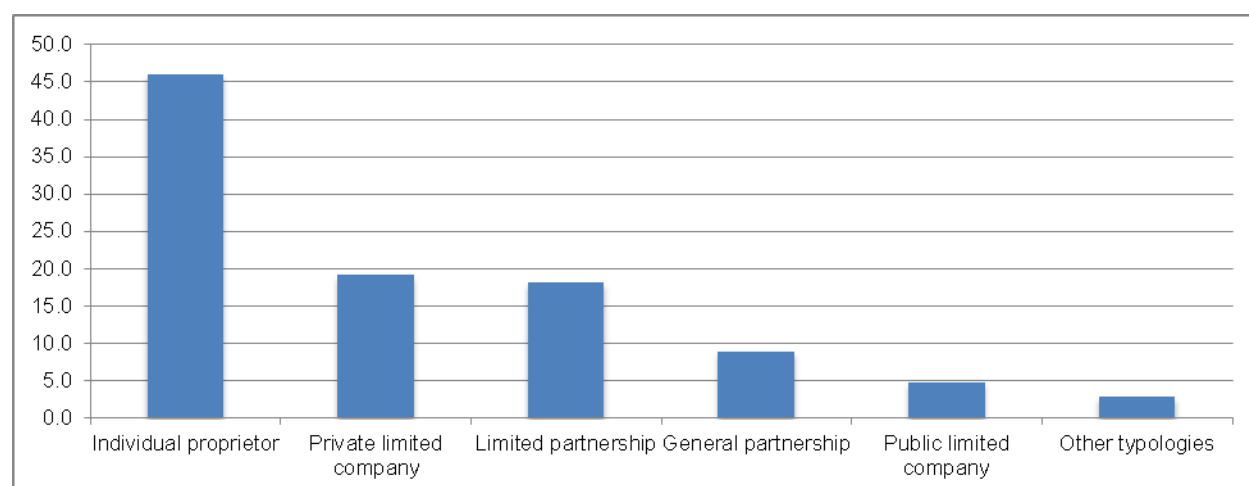


Source: NEA Employer Skills Needs Survey 2012.

3.2 Types of business entity

The most common type of business entity was individual proprietor, representing almost half of the total (46.0 per cent), followed by private limited company (19.1 per cent) and limited partnership (18.2 per cent). General partnerships accounted for 8.9 per cent, and public limited companies for 4.8 per cent, as shown in figure 3.2.

Figure 3.2. Share of sampled establishments, by type of business entity



Source: NEA Employer Skills Needs Survey 2012.

Individual proprietors and public limited companies were, on average, relatively older; the youngest sector was represented by private limited companies, as shown in table 3.1.

Table 3.1. Sampled establishments, by type of business entity and date on which they started business

	Before 1992	1993–2002	2003–2012	Total
Absolute values				
Individual proprietor	15	72	151	238
Private limited company	2	17	27	46
Limited partnership	1	34	59	94
General partnership	1	26	72	99
Public limited company	2	7	16	25
Others	2	3	10	15
Total	23	159	335	517
Percentage composition				
Individual proprietor	6.3	30.3	63.4	100.0
Private limited company	4.3	37.0	58.7	100.0
Limited partnership	1.1	36.2	62.8	100.0
General partnership	1.0	26.3	72.7	100.0
Public limited company	8.0	28.0	64.0	100.0
Others	13.3	20.0	66.7	100.0
Total	4.4	30.8	64.8	100.0

Source: NEA Employer Skills Needs Survey 2012.

3.3 Ownership

Just over two-thirds of the interviewed establishments were owned by Cambodians, with 7.5 per cent owned by entities from Taiwan, China, 7.2 per cent by Chinese entities, 6 per cent by European entities, 5.4 per cent by ASEAN entities, and 3.3 per cent by entities from the Republic of Korea, as shown in table 3.2.

Table 3.2. Share of sampled establishments, by nationality of ownership

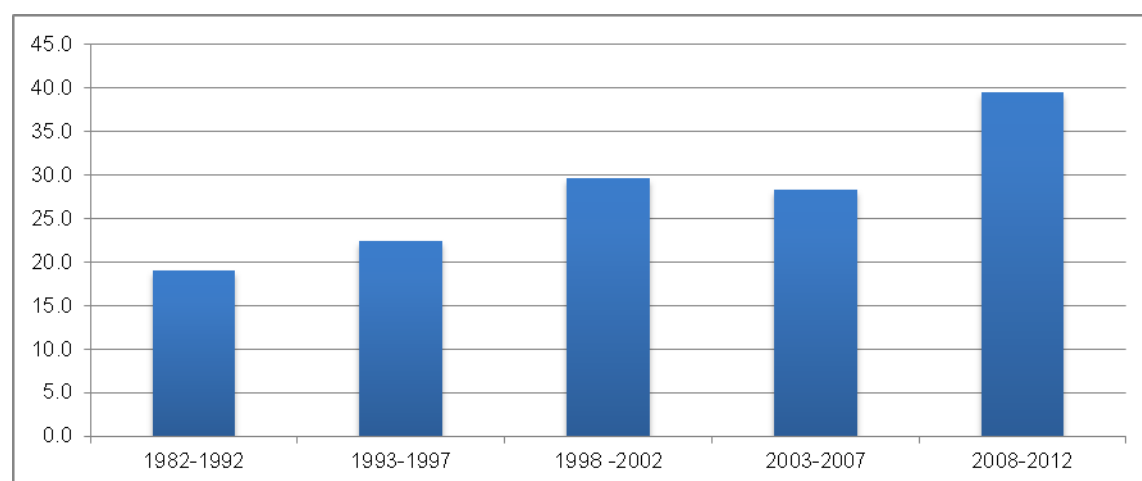
	Abs. value	Percentage
Cambodian	354	68.5
Taiwan, China	39	7.5
Chinese	37	7.2
European countries	31	6.0
ASEAN countries	28	5.4
Korea, Rep. of.	17	3.3
Others	11	2.1
Total	517	100.0

Source: EA Employer Skills Needs Survey 2012.

On average, the foreign-owned establishments were younger than the Cambodian establishments (figure 3.1 above), reflected also by the fact that the percentage of foreign-owned establishments starting business over the total number of establishments starting business was progressively increasing, as shown in figure 3.3.

The first foreign-owned establishments to start business in Cambodia were owned by ASEAN and European entities, followed by entities from China and Taiwan, China, which have become predominant over the last five years. The number of establishments owned by entities from the Republic of Korea starting business in Cambodia has been progressively increasing but remains quite limited.

Figure 3.3. Share of foreign-owned establishments over the total number of establishments starting business, 1992–2012



Source: NEA Employer Skills Needs Survey 2012.

For Cambodian establishments, the main type of business entity was individual proprietor, accounting for 57.1 per cent of all business types. Among foreign-owned establishments, individual proprietorships represented only 22.1 per cent of business entity types, the most common types being private limited companies (31.9 per cent) and limited partnerships (30.1 per cent) as shown in table 3.3.

Table 3.3. Sampled establishments, by type of business entity and nationality of ownership

	Abs. value			Percentage composition		
	Cambodian	Foreign	Total	Cambodian	Foreign	Total
Individual proprietor	202	36	238	57.1	22.1	46.0
General partnership	33	13	46	9.3	8.0	8.9
Limited partnership	45	49	94	12.7	30.1	18.2
Private limited company	47	52	99	13.3	31.9	19.1
Public limited company	17	8	25	4.8	4.9	4.8
Others	10	5	15	2.8	3.1	2.9
Total	354	163	517	100.0	100.0	100.0

Source: NEA Employer Skills Needs Survey 2012.

3.4 Market

The majority of the interviewed establishments (57.4 per cent) operated in the national market, 23.6 per cent limited their activity to the local market, and 19.0 per cent were active in the international market. However, only 8.5 per cent of the Cambodian establishments operated abroad, while that percentage was 41.7 per cent for foreign-owned establishments. Thus, more than two-thirds of the establishments operating in the international market were foreign-owned establishments, as shown in table 3.4.

Table 3.4. Sampled establishments, by type of market and nationality of ownership

	Local	National	International	Total
Absolute value				
Cambodian	97	227	30	354
Foreign	25	70	68	163
Total	122	297	98	517
Percentage composition				
Cambodian	27.4	64.1	8.5	100.0
Foreign	15.3	42.9	41.7	100.0
Total	23.6	57.4	19.0	100.0

Source: NEA Employer Skills Needs Survey 2012.

The large majority of establishments that operated in the international market belonged to three types of business entity: private limited company, individual proprietor, and limited partnership. This was true, with some minor differences, both for Cambodian and foreign-owned establishments, as shown in table 3.5.

Table 3.5. Sampled establishments operating in the international market, by type of business entity and nationality of ownership

	Absolute values			Percentage composition		
	Cambodian	Foreign	Total	Cambodian	Foreign	Total
Individual proprietor	10	20	30	33.3	29.4	30.6
General partnership	5	3	8	16.7	4.4	8.2
Limited partnership	6	19	25	20.0	27.9	25.5
Private limited company	6	25	31	20.0	36.8	31.6
Public limited company	2	0	2	6.7	0.0	2.0
Others	1	1	2	3.3	1.5	2.0
Total	30	68	98	100.0	100.0	100.0

Source: NEA Employer Skills Needs Survey 2012.

3.5 Size of sampled establishments

The majority of the establishments (43.5 per cent) were of intermediate size (20–99 employees), 30.4 per cent had 100 or more employees, while only 26.1 were small establishments, here defined as those with a maximum of 19 employees, as shown in table 3.6.

Table 3.6. Sampled establishments, by type of business entity and workforce size

	10–19	20–99	100+	Total
Absolute value				
Individual proprietor	91	96	51	238
General partnership	8	28	10	46
Limited partnership	13	39	42	94
Private limited company	19	38	42	99
Public limited company	0	19	6	25
Others	4	5	6	15
Total	135	225	157	517
Percentage composition				
Individual proprietor	38.2	40.3	21.4	100.0
General partnership	17.4	60.9	21.7	100.0
Limited partnership	13.8	41.5	44.7	100.0
Private limited company	19.2	38.4	42.4	100.0
Public limited company	0.0	76.0	24.0	100.0
Others	26.7	33.3	40.0	100.0
Total	26.1	43.5	30.4	100.0

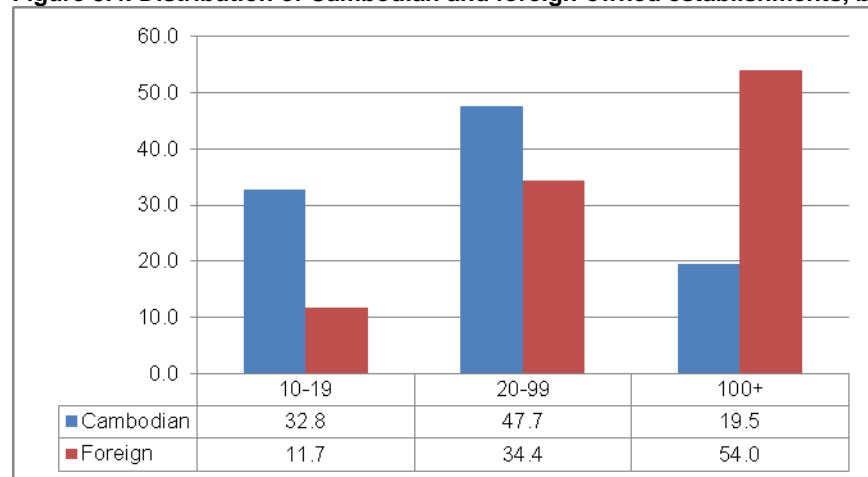
Source: NEA Employer Skills Needs Survey 2012.

Individual proprietors were mainly small businesses. Public limited companies and general partnerships were mainly medium-sized establishments. Limited partnerships and private limited companies were mainly large establishments.

Foreign-owned establishments were, on average, larger than Cambodian establishments; they represented 56.1 per cent of the large establishments, 24.9 of medium-sized establishments, and just 14.1 per cent of the small establishments, as shown in figure 3.4. This was especially true for establishments owned by ASEAN entities (33 of 38 were large) and for establishments owned by European entities (26 of 38). Establishments owned by entities from China and Taiwan, China were mainly of medium size, as shown in table 3.7

As expected, the majority of big establishments operate in the international market (45.2 per cent), but a large percentage operates at the national level (38.2 per cent). Finally, no clear relationship emerges between age and size of establishments.

Figure 3.4. Distribution of Cambodian and foreign-owned establishments, by workforce size



Source: NEA Employer Skills Needs Survey 2012.

Table 3.7. Share of foreign-owned establishments, by nationality of ownership and workforce size; percentage distribution by size

	10-19	20-99	100+
Chinese	21.4	46.4	32.1
Taiwan, China	12.9	61.3	25.8
European	0.0	31.6	68.4
ASEAN	0.0	13.2	86.8
Korea, Rep. of.	23.5	23.5	52.9
Others	45.5	27.3	27.3

Source: NEA Employer Skills Needs Survey 2012.

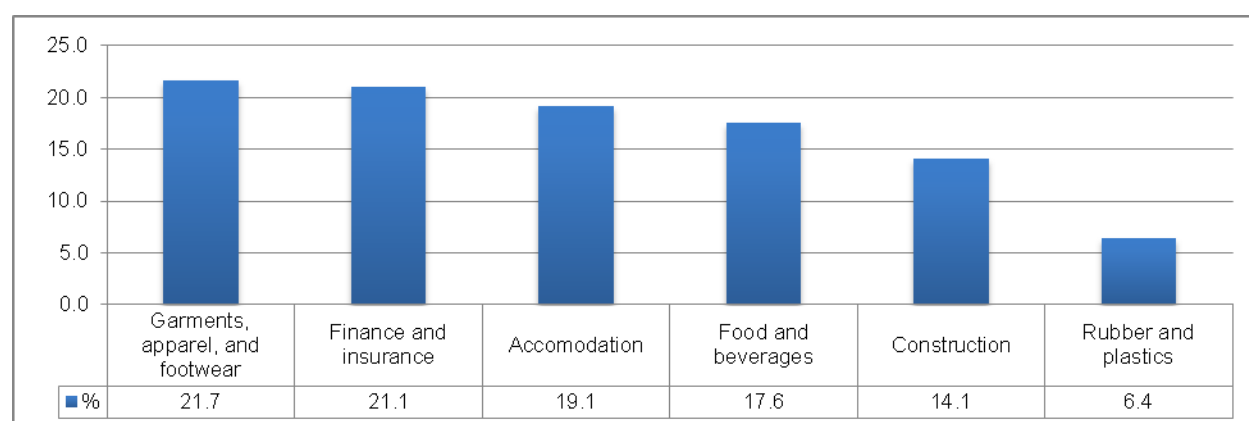
3.6 Commercial registration

The great majority of the establishments in the sample were legally registered, the exception being 29 establishments (5.6 per cent), 27 of which were individual proprietorships and two general partnerships. Only one non-registered establishment had more than 99 employees. Non-registered establishments were quite old or very recent.

3.7 Sectors

As a reminder, the percentage of establishments in the six selected sectors each accounted for between 21.0 per cent (for garments and finance) and a minimum of 6.4 per cent (for rubber), with intermediate values of 19.1 per cent, 17.6 per cent, and 14.1 per cent for accommodation, food and beverages, and construction, respectively, as shown in figure 3.5.

Figure 3.5. Share of sampled establishments, by sector



Source: NEA Employer Skills Needs Survey 2012.

Let's now consider the characteristics of the sampled establishments from a sector perspective, as shown in table 3.8 and table 3.9.

3.7.1 Food and beverages

This sector was characterized by an above-average presence of individual proprietorships, representing 68.1 per cent of the total. Of these, 16.5 per cent were large establishments, 42.9 per cent medium-sized, and 40.7 per cent small establishments. Finally, 90.1 per cent of the establishments were Cambodian-owned.

3.7.2 Garments

This sector was characterized by the presence of large, foreign-owned establishments operating in the international market. In this sector, large establishments represented almost two-thirds of the total number,

with a similar proportion being foreign-owned. The majority of the foreign-owned establishments belonged to entities from China and Taiwan, China. Regarding the type of business entity, the garments sector appeared polarized, with an above-average presence of individual proprietors on one hand, and of limited partnerships and private limited companies on the other.

Table 3.8. Share of sampled establishments, by type of business entity and sector

	Food and beverages	Garments, apparel, footwear	Rubber and plastics	Constr.	Accom.	Finance and insurance	Total
<i>Absolute value</i>							
Individual proprietor	62	55	16	25	69	11	238
General partnership	5	6	3	3	11	18	46
Limited partnership	11	24	6	15	6	32	94
Private limited company	8	25	8	28	10	20	99
Public limited company	0	1	0	0	2	22	25
Others	5	1	0	2	1	6	15
Total	91	112	33	73	99	109	517
<i>Percentage composition by sector</i>							
Individual proprietor	26.1	23.1	6.7	10.5	29.0	4.6	100.0
General partnership	10.9	13.0	6.5	6.5	23.9	39.1	100.0
Limited partnership	11.7	25.5	6.4	16.0	6.4	34.0	100.0
Private limited company	8.1	25.3	8.1	28.3	10.1	20.2	100.0
Public limited company	0.0	4.0	0.0	0.0	8.0	88.0	100.0
Others	33.3	6.7	0.0	13.3	6.7	40.0	100.0
Total	17.6	21.7	6.4	14.1	19.1	21.1	100.0
<i>Percentage composition by type of business entity</i>							
Individual proprietor	68.1	49.1	48.5	34.2	69.7	10.1	46.0
General partnership	5.5	5.4	9.1	4.1	11.1	16.5	8.9
Limited partnership	12.1	21.4	18.2	20.5	6.1	29.4	18.2
Private limited company	8.8	22.3	24.2	38.4	10.1	18.3	19.1
Public limited company	0.0	0.9	0.0	0.0	2.0	20.2	4.8
Others	5.5	0.9	0.0	2.7	1.0	5.5	2.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: NEA Employer Skills Needs Survey 2012.

3.7.3 Rubber and plastics

In this sector, establishments were mainly of medium size. One-third of the establishments were large, and one-third foreign-owned.

3.7.4 Construction

Four-fifths of the establishments in this sector were Cambodian-owned. The other fifth were owned mainly by entities from ASEAN, China (5.5 per cent in both cases), and the Republic of Korea (2.7 per cent) entities. Regarding business entity types, 38.4 per cent were private limited companies, 34.2 per cent individual proprietor, and 20.5 per cent limited partnerships. With an average of 52 employees each, this sector had the smallest average workforces among the sectors in our sample.

3.7.5 Accommodation

Almost 70 per cent of the establishments in this sector were individual proprietor, with 11.1 per cent general partnerships and 10.1 per cent private limited companies. The vast majority of the establishments in this sector (86.9 per cent) were Cambodian-owned, followed by 5.1 per cent being European-owned. The number of establishments with a staff of almost 100 employees was surprisingly large, which reflects the abundance of workers employed by hotels in Cambodia.

3.7.6 Finance

Only 60 per cent of the establishments in this sector were Cambodian-owned; around 20 per cent were European-owned and almost 13 per cent owned by ASEAN entities. From a different perspective, it is interesting to observe that 71 per cent of European-owned establishments in Cambodia operated in the financial sector, as well as 50 per cent of ASEAN-owned establishments, while 82.1 per cent of entities from Taiwan, China and 70.3 per cent from China operated in the garments sector. Among the establishments owned by entities from the Republic of Korea, 47.1 per cent were in the garments sector, but establishments owned by entities from the Republic of Korea were present in all the other sectors as well. The average size of the workforce in the finance sector was 75 employees, as shown in table 4.1 below, and all types of business entities were present, with a small predominance of limited partnerships (29.4 per cent) over public limited companies (20.2 per cent), private limited companies (18.3 per cent), and general partnerships (16.5 per cent).

Table 3.9. Share of sampled establishments, by nationality of ownership and sector

Nationality of ownership	Sector						Total
	Food and beverages	Garments, apparel and footwear	Rubber and plastics	Constr.	Accom.	Finance	
Cambodian	90.1	34.8	66.7	80.8	86.9	60.6	68.5
ASEAN	2.2	2.7	9.1	5.5	2.0	12.8	5.4
European	1.1	0.9	0.0	2.7	5.1	20.2	6.0
Chinese	2.2	23.2	9.1	5.5	0.0	1.8	7.2
Taiwan, China	2.2	28.6	12.1	0.0	0.0	0.9	7.5
Korea, Rep. of.	1.1	7.1	3.0	2.7	3.0	1.8	3.3
Others	1.1	2.7	0.0	2.7	3.0	1.8	2.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: NEA Employer Skills Needs Survey 2012.

4. Employment structure

4.1 Employment level and structure in 2012

The total number of employees in the sampled establishments amounted to 126,315, representing around 8 per cent of total employment (NIS, Cambodia Establishment Census 2011).⁵

Table 4.1. Employment in the sample, by sector and workforce size

Sector	Workforce size			Total	Average
	10-19	20-99	100+		
<i>Absolute value</i>					
Food and beverages	479	1 323	5 022	6 824	75
Garments, apparel and footwear	156	967	86 814	87 937	785
Rubber and plastics	93	607	9 557	10 257	311
Construction	331	1 305	2 164	3 800	52
Accommodation	308	1 735	7 271	9 314	94
Finance and insurance	216	3 145	4 822	8 183	75
Total	1 583	9 082	115 650	126 315	244
<i>Percentage composition by sector</i>					
Food and beverages	30.3	14.6	4.3	5.4	
Garments, apparel, and footwear	9.9	10.6	75.1	69.6	
Rubber and plastics	5.9	6.7	8.3	8.1	
Construction	20.9	14.4	1.9	3.0	
Accommodation	19.5	19.1	6.3	7.4	
Finance and insurance	13.6	34.6	4.2	6.5	
Total	100.0	100.0	100.0	100.0	
<i>Percentage composition by workforce size</i>					
Food and beverages	7.0	19.4	73.6	100.0	
Garments, apparel, and footwear	0.2	1.1	98.7	100.0	
Rubber and plastics	0.9	5.9	93.2	100.0	
Construction	8.7	34.3	56.9	100.0	
Accommodation	3.3	18.6	78.1	100.0	
Finance and insurance	2.6	38.4	58.9	100.0	
Total	1.3	7.2	91.6	100.0	

Source: NEA Employer Skills Needs Survey 2012.

⁵ This data covered only the non-agricultural sector.

4.1.1 Sectors

Consistent with census data, the majority of workers were in the garments sector, representing 69.6 per cent of total employment in the sample. The large establishments in the garments sector accounted for 75.1 per cent of total employment in all the large establishments in the survey. This aspect of the garments sector was reflected by the large average size of workforces, at 785, as shown in table 4.1.

The shares of the other sectors were between 8.1 per cent for rubber and a minimum of 3.0 per cent for construction. The construction sector was also characterized by the smallest average size of establishments (52 employees), while food and beverages presented the highest concentration of employment in small-sized establishments (30.3 per cent). Rubber and plastics, together with garments, were the only sectors with more than 90 per cent of their employees concentrated in large establishments. However, the average size of establishments in the rubber sector (an average of 311 employees) was much smaller than that of garments (785). In all the other four sectors, the average size of the establishments was less than 100, between an average of 52 employees per establishment for construction, and 94 for accommodation, as shown in table 4.1.

4.1.2 Gender

More than 70 per cent of the employees were women (71.6 per cent), as shown in table 4.2. However, the percentage varied greatly between sectors, from a maximum of 85.2 per cent in garments to a minimum of 16.7 per cent in construction. Also, workers in the accommodation sector were mainly women, while in the other three sectors the percentage of women ranged between 35 per cent and 40 per cent.

Table 4.2. Employment in the sample, by major occupation type and sex

	Absolute value			Percentage			Share of women
	Men	Wome	Total	Men	Wome	Total	
Managers	2 402	1 219	3 621	6.7	1.3	2.9	33.7
Professionals	2 934	1 758	4 692	8.2	1.9	3.7	37.5
Technicians and associated professionals	1 932	1 251	3 183	5.4	1.4	2.5	39.3
Clerical support workers	1 335	2 227	3 562	3.7	2.5	2.8	62.5
Service and sales workers	3 083	4 366	7 449	8.6	4.8	5.9	58.6
Skilled agricultural, forestry, and fishery workers	2 905	2 279	5 184	8.1	2.5	4.1	44.0
Craft and related trades workers	4 653	22 273	26 926	13.0	24.6	21.3	82.7
Plant and machine operators, and assemblers	1 604	374	1 978	4.5	0.4	1.6	18.9
Elementary occupations	15 080	54 640	69 720	42.0	60.5	55.2	78.4
Total	35 928	90 387	126 315	100.0	100.0	100.0	71.6

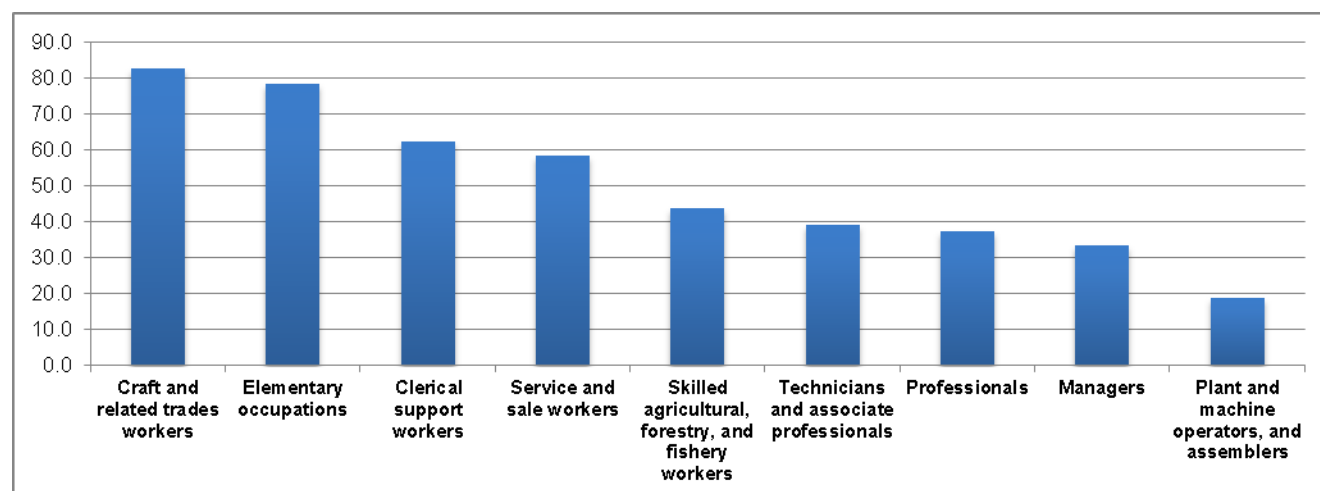
Source: NEA Employer Skills Needs Survey 2012.

4.1.3 Major occupation types

An analysis by major occupation types shows that the skill levels required for the jobs in the sample was quite low (table 4.2). Elementary occupations, accounting for 55.2 per cent, had the largest share, followed by crafts and related trades with 21.3 per cent. Plant and machine operators accounted for 1.6 per cent of the total number of workers in this category. In the occupations that require at least a high-school diploma, professionals accounted for 3.7 per cent of the total workforce, managers 2.9 per cent, and technicians 2.5 per cent.

Female employment was heavily concentrated in occupations such as clerical work and services, as shown in figure 4.1. Women represented 82.7 per cent of craft trades workers, 78.4 per cent of workers in elementary occupations, 62.5 per cent of clerical support workers, and 58.6 per cent of service and sales workers. At the same time, they made up only 37.5 per cent of professionals and 39.3 per cent of technicians and associated professionals.

Figure 4.1. Share of women in each major occupation type



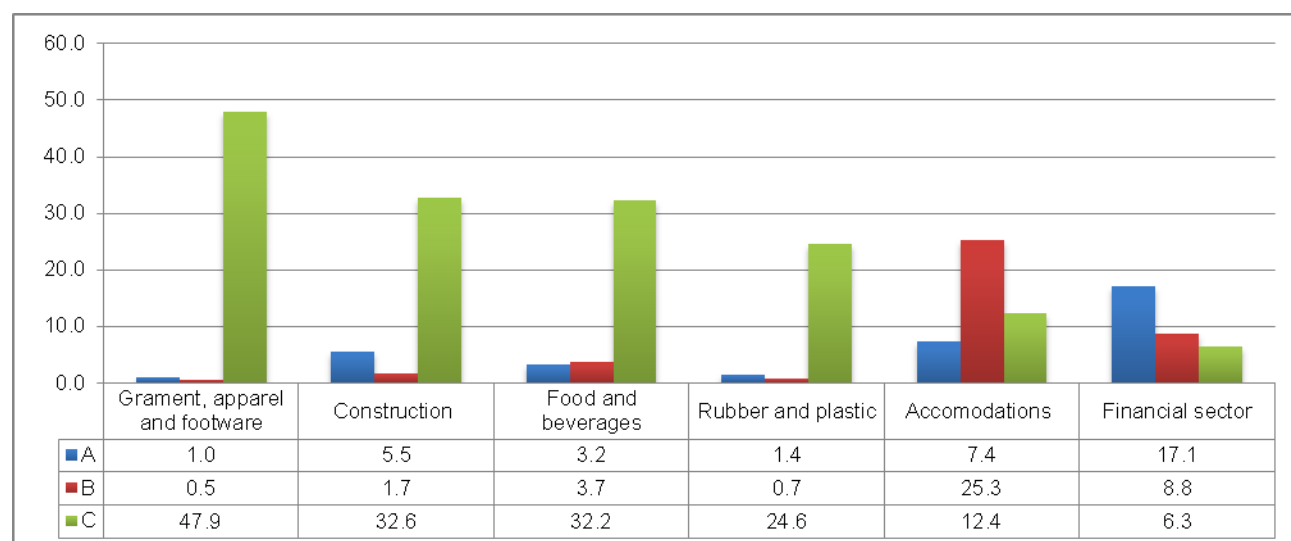
Source: NEA Employer Skills Needs Survey 2012.

The workforce structure by major occupation types differed substantially between sectors. However, in all sectors, the percentage of employees in elementary occupations exceeded 50 per cent, and the inter-sector differential was quite small. In order to illustrate the characteristic of each sector in relation to education and skills level, the other eight major occupation types, excluding elementary occupation, were grouped into three subgroups:

- (a) group A – the percentage of employed with at least an upper-secondary school diploma (major occupation types 1, 2, and 3);
- (b) group B – the percentage of clerical support and sales workers (major occupation types 4 and 5); and
- (c) group C – the percentage of skilled and semi-skilled production workers (major occupation types 6, 7 and 8).

The result, shown in figure 4.2, shows that the more educated segment of the labour force played a major role only in finance, and a consistent role in accommodation and in construction. Clerical and sales occupations were predominant in accommodation and finance. Garments, construction, food, and rubber were, on the contrary “specialized” in skilled and semi-skilled labour.

Figure 4.2. Share of employment, by subgroup of major occupation type and sector



Source: NEA Employer Skills Needs Survey 2012.

As shown in table 4.3, the garments sector employed 92.9 per cent of craft and related trades workers, 83.2 per cent of workers in elementary occupations, and 36.6 per cent of plant and machine operators, and assemblers. It also employed 28.8 per cent of clerical support workers, 26.6 per cent of managers, 21.5 per cent of technicians and associated professionals, and 10.7 per cent of service and sales workers.

Food and beverages accounted for a notable share of plant and machine operators, and assemblers (25.4 per cent) and skilled agricultural, forestry, and fishery workers (17.1 per cent).

Rubber and plastics accounted for 81.3 per cent of skilled agricultural, forestry, and fishery workers, and 26.2 per cent of plant and machine operators, and assemblers.

Construction, which represented only 3.0 per cent of total employment, but was characterized by small-sized establishments, accounted for 12.6 per cent of professionals.

The accommodation sector, representing 7.4 per cent of the total workforce, accounted for 61.3 per cent of service and sales workers, 20.6 per cent of clerical support workers, 19.1 per cent of technicians and associated professionals, and 15.4 per cent of managers.

The finance sector accounted for 43.6 per cent of professionals, 39.6 per cent of technicians and associated professionals, 36.8 per cent of clerical support workers, and 35.3 per cent of managers.

Table 4.3. Distribution of employees, by major occupation type and sector

	Food and beverages	Garments, apparel and footwear	Rubber and plastics	Constr.	Accom.	Finance and insurance	Total
Managers	10.1	26.6	4.1	8.4	15.4	35.3	100.0
Professionals	7.9	15.0	9.9	12.6	11.1	43.6	100.0
Technicians and associated	8.4	21.5	5.5	5.7	19.1	39.8	100.0
Clerical support workers	4.5	28.8	3.3	6.1	20.6	36.8	100.0
Service and sales workers	6.6	10.7	1.9	1.7	61.3	17.8	100.0
Skilled agricultural, forestry, and	17.1	0.0	81.3	0.0	1.7	0.0	100.0
Craft and related trades workers	2.6	92.9	1.0	2.8	0.7	0.0	100.0
Plant and machine operators, and assemblers	25.4	36.6	26.2	6.0	5.2	0.7	100.0
Elementary occupations	4.4	83.2	6.0	2.2	2.8	1.3	100.0
Total	5.4	69.6	8.1	3.0	7.4	6.5	100.0

Source: NEA Employer Skills Needs Survey 2012.

Almost 73 per cent of the total number of employed worked in foreign-owned establishments. The percentage of those in establishments owned by entities from Taiwan, China (37.1 per cent) exceeded the percentage of those working in Cambodian establishments (28.3 per cent). Foreign-owned establishments were characterized by a much larger size than Cambodian establishments, with up to 1,200 workers employed in establishments owned by entities from Taiwan, China. Establishments owned by entities from China and the Republic of Korea employed, on average, 600 workers, as shown in table 4.4.

Table 4.4. Employees, establishments, and average size of establishment, by nationality of ownership

	Employees		Establishments	
	Absolute value	Percentage of establishments	No. of establishments	Average number employed
Cambodian	35 685	28.3	354	101
ASEAN countries	3 720	2.9	28	133
European	2 388	1.9	31	77
Chinese	22 376	17.7	37	605
Taiwan, China	46 820	37.1	39	1 201
Korea, Rep. of.	9 811	7.8	17	577
Others	5 515	4.4	11	501
Total	126 315	100.0	517	244

Source: NEA Employer Skills Needs Survey 2012.

Limited partnership companies provided employment to 38.8 per cent of the workers in the sample, followed by individual proprietors (25.9 per cent) and private limited companies (23.9 per cent). Establishments operating in the international market played a predominant role, with almost three-quarters of total employment, as shown in table 4.5. They were followed by establishments acting in the national market (17.1 per cent), with local-market establishments providing employment to only to 8.8 per cent of the total number of employees. The international market played an above-average role for limited partnerships and limited

private companies; the national market for public limited companies; and the local market for individual proprietors and general partnerships (table 4.5).

Table 4.5. Employment, by type of business entity and type of market

	Local market	National market	International market	Total
<i>Absolute value</i>				
Individual proprietorship	6 289	5 627	20 807	32 723
General partnership	2 249	1 157	5 396	8 802
Limited partnership	1 705	6 471	40 874	49 050
Private limited company	358	4 116	25 714	30 188
Public limited company	271	2 265	99	2 635
Others	243	2 001	673	2 917
Total	11 115	21 637	93 563	126 315
<i>Percentage composition by type of business entity</i>				
Individual proprietorship	56.6	26.0	22.2	25.9
General partnership	20.2	5.3	5.8	7.0
Limited partnership	15.3	29.9	43.7	38.8
Private limited company	3.2	19.0	27.5	23.9
Public limited company	2.4	10.5	0.1	2.1
Others	2.2	9.2	0.7	2.3
Total	100.0	100.0	100.0	100.0
<i>Percentage composition by type of market</i>				
Individual proprietorship	19.2	17.2	63.6	100.0
General partnership	25.6	13.1	61.3	100.0
Limited partnership	3.5	13.2	83.3	100.0
Private limited company	1.2	13.6	85.2	100.0
Public limited company	10.3	86.0	3.8	100.0
Others	8.3	68.6	23.1	100.0
Total	8.8	17.1	74.1	100.0

Source: NEA Employer Skills Needs Survey 2012.

4.2 Employment growth 2010 to 2012

One noteworthy observation that emerged from our analysis was the extremely positive evolution of employment growth registered between 2010 and 2012. Data shows that the dynamic of the two years under consideration (2010–11 and 2011–12) was very similar. Therefore, for simplicity of exposition, we present the cumulative results of the two-year period.

In terms of sectors, between 2010 and 2012, the total employment level of the six sectors increased by a very notable 17.6 per cent. The sector that registered the biggest percentage increase was construction (50.4 per cent), followed by finance (23.2 per cent), and accommodation (19.4 per cent). The other three sectors also

registered consistent increases. However, they remained below the average. Employment in the garments and apparel sector increased by 16.9 per cent, in rubber and plastics by 12.6 per cent, while food and beverages increased by only 10.7 per cent.

At the global level, men and women registered a similar trend. This was true also in some sectors like food and beverages, garments and apparel, and finance. In the others, women registered a more pronounced rate of growth.

The largest contribution to employment growth came from the garments and apparel sector (67.5 per cent), followed by finance (8.2 per cent) and accommodation (8.0 per cent), as shown in table 4.6.

Table 4.6. Employment growth from 2010 to 2012, by sector and sex

	Absolute change (in thousands)			Percentage change			Percentage contribution to change		
	Men	Women	Total	Men	Women	Total	Men	Women	Total
Food and beverages	425	235	660	10.5	11.0	10.7	7.8	1.7	3.5
Garments, apparel and footwear	1 875	10 866	12 741	16.8	17.0	16.9	34.5	80.9	67.5
Rubber and plastics	622	526	1 148	5.6	15.7	12.6	11.4	3.9	6.1
Construction	1 009	265	1 274	46.8	72.0	50.4	18.5	2.0	6.7
Accommodation	557	954	1 511	16.4	21.7	19.4	10.2	7.1	8.0
Finance and insurance	954	588	1 542	23.9	22.3	23.2	17.5	4.4	8.2
Total	5 442	13 434	18 876	17.9	17.5	17.6	100.0	100.0	100.0

Source: NEA Employer Skills Needs Survey 2012.

The growth in employment was greater for establishments operating in the national market (22.6 per cent), followed by those operating at the international level (17.1 per cent), and the lowest rate of growth was registered by establishments operating at the local level (12.3 per cent), as shown in table 4.7. However, the biggest contribution to employment expansion came from establishments operating in the international market, as they generated 72.4 per cent of the additional jobs.

Table 4.7. Employment growth, by type of market and sex, 2010 to 2012

	Absolute change (in thousands)			Percentage change			Percentage contribution to change		
	Men	Women	Total	Men	Women	Total	Men	Women	Total
Local	703	515	1 218	17.0	8.9	12.3	12.9	3.8	6.5
National	2 336	1 647	3 983	24.1	20.7	22.6	42.9	12.3	21.1
International	2 403	11 272	13 675	14.4	17.8	17.1	44.2	83.9	72.4
Total	5 442	13 434	18 876	17.9	17.5	17.6	100.0	100.0	100.0

Source: NEA Employer Skills Needs Survey 2012.

If we consider ownership by nationality, as shown in table 4.8, the rates of growth did not present large differences around the average, with two notable exceptions: on one hand, employment in European-owned establishments increased by 48.4 per cent and was especially relevant for men (83.4 per cent); on the other hand, employment in establishments owned by entities from the Republic of Korea increased by only 6.8 per

cent. Recall that the number of employees in European-owned establishments was quite small and that they were concentrated in the finance sector.

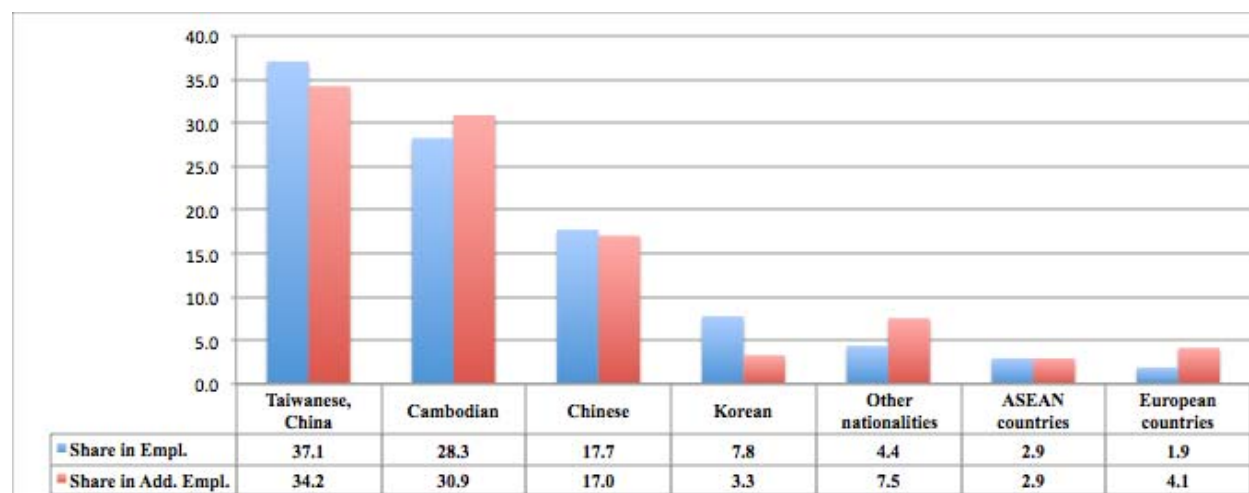
Table 4.8. Employment growth, by nationality of ownership and sex, 2010 to 2012

(%)	Men	Women	Total
European	83.4	25.9	48.4
Cambodian	15.7	24.6	19.5
ASEAN countries	21.1	15.0	17.4
Chinese	41.6	12.6	16.8
Taiwan, China	6.7	18.3	16.0
Korea, Rep. of.	4.9	6.9	6.8
Total	17.9	17.5	17.6

Source: NEA Employer Skills Needs Survey 2012.

Figure 4.3 compares the employment share of each nationality of ownership with its contribution to employment growth. Establishments owned by entities from Taiwan, China, with the biggest share in employment, also ranked first for contribution to employment growth, followed by Cambodian establishments, whose contribution to the creation of new jobs was bigger than its share in employment. A similar result was exhibited by European-owned establishments and by the establishments of “other countries”.

Figure 4.3. Share in employment (2012) and in additional employment (2010 to 2012), by nationality of ownership



Source: NEA Employer Skills Needs Survey 2012.

However, the most interesting and relevant question is whether, and in which measures, the education level and skills level of workers increased from 2010 to 2012.

As we have already seen, between 2010 and 2012, total employment in the six sectors covered by the survey increased by almost 19,000 jobs, i.e. by 17.6 per cent. Three major occupation types grew below average: skilled workers in agriculture (6.3 per cent [which is not surprising given the sectors covered by the survey

and their concentration in only two sectors – food and beverages, and rubber and plastics]), machine operators (8.1 per cent), and elementary occupations (11.2 per cent). At the same time, service and sales workers registered the highest percentage increase, followed by craft workers, professionals, and clerks, as shown in table 4.9.

Table 4.9. Employment growth, by major occupation type from 2010 to 2012

	Men	Women	Total	Men	Women	Total
	Absolute change (in thousands)			Percentage change		
Managers	411	235	646	20.6	23.9	21.7
Professionals	707	382	1 089	31.7	27.8	30.2
Technicians and associated professionals	221	334	555	12.9	36.4	21.1
Clerical support workers	284	495	779	27.0	28.6	28.0
Service and sales workers	764	1 059	1 823	32.9	32.0	32.4
Skilled agricultural, forestry, and fishery workers	-16	324	308	-0.5	16.6	6.3
Craft and related trades workers	711	5 819	6 530	18.0	35.4	32.0
Plant and machine operators, and assemblers	198	-49	149	14.1	-11.6	8.1
Elementary occupations	2 162	4 835	6 997	16.7	9.7	11.2
Total	5 442	13 434	18 876	17.9	17.5	17.6
Percentage contribution to change						
Managers	7.6	1.7	3.4			
Professionals	13.0	2.8	5.8			
Technicians and associated professionals	4.1	2.5	2.9			
Clerical support workers	5.2	3.7	4.1			
Service and sales workers	14.0	7.9	9.7			
Skilled agricultural, forestry, and fishery workers	-0.3	2.4	1.6			
Craft and related trades workers	13.1	43.3	34.6			
Plant and machine operators, and assemblers	3.6	-0.4	0.8			
Elementary occupations	39.7	36.0	37.1			
Total	100.0	100.0	100.0			

Source: NEA Employer Skills Needs Survey 2012.

In the sectors with above-average rates of growth, managers, and technicians and associated professionals tended to rank lower in terms of employment growth. The trend was for an above-average increase mainly in the intermediate professions, but also in those occupation types that require higher education.

However, when we consider the contribution by each major occupation type to the growth in employment, (i.e. to additional demand), the ranking was led by the two occupation types with the largest share in employment: elementary occupations accounted for 37.1 per cent and craft occupations 34.6 per cent. In third and fourth place, with much lower values, were service and sales workers (9.7 per cent) and professionals (5.8 per cent).

Table 4.10. Employment growth, by sector and major occupation type from 2010 to 2012

	Food and bev.	Garments, apparel and footwear	Rubber and plastics	Constr.	Accom.	Finance and ins.	Total
<i>Absolute change (in thousands):</i>							
Managers	19	151	12	107	92	265	646
Professionals	11	127	10	351	78	512	1 089
Technicians and associated professionals	26	106	10	74	134	205	555
Clerical support workers	18	241	8	101	152	259	779
Service and sales workers	48	627	28	47	931	142	1 823
Skilled agricultural, forestry, and fishery workers	112	0	196	0	0	0	308
Craft and related trades workers	37	6 265	36	146	46	0	6 530
Plant and machine operators, and assemblers	48	-50	79	66	1	5	149
Elementary occupations	341	5 274	769	382	77	154	6 997
Total	660	12 741	1 148	1 274	1 511	1 542	18 876
<i>Percentage composition of change by sectors:</i>							
Managers	2.9	23.4	1.9	16.6	14.2	41.0	100.0
Professionals	1.0	11.7	0.9	32.2	7.2	47.0	100.0
Technicians and associated professionals	4.7	19.1	1.8	13.3	24.1	36.9	100.0
Clerical support workers	2.3	30.9	1.0	13.0	19.5	33.2	100.0
Service and sales workers	2.6	34.4	1.5	2.6	51.1	7.8	100.0
Skilled agricultural, forestry, and fishery workers	36.4	0.0	63.6	0.0	0.0	0.0	100.0
Craft and related trades workers	0.6	95.9	0.6	2.2	0.7	0.0	100.0
Plant and machine operators, and assemblers	32.2	-33.6	53.0	44.3	0.7	3.4	100.0
Elementary occupations	4.9	75.4	11.0	5.5	1.1	2.2	100.0
Total	3.5	67.5	6.1	6.7	8.0	8.2	100.0
<i>Percentage composition of change by major occupation type:</i>							
Managers	2.9	1.2	1.0	8.4	6.1	17.2	3.4
Professionals	1.7	1.0	0.9	27.6	5.2	33.2	5.8
Technicians and associated professionals	3.9	0.8	0.9	5.8	8.9	13.3	2.9
Clerical support workers	2.7	1.9	0.7	7.9	10.1	16.8	4.1
Service and sales workers	7.3	4.9	2.4	3.7	61.6	9.2	9.7
Skilled agricultural, forestry, and fishery workers	17.0	0.0	17.1	0.0	0.0	0.0	1.6
Craft and related trades workers	5.6	49.2	3.1	11.5	3.0	0.0	34.6
Plant and machine operators, and assemblers	7.3	-0.4	6.9	5.2	0.1	0.3	0.8
Elementary occupations	51.7	41.4	67.0	30.0	5.1	10.0	37.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: NEA Employer Skills Needs Survey 2012.

Let us now analyse how the different sectors contributed to the growth of each major occupation type, as shown in table 4.10 above.

Given its size, the garments sector played a dominant role for many occupations . The garments sector

generated three-quarters of the additional demand for elementary occupations and almost the total additional demand for craft workers.

For elementary occupations, the next contributions in order of relevance were from the rubber sector (11.0 per cent), followed by construction (5.5 per cent) and food (4.9 per cent).

More than half of the additional demand for sales and service workers was generated by the accommodation sector, followed by garments (34.4 per cent) and finance (7.8 per cent).

Almost half (47.0 per cent) of the additional demand for professionals came from the finance sector, while 32.2 per cent came from the construction sector, and 11.7 per cent from garments sector.

The additional demand for technicians was largest in the finance sector (36.9 per cent), but relevant contributions also came from accommodation (24.1 per cent), garments (19.1 per cent), and construction (13.3 per cent).

The demand for machine operators was quite limited and concentrated in three sectors – (in order) rubber, construction, and food. The garments sector seemed to have reduced the number of employees in this occupation type.

4.3 Wages

A very relevant issue explored by the survey was the level of wages paid in establishments operating in Cambodia (allowing for computing the wage differentials between sectors and occupation type). Wages certainly play a very important role in determining the level of labour supply, the willingness to remain in a given job, and thus vacancies and turnover level, especially for non-qualified workers in a situation in which agriculture can offer a subsistence livelihood for the household.

Table 4.11 shows the average wage received by workers in each major occupation type in each sector. It also reports also an indicator of wage differentials both for each major occupation type and for each sector, computed as the ratio between the highest and the lowest average value.

If we consider the complete spectrum, wages ranged between a maximum of US\$919 paid to managers in the finance sector to a minimum of \$84 for workers in elementary occupations in the food and beverages sector. The finance sector registered the highest wages for six of the nine major occupation types, and ranked second in two of the others, skilled workers in agriculture being obviously absent in this sector.

The sector that presented the highest wage differential between major occupation types was rubber and plastics, where managers earned almost eight times as much as some workers in elementary occupations. Accommodation came second, followed by finance, with differentials of 7.2 and 7.0, respectively. Also in these sectors, the highest-paid employees were managers and the lowest-paid were workers in elementary

occupations. The sector with the lowest differential between major occupation types was food and beverages, which registered the lowest wages both for managers (\$441) and for elementary occupations (\$84).

If we consider the average wage of the same occupation type in the six sectors, the highest differential was 2.5 for service and sales workers, the highest average wage being in the finance sector and the lowest in food and beverages. The second ranking major occupation type, with a differential of 2.4, was craft workers, and it must be underlined that the lowest wage was registered in the garments sector. The third major occupation type, with a differential above 2, was managers. In all the other major occupation types the differential was below 2, the minimum value being registered by elementary occupations (1.6), with values included between a maximum of \$132 in the finance sector and a minimum of \$84 in food and beverages.

Table 4.11. Wages, by major occupation type and sector

	Accom.	Constr.	Finance	Food and beverages	Garments and apparel	Rubber and plastics	Max/Min
Managers	611	678	919	441	540	798	2.1
Professionals	313	398	387	296	265	266	1.5
Technicians and associated professionals	206	223	307	174	237	228	1.8
Clerical support workers	157	214	267	202	225	211	1.7
Service and sales workers	115	169	283	118	202	181	2.5
Skilled agricultural, forestry, and fishery workers	96	N/A	N/A	107	N/A	178	1.9
Craft and related trades workers	144	202	238	111	99	176	2.4
Plant and machine operators, and assemblers	130	179	152	145	140	152	1.4
Elementary occupations	85	116	132	84	99	102	1.6
Maximum/Minimum	7.2	5.9	7.0	5.3	5.4	7.8	

Note: Wage refers to the gross salary of employees after tax. Wage was calculated as the average between the average of maximum values and the average of minimum values: (avg. max + avg. min)/2.

Source: NEA Employer Skills Needs Survey 2012.

A comparison between the wages paid by Cambodian-owned and foreign-owned establishments, in table 4.12, shows that the latter paid higher wages for almost all occupations but especially for managerial positions and service and sales workers. Two marginal exceptions were found for skilled agricultural workers and craft workers, for whom Cambodian-owned establishments paid slightly higher wages.

Table 4.12. Wages, by major occupation type and nationality of ownership

	Cambodian	Foreign	Foreign/Cambodian
Managers	567	832	1.47
Professionals	328	361	1.10
Technicians and associated professionals	229	281	1.23
Clerical support workers	197	247	1.25
Service and sales workers	155	225	1.45
Skilled agricultural, forestry, and fishery	127	125	0.98
Craft and related trades workers	133	129	0.97
Plant and machine operators, and assemblers	135	163	1.20
Elementary occupations	101	108	1.07
Maximum/Minimum	5.6	7.7	

Note: Wage refers to the gross salary of employees after tax. Wage was calculated by the average of average of maximum and average of minimum: (average maximum + average minimum)/2.

Source: NEA Employer Skills Needs Survey 2012.

As shown in table 4.13, individual proprietors paid the lowest wages in seven out of the nine major occupation types, while public limited companies paid the highest wages in five out of nine occupation types.

Table 4.13. Wages, by major occupation type and type of business entity

	Individual proprietorship	General partnership	Limited partnership	Private limited company	Public limited company	Other types	Max/min
Managers	435	801	884	712	1 017	850	2.3
Professionals	287	332	382	314	505	314	1.8
Technicians and associated	171	232	280	267	338	280	2.0
Clerical support workers	171	216	257	218	259	271	1.6
Service and sales workers	121	151	230	213	290	268	2.4
Skilled agricultural, forestry, and	96	110	183	129	N/A	93	2.0
Craft and related trades workers	122	128	141	157	100	120	1.6
Plant and machine operators,	140	159	156	149	155	151	1.1
Elementary occupations	88	109	114	107	150	115	1.7
Maximum/minimum	5.0	7.4	7.7	6.6	6.8	7.4	

Note: Wage refers to the gross salary of employees after tax. Wage was calculated by taking the average of average of maximum and average of minimum: (average maximum + average minimum)/2.

Source: NEA Employer Skills Needs Survey 2012.

Unregistered establishments paid much lower wages. Managers and technicians were paid, on average, less than 50 per cent. Professionals and elementary occupations registered the lowest differentials, of 92.5 per cent and 87.4 per cent, respectively.

5. First-time jobseekers with at least upper-secondary education

This section examines the incidence of recruitment, work-preparedness, and skills endowment of first-time jobseekers coming directly from upper-secondary school, technical and vocational schools (TVET), and higher education. More specifically, it looks at the proportion of employers that recruited first-time jobseekers over the last three years, and explores their perceptions on the preparedness for work, and lack of skills, of new recruits.

5.1 Recruitment of first-time jobseekers coming directly from upper-secondary schools, TVET, and higher education institutes

Around 60 per cent of the establishments in the sample had hired first-time jobseekers coming directly from the education system. The percentage was 74.5 per cent for large establishments, 62.7 per cent for medium-sized establishments, and 38.5 per cent for small establishments. These data suggest that smaller establishments tended to prefer more mature workers with some work experience, while larger establishments preferred young workers that could be better trained to the philosophy and practices of the establishment.

More than half of the establishments had hired higher education graduates, while only 21.7 per cent had hired young people coming from TVET, as shown in table 5.1. Upper-secondary school graduates had been hired by 42.6 per cent of the establishments.

Table 5.1. Share of sampled establishments that had hired first-time jobseekers, by educational level and workforce size

	10–19 workers	20–99 workers	100+ workers	Total
Upper-secondary school	19.3	44.9	59.2	42.6
TVET	5.2	17.3	42.0	21.7
Higher education	25.9	54.2	66.9	50.7
Total	38.5	62.7	74.5	60.0

Source: NEA Employer Skills Needs Survey 2012.

If the sample is narrowed to only the establishments that had hired first-time jobseekers with at least secondary school education, 84.5 per cent had hired some people with higher education, 71.0 per cent with upper-secondary education, and 36.1 per cent with vocational training. Also, these data confirm that the larger the size of the establishment, the greater the tendency to hire first-time jobseekers, and this for every type of upper education, as shown in table 5.2.

Table 5.2. Distribution of establishments that had hired first-time jobseekers with at least upper-secondary education, by educational level and workforce size

	10–19 workers	20–99 workers	100+ workers	Total
Upper-secondary school	50.0	71.6	79.5	71.0
TVET	13.5	27.7	56.4	36.1
Higher education	67.3	86.5	89.7	84.5

Source: NEA Employer Skills Needs Survey 2012.

Table 5.3 shows a specialization index, or, in this case, an indicator that reflects recruitment preferences by each establishment size across educational level for hiring first-time jobseekers from upper-secondary education and above. For example, for small establishments, if a value of the index is above 100, it implies that small establishments showed an above-average tendency to hire new graduates from that educational level (in this case, upper-secondary school and higher-education graduates). If the value is less than 100, it implies that hiring of new graduates from that educational level occurred below average (in this case, technical and vocational schools).

The table shows that small and medium-sized establishments preferred to recruit workers from secondary and higher education, while larger establishments preferred to recruit from technical and vocational schools.

Table 5.3. Specialization index/recruitment preference, by educational level and workforce size

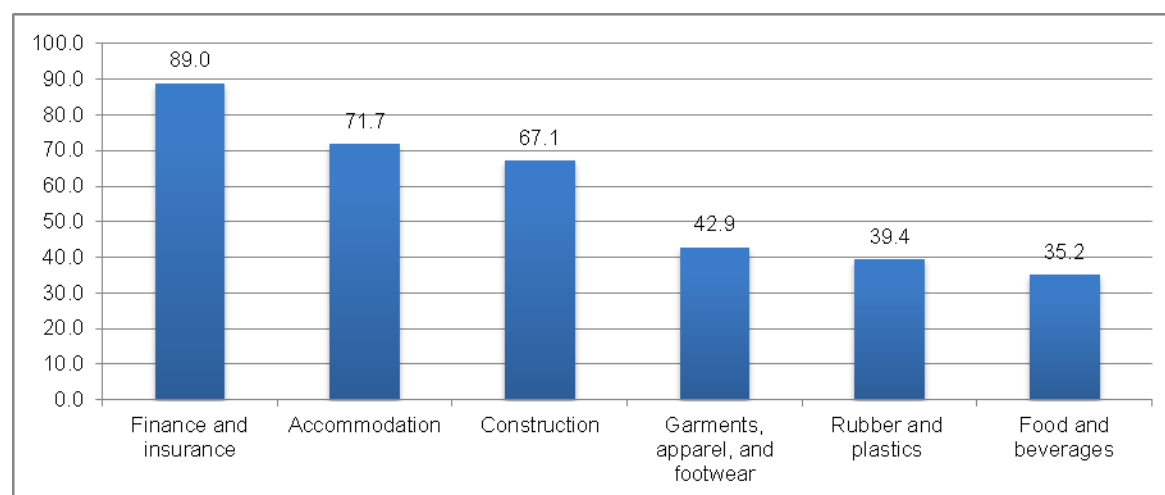
	10–19 workers	20–99 workers	100+ workers
Upper-secondary school	103.2	104.1	95.1
Technical and vocational school	54.6	78.9	132.6
Higher education	116.7	105.6	90.2

Note: Specialization index = ratio of the percentage of the establishments of a given size that had hired a given group of first-time jobseekers and the percentage of establishments of that size that had hired first-time jobseekers with at least upper-secondary education *100.

Source: NEA Employer Skills Needs Survey 2012.

The two service sectors (finance, 89.0 per cent, and accommodation, 71.7 per cent), followed by construction (67.1 per cent) presented the highest percentages of establishments hiring first-time jobseekers with at least secondary school education, as shown in figure 5.1. The percentages of the three industrial sectors were much lower and quite similar: 42.9 per cent for the garments sector, 39.4 per cent for the rubber sector, and 35 per cent for the food sector.

Figure 5.1. Share of establishments that had hired first-time jobseekers directly from school, by sector



Source: NEA Employer Skills Needs Survey 2012.

In three sectors (rubber, finance, and construction), the percentage of establishments that had hired workers with upper-secondary school education was above average. Only two sectors (construction and accommodation) showed a strong preference for workers from technical and vocational schools. Garments was the only sector that seemed to prefer hiring secondary school graduates, as shown in table 5.4.

Finally, the percentage of foreign-owned establishments hiring first-time jobseekers with at least upper-secondary school was higher than the percentage of Cambodian establishments (59.3 per cent versus 55.6 per cent).

Table 5.4. Specialization index/recruitment preference on educational level, by sector

	Upper-secondary school	Technical and vocational school	Higher education
Accommodation	113.8	123.4	78.4
Construction	70.4	126.8	113.4
Finance and insurance	89.5	72.7	120.5
Food and beverages	104.2	102.3	95.5
Garments, apparel and footwear	121.6	99.1	82.2
Rubber and plastics	108.0	26.5	124.7

Note: Specialization index = ratio of the percentage of the establishments of a given sector that had hired a given group of first-time jobseekers and the percentage of establishments of that sector that had hired first-time jobseekers with at least upper-secondary education *100

Source: NEA Employer Skills Needs Survey 2012.

5.2 Work preparedness of first-time jobseekers with at least secondary education

The establishments interviewed expressed quite positive views on the preparedness of first-time jobseekers they hired. Only 12.8 per cent of the establishments considered new entrants' preparation poor or very poor, while 53.7 per cent judged it good or very good, as shown in table 5.5. Relatively speaking, the best opinions were in regard to higher education graduates, with 64.1 per cent of employers offering appreciative comments and only 10.3 per cent offering negative appraisal; the worst appraisal was for secondary school graduates, with 39.1 per cent of the establishments judging newly hired workers as well prepared; and 17.8 per cent judging them poorly prepared.

Table 5.5. Employers' perception on first-time jobseekers, by educational level; percentage of establishments

	Upper-secondary school	TVET	Higher education	Total
Very well prepared	2.3	2.7	5.3	3.7
Well prepared	36.8	55.4	58.8	50.0
Prepared	43.2	33.0	25.6	33.5
Poorly prepared	17.3	8.9	9.9	12.5
Very poorly prepared	0.5	0.0	0.4	0.3
Total	100.0	100.0	100.0	100.0

Source: NEA Employer Skills Needs Survey 2012.

The most positive comments on first-time jobseekers came from the rubber and plastics sector, followed by finance – the sectors that hired mainly young people from higher education, as shown in table 5.6. In the intermediate position, with similar comments, were garments and apparel, food and beverages, and accommodation. The most negative comments came from the construction sector.

Table 5.6. Employers' perception on first-time jobseekers, by sector

Sector	Not well prepared	Prepared	Well prepared
Rubber and plastics	10.0	15.0	75.0
Finance and insurance	11.4	28.6	60.0
Garments, apparel and footwear	13.2	34.1	52.7
Food and beverages	8.8	38.6	52.6
Accommodation	12.6	36.5	50.9
Construction	18.5	38.0	43.5

Source: NEA Employer Skills Needs Survey 2012.

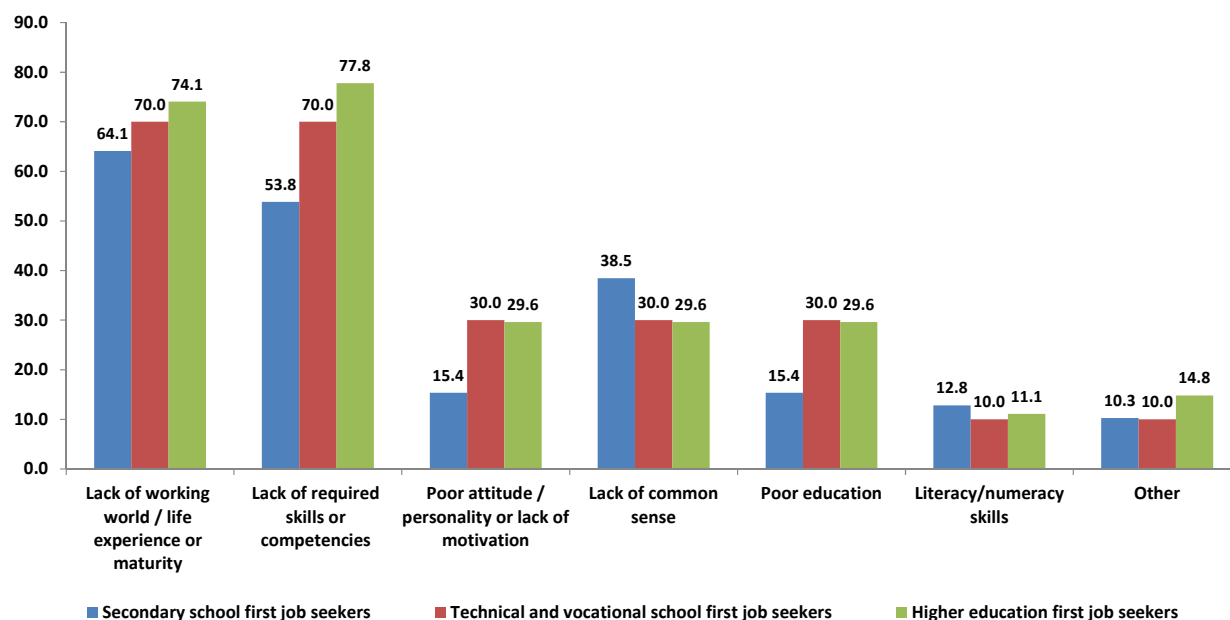
5.3 Skills and competencies lacking among first-time jobseekers from upper-secondary school, TVET, and higher education

The establishments that complained about the preparedness of their newly hired workers that came directly from the education system concentrated their criticism mainly on three areas: lack of skills, lack of life experience and maturity, and lack of motivation. However, the degree of complaint depended on the type and level of schooling, as shown in figure 5.2. For the first two areas of complaint, area data suggest that the problem was more pronounced for the graduates from higher education. For example, the lack of required skills and competencies has been indicated by:

- (a) 77.8 per cent of the establishments complaining about the preparedness of newly hired workers coming directly from higher education;
- (b) 70.0 per cent of the establishments complaining about the preparedness of newly hired workers coming directly from technical and vocational schools; and
- (c) 53.8 per cent of the establishments complaining about the preparedness of newly hired workers coming directly from upper-secondary school (which, however, was not surprising given the age of those newly hired workers).

In general, however, the comments seemed to suggest that a significant proportion of young people were not sufficiently mature for the labour market by the end of the education process, a situation that could be the result both of the education system and/or the family background.

Figure 5.2. Skills and competencies lacking among first-time jobseekers



Source: NEA Employer Skills Needs Survey 2012.

6. Recruitment difficulties and skills shortages

This section discusses the recruitment difficulties and defines the skills shortages in the Cambodian labour market in the selected sectors. Specifically, it illustrates and evaluates the abilities of the Cambodian labour market to respond to labour demand by employers, and the level of hard-to-fill vacancies. Moreover, it identifies the causes of recruitment difficulties in each major occupation type, in each market, and in each selected sector. These difficulties are caused by a lack of skills, qualifications, or experience (skills shortages vacancies). Last but not least, it examines the effects of hard-to-fill vacancies on business prospects, and the measures used to address those problems.

6.1 Vacancies

6.1.1 Number of vacancies

The problem of vacancies appeared very serious when we consider that, at the time of the survey, the establishments in the sample were looking for around 17,500 workers, a figure that represented almost 14 per cent of their total employment. (Appendix C).

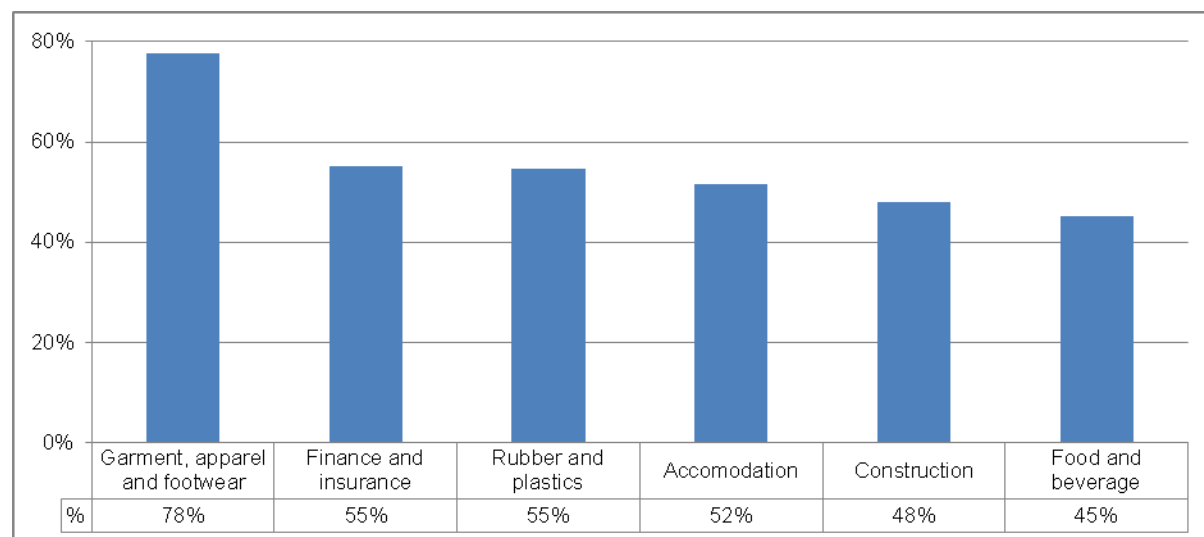
6.1.2 Size of establishments

More than half of the establishments (56 per cent) declared vacancies, the percentage being directly related to size: 38 per cent for small establishments, 57 per cent for medium-sized establishments, and 72 per cent for large establishments.

6.1.3 Sectors

Garments sector, accounting for 78 per cent of establishments declaring vacancies, was the sector in which the problem was more acute, as shown in figure 6.1. In the other sectors, percentages were quite lower, but still ranged between 55 per cent (rubber and plastics, and finance) and 45 per cent (food and beverages). In the garments sector, the percentage of establishments with vacancies was higher in foreign-owned establishments and establishments operating in the international market.

Figure 6.1. Share of establishments with vacancies, by sector



Source: NEA Employer Skills Needs Survey 2012.

The density of vacancies, as measured by the ratio of vacancies to employment by sector and workforce size, was especially severe in the garments and apparel sector: 89.1 per cent of all vacancies were in fact concentrated in this sector, where vacancies represented nearly 17.7 per cent of total employment, a percentage that was at least double those registered by the other sectors, as shown in table 6.1.

Table 6.1. Vacancies distribution, by sector; and vacancy density, by sector and workforce size

	Percentage distribution by sector	Density			
		10-19 workers	20-99 workers	100+ workers	Total
Garments, apparel and footwear	89.1	99.4	92.3	16.7	17.7
Accommodation	3.5	6.2	10.7	5.7	6.6
Food and beverages	2.1	7.3	13.2	3.3	5.5
Finance and insurance	2.1	6.0	7.2	2.6	4.5
Construction	1.9	18.7	10.0	6.4	8.7
Rubber and plastics	1.2	20.4	5.1	1.7	2.1
Total	100.0	17.5	43.8	38.7	13.8

Note: vacancies density = cell vacancies/cell employment*100.

Source: NEA Employer Skills Needs Survey 2012.

Concentrating the analysis on garments, apparel and footwear sector, the great majority of vacancies were in the large establishments, but the problem was more severe in small establishments, with a density of 99.4 per cent, and in medium-sized establishments, with a density of 92.3 per cent, as shown in table 6.1. Density was only 16.7 per cent in large establishments. The survey also showed that in the garments sector, vacancies were concentrated in three major occupation types: elementary occupations (65.2 per cent), craft occupations (24.1 per cent), and clerical jobs (9.0 per cent).

In the other sectors, considering ranking in terms of densities, construction was in second place with a density of 8.7 per cent, followed by accommodation with a density of 6.6 per cent, food and beverages with 5.5 per cent, finance with 4.5 per cent, and rubber and plastics with 2.1 per cent. In rubber and plastics, and construction the problem was more severe in small establishments; in food and beverages, accommodation, and finance, the problem was more severe in medium-sized establishments.

Considering the last five sectors together (but keeping in mind that they accounted for less than 11 per cent of all vacancies), among the major occupation types, elementary occupations still ranked first, with 30 per cent, followed by service and sales workers, and clerks. In these sectors, vacancies for technicians and professionals accounted for 10.2 and 7.7 per cent, respectively, as shown in table 6.2.

Table 6.2. Distribution of vacancies, by major occupation type and sector

	Garments, apparel, and footwear	Other sectors					
		Total	Accom.	Constr.	Finance and insurance	Food and beverages	Rubber and plastics
Managers	0.0	0.8	0.3	1.5	1.6	0.5	0.0
Professionals	0.3	7.7	0.7	18.7	13.7	6.7	1.8
Technicians and associated	0.1	10.2	6.8	4.8	29.3	6.4	2.3
Clerical support workers	9.0	14.5	12.9	0.3	47.9	4.8	0.9
Service and sales workers	0.0	23.7	67.1	2.1	2.5	7.2	0.0
Skilled agricultural, forestry, and	0.0	5.7	1.2	0.0	0.0	0.0	46.1
Craft and related trades workers	24.1	3.2	1.7	9.1	0.0	3.7	2.8
Plant and machine operators, and	1.3	3.9	0.2	6.6	2.2	4.8	11.1
Elementary occupations	65.2	30.4	9.3	56.8	2.7	65.8	35.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: NEA Employer Skills Needs Survey 2012.

Elementary occupations ranked first also for vacancies in food and beverages, and construction, and accounted for 35.0 per cent of vacancies in rubber and plastics. In accommodation, 67.1 per cent of the vacancies were concentrated in service and sales workers, with clerical support workers second with 12.9 per cent. In the rubber and plastics sector, skilled agricultural workers ranked first with 46.3 per cent. Finally, in the finance sector, 47.9 per cent of vacancies were for clerks, followed by technicians and associated professionals (29.3 per cent) and professionals (13.7 per cent). More than half of the vacancies for technicians were in this sector, as well as a quarter of those for professionals.

6.2 Hard-to-fill vacancies

The survey showed not only that many establishments, especially large establishments in the garments sector, had a very high number of vacancies, but that three-quarters of the vacancies were considered hard to fill, and 73 per cent of the establishments with vacancies considered all or some of their vacancies hard to fill, as shown in figure 6.2.

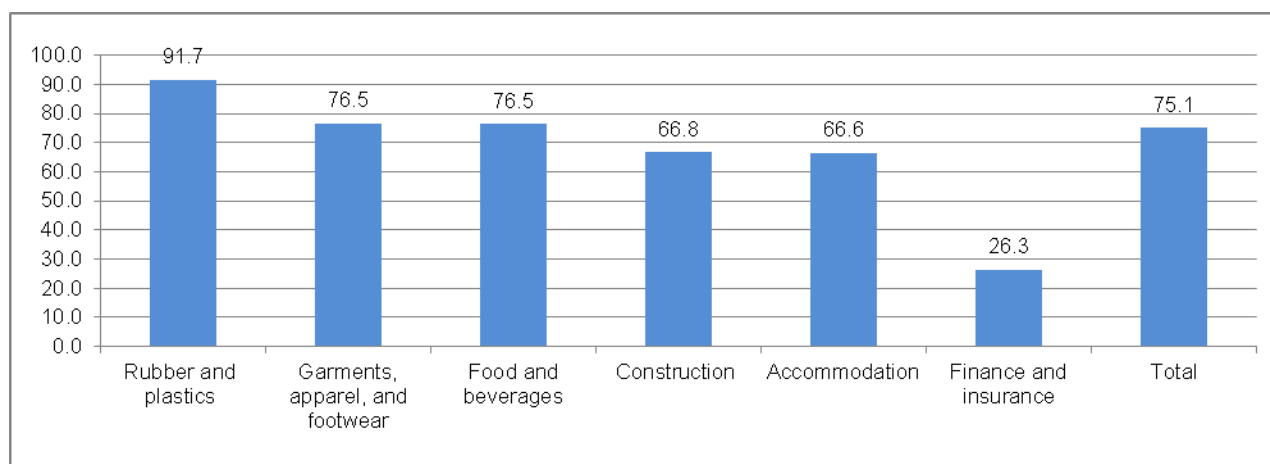
Figure 6.2. Share of establishments declaring vacancies as hard to fill, and share of hard-to-fill vacancies by workforce size



Source: NEA Employer Skills Needs Survey 2012.

The highest percentage of hard-to-fill vacancies was in the rubber and plastics sector (91.7 per cent), followed by garments, apparel, and footwear, and food and beverages, with values just above the total average (75.1 per cent). Construction and accommodation followed with around 67 per cent each, while the finance sector seemed to enjoy a much better situation with only 26.3 per cent, as shown in figure 6.3. This ranking suggests that wages could play a relevant role in explaining the difficulties that different sectors encountered in filling their vacancies.

Figure 6.3 Share of hard-to-fill vacancies, by sector



Source: NEA Employer Skills Needs Survey 2012.

The vacancies that were more difficult to fill were those that required skilled agricultural workers, machine operators, managers, and craft workers, as shown in table 6.3. However, and quite surprisingly for a country that, at least on paper, should have an almost unlimited supply of unskilled labour, vacancies for elementary occupations were considered hard to fill in almost 75 per cent of the cases. At the same time, vacancies for

which the problem was less severe were those requiring a university degree and especially an upper-school diploma.

Table 6.3. Hard-to-fill vacancies: distribution and densities, by major occupation type

Major occupation type	Percentage distribution	Major occupation type	Density
Elementary occupations	61.0	Skilled agricultural, forestry, and fishery workers	96.3
Craft and related trades workers	23.6	Plant and machine operators, and assemblers	91.7
Clerical support workers	8.8	Managers	86.7
Service and sales workers	2.4	Craft and related trades workers	81.3
Plant and machine operators, and assemblers	1.9	Elementary occupations	74.7
Skilled agricultural, forestry, and fishery workers	0.8	Service and sales workers	70.2
Professionals	0.7	Clerical support workers	69.1
Technicians and associated professionals	0.6	Professionals	49.7
Managers	0.1	Technicians and associated professionals	34.7

Source: NEA Employer Skills Needs Survey 2012.

Combining the fact that three-quarters of the vacancies were hard to fill with the fact that three-quarters of the hard-to-fill vacancies were represented by jobs that do not require any special skill, the result was that the percentage of vacancies for elementary occupations was equal to the percentage of hard-to-fill vacancies for elementary occupations (61 per cent). Craft and related trades workers ranked second at 23.6 per cent. Clerical support workers ranked third at 8.8 per cent. The percentages of the other major occupation types were all below 3 per cent. Densities did, however, differ between sectors, as shown in table 6.4.

Table 6.4. Densities of hard-to-fill vacancies, by major occupation type and sector

	Accom.	Constr.	Finance	Food and beverages	Garments and apparel	Rubber and plastics
Managers	100.0	100.0	83.3	50.0		
Professionals	25.0	59.7	22.0	56.0	62.5	75.0
Technicians and associated professionals	19.5	37.5	25.2	62.5	75.0	60.0
Clerical support workers	70.5	0.0	26.3	55.6	74.5	100.0
Service and sales workers	72.7	42.9	33.3	51.9		
Skilled agricultural, forestry, and fishery workers	42.9					100.0
Craft and related trades workers	100.0	66.7		64.3	81.5	83.3
Plant and machine operators, and assemblers	0.0	90.9	12.5	77.8	97.5	83.3
Elementary occupations	51.8	69.1	30.0	85.0	74.6	86.8

Source: NEA Employer Skills Needs Survey 2012.

Leaving aside elementary occupations, the survey showed that the two service sectors and construction had difficulty filling their available positions for managers, as did establishments in the finance sector. Machine

operators ranked between the hardest to find for establishments in construction and in three industrial sectors. The same was true for craft workers.

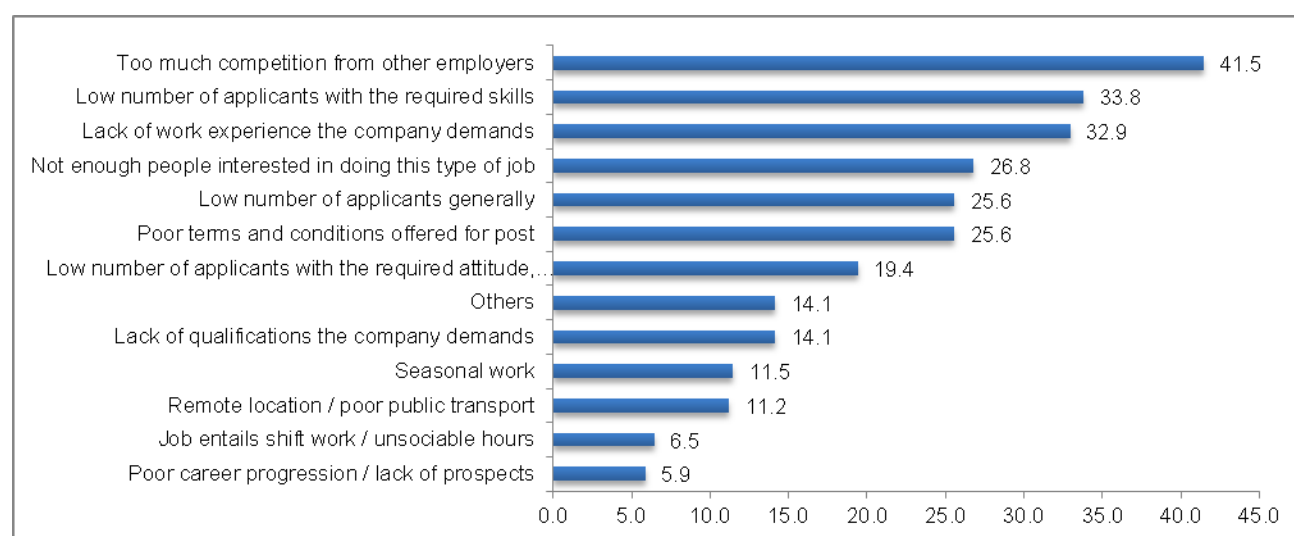
6.3 Causes of hard-to-fill vacancies

Asked why vacancies were hard to fill, the establishments in the sample failed to indicate a strongly predominant reason. The most cited reasons, as shown in figure 6.4, were, in order:

- (a) the presence of too much competition from other employers;
- (b) the low number of applicants with the required skills; and
- (c) the lack of work experience the establishment demanded.

Employers were thus faced with an insufficient number of applicants and, more specifically, of applicants with the required skills. However the first reason also suggested that employers were not willing to pay higher wages. The most important determinants in the supply of labour are certainly represented by the wage level and the working conditions, and this is certainly true in a situation where almost everybody has the alternative to remain with their family in an agricultural setting that can provide not only subsistence, but also a degree of economic freedom.

Figure 6.4. Causes of hard-to-fill vacancies



Source: NEA Employer Skills Needs Survey 2012.

The presence of too much competition as the main cause of hard-to-fill vacancies was felt by large establishments that probably paid more attention to the financial aspect of the working contract; for small establishments the main reason was represented by the fact that not enough people were interested in accepting available jobs, while medium-sized establishments complained mainly about the low number of applicants with the required skills, as shown in table 6.5.

Table 6.5. Causes of hard-to-fill vacancies, by workforce size

Causes of hard-to-fill vacancies	Workforce size		
	10-19	20-99	100+
Too much competition from other employers	38.6	28.1	52.5
Not enough people interested in the type of job	43.9	26.4	21.0
Poor terms and conditions offered	38.6	20.7	24.7
Low number of applicants with the required skills	33.3	42.1	27.8
Low number of applicants with the required attitude, motivation, or personality	19.3	21.5	17.9
Low number of applicants generally	17.5	19.8	32.7
Lack of work experience the establishment demands	33.3	36.4	30.2
Lack of qualifications the establishment demands	26.3	9.9	13.0
Poor career progression/lack of prospects	1.8	8.3	5.6
Job entails shift work/unsociable hours	12.3	3.3	6.8
Seasonal work	7.0	13.2	11.7
Remote location/poor public transport	5.3	5.8	17.3
Others	14.0	19.0	10.5

Source: NEA Employer Skills Needs Survey 2012.

Analyzing the answers by sector, as shown in table 6.6, the presence of too much competition ranked first for accommodation and for the three industrial sectors. Establishments in the construction sector complained mainly about lack of work experience, while for those in finance the main problem was the low number of applicants with the required skills.

Table 6.6. Causes of hard-to-fill vacancies, by sector

Causes of hard-to-fill vacancies	Accom.	Constr.	Finance and ins.	Food and bev.	Garments, apparel and footwear	Rubber and plastics
Too much competition from other employers	41.0	28.6	22.7	38.6	52.7	58.8
Not enough people interested in the type of job	27.7	26.2	6.8	34.1	30.9	29.4
Poor terms and conditions offered	28.9	28.6	13.6	36.4	19.1	47.1
Low number of applicants with the required skills	26.5	52.4	56.8	34.1	24.5	23.5
Low number of applicants with the required attitude, motivation, or personality	25.3	21.4	18.2	34.1	10.0	11.8
Low number of applicants generally	30.1	11.9	4.5	22.7	39.1	11.8
Lack of work experience the establishment demands	30.1	61.9	47.7	15.9	22.7	47.1
Lack of qualifications the establishment demands	12.0	33.3	31.8	6.8	6.4	0.0
Poor career progression/lack of prospects	15.7	0.0	4.5	2.3	3.6	0.0
Job entails shift work unsociable hours	15.7	0.0	2.3	0.0	6.4	5.9
Seasonal work	10.8	7.1	0.0	11.4	19.1	5.9
Remote location/poor public transport	3.6	4.8	11.4	13.6	15.5	29.4

Others	18.1	11.9	11.4	11.4	11.8	29.4
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Source: NEA Employer Skills Needs Survey 2012.

6.4 Skills shortages

On the basis of the previous classification of the hard-to-fill vacancies, the survey showed that 35.6 per cent of establishments were affected by skills-shortage vacancies, accounting for 28 per cent of the total, as shown in table 6.7. Thus, in substance, according to the survey, the large majority of vacancies were due not to skills shortages but to the poor attitude, personality, or motivation of the applicants.

It must be underlined that skills-shortage vacancies were concentrated in large establishments (which were more likely to be organized to measure the problem), while the minimum incidence affected medium-sized establishments. As the previous analysis suggested, the sectors that were less affected by the presence of skill-shortage vacancies were rubber and plastics sector, followed by food and beverages, and finance and insurance (table 6.7). In terms of percentage of establishments, the leading sector was accommodation, followed by construction, garments, and rubber and plastics.

Table 6.7. Share and density of skills-shortage vacancies, by workforce size and sector

	No. of establishments with vacancies	No. of vacancies	Share of establishments with skills-shortage vacancies		Skills-shortage vacancies	
	Abs. value	Abs. value	Abs. value	Percent	Abs. value	Percent
Total	292	17 448	104	35.6	4 894	28.0
Size of workforce						
10–19	135	303	16	31.4	78	25.7
20–99	225	1 638	40	31.3	361	22.0
100+	157	15 507	48	42.5	4 455	28.7
Sector						
Accommodation	51	605	26	51.0	159	26.3
Construction	35	331	16	45.7	78	23.6
Finance and insurance	60	365	19	31.7	80	21.9
Food and beverages	41	374	8	19.5	63	16.8
Garments, apparel, and footwear	87	15 556	29	33.3	4 492	28.9
Rubber and plastics	18	217	6	33.3	22	10.1

Note: Number of vacancies covered only the top five major occupations vacancies reported by establishments at the time of interview. Density of skills-shortage vacancies refers to the percentage of vacancies that are hard to fill because of skills shortages.

Source: NEA Employer Skills Needs Survey 2012.

6.5 Vacancies by major occupation types

The analysis of skills-shortage vacancies by major occupation type and sector showed that almost 85 per cent of the skills-shortages vacancies were for elementary occupations and 84 per cent were in the garments sector. It is a result that takes away most of the relevance of this concept for the Cambodian labour market, given that the competencies required for elementary occupations in the garments sector could probably be acquired on the job in a rather short period, but as we will see later, not much effort was made by the establishments in this sector to train their workers.

The other numbers are quite modest. However, as shown in table 6.8, they suggest that the skills shortages affected:

- (a) in accommodation, mainly service and sales workers (68.6 per cent), followed by clerical and support workers (17.6 per cent);
- (b) in finance, clerical support workers (47.5 per cent) and technicians and associated professionals (28.8 per cent);
- (c) in construction, professionals (47.4 per cent) and plant and machine operators (25.6 per cent);
- (d) in rubber and plastics, plant and machine operators (45.5 per cent) and elementary occupations (27.3 per cent); and
- (e) in food and beverages, elementary occupations (34.9 per cent), professionals (19 per cent), plant and machine operators (15.9 per cent), and technicians (14.3 per cent).

Table 6.8. Share of skills-shortage vacancies, by major occupation type and sector

	Accom.	Constr.	Finance and ins.	Food and beverages	Garments, apparel and footwear	Rubber and plast.	Total
Managers	2	5	5	1	0	0	13
Professionals	1	37	8	12	13	3	74
Technicians and associated professionals	4	5	23	9	13	1	55
Clerical support workers	28		38	5	5	2	78
Service and sales workers	109	1	2	1	0	0	113
Skilled agricultural, forestry, and fishery workers	0	0	0	0	0	0	0
Craft and related trades workers	7	10	0	3	308	0	328
Plant and machine operators, and assemblers	0	20	1	10	47	10	88
Elementary occupations	8	0	3	22	4 106	6	4 145
Total	159	78	80	63	4 492	22	4 894
<i>Percentage composition by major occupation</i>							
Managers	1.3	6.4	6.3	1.6	0.0	0.0	0.3
Professionals	0.6	47.4	10.0	19.0	0.3	13.6	1.5
Technicians and associated professionals	2.5	6.4	28.8	14.3	0.3	4.5	1.1
Clerical support workers	17.6	0.0	47.5	7.9	0.1	9.1	1.6
Service and sales workers	68.6	1.3	2.5	1.6	0.0	0.0	2.3
Skilled agricultural, forestry, and fishery workers	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Craft and related trades workers	4.4	12.8	0.0	4.8	6.9	0.0	6.7
Plant and machine operators, and assemblers	0.0	25.6	1.3	15.9	1.0	45.5	1.8
Elementary occupations	5.0	0.0	3.8	34.9	91.4	27.3	84.7

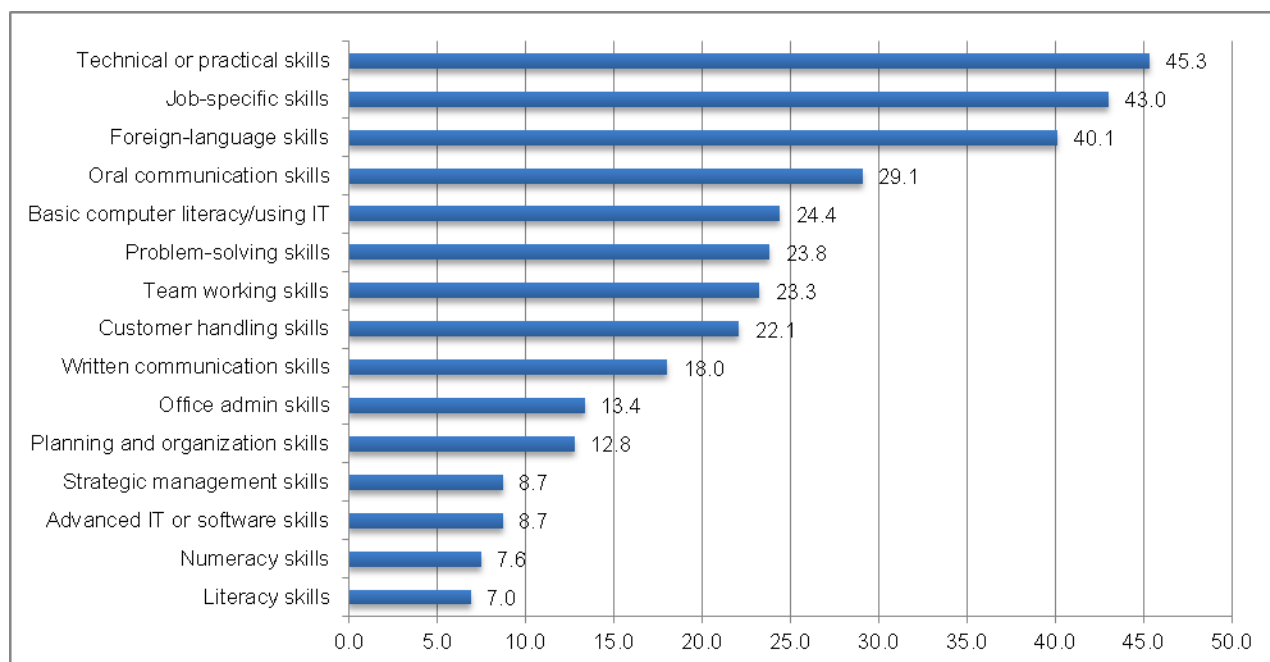
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
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Source: NEA Employer Skills Needs Survey 2012.

6.6 Skills lacking among jobseekers

The survey also tried to identify which skills were lacking in jobseekers. According to the establishments in the sample, the three most relevant gaps (cited by more than 40 per cent of the establishments), were, as shown in figure 6.5: lack of technical or practical skills,⁶ lack of job-specific skills,⁷ and lack of language skills.

Figure 6.5. Skills shortages



Note: The result was based on skill-shortages vacancies (172 vacancies), which were reported by 104 establishments with a skills shortage. These percentages refer to the proportion of the skills-shortage vacancies caused by a lack of each skill.

Source: NEA Employer Skills Needs Survey 2012.

A detailed analysis at the major-occupation type level, as shown in Table 6.9, showed that:

- (a) managers miss: (i) basic computer literacy/using IT, (ii) customer handling skills, (iii) foreign-language skills;
- (b) professionals miss: (i) foreign-language skills, (ii) basic computer literacy/using IT, (iii) oral communication skills;

⁶ Technical skills refers to the knowledge and abilities needed to accomplish mathematical, engineering, scientific, or computer-related duties.

⁷ Job-specific skills are usually specialized and refer to those abilities acquired through learning and practice. They are often job- or task-specific; in other words, a particular skills set or proficiency required to perform a specific job or task.

- (c) technicians and associated professionals miss: (i) foreign-language skills, (ii) job-specific skills, (iii) technical or practical skills;
- (d) clerical support workers miss: (i) oral communication skills, (ii) foreign-language skills, (iii) customer handling skills, (iv) problem-solving skills, (v) job-specific skills;
- (e) service and sales workers miss: (i) foreign-language skills, (ii) technical or practical skills, (iii) job-specific skills;
- (f) craft and related trades workers miss: (i) technical or practical skills, (ii) job-specific skills;
- (g) plant and machine operators, and assemblers miss: (i) team-working skills, (ii) technical or practical skills; and
- (h) elementary occupations miss: (i) technical or practical skills, (ii) job-specific skills.

Table 6.9. Skills shortages, by major occupation type

Managers		Professionals	
Skills		Skills	
Basic computer literacy/using IT	45.5	Foreign-language skills	52.8
Customer handling skills	45.5	Basic computer literacy/using IT	50.0
Foreign-language skills	45.5	Oral communication skills	44.4
Oral communication skills	36.4	Customer handling skills	36.1
Problem-solving skills	36.4	Technical or practical skills	36.1
Planning and organization skills	36.4	Job-specific skills	36.1
Technical or practical skills	36.4		

Technicians and associated professionals		Clerical support workers	
Skills		Skills	
Foreign-language skills	50.0	Oral communication skills	56.0
Job-specific skills	46.4	Foreign-language skills	56.0
Technical or practical skills	42.9	Customer handling skills	44.0
Basic computer literacy/using IT	32.1	Problem-solving skills	40.0
Problem-solving skills	32.1	Job-specific skills	40.0
Oral communication skills	28.6	Office admin skills	32.0
Team-working skills	25.0	Basic computer literacy/using IT	28.0

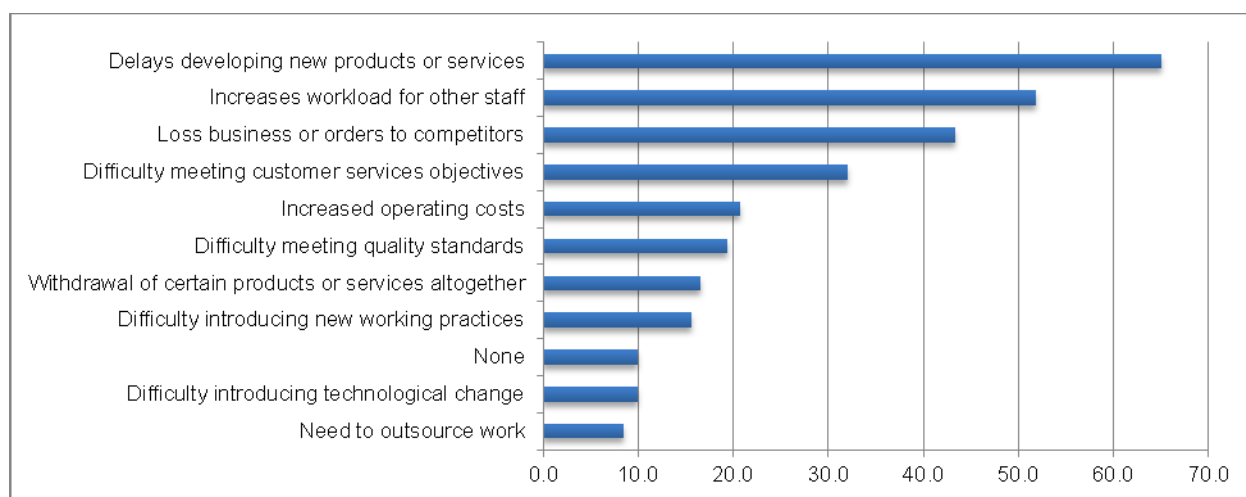
Service and sales workers		Craft and related trades workers	
Skills		Skills	
Foreign-language skills	54.5	Technical or practical skills	80.0
Technical or practical skills	45.5	Job-specific skills	46.7
Job-specific skills	45.5	Advanced IT or software skills	13.3
Oral communication skills	31.8	Customer handling skills	13.3
Team-working skills	27.3	Team-working skills	13.3
Problem-solving skills	22.7	Foreign-language skills	13.3
		Problem-solving skills	13.3

Plant and machine operators, and assemblers		Elementary occupations	
Skills		Skills	
Team-working skills	53.3	Technical or practical skills	70.0
Technical or practical skills	40.0	Job-specific skills	70.0
Job-specific skills	26.7	Any other skills	20.0
Any other skills	26.7	Written communication skills	15.0

6.7 Impact of hard-to-fill vacancies and measures taken to remedy the problem

The establishments largely agreed on the main consequences of the difficulties in filling vacancies. Almost two-thirds indicated that this situation delayed the development of new products; 51.9 per cent reported that it increased the workload of other staff; and 43.4 per cent that it caused loss of business or orders to other competitors, as shown in figure 6.6. The first and third problems appeared to be most serious for the garments sector; the second for the accommodation sector.

Figure 6.6. Impacts of hard-to-fill vacancies

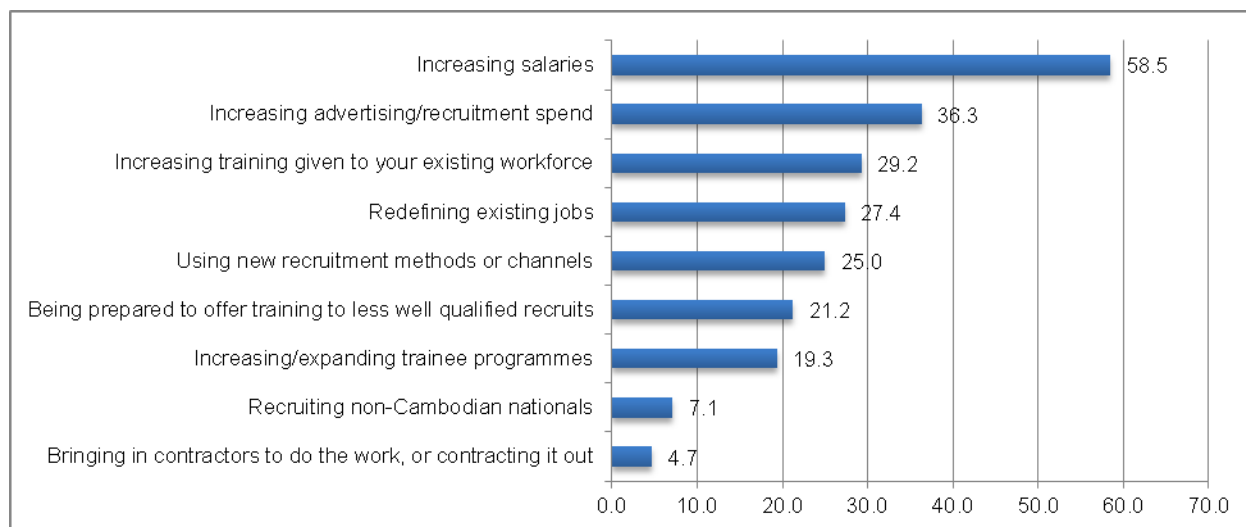


Note: This result was based on all establishments with hard-to-fill vacancies.

Source: NEA Employer Skills Needs Survey 2012.

The establishments had adopted an array of measures to try to fill their vacancies. The most common was to raise wages, a measure taken by 58.5 per cent of the establishments affected by the problem of hard-to-fill vacancies, as shown in figure 6.7. This also confirmed the fact that establishments understand that wages are a critical variable in acquiring the workforce they need and to reduce staff turnover. However, data suggest that what had been done was not sufficient, and wages were still too low. Other measures were directed towards recruitment and to reducing the need for new employees. The former type of measures included improvements in advertisement and recruitment spending (36.3 per cent), and recruitment methods (25.0 per cent); the latter, increasing on-the-job training and redefining existing jobs.

Figure 6.7. Measures taken to address hard-to-fill vacancies



Note: This result is based on all establishments with hard-to-fill vacancies.

Source: NEA Employer Skills Needs Survey 2012.

7. Skills gaps

7.1 Incidence and density of skills gaps at the workplace

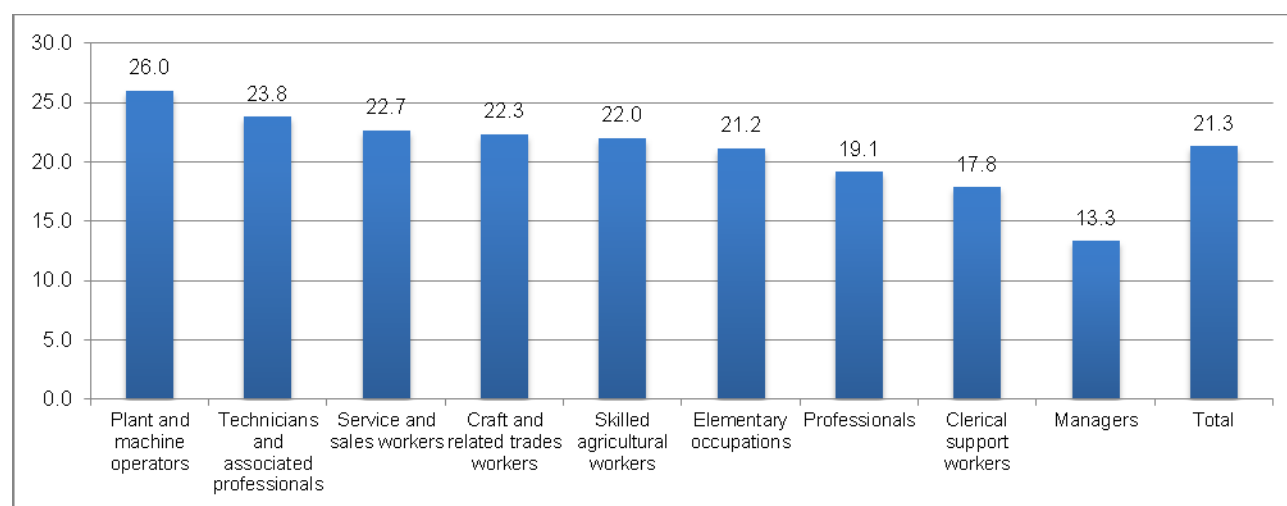
More than half (55 per cent) of the establishments interviewed declared that employees did not perform their jobs at the required level. The incidence of this problem, as shown in table 7.1 and figure 7.1, appears to be directly related to the size of the establishment; to be particularly acute in the rubber, garments, and accommodation sectors, but also felt by around 50 per cent of establishments in the other sectors; to be more prevalent in establishments operating in the international market and local market; and to affect non-registered establishments more than registered establishments.

Table 7.1. Percentage of establishments affected by skills gaps and percentage of workers with skills gaps

Workforce size	Share of establishments	Nationality of ownership	Share of establishments
10–19	41.5	Foreign	60.7
20–99	54.7	Cambodian	51.7
100+	65.6		
Sector	Share of establishments	Market	Share of establishments
Rubber and plastics	60.6	Local	60.7
Garments and apparel	59.8	International	60.2
Accommodation	59.6	National	50.2
Food and beverages	52.7		
Finance	50.5	Commercial registration	Share of establishments
Construction	45.2	Not registered	75.9
		Registered	53.3

Source: NEA Employer Skills Needs Survey 2012.

Figure 7.1. Share of skills gaps, by major occupation type



Source: NEA Employer Skills Needs Survey 2012.

7.2 Causes of skills gaps

Rather surprisingly, the main cause behind the inadequate performance of workers was not a lack of appropriate training, the insufficient supply of skilled labour, or the innovation processes adopted by the establishment, but, according to the interviews, a lack of worker motivation. Almost two-thirds of establishments facing the problem cited this explanation. The second reason, cited by 44 per cent of the establishments, was the fact that workers were new to the role, a reason that could be connected to the high turnover that characterizes the Cambodian labour market. Insufficient training and the limited impact of the training on workers' performance ranked only third in most cases. Finally, a limited number of establishments put the problem down to ongoing innovation processes.

Table 7.2 shows the three main causes of insufficient performance indicated by the establishments in each sector. The lack of motivation ranked first in every sector with the exception of finance, where it ranked second. The problem was most acute in the rubber sector (at 90 per cent), followed by food, accommodation, and garments, all at around 70 per cent.

Table 7.2: Factors associated with employees not performing to the required level, by sector

Accommodation		Food and Beverages	
Lack of motivation	71.2	Lack of motivation	72.9
New to the role	57.6	New to the role	41.7
Not properly trained	30.5	Others	27.1
Construction		Garments, apparel and footwear	
Lack of motivation	63.6	Lack of motivation	70.1
New to the role	33.3	New to the role	47.8
Not properly trained	30.3	Development of new products	26.9
Finance		Rubber and plastics	
New to the role	47.3	Lack of motivation	90.0
Lack of motivation	34.5	New to the role	35.0
Not improved after training	29.1	Problems retaining staff	30.0

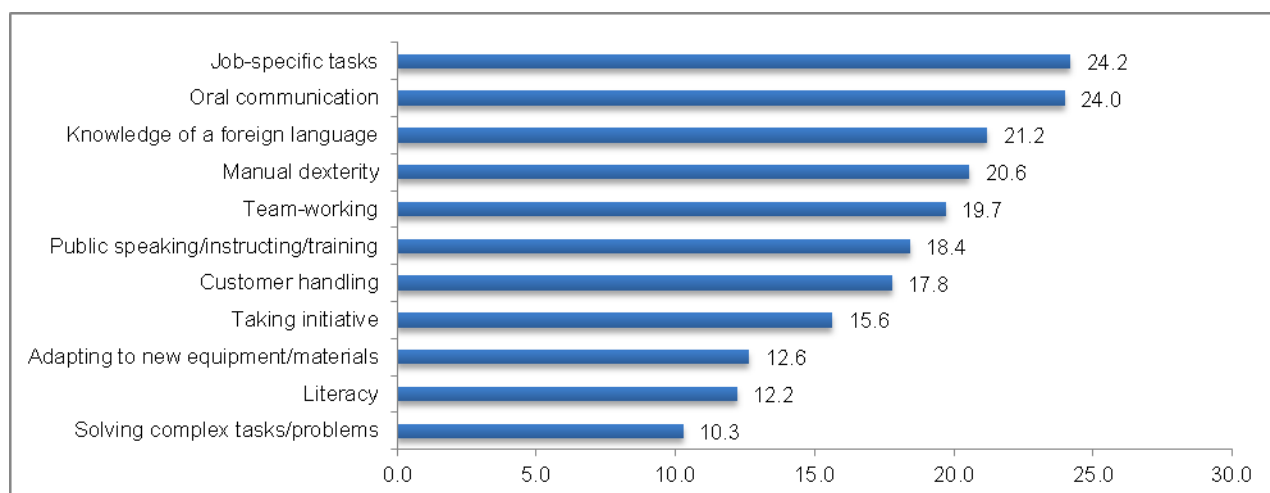
Source: NEA Employer Skills Needs Survey 2012.

The second most common reason cited for inadequate performance was the fact that employees were new to their role. This reason ranked second in all sectors with the exception of finance, where it ranked first. In third place, the different sectors cited other reasons: lack of adequate training in the accommodation and construction sectors; development of new products in the garments sector; problems in retaining staff in the rubber sector; and, finally, insufficient improvement after training in the financial sector.

7.3 Skills that need to be improved

Regarding skills that needed improvement, the establishments gave answers spread over the possibilities offered by the questionnaire. However, as shown in figure 7.2, four skills were cited by more than 20 per cent of the establishments, in the following order: job-specific tasks, oral communication, knowledge of a foreign language, and manual dexterity.

Figure 7.2. Skills that need to be improved, percentage of establishments



Source: NEA Employer Skills Needs Survey 2012.

Notable differences emerged between sectors, together with relevant similarities, as shown in table 7.3. In the three industrial sectors, the most cited skills need was manual dexterity, which also ranked second in construction. The need to learn better job-specific tasks ranked in third position not only in the food and rubber sectors, but also in construction and in garments. Team-working not surprisingly ranked first in construction, and ranked second in the food and rubber sectors. Establishments in the garments sector indicated different skills needs, with taking initiative in second position, and, unexpectedly, public speaking in third.

Table 7.3: First three skills that need to be improved, by sector; percentage of establishments

Accommodation		Food and beverages	
Knowledge of a foreign language	47.2	Manual dexterity	31.0
Oral communication	32.0	Team-working	25.4
Public speaking/instructing/training	23.2	Job-specific tasks	22.5
Construction		Garments, apparel and footwear	
Team-working	34.0	Manual dexterity	32.7
Manual dexterity	29.8	Taking initiative	26.2
Job-specific tasks	29.8	Public speaking/instructing/training	25.2
Finance and insurance		Rubber and plastics	
Oral communication	49.5	Manual dexterity	37.5
Customer handling	46.2	Team-working	33.3
Job-specific tasks	26.9	Job-specific tasks	29.2

Note: This percentage is based on the skills gap in each occupation. It shows the proportion of the skills gap caused by a lack of each skill in those sectors.

Source: NEA Employer Skills Needs Survey 2012.

Accommodation was a unique case in this respect. Here, what establishments demanded was a better knowledge of foreign languages, and more developed communication capacities. In a similar vein, the finance sector demanded not only improved communications skills for dealing with clients, but also, as we have already seen, a better knowledge of job-specific skills.

Let us now analyse the problem from the perspective of major occupation type, as shown in table 7.4. Although certainly influenced by the sectors involved in the survey, the message was very clear: Establishments need office workers in possession of a better knowledge of foreign languages, a more developed capacity to communicate with and handle clients, and better IT knowledge. Regarding skilled agricultural workers, craft workers, and machine operators, the main demand was for more manual dexterity and better preparation on job-related tasks.

Table 7.4. Skills that need to be improved, by major occupation; percentage of establishments

Managers		Service and sales workers	
IT literacy/using IT	33.3	Knowledge of a foreign language	44.4
Advanced IT application/development	33.3	Oral communication	41.3
Oral communication	33.3	Customer handling	31.7
Public speaking/instructing/training	33.3	Team-working	25.4
Knowledge of a foreign language	33.3	Other job-specific tasks	23.8
Management responsibilities/taking initiative	33.3	Skilled agricultural workers	
Job-specific tasks	33.3	Job-specific tasks	40.0
Professionals		Literacy	20.0
Job-specific tasks	31.4	Public speaking/instructing training	20.0
Customer handling	28.6	Taking initiative	20.0
Knowledge of a foreign language	28.6	Knowledge of a foreign language	20.0
Oral communication	22.9	Planning and organizing	20.0
IT literacy/using IT	20.0	Adapting to new equipment/materials	20.0
Technicians and associated professionals		Learning new ideas, methods, concepts	20.0
Oral communication	37.7	Craft and related trade workers	
Customer handling	34.4	Manual dexterity	41.7
Job-specific tasks	26.2	Team-working	28.3
Knowledge of a foreign language	21.3	Taking initiative	26.7
Planning and organizing	21.3	Adapting to new equipment/materials	23.3
Clerical support workers		Other job-specific tasks	23.3
Oral communication	50.6	Plant and machine operators	
Knowledge of a foreign language	39.2	Manual dexterity	35.0
Customer handling	27.8	Taking initiative	30.0
IT literacy/using IT	24.1	Solving complex tasks/problems	20.0
		Elementary occupations	
		Manual dexterity	33.3
		Other job-specific tasks	29.7
		Team-working	22.5

Note: This percentage is based on the skills gap in each occupation. It shows the proportion of the skills gap caused by a lack of each skill in those sectors.

Source: NEA Employer Skills Needs Survey 2012.

The needs and demands were similar for higher-level positions. Establishments suggested that managers and professionals should receive training in IT and IT applications, communications, foreign languages, and leadership. For technicians, they suggested more training on job-specific tasks and on planning and organization.

8. Workforce development and business strategy

After presenting the proportion of establishments that had tried to improve labour productivity through training programmes, this section will present the main training activities undertaken by the establishments together with the difficulties in organizing them, and discuss the establishments' future plans to recruit new staffs in the following year.

8.1 Incidence of training

During the year preceding the survey, a high percentage of establishments (62 per cent) provided some form of training to their employees. The percentage of establishments that provided more training was directly related to the establishment size, as shown in table 8.1. Training was provided by 37.8 per cent of small establishments, 64.4 per cent of medium-sized establishments, and 79.6 per cent of large establishments. Foreign-owned establishments (73.0 per cent) were more inclined to provide training than Cambodian establishments (57.1 per cent). Establishments operating in the international market (72.4 per cent) were more inclined to provide training than establishments operating in the national market (60.9 per cent) or the local market (56.6 per cent).

In the finance sector, 94.5 per cent of the establishments provided some form of training. In garments and in accommodation, training was provided by around 60 per cent of the establishments, in construction by 53.4 per cent, and in the food sector by 45.1. Only 27.3 per cent of establishments in the rubber sector provided some form of training. Finally, 31.0 per cent of unregistered establishments provided some form of training, versus a percentage of 63.9 per cent for registered establishments.

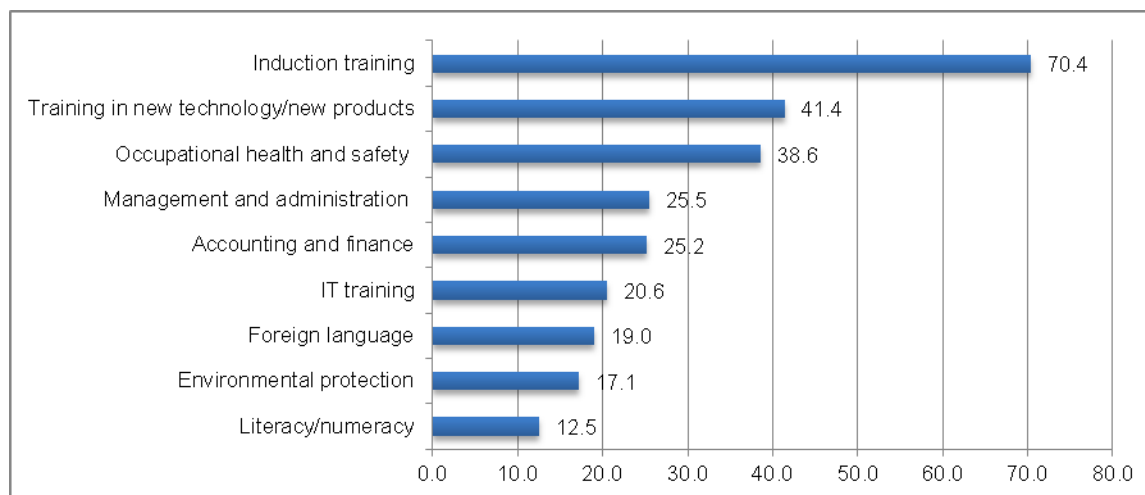
Table 8.1. Share of establishments that provided training, by workforce size, sector, nationality of ownership, type of market, and business registration

Group/workforce size		Ownership	
10–19 workers	37.8	Foreign	73.0
20–99 workers	64.4	Cambodian	57.1
100+ workers	79.6	Market	
Sector		International	72.4
Finance and insurance	94.5	National	60.9
Garments, apparel, and footwear	61.6	Local	56.6
Accommodation	60.6	Commercial Registration	
Construction	53.4	Registered	63.9
Food and beverages	45.1	Not registered	31.0
Rubber and plastics	27.3		

Source: NEA Employer Skills Needs Survey 2012.

As shown in figure 8.1, just over 70 per cent of establishments that provided some type of training offered an induction course, 41.4 per cent offered training in new technologies, and 38.6 per cent provided courses on health and safety.

Figure 8.1. Share of establishments that provided training, by type of training



Source: NEA Employer Skills Needs Survey 2012.

However, training provisions varied across sectors, as shown in table 8.2. In this table we have reported a specialization index computed by dividing the percentage of firms in each sector that provided a given course by the percentage computed for all the establishments. Therefore, a value above 100 implies that that sector provided that type of course at an above-average rate; if the value is less than 100, it represents below average. We can therefore observe that:

- (a) Induction courses were offered by the accommodation sector and finance sector at above-average intensity. The accommodation sector also provided courses at an above-average rate in foreign languages, literacy and numeracy, and environmental protection.
- (b) The only area in which the percentage of construction establishments provided courses at above-average rate was management and administration.
- (c) As we have already seen, finance was a leading sector for training; more specifically its training activity was above-average in many fields related to its core activity, such as accounting and finance, management and administration, and new technology, but also literacy and numeracy.
- (d) The training performance of the food sector was above-average in new technology and occupational health and safety; and for garments and rubber in occupational health and safety, and environmental protection.

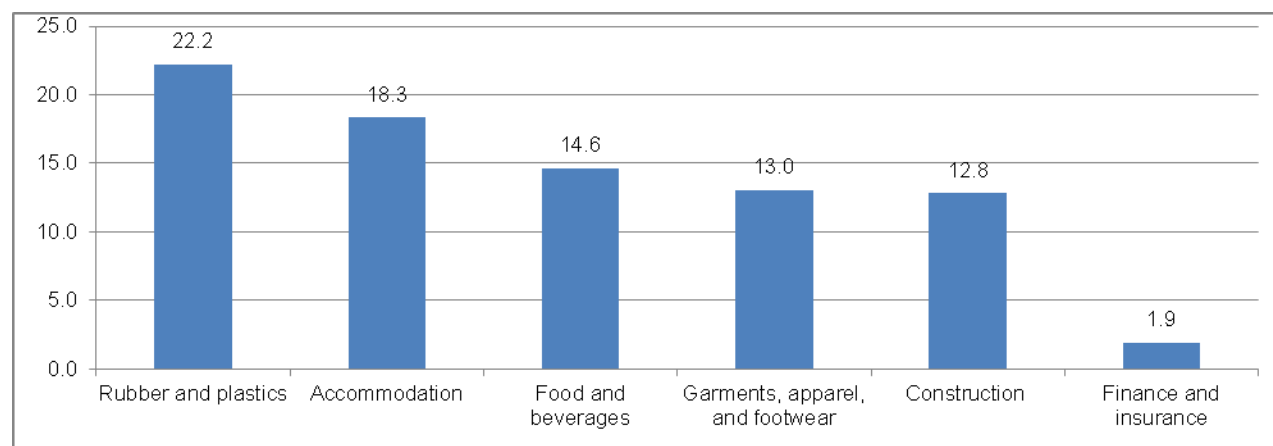
Table 8.2. Specialization index in a given type of course, by sector

	Accom.	Constr.	Finance and insurance	Food and beverages	Garments, apparel, and footwear	Rubber and plastics
Induction training	130.2	80.1	107.6	72.7	92.6	78.9
Occupational health and safety	82.0	86.3	72.9	101.0	161.3	115.1
Literacy/numeracy	120.4	61.7	171.4	19.6	58.2	0.0
Foreign language	219.3	67.5	92.0	25.7	76.3	58.5
IT training	89.2	87.3	165.3	47.5	56.4	54.0
Management and administration	52.2	110.4	171.0	47.7	68.1	43.5
Training in new technology/new products or services	80.5	92.8	138.3	117.7	59.5	53.6
Environmental protection	107.0	29.9	96.3	85.4	143.8	129.7
Accounting and finance	59.4	71.1	203.9	48.3	34.5	44.0
Others	91.9	124.7	116.5	71.2	89.3	72.1

Source: NEA Employer Skills Needs Survey 2012.

In conclusion, apart from finance, the other sectors, and especially the garments sector, did not provide a relevant number of courses aimed at remedying the skills problems they reported.

The last section of this part of the questionnaire aimed to ascertain whether, and in which measure, establishments experienced difficulties in organizing training courses and/or finding trainers, as shown in figure 8.2.

Figure 8.2. Share of establishments that organized training courses and experienced difficulties, by sector

Source: NEA Employer Skills Needs Survey 2012.

Around 11 per cent of establishments reported difficulties in organizing training courses and/or finding trainers, with the problem especially acute in the rubber sector (22.2 per cent), followed by accommodation, food, garments, and construction, and least of all in the finance sector (1.9 per cent).

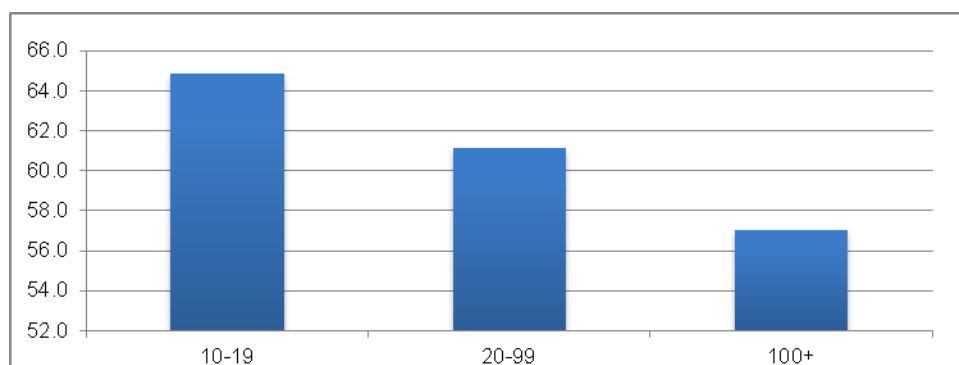
Regarding the reasons for difficulty in organizing training, the survey left some doubts, given that 59 per cent of the establishments chose the answer “Other reasons”, 40 per cent indicated a lack of information, 29 per cent a lack of courses and trainers, and again 29 per cent the low quality of courses and trainers.

8.2 Business strategy

The last part of the questionnaire aimed to ascertain the willingness of the establishments to innovate in product development, services, technologies, and to acquire new markets. Such willingness was stated by 61.7 per cent of the establishments in the sample.

As shown in figure 8.3, size of establishment was not a relevant factor on this question, with large establishments on the average, small establishments a little below average, and medium-sized establishments a little above the total average value.

Figure 8.3. Share of establishments that planned to introduce new products, services, or technologies, or expand/switch to new markets, by workforce size

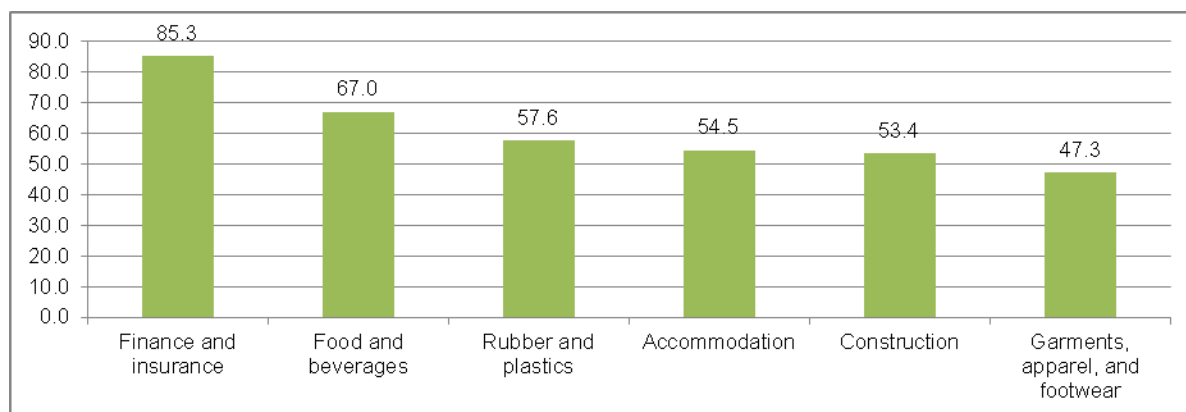


Source: NEA Employer Skills Needs Survey 2012.

Much more relevant differences emerged when we considered the sectors (as shown in figure 8.4) and the nationality of ownership (as shown in figure 8.5). Finance appeared to be the most innovative sector, with 85.3 per cent of establishments declaring a readiness to introduce some innovative measures. The only other sector with a percentage above average was food (67.0 per cent). It is interesting to note that the garments sector was the one in which establishments appeared to be least interested in innovation.

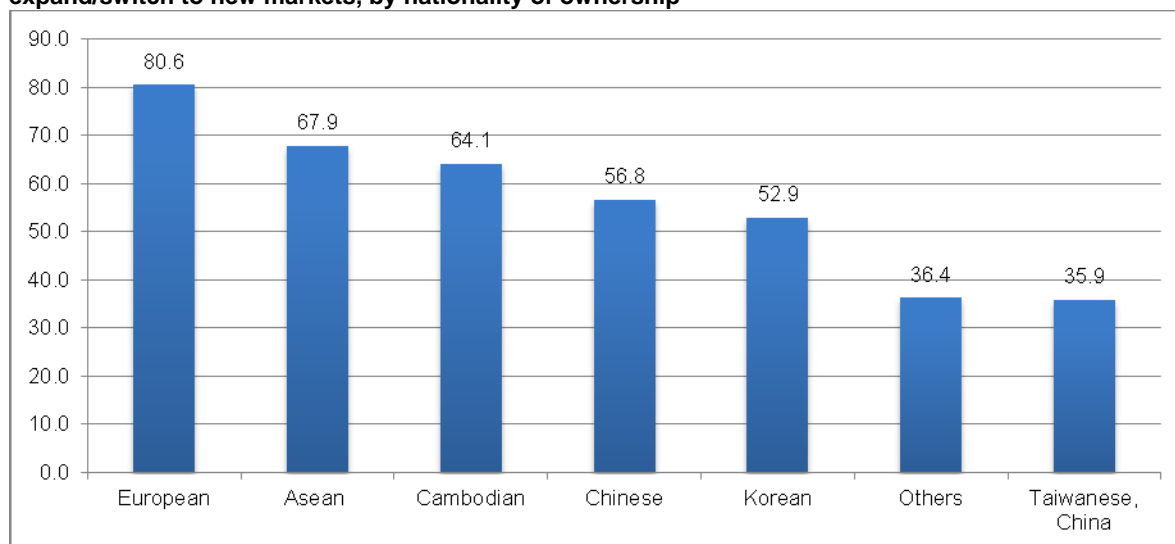
European-, ASEAN-, and Cambodian-owned establishments were more interested in innovation than their counterparts owned by entities from China, the Republic of Korea, and Taiwan, China.

Figure 8.4. Share of establishments that planned to introduce new products, services, or technologies, or expand/switch to new markets, by sector



Source: NEA Employer Skills Needs Survey 2012.

Figure 8.5. Share of establishments that planned to introduce new products, services, or technologies, or expand/switch to new markets, by nationality of ownership



Source: NEA Employer Skills Needs Survey 2012.

As shown in table 8.3, exploring the policies that establishments intended to adopt in order to innovate, the survey found that: 83.1 per cent of them planned to hire additional staff; 67.5 per cent planned to train existing staff; and 40.4 per cent planned to reorganize in order to better use available staff and competencies.

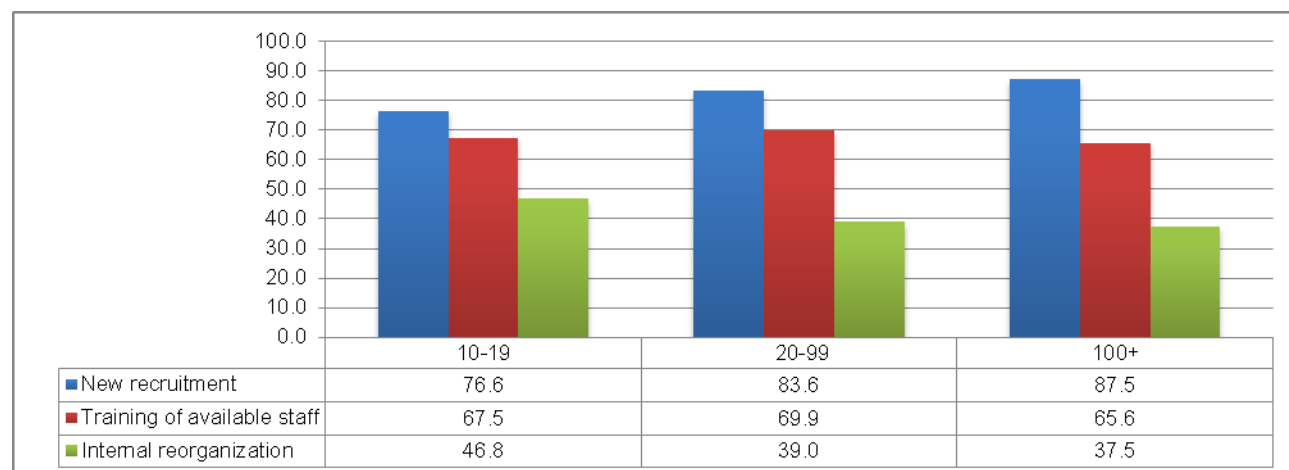
Table 8.3. Policies that establishments intended to adopt to introduce new products, services, or technologies, or expand/switch to new markets

	Absolute value	Percentage
Recruitment of new staff	265	83.1
Training of available staff	217	68.0
Internal reorganization to better use available staff and competences	129	40.4
Others	48	15.0

Source: NEA Employer Skills Needs Survey 2012.

When we examined innovation policies by size of establishment, as shown in Figure 8.6, the bigger the establishment the more widespread the tendency to recruit new personnel, and the lower the tendency to proceed to internal reorganization. The training of existing personnel did not reveal any clear trend connected to establishment size, but the medium-sized establishments prevailed in this respect by a limited margin.

Figure 8.6. Policies that establishments intended to adopt to introduce new products, services, or technologies, or expand/switch to new markets, by type of policy and workforce size



Source: NEA Employer Skills Needs Survey 2012.

Let us now consider the sectors. Garments presented a very well-defined policy profile. Basically, all the establishments in this sector intended to innovate through the recruitment of new staff. The other two policies (training of available staff and internal reorganization) played only a complementary role, with training being indicated by 47.2 per cent of the establishments, and reorganization by 30.2 per cent, as shown in table 8.4.

At the other extreme, in the finance sector, 83.9 per cent of the establishments indicated training as the main road to innovation, and 78.5 per cent the recruitment of new staff (a measure that is obviously necessary for the expected expansion of this rather young sector). Only 35.5 per cent of establishments indicated internal reorganization in this respect.

Accommodation presented a pattern similar to that of finance, while the pattern in construction was similar to that of garments. Establishments in the food sector seemed to prefer an intermediate position, with a consistent use of all three methods, as did rubber, although in a more limited way.

Table 8.4. Share of establishments that intended to adopt specific innovation measures, by sector

	Training of available staff		Internal re- organization		Recruitment of new staff
Finance and insurance	83.9	Food and beverages	54.1	Garments, apparel and footwear	98.1
Accommodation	81.5	Construction	43.6	Construction	92.3
Food and beverages	63.9	Accommodation	42.6	Accommodation	85.2
Rubber and plastics	57.9	Rubber and plastics	36.8	Finance and insurance	78.5
Construction	51.3	Finance and insurance	35.5	Food and beverage	77.0
Garments, apparel and footwear	47.2	Garments, apparel and footwear	30.2	Rubber and plastics	57.9

Source: NEA Employer Skills Needs Survey 2012.

9. Final observations

The general picture offered by the survey is that of a labour market dominated by foreign-owned establishments of large size (mainly from China and Taiwan, China), operating especially, but not only, in the garments sector, and whose production is aimed at foreign markets.

The survey confirmed what has been suggested by national accounting data, that the period from 2010 to 2012 was a very positive one. Employment grew at an average rate of almost 9 per cent, with growth rates above average being registered in the construction, finance, and tourism sectors, while garments – which employed 73 per cent of the workers in the sample – grew at just below average rates but contributed by almost three-quarters to the expansion in employment.

However, this notable expansion in demand for labour was countered by an insufficient supply of both skilled and (mainly) unskilled workers. This resulted in a large number of vacancies that accounted, at the time of the interviews, to 14 per cent of total employment. The vacancies were concentrated in the garments sector, and the occupation types most affected were elementary occupations, craft and related trades, and clerical jobs. The other sectors reported a lack of service and sales staff, clerks, technicians, and professionals.

In all sectors but finance, a large majority of vacancies were considered hard-to-fill. Skilled workers, machine operators, managers, and craft workers were the most difficult to find, together with unskilled workers. The latter shortage represents a rather unusual situation in a country that would be expected to have an abundant supply of unskilled labour.

The reasons most commonly cited for problems with recruitment were: the presence of too much competition from other employers; the low number of applicants with the required skills; and a lack of specific skills as requested by the establishment. All this would seem to imply, on one hand, that the vocational training system does not produce a sufficient number of skilled workers to meet the demands of the market and, on the other, that wages and working conditions are not sufficiently attractive for rural workers who can always fall back on subsistence agriculture on the family farm, while at the same time enjoying more personal and economic freedom.

The interviewed establishments also stressed that the difficulties in filling vacancies delayed the development of new products, increased the workload of other staff, and caused a loss of business or orders to competitors. This pushed them to offer higher wages, but the results of the survey suggest that such increases were not sufficient to create and motivate a labour supply quantitatively coherent with the demand.

Around 60 per cent of the establishments had hired first-time jobs seekers coming directly from the education system. Smaller establishments tended to prefer more mature candidates with previous work experience, while larger establishments seemed to prefer young people who could be better trained to the philosophy and practices of the establishment. The establishments generally gave quite positive evaluations of newly hired

workers, especially for those entrants coming from higher education and vocational training. Establishments in the construction sector were the most critical. The main criticisms were over lack of skills, lack of life experience and maturity, and lack of motivation.

In spite of positive comments on the preparedness of newly hired workers, more than half of the establishments declared that, eventually, their employees did not perform at the required level. On this point, the larger establishments operating in the international market were more critical, with the sectors most affected being rubber, garments, and accommodation. The workers for whom more technical training was needed were plant and machine operators, service and sales workers, craft workers, and skilled agricultural workers.

Interestingly, the main cause of insufficient performance indicated by the establishments in all sectors (with the only exception being the high-paying finance sector) was a lack of motivation. This reason was given by almost two-thirds of the establishments. The second reason was that workers were new to the role, which could be connected to the high turnover that characterizes the Cambodian labour market. Insufficient training and the limited impact of the training on workers' performance ranked only third. Finally, a limited number of establishments put the problem down to ongoing innovation processes.

When it came to indicating the skills that needed to be improved, the responses were thinly spread over the choice offered by the questionnaire. The most cited needs were for job-specific tasks, oral communication skills, knowledge of a foreign language, and manual dexterity. In the major occupation types, the message was very clear: Establishments need office workers with a better knowledge of foreign languages, a more developed capacity to communicate with and handle clients, and better IT knowledge. For skilled agricultural workers, craft workers, and machine operators the main demand was for more manual dexterity and better preparation on job-related tasks. The demands were similar also for higher-level positions. Establishments suggested that managers and professionals should receive more training in IT and IT applications, communications, foreign languages, and leadership; for technicians they suggested training in job-specific tasks, and planning and organization.

10. Policy suggestions

Economic growth is the result of a process of technological upgrading, of diversification, and structural change driven by the accumulation of capabilities, on one hand, and the transformation of the production structure on the other. The knowledge base of a country defines and limits the technologies that country can adopt, the production structure that may evolve, and thus the possible paths to its economic growth and social development. Speeding up economic growth and triggering successful catching-up processes requires shifting production from “low-quality” activities into “high-quality” activities, to “jump” into new “knowledge clusters”. In order to do so, a country also needs to drive the knowledge structure towards higher diversity and complexity, to endow its incoming labour force with new abilities and expertise.

The different levels of economic development reached by ASEAN countries reflect their different knowledge bases. Within the regional grouping, the percentage of people aged between 15 and 44 with secondary and tertiary education spans a maximum in Singapore (91 per cent) and minimum that characterizes the Lao People’s Democratic Republic, Cambodia, and Viet Nam (between 40 and 45 per cent). As a result, only Singapore – which has the world’s highest ranking in industrial performance – Malaysia, and Indonesia have already shifted their production structure to high-quality activities and new knowledge clusters, or are ready to do so. The more polarized education structure of Thailand, and possibly Myanmar, suggest that these two countries have limited options to start the production of intermediate-technology products, but could develop directly towards high-technology sectors.

Our assessment of the education and vocational training system and the results of the survey clearly suggest that, in Cambodia, education and vocational training are still largely insufficient even to allow diversification of production within the existing knowledge cluster. In substance, Cambodia has an extreme need to increase the educational achievements and technical training of its labour force in order to move away from a situation in which foreign and local investments are concentrated in labour-intensive activities. Eventually, it will be up to industrial policies to adopt measures that allow a correct utilization of the human resources available in the country.

In the near future, the Cambodian education and vocational training systems will benefit from a notable reduction in the population of training age, a clear advantage for a country that should aim not only to provide education to a larger percentage of young people, but also, and especially, to improve the quality of the learning process. It has been estimated that in the next 20 to 25 years, the population of training age will decline by almost 20 per cent, the decline being more pronounced for the population in compulsory education and higher secondary education age (-24.5 per cent, Appendix H).

On the basis of this demographic scenario – and assuming universal primary education, a gross enrolment ratio in lower-secondary education of 72.2 per cent, and of 45 per cent in upper-secondary education – total enrolment in the general education stream is projected to decline over the next 25 years by around 900,000 pupils, all in compulsory education. More specifically, enrolment in primary education will decline by

around 40 per cent, in lower-secondary by 8 per cent, while slightly increasing in upper-secondary education.⁸

This demographic situation should facilitate the pursuit of the necessary steps in education and vocational training. In the first place, Cambodia must reduce the wasteful number of school drop-outs and bring more students to the completion of compulsory education – by providing more relevant inputs both to upper-secondary schools and vocational training, despite the reduction in the size of the incoming cohorts.

However, this quantitative goal is not sufficient and must be accompanied by an improvement in the quality of education that, in turn, will require improving teaching methodologies and teachers' preparation – a step that, in turn, demands more competitive wages.

In the intermediate phase, during which the drop-out rates will remain high, measures must be taken to provide some form of basic education and, eventually, vocational training, to the thousands of children that will not complete compulsory education, allowing them to eventually re-enter the education stream or to access what is now defined as formal training.

The second step should be to enrich and diversify the choices offered to students completing compulsory education.

In the first place, Cambodia needs to improve the general education path, with an upper-secondary education capable of providing the preparation necessary to successfully carry on university courses in all disciplines, including scientific ones, which are at present attended by a very limited number of students.

A possible interpretation of the results of the survey is that the country also needs technical high schools, offering a career path for those students that are not planning to go to university or are not yet sure of the choices they will make. These technical schools could offer three-year diploma programmes in such fields as agriculture, accounting, information technology, building surveying, mechanics, and electronics, among other subjects. Such diplomas would provide direct access to the labour market or entrance to higher education in a chosen field at the university level.

To reduce the problem of Cambodia's labour market to a mismatch between labour demand and supply, and to imagine that labour-market problems can be solved by acting on the vocational training system, is certainly very reductive. However, there is no doubt that Cambodia needs to develop a system of vocational training capable both of short-term responses to the needs of the market, and of providing the technicians necessary to upgrade the production structure and attract national and foreign investment.

⁸ For primary education we have assumed that there will be a progressive regularization of the two distortive phenomena that affect enrollment (the presence of over-age students and repeaters) so that in about 20 to 25 years the school population in primary schools will reflect the legal age population. For the lower- and upper-secondary levels, we have assumed that the GRE rate will increase by 2.5 percentage points every five years.

At present, 80 per cent of the very few vocational training courses available in Cambodia are provided by private institutions and non-government organizations outside any general framework, while the Ministry of Labour and Vocational Training (MOLVT) is more engaged in running and upgrading its vocational schools than designing and implementing an organic set of active policies, including education and vocational training policies. The needs of the country would probably be better served if the Ministry of Labour concentrated its effort on coordinating vocational training activities over the territory inside a general vocational training plan to be updated, let's say, every three years, while the administration of the public vocational schools and institutes could be entrusted to a public establishment.

Vocational training needs both flexibility and coherence. Flexibility could obviously be improved by relying on the private sector and using the facilities of the existing business establishments operating in Cambodia. Coherence, on the other hand, requires a long-term vision and coordination with industrial and development policies that can be provided only by the MOLVT and by the NTB.

It has been suggested that Cambodia is already affected by an overproduction of higher-education graduates and that the problem will become more acute in the future. In fact, in the next ten years the number of young people that earn a bachelor degree should remain between 36,000 and 54,000. These figures are in line with what we can consider the physiological needs of the Cambodian labour market if we take into consideration not only the private sector, but also the public sector, which needs to strengthen numerous areas including education, health, and the ministries' technical competencies.

The real problem is not one of quantity, but of quality. An area of concern is the generally narrow choice of major subjects for university graduates. Due to lack of confidence, insufficient counselling, distrust of local universities, a wrong perception of labour-market needs, and probably other reasons, the student enrolment structure for universities has been concentrated in few subject areas. According to the most recent available information, economics and business administration accounted for slightly more than 50 per cent of total student enrolment; the leading four majors (languages, literature, information technology, and law) for more than three-quarters of the total (75.8 per cent). Major subjects such as agriculture or tourism – that could play an extremely relevant role in Cambodia's economic development – were marginal choices, at 4 per cent and 1.7 per cent, respectively. Also insufficient for the country's social and economic development were enrolments in engineering (3.8 per cent), medicine (3.1 per cent), and sciences (2.5 per cent).

A central element to foster future economic development is, therefore, the promotion of a structure of university enrolment more balanced between humanistic and scientific areas, an objective to be pursued through the quality of the general education stream and counselling to be delivered from the beginning of upper-secondary school.

The last consideration relevant to the design of future development policies relates to the fact that the demographic trend already outlined for the population of training age will affect potential entries to the working-age population, which are expected to decline from around 360,000 at the time of the survey to less than 300,000 in ten to 15 years. All other things being equal, demographic trends will progressively reduce the pressure for agriculture to act as the "sponge sector" of the system, and make it easier for the modern sectors to absorb an increasing percentage of the new generations coming up to working age. However, a reduction in the percentage of workers in agriculture will still require a large degree of international migration. Cambodian migrants could easily find good job opportunities not only in other ASEAN countries – namely Singapore, Thailand, and Malaysia – but also in China, Japan, and the Republic of Korea. These

latter countries are already more advanced along the so-called demographic transition, and their labour supply already is, or is going to become, structurally lacking in the near future. This policy would, however, require a Cambodian labour force endowed with necessary skills, and a supportive and proactive migration policy on the part of the Cambodian government.

In conclusion, education and vocational training policies should address both the needs of the existing production structure and those of its future upgrading. However, for at least the next ten years it will be impossible for the modern sectors to produce the number of additional jobs sufficient to absorb the increase in the working-age population and, eventually, those left unemployed or underemployed by the unavoidable decline in agricultural employment. Thus, education and vocational training policies should also address the needs of possible destination countries.

The complex set of policies we have tried to design can be summarized for practical purposes into two sets of interventions: first, a group of short-term measures directed to meet immediate needs in the areas of vocational training, public employment services, and human resources management; second, a group of long-term measures aimed at improving the education system, developing a wider vision for vocational training, improving the quality of both education and vocational training, sustaining economic development, and providing a labour supply in tune not only with the needs of the Cambodian labour market but also with those of the countries in the region that will experience a shortage of labour.

More specifically, the short-term interventions should aim to:

- (a) organize customized training, on-the-job training (“soft” and “hard” skills), and apprenticeships based on a closer collaboration/partnership between the government, the private sector, and the trade unions;
- (b) improve and expand public employment services to better match jobseekers with employers, and facilitate the transition from agriculture to industry and services; and
- (c) reconfigure/reconsider human resources management policies to devise attractive incentive/benefit packages (not only wages) and working conditions.

At the same time, long-term measures should be designed and implemented in order to:

- (a) expand the capacity to provide basic and vocational training to young people who did not complete compulsory education (Grade Nine), and provide them with the opportunity to re-enter the educational stream or the formal training path;
- (b) improve the quality of education and training, including curriculum improvement (“hard” and “soft” skills that are competence-based), teacher training, governance, quality assurance and control, qualifications control, and qualifications and competency standards; and
- (c) design and implement the necessary policies to develop a more complete, coordinated, and unified vision of the education and vocational training systems, to support the upgrading of the Cambodian production system from low-technology, low-wage clusters to medium- and high-technology clusters by: increasing educational vocational training attainment (including “soft” skills); enriching and diversifying the choice of education and vocational training paths available to students completing compulsory education; improving upper-secondary education to prepare students for successfully undertaking science majors at university or a successful transition to TVET; creating a correct synergy between general education and TVET; developing a flexible and coherent TVET system (flexible in the sense of being based on cooperation and partnership with the private sector; coherent with a long-term vision, developed in coordination with cross-cutting stakeholders, of the employment needs generated by the industrial and economic development not only of Cambodia but also of countries in the region that will be characterized by a structural shortage of labour [including

Singapore, Thailand, the Republic of Korea, China, and Japan);⁹ developing a long-term industrial and development vision, policy, and strategy; developing a labour-market information system on skills demand and supply, and projections; strengthening the public employment service to be able to support labour-market interventions and provide career/vocational/ employment guidance and counseling, as well as matching jobseekers not only with domestic employers but also with ASEAN employers; and producing more in-depth sectorial studies and analyses.

⁹ See for instance, Bruni (2009, 2011, 2012, 2013a, 2013b).

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Appendixes

Appendix A

The International Standard Classification of Occupations (ISCO) is one of the main international classifications, and was developed by the ILO. The ISCO is a tool for organizing jobs into a clearly defined set of groups according to the tasks and duties undertaken in the job. Its main aims are to provide: a basis for the international reporting, comparison, and exchange of statistical and administrative data about occupations; a model for the development of national and regional classifications of occupations; and a system that can be used directly in countries that have not developed their own national classifications.

Definitions of each of the four ISCO skill levels are given below. These definitions do not change the boundaries between the skills levels used in ISCO-88. They serve to clarify these boundaries and to deal with cases where formal educational requirements may not be the most suitable method of measuring the skill level of a particular occupation. Each definition provides examples of the typical or characteristic tasks performed at each skill level, the types of skill required (in broad terms), and the typical occupations classified at that skill level.

Skill Level 1

Occupations at Skill Level 1 typically require the performance of simple and routine physical or manual tasks. They may require the use of hand-held tools such as shovels, or of simple electrical equipment such as vacuum cleaners. They involve tasks such as cleaning, digging, lifting and carrying materials by hand, sorting, storing or assembling goods by hand (sometimes in the context of mechanized operations), operating non-motorized vehicles, and picking fruit and vegetables.

Many occupations at Skill Level 1 may require physical strength and/or endurance. For some jobs, basic skills in literacy and numeracy may be required. If required, these skills would not form a major part of the job. For competent performance in some occupations at Skill Level 1, completion of primary education or the first stage of basic education (International Standard Classification of Education Level 1 [ISCED]) may be required. A short period of on-the-job training may be required for some jobs.

Occupations classified at Skill Level 1 include office cleaners, freight handlers, garden labourers, and kitchen assistants

Skill Level 2

Occupations at Skill Level 2 typically involve the performance of tasks such as operating machinery and electronic equipment; driving vehicles; maintenance and repair of electrical and mechanical equipment; and manipulation, ordering, and storage of information.

For almost all occupations at Skill Level 2, the ability to read information such as safety instructions, to make written records of work completed, and to accurately perform simple arithmetical calculations is essential. Many occupations at this skill level require relatively advanced literacy and numeracy skills, and good

interpersonal communication skills. In some occupations, these skills are required for a major part of the work. Many occupations at this skill level require a high level of manual dexterity.

The knowledge and skills required for competent performance in all occupations at Skill Level 2 are generally obtained through completion of the first stage of secondary education (ISCED Level 2). Some occupations require the completion of the second stage of secondary education (ISCED Level 3), which may include a significant component of specialized vocational education and on-the-job training. Some occupations require completion of vocation-specific education undertaken after completion of secondary education (ISCED Level 4). In some cases, experience and on-the-job training may substitute for the formal education.

Occupations classified at Skill Level 2 include butchers, bus-drivers, secretaries, accounts clerks, sewing-machinists, dressmakers, shop sales assistants, police officers, hairdressers, building electricians, and motor vehicle mechanics.

Skill Level 3

Occupations at Skill Level 3 typically involve the performance of complex technical and practical tasks that require an extensive body of factual, technical, and procedural knowledge in a specialized field.

Occupations at this skill level generally require a high level of literacy and numeracy, and well-developed interpersonal communication skills. These skills may include the ability to understand complex written material, prepare factual reports, and communicate with people who are distressed.

The knowledge and skills required at Skill Level 3 are usually obtained as the result of study at a higher educational institution following completion of secondary education for a period of one to three years (ISCED Level 5b). In some cases, extensive relevant work experience and prolonged on-the-job training may substitute for the formal education.

Occupations classified at Skill Level 3 include shop managers, medical laboratory technicians, legal secretaries, commercial sales representatives, computer support technicians, and broadcasting and recording technicians.

Skill Level 4

Occupations at Skill Level 4 typically involve the performance of tasks that require complex problem solving and decision making based on an extensive body of theoretical and factual knowledge in a specialized field. The tasks performed typically include analysis and research to extend the body of human knowledge in a particular field; diagnosis and treatment of disease; imparting knowledge to others; design of structures or machinery; and of processes for construction and production.

Occupations at this skill level generally require extended levels of literacy and numeracy, sometimes at a very high level, and excellent interpersonal communication skills. These skills generally include the ability to understand complex written material and communicate complex ideas in media such as books, reports, and oral presentations.

The knowledge and skills required at Skill Level 4 are usually obtained as the result of study at a higher educational institution for a period of three to six years leading to the award of a first degree or higher qualification (ISCED Level 5a or higher). In some cases, experience and on-the-job training may substitute

for the formal education. In many cases, appropriate formal qualifications are an essential requirement for entry to the occupation.

Occupations classified at Skill Level 4 include sales and marketing managers, civil engineers, secondary school teachers, medical practitioners, operating theatre nurses, and computer systems analysts.

The relationship between the ten ISCO-08 major groups and the four ISCO-08 skill levels is summarized below in Table 1.

Table 1. Mapping of ISCO-08 major groups to skill levels

ISCO-08 major groups	Skill level
1 Managers, senior officials, and legislators	3 + 4
2 Professionals	4
3 Technicians and associated professionals	3
4 Clerks	
5 Service and sales workers	
6 Skilled agricultural and fishery workers	2
7 Craft and related trades workers	
8 Plant and machine operators, and assemblers	
9 Elementary occupations	1

Note: A significant problem regarding the application of the concept of “skill level” in ISCO-88 relates to occupations with similar tasks and duties (or content) but with a different (higher or lower) “skill level” requirement, as measured in particular countries. This is because, given realistic differences in national education systems, the same occupation (with the same set of tasks and duties) can be undertaken by individuals with different educational levels without affecting the level of skill required for competent performance of the tasks. This is the case for some elementary, craft, and technical occupations, which in many countries require higher education levels than those assigned in ISCO-88.

Source: International Standard Classification of Occupations (ISCO-08) – Conceptual Framework, ILO.

Appendix B

Gross enrolment rate, net enrolment rate, rate of repetition, and share of over-age students by educational level, 2005–2006/2010–2011

Gross enrolment rate							Difference from 2005–2006 to 2010–2011
	2005– 2006	2006– 2007	2007– 2008	2008– 2009	2009– 2010	2010– 2011	
Primary	124.0	122.7	121.9	120.2	125.4	116.0	-8.07
Lower-secondary	55.3	60.0	63.6	61.6	58.1	58.5	3.21
Upper-secondary	19.3	21.2	25.7	28.2	32.3	32.9	13.61
Total	80.0	80.7	82.0	81.0	83.0	79.9	-0.17
Net enrolment rate							Difference from 2005–2006 to 2010–2011
	2005– 2006	2006– 2007	2007– 2008	2008– 2009	2009– 2010	2010– 2011	
Primary	91.3	92.1	93.3	94.4	94.8	95.2	3.88
Lower-secondary	31.3	33.7	34.8	33.9	32.6	35.0	3.79
Upper-secondary	11.3	12.5	14.8	16.4	19.4	20.6	9.21
Total	55.8	56.8	57.9	58.5	58.4	60.7	4.85
Rate of repetition							Difference from 2005–2006 to 2010–2011
	2005– 2006	2006– 2007	2007– 2008	2008– 2009	2009– 2010	2010– 2011	
Primary	12.75	11.70	11.34	10.27	8.97	7.22	-5.53
Lower-secondary	2.47	2.41	1.98	2.00	2.41	2.11	-0.36
Upper-secondary	3.09	3.05	2.91	3.18	2.49	1.77	-1.32
Total	10.36	9.36	8.80	8.03	7.09	5.70	-4.65
Share of over-age students							Difference from 2005–2006 to 2010–2011
	2005– 2006	2006– 2007	2007– 2008	2008– 2009	2009– 2010	2010– 2011	
Primary	26.36	24.95	23.52	21.43	24.38	17.88	-8.48
Lower-secondary	43.46	43.87	45.35	44.90	43.88	40.09	-3.38
Upper-secondary	41.32	41.11	42.49	41.84	39.96	37.60	-3.72
Total	30.27	29.61	29.40	27.82	29.60	24.05	-6.22

Appendix C

Incidence and density of vacancy by workforce size, sector, type of business entity, ownership, type of market, and commercial registration

	No. of sampled establishments	Number of employees	Establishments with at least one vacancy		Vacancies		Vacancy density
			Abs. value	Percentage	Abs. value	Percentage	Percentage
Total	517	126 315	292	56.5	17 462	100.0	13.8
Workforce size							
10–19	135	1 583	51	37.8	303	1.7	19.1
20–99	225	9 082	128	56.9	1 640	9.4	18.1
100+	157	115 650	113	72.0	15 519	88.9	13.4
Sector							
Accommodation	99	9 314	51	51.5	617	3.5	6.6
Construction	73	3 800	35	47.9	331	1.9	8.7
Finance and insurance	109	8 183	60	55.0	367	2.1	4.5
Food and beverages	91	6 824	41	45.1	374	2.1	5.5
Garments, apparel, and footwear	112	87 937	87	77.7	15 556	89.1	17.7
Rubber and plastics	33	10 257	18	54.5	217	1.2	2.1
Type of business entity							
Individual proprietor	238	32 723	126	52.9	5 130	29.4	15.7
General partnership	46	8 802	24	52.2	665	3.8	7.6
Limited partnership	94	49 050	60	63.8	7 671	43.9	15.6
Private limited company	99	30 188	57	57.6	3 750	21.5	12.4
Public limited company	25	2 635	17	68.0	201	1.2	7.6
Others	15	2 917	8	53.3	45	0.3	1.5
Ownership							
Cambodian	354	35 685	192	54.2	4 237	24.3	11.9
Foreign	163	90 630	100	61.3	13 225	75.7	14.6
Type of market							
Local	122	11 115	63	51.6	1 579	9.0	14.2
National	297	21 637	160	53.9	2 258	12.9	10.4
International	98	93 563	69	70.4	13 625	78.0	14.6
Commercial registration							
Registered	488	125 439	273	55.9	17 234	98.7	13.7
Not registered	29	876	19	65.5	228	1.3	26.0

Note: Number of vacancies covered all of the vacancies reported by establishments at the time of interview. Vacancy density represents the number of vacancies as a proportion of the total number of employees.

Source: NEA Employer Skills Needs Survey 2012.

Appendix D

Density of vacancy, by major occupations and sector

Major occupations	Accom.	Constr.	Finance and insurance	Food and beverages	Garments, apparel, and footwear	Rubber and plastics
Managers	0.4	1.6	0.5	0.5	0.0	0.0
Professionals	0.8	10.5	2.4	6.8	6.8	0.9
Technicians and associated professionals	6.7	8.8	8.4	9.0	2.9	2.9
Clerical support workers	10.7	0.5	13.4	11.3	136.4	1.7
Service and sales workers	8.9	5.6	0.7	5.5	0.0	0.0
Skilled agricultural, forestry, and fishery workers	8.1	0.0	0.0	0.0	0.0	2.4
Craft and related trades workers	5.3	4.0	0.0	2.0	15.0	2.2
Plant and machine operators, and assemblers	1.0	18.5	61.5	3.6	28.0	4.6
Elementary occupations	2.9	12.5	1.1	8.0	17.5	1.8

Note: Vacancy density represents the number of vacancies as a proportion of all employees in each major occupation and sector.
Source: NEA Employer Skills Needs Survey 2012.

Share of vacancies, by major occupation types and sector

Major occupations	Accom.	Constr.	Finance and insurance	Food and beverages	Garments, apparel, and footwear	Rubber and plastics
Total (absolute value)	605	331	365	374	15 556	217
Managers	0.3	1.5	1.6	0.5	0.0	0.0
Professionals	0.7	18.7	13.7	6.7	0.3	1.8
Technicians and associated professionals	6.8	4.8	29.3	6.4	0.1	2.3
Clerical support workers	12.9	0.3	47.9	4.8	9.0	0.9
Service and sales workers	67.1	2.1	2.5	7.2	0.0	0.0
Skilled agricultural, forestry, and fishery workers	1.2	0.0	0.0	0.0	0.0	46.1
Craft and related trades workers	1.7	9.1	0.0	3.7	24.1	2.8
Plant and machine operators, and assemblers	0.2	6.6	2.2	4.8	1.3	11.1
Elementary occupations	9.3	56.8	2.7	65.8	65.2	35.0

Source: NEA Employer Skills Needs Survey 2012.

Appendix E

Incidence and share of hard-to-fill vacancies in 2012, by workforce size, sector, type of business entity, ownership, type of market, and commercial registration

	Establishments with at least one vacancy	No. of vacancies	Establishments with a hard-to-fill vacancy		Share of hard-to-fill vacancies
	Abs. value	Abs. value	Abs. value	Percentage	Percentage
Total	292	17 448	212	72.6	75.1
Workforce Size					
10–19	51	303	40	78.4	88
20–99	128	1 638	76	59.4	72
100+	113	15 507	96	85.0	75
Sector					
Accommodation	51	605	42	82.4	67
Construction	35	331	24	68.6	67
Finance and insurance	60	365	22	36.7	26
Food and beverages	41	374	30	73.2	76
Garments, apparel, and footwear	87	15 556	79	90.8	77
Rubber and plastics	18	217	15	83.3	92
Type of business entity					
Individual proprietorship	126	5 116	101	80.2	80
General partnership	24	665	19	79.2	17
Limited partnership	60	7 671	35	58.3	87
Private limited company	57	3 750	48	84.2	57
Public limited company	17	201	5	29.4	35
Others	8	45	4	50.0	56
Ownership					
Cambodian	192	4 231	134	69.8	56
Foreign	100	13 217	78	78.0	81
Type of market					
Local	63	1 567	49	77.8	61
National	160	2 256	102	63.8	78
International	69	13 625	61	88.4	76
Commercial registration					
Registered	273	17 220	195	71.4	75
Not registered	19	228	17	89.5	95

Note: Number of vacancies covered only the top five major-occupation vacancies reported by employers at the time of interview. Share of hard-to-fill vacancies is based on the total top five major occupations reported by employers and shows the percentage of vacancies that are hard to fill.

Source: NEA Employer Skills Needs Survey 2012.

Appendix F

Causes of hard-to-fill vacancies, percentages by workforce size, sector, type of business entity, ownership, type of market, and commercial registration

	Number of hard-to-fill vacancies	Too much competition from other employers	Not enough people interested in doing this type of job	Poor terms and conditions offered for post	Low number of applicants with the required skills	Low number of applicants with the required attitude, motivation, or personality	Low number of applicants generally	Lack of work experience the establishment demands	Lack of qualifications the establishment demands	Poor career progression / lack of prospects	Job entails shift work / unsociable hours	Seasonal work	Remote location / poor public transport	Others
Total	340	41	27	26	34	19	26	33	14	6	6	11	11	14
Workforce size														
Less than 20	57	39	44	39	33	19	18	33	26	2	12	7	5	14
From 20 to 99	121	28	26	21	42	21	20	36	10	8	3	13	6	19
More than 99	162	52	21	25	28	18	33	30	13	6	7	12	17	10
Sector														
Accommodation	83	41	28	29	27	25	30	30	12	16	16	11	4	18
Construction	42	29	26	29	52	21	12	62	33	0	0	7	5	12
Finance and insurance	44	23	7	14	57	18	5	48	32	5	2	0	11	11
Food and beverages	44	39	34	36	34	34	23	16	7	2	0	11	14	11
Garments, apparel, and footwear	110	53	31	19	25	10	39	23	6	4	6	19	15	12
Rubber and plastics	17	59	29	47	24	12	12	47	0	0	6	6	29	29
Type of business entity														
Individual proprietorship	160	39	29	30	29	19	32	26	16	5	6	14	4	10
General partnership	30	27	27	20	27	17	27	37	7	3	3	0	0	20
Limited partnership	50	54	26	26	38	14	26	30	18	6	10	14	22	16
Private limited company	80	45	25	21	36	28	16	48	8	8	6	10	14	21
Public company	13	38	15	15	69	15	15	38	8	15	15	8	38	0
Others	7	29	29	14	57	0	0	14	71	0	0	14	57	14
Ownership														
Cambodian	219	34	29	26	34	21	26	31	15	7	7	11	8	15
Foreign	121	55	22	25	33	17	24	37	13	4	5	13	17	13
Type of market														
Local	81	28	27	30	19	17	32	20	6	4	5	14	2	9
National	171	36	29	26	44	25	21	39	20	9	5	11	11	17
International	88	65	22	22	27	11	28	33	10	2	11	11	20	14
Commercial registration														
Registered	319	41	25	27	34	21	25	34	15	6	5	11	12	14
Not registered	21	43	52	10	24	0	33	10	0	0	24	24	5	19

Note: The percentages are based on all hard-to-fill vacancies reported by 212 establishments with hard-to-fill-vacancies. The percentages refer to the proportion of hard-to-fill vacancies caused by factors reported by employers. Some percentages are given as more than 100 because of multiple answers.

Source: NEA Employer Skills Needs Survey 2012.

Appendix G

Skills that needed to be improved for employees unable to perform their jobs at the required level, percentages by sector

Skills that need improving	Total	Accom.	Constr.	Finance and ins.	Food and bev.	Garments, apparel, and footwear	Rubber and plastics
Literacy	12	10	9	9	20	12	21
Numeracy	6	2	2	12	10	7	4
IT literacy/using IT	10	11	9	17	0	8	8
Advanced IT application/development	4	1	15	6	0	6	0
Oral communication	24	32	6	49	13	11	8
Written communication	7	6	0	10	0	13	4
Public speaking/ instructing/training	18	23	6	23	6	25	8
Customer handling	18	20	6	46	10	3	8
Team-working	20	14	34	12	25	20	33
Taking initiative	16	11	21	9	17	26	4
Knowledge of a foreign language	21	47	9	13	3	20	4
Solving complex tasks/problems	10	7	19	9	14	11	0
Planning and organizing	8	6	17	12	7	7	0
Management responsibilities/ taking a lead	6	2	13	5	4	10	8
Adapting to new equipment / materials	13	15	13	6	8	18	13
Learning new ideas, methods, concepts	4	4	4	4	4	5	4
Manual dexterity	21	12	30	1	31	33	38
Clerical/administrative tasks	5	2	9	3	1	10	4
Pro-environmental tasks	3	3	0	4	10	0	0
Other job-specific tasks	24	21	30	27	23	23	29

Note: Percentages are based on the skills gap in each occupation. Table shows the proportion of the skills gap caused by a lack of each skill in each sector.

Source: NEA Employer Skills Needs Survey 2012.

Appendix H

A projection of population in training age, by main age groups (in thousands) 2010–2035

	2010	2015	2020	2025	2030	2035	2010-35	
	Abs.	Abs.	Abs.	Abs.	Abs.	Abs.	Abs.	Percent
Primary (6–11)	1 788	1 751	1 696	1 600	1 473	1 346	-442	-24.7
Low-sec.(12–14)	939	866	876	831	782	712	-227	-24.2
Compulsory	2 727	2 617	2 572	2 431	2 255	2 059	-669	-24.5
Upper-sec. (15–17)	1 033	913	851	868	827	779	-253	-24.5
University (18–24)	2 119	2,204	2 023	1 960	1,988	1 891	-228	-10.8
Total	5 879	5 734	5 446	5 259	5 070	4 729	1 150	-19.6

Source: M. Bruni, Heangtharith, 2013. (Forthcoming).

General education stream, gross enrolment rate and total enrolment, by level (in thousands) 2010–2035

	2010	2015	2020	2025	2030	2035	2010–2035
Gross enrolment rates							
Primary (6–11)	122.5	117.5	112.5	107.5	102.5	97.5	-25.0
Low-sec. (12–14)	59.7	62.2	64.7	67.2	69.7	72.2	12.5
Compulsory	100.9	99.2	96.2	93.7	91.1	88.8	-12.1
Upper-sec. (15–17)	32.4	35.0	37.5	40.0	42.5	45.0	12.6
Total	52.5	50.9	51.3	49.9	47.5	46.1	-6.4
Total enrolment							
Primary (6–11)	2 191	2 057	1 909	1 720	1,510	1,313	-878
Low-sec. (12–14)	561	539	567	559	545	514	-46
Compulsory	2 752	2 596	2 476	2 278	2 055	1 827	-925
Upper-sec. (15–17)	335	319	319	347	352	351	16
Total	3 087	2 916	2 795	2 625	2 407	2 178	-909

Source: M. Bruni, Heangtharith, 2013. (Forthcoming).

APPENDIX I:

Employer Skills Needs Survey 2012

Good morning/afternoon. My name is.....I am from the National Employment Agency of the Office of the Council of Ministers. We are conducting a survey to identify skills and training needs. The information collected is strictly confidential and will be used only for statistical purposes. We would appreciate if you would dedicate some of your time to answer all the following questions.

Ordinal Number of Questionnaire: _____

Interview Record

Interviewer's name:

Date of interview:

Time started:

Time completed:

Quality Control by team leader

Survey team leader's name:

Date:

Remarks:

Quality Control by technical team

Name:

Time:

signature:

Remarks:

Data Entry Record

Name of data encoder:

Date:

Remarks:

Records on data cleaning and entry

Name of data cleaning person:

Date:

Remarks:

Questionnaires

Section A –Firmographics

1. Name of the company:
2. Address of the company:
Address of the company (if different):
3. Name of contact person: Position of contact person:
4. Contact person (Tel. no.) :
5. Office Tel. no.:
6. Contact person (email):
7. Name of the interviewee (if different from contact person):
8. Position of the interviewee (if different from contact person):
9. Interviewee phone no.: Interviewee's office tel. no.:

A.2. When did your company start business? Month: ____ Year: ____

A.3. Has your company been registered at the Ministry of Commerce or at the Provincial Department of Commerce? 1- Registered 2- Not registered

A.4. The company is a/an:

Individual proprietorship	1
General partnership	2
Limited partnership	3
Private limited company	4
Public limited company	5
Subsidiary of a foreign company	6
Branch of a foreign company	7
Commercial representative office of a foreign company	8
Cooperative	9
State owned organization	10
Non-Governmental Organization	11
Others	12

A.5. The company is owned by 1-Cambodian 2- Foreigner (Please specify nationality:)

A.6. Could you please briefly describe the main business activity of the company, and indicate your main products or services, and your customers:

Code ISIC: |_|_|_|_|

A.7. Are your products or services sold primarily to:

- 1- Locally, within an individual town or local area
- 2- Nationally
- 3- Outside Cambodia

Section B – Structure of Workforce

B.1. How many people are currently working for the company, including yourself?

B.2. Could you please indicate how many employees of your company work in each of the following occupations and their ranges of wage (In case of more than one occupation, choose the main one i.e. the one that takes up the greatest proportion of time):

Occupation categories	Number of people (Please write 0 if not applicable)	Range of wage (USD per month)
Managers (This category includes chief executives; general and corporate managers; managing director; administrative, finance, production, service and sale manager; and regional and branch manager who plan, direct and coordinate the policies and activities of business and other organization)	_____	
Professionals (Professionals increase the existing of knowledge, apply scientific or artistic concepts and theories, or teach in a systematic manner. Most occupations in this category- such as engineers, lawyers, economists, computing professionals, teachers and health professionals- require skills at graduate and postgraduate education)	_____	
Technicians and associate professionals (This category performs mostly technical and related tasks connect with research and application of scientific, artistic, or operational methods. These occupations, which typically require skills at upper secondary or tertiary education, include industrial robot controllers, photographers and medical assistants)	_____	
Clerical support workers (This category performs clerical duties with associated with money-handling operations, travel arrangements, requests for information and arrangement. Most of these jobs, such as secretaries, cashiers, or transport clerks, require skills at least lower secondary educations)	_____	
Service and sale workers (This category provides personal services related to travel, housekeeping, catering, personal care, or protection, or they demonstrate and sell goods. Most occupations require skills at least lower secondary education)	_____	
Skilled agricultural, forestry, and fishery workers (This group includes occupations that require skills at least secondary education or equivalent critical skills and knowledge such as crop growers, gardeners and dairy and livestock producers)	_____	
Craft and related trades workers (This group applies their skills in the fields of mining and construction, making or repairing machinery, printing, processed food, textiles, or articles including handicrafts goods which involve the performance of complex physical duties that normally involve initiative, manual dexterity and other practical skills. Most of these occupations, such as builders, bricklayers, plumbers, or electronic mechanics require a substantial period of training)	_____	

Plant and machine operators, and assemblers <i>(This group operates and monitors industrial and agricultural machinery and equipment, drives and operates motor vehicles and mobile machinery, or assembles products. Most occupations have not a particular standard of education but will usually have formal experience related training)</i>	_____	
Elementary occupations <i>(This group consists of simple and routine tasks that mainly require the use of hand tools plus physical effort. Most occupations in this group, such as cleaners, building caretakers, doorkeepers or labourers do not require formal education qualification).</i>	_____	

B.3. Could you please indicate the number of employees in each occupation at each of the following dates (*employees with more than one occupation should be classified in the main one, and write 0 for occupation not applicable in your company*):

Occupation	31/12/2010		31/12/2011		30/11/2012	
	Total	Female	Total	Female	Total	Female
Managers						
Professionals						
Associate professionals						
Service and sale workers						
Clerical support workers						
Skilled agricultural, forestry and fishery workers						
Craft and related trades workers						
Plant and machine operators and assemblers						
Elementary occupations						
Total						
Section C – Recruitment / Recruitment Difficulties						

C.1. In the last 3 years, has your company filled any vacant full-time or part-time positions?

Yes	1	Go to C.2
No	2	Go to C.7

C.2. Could you please indicate the occupations (up to a maximum of five) in which your company has hired the highest number of people and the total number of people in the following periods(*in the case of people having been*

hired for more than one occupation, please choose the main one):

Occupation (List up to five occupations)	Approximate number of workforces hired					
	01/01/2010 to 31/12/2010		01/01/2011 to 31/12/2011		01/01/2012 to 30/11/2012	
	Total	Female	Total	Female	Total	Female
1.						
2.						
3.						
4.						
5.						
6. Total workforces hired						

C.3. In the last 3 years has your company hired any first jobseekers that were leaving secondary school; technical and vocational schools; or university?

Yes	1	Go to C.4
No	2	Go to C.7

C.4. Have any of these been....

	Yes	No
First jobseekers coming from secondary school	1	2
First jobseekers coming from technical and vocational school	1	2
First jobseekers coming from university or other higher education institution	1	2

FOR EACH YES ANSWER IN C.4, GO TO C.5

C.5. How well did they prepare for work for each category?

	Very well prepared	Well prepared	Prepared	Poorly prepared	very poorly prepared
Firs jobseekers coming from secondary school	1	2	3	4	5
Firs jobseekers coming from technical and vocational school	1	2	3	4	5
Firs jobseekers coming from University or	1	2	3	4	5

other Higher Education institution					
------------------------------------	--	--	--	--	--

IF THE PREPARATION FOR WORK OF THE NEWLY HIRED WAS EVALUATED 4 OR 5, GO TO C.6.

C.6. In which of the following areas was the preparation of the newly hired was lacking (you can select all relevant fields for each group):

	Firs jobseekers coming from secondary school	Firs jobseekers coming from technical and vocational school	Firs jobseekers coming from University or other Higher Education institution
Lack required skills or competencies (e.g. technical or job specific skills, IT skills, problem solving skills, team working skills)	1	1	1
Literacy/numeracy skills	2	2	2
Poor education	3	3	3
Lack of common sense	4	4	4
Poor attitude / personality or lack of motivation (e.g. poor work ethic, punctuality, appearance, manners)	5	5	5
Lack of working world / life experience or maturity (including general knowledge)	6	6	6
Other (Please specify_____)	7	7	7

C.7. In the last 3 years, has your employees exited your company? (Full-time or part-time positions)

Yes	1	Go to C.8
No	2	Go to C.9

C.8. Could you please indicate the occupations (up to a maximum of five) that have registered the highest number of exits and the total number of exits in the following periods

Occupation (List up to five occupations)	Approximate number of workforces exited					
	01/01/2010 to 31/12/2010		01/01/2011 to 31/12/2011		01/01/2012 to 30/11/2012	
	Total	Female	Total	Female	Total	Female
1.						
2.						
3.						
4.						
5.						

6. Total workforces exited						
----------------------------	--	--	--	--	--	--

C.9. In this moment do you have vacancies?

Yes (Number of vacancies _____)	1	Go to C.10
No	2	Go to D.1

C.10. Could you please tell us in which occupations do you have the most vacancies (please list up to five occupations):

Occupation	Approximate number of vacancies
Occupation 1: _____	
Occupation 2: _____	
Occupation 3: _____	
Occupation 4: _____	
Occupation 5: _____	

C.11. Are any of these vacancies proving hard to fill?

Yes	1	Go to C.12
No	2	Go to D.1

C.12. Could you please indicate how many vacancies are proving hard-to-fill? (Up to five occupations)

Occupation	Approximate number of hard-to-fill vacancies
Occupation 1: _____	
Occupation 2: _____	
Occupation 3: _____	
Occupation 4: _____	
Occupation 5: _____	

C.13. For each of the previous occupations, could you please indicate the reasons why they are hard to fill? (You can select all relevant reasons for each occupation)

Reasons	Occupations with hard-to-fill vacancies				
	Occ 1	Occ 2	Occ 3	Occ 4	Occ 5
Too much competition from other employers	1	1	1	1	1
Not enough people interested in doing this type of job	2	2	2	2	2

Poor terms and conditions (e.g. pay) offered for post	3	3	3	3	3
Low number of applicants with the required skills	4	4	4	4	4
Low number of applicants with the required attitude, motivation or personality	5	5	5	5	5
Low number of applicants generally	6	6	6	6	6
Lack of work experience the company demands	7	7	7	7	7
Lack of qualifications the company demands	8	8	8	8	8
Poor career progression / lack of prospects	9	9	9	9	9
Job entails shift work / unsociable hours	10	10	10	10	10
Seasonal work	11	11	11	11	11
Remote location / poor public transport	12	12	12	12	12
Others	13	13	13	13	13

IF ANSWERS TO C.13 ARE OR 4 OR/AND 7 OR/AND 8 GO TO C.14; OTHERWISE GO TO C15

C.14. Could you please indicate which of the following skills were lacking(For each occupation you can select all the skills you think were lacking)

	Occupations with hard-to-fill vacancies				
	Occ 1	Occ 2	Occ 3	Occ 4	Occ 5
Basic computer literacy / using IT	1	1	1	1	1
Advanced IT or software skills	2	2	2	2	2
Oral communication skills	3	3	3	3	3
Written communication skills	4	4	4	4	4
Customer handling skills	5	5	5	5	5
Team working skills	6	6	6	6	6
Foreign language skills	7	7	7	7	7
Problem solving skills	8	8	8	8	8
Planning and organization skills	9	9	9	9	9
Strategic Management skills	10	10	10	10	10
Numeracy skills	11	11	11	11	11
Literacy skills	12	12	12	12	12
Office admin skills	13	13	13	13	13
Technical or practical skills	14	14	14	14	14
Job specific skills	15	15	15	15	15
Any other skills	16	16	16	16	16

C.15. Are hard-to-fill vacancies causing this establishment to... (You can select all relevant answers)

Effects on business	
Lose business or orders to competitors	1
Delay developing new products or services	2
Have difficulties meeting quality standards	3
Experience increased operating costs	4
Have difficulties introducing new working practices	5
Increase workload for other staff	6
Outsource work	7
Withdraw from offering certain products or services altogether	8
Have difficulties meeting customer services objectives	9
Have difficulties introducing technological change	10
None	11

C.16. What, if anything, is your company doing to overcome the difficulties that you are having finding candidates to fill these hard-to-fill vacancies? *(You can select all relevant answers)*

Increasing salaries	1
Increasing the training given to your existing workforce	2
Redefining existing jobs	3
Increasing advertising / recruitment spend	4
Increasing / expanding trainee programs	5
Using NEW recruitment methods or channels	6
Recruiting workers who are non-Cambodian nationals	7
Bringing in contractors to do the work, or contracting it out	8
Being prepared to offer training to less well qualified recruits	9
Other	10
Nothing	11

Section D – Future Hiring

D.1. Do you think the number of people working in your company will increase in the next 12 months?

Yes (How many? _____)	1	Go to D.2
No	2	Go to E.1

D.2. Could you please indicate the occupations (if any) that will register the highest increase in the number of job positions in the next 12 months *(Please indicate up to five occupations).*

Occupation	Number of additional job positions in the next 12 months
1.	
2.	
3.	
4.	
5.	

Section E – Skills Gaps and Workforce Training

E.1. For each occupation, do you have problem related to your employees who do not perform jobs at the required level?

Yes	1	Go to E.2
No	2	Go to E.5

E.2. Could you please indicate in which occupations the problem is more severe and approximate proportion of people do not perform jobs at the required level? *(List up to 5 occupations in order of severity of the problem)*

Occupations	Approximate proportion of people do not perform jobs at the required level				
	[100%-80%]	[80%-60%]	[60%-40%]	[40%-20%]	[20%-0%]
1: _____	1	2	3	4	5
2: _____	1	2	3	4	5
3: _____	1	2	3	4	5
4: _____	1	2	3	4	5
5: _____	1	2	3	4	5

E.3. Which of the following factors cause your employees not being able to do their jobs to the required level (You can select all relevant answers)

The development of new products and services	1
The introduction of new working practices	2
The introduction of new technology	3
They are new to the role	4
They have not received the appropriate training	5
Their training is currently only partially completed	6
They have been on training but their performance has not improved sufficiently	7
Unable to recruit staff with the required skills	8
Problems retaining staff	9
Staff lack motivation	10
Others	11
No particular cause	12

E.4. Among your employees who are not able to do their jobs at the required level, which, if any, of the following skills need to be improved? (Select up to five skills for each occupation)

Skills	Occupations				
	Occ 1	Occ 2	Occ 3	Occ 4	Occ 5
Literacy	1	1	1	1	1
Numeracy	2	2	2	2	2
IT literacy / using IT	3	3	3	3	3
Advanced IT application / development	4	4	4	4	4
Oral communication	5	5	5	5	5
Written communication	6	6	6	6	6
Public speaking / instructing / training	7	7	7	7	7
Customer handling	8	8	8	8	8
Team working	9	9	9	9	9
Taking initiative	10	10	10	10	10
Knowledge of a foreign language	11	11	11	11	11
Solving complex tasks / problems	12	12	12	12	12
Planning and organizing	13	13	13	13	13
Management responsibilities / taking a lead	14	14	14	14	14
Adapting to new equipment / materials	15	15	15	15	15
Learning new ideas, methods, concepts	16	16	16	16	16
Manual dexterity	17	17	17	17	17
Clerical / administrative tasks	18	18	18	18	18
Pro-environmental tasks (e.g. resource efficiency, saving energy or water, limiting pollution/waste, recycling, restoring)	19	19	19	19	19

environmental quality etc.)					
Other job-specific tasks(_____)	20	20	20	20	20

E.5. Last year, did your employees participate in any external or internal training courses, completely or partially financed by the company?

Yes	1	Go to E.6
No	2	Go to E.7

E.6. In which areas did your company finance the training?

Training fields	
Induction training	1
Occupational health and safety	2
Literacy / numeracy	3
Foreign language	4
IT training	5
Management and administration (including human resource management and quality management)	6
Training in new technology / new product or service	7
Environmental protection	8
Accounting and finance	9
Any other types? (Specify_____)	10

E.7. Did your company experience difficulties in organizing the courses or in finding the trainers?

Yes	1	Go to E.8
No	2	Go to E.11

E.8. What were the main reasons of the difficulties?

Reasons	Select all that apply	
No or poor information on courses/ trainers	1	Go to E.11
No or lack courses / trainers available	2	Go to E.9
Low quality of courses on offer / low quality of trainers	3	Go to E.10
Others	4	Go to E.11

E.9. In which fields of training did your company experience shortages of courses/trainers? (Please list up to five fields in order of severity of shortages)

Field of training
1.
2.
3.

4.
5.

E.10. In which fields of training did your company experience low quality of course/trainers on offer?*(Please list up to five fields)*

Field of training
1.
2.
3.
4.
5.

E.11. Has your company used any of the following methods to help the next generation of workers prepare for career? Select all that apply

Employ interns from high schools	1
Employ interns from technical and vocational schools/centers	2
Employ interns from universities	3
Allow employees to mentor high school/technical and vocational school/university on company time	4
Encourage employees to mentor high school/technical and vocational school/university on their own time	5
Other (Specify_____)	6

Section F– Company's Business strategy

F.1. Does your company plan to introduce new products, services, technologies or expand/switch to new markets?

1- Yes

2-No (End interview here)

F.2. Linked to these plans, does your company plan to apply any of the following measures to address newly emerging tasks?Select all that apply

Training of available staff	1
Internal re-organization to better use available staff and competences	2
Recruitment of new staff	3
Other measures (Specify _____)	4

Thank you very much for taking your time to answer all the questions!

Appendix J

ISIC codes covered by the survey

Code	Description
Manufacturing	
10	Manufacture of food products
1010	Processing and preserving of meat
1020	Processing and preserving of fish, crustaceans, and molluscs
1030	Processing and preserving of fruit and vegetables
1040	Manufacture of vegetable and animal oils and fats
1050	Manufacture of dairy products
1061	Manufacture of grain mill products
1062	Manufacture of starches and starch products
1071	Manufacture of bakery products
1072	Manufacture of sugar
1073	Manufacture of cocoa, chocolate, and sugar confectionery
1074	Manufacture of macaroni, noodles, couscous, and similar farinaceous products
1079	Manufacture of other food products (not elsewhere indicated).
1080	Manufacture of prepared animal feeds
11	Manufacture of beverages
1101	Distilling, rectifying, and blending of spirits
1102	Manufacture of wines
1103	Manufacture of malt liquors and malt
1104	Manufacture of soft drinks; production of mineral waters and other bottled waters
13	Manufacture of textiles
1311	Preparation and spinning of textile fibres
1312	Weaving of textiles
1313	Finishing of textiles
1391	Manufacture of knitted and crocheted fabrics
1392	Manufacture of made-up textile articles, except apparel
1393	Manufacture of carpets and rugs
1394	Manufacture of cordage, rope, twine, and netting
1399	Manufacture of other textiles (not elsewhere indicated).
14	Manufacture of wearing apparel
1410	Manufacture of wearing apparel, except fur apparel
1420	Manufacture of articles of fur
1430	Manufacture of knitted and crocheted apparel

15	Manufacture of leather and related products
1511	Tanning and dressing of leather; dressing and dyeing of fur
1512	Manufacture of luggage, handbags, and the like; saddlery and harnesses
1520	Manufacture of footwear
20	Manufacture of chemicals and chemical products
2011	Manufacture of basic chemicals
2012	Manufacture of fertilizers and nitrogen compounds
2013	Manufacture of plastics and synthetic rubber in primary forms
2021	Manufacture of pesticides and other agrochemical products
2022	Manufacture of paints, varnishes and similar coatings, printing ink, and mastics
2023	Manufacture of soap and detergents, cleaning and polishing preparations, perfumes and toilet preparations
2029	Manufacture of other chemical products (not elsewhere indicated).
2030	Manufacture of man-made fibres
22	Manufacture of rubber and plastic products
2211	Manufacture of rubber tyres and tubes; retreading and rebuilding of rubber tyres
2219	Manufacture of other rubber products
2220	Manufacture of plastic products
Construction	
41	Construction of buildings
4100	Construction of buildings
42	Civil engineering
4210	Construction of roads and railways
4220	Construction of utility projects
429	Construction of other civil engineering projects
4290	Construction of other civil engineering projects
43	Specialized construction activities
4311	Demolition
4312	Site preparation
4321	Electrical installation
4322	Plumbing, heat, and air-conditioning installation
4329	Other construction installation
4330	Building completion and finishing
4390	Other specialized construction activities
Accommodation	
55	Accommodation
5510	Short-term accommodation activities
5520	Camping grounds, recreational vehicle parks, and trailer parks

5590 Other accommodation

Financial and insurance activities

64 Financial service activities, except insurance and pension funding

6411 Central banking

6419 Other monetary intermediation

6420 Activities of holding companies

6430 Trusts, funds, and similar financial entities

6491 Financial leasing

6492 Other credit granting

6499 Other financial service activities, except insurance and pension funding activities (not elsewhere indicated).

65 Insurance, reinsurance, and pension funding, except compulsory social security

6511 Life insurance

6512 Non-life insurance

6520 Reinsurance

6530 Pension funding

66 Activities auxiliary to financial services and insurance activities

6611 Administration of financial markets

6612 Security and commodity contracts brokerage

6619 Other activities auxiliary to financial service activities

6621 Risk and damage evaluation

6622 Activities of insurance agents and brokers

6629 Other activities auxiliary to insurance and pension funding

6630 Fund management activities

Skills shortages and skills gaps in the Cambodian labour market: Evidence from the employer skills needs survey

In 2012 the National Employment Agency of the National Training Board in Cambodia conducted an Employer Skills Needs Survey. The survey covered more than 500 establishments in six sectors: accommodation; construction; finance and insurance; food and beverages; garments, apparel, and footwear; and rubber and plastics. Such a data-collection effort was the first of its kind in terms of scope and content in Cambodia. The paper finds the existence of skills shortages, as well as vacancies that are hard to fill. The underlying reasons for these hard-to-fill vacancies stem from jobseekers being insufficiently skilled or experienced, and from competition in recruitment from other enterprises. At the same time, establishments reported underperformance by the current workforce as being attributable to a lack of motivation, unfamiliarity with the job at hand, and insufficient training. The paper considers realistic short-term measures that need to be put in place to support workforce and enterprise development, as well as long-term measures that would enable Cambodia to upgrade and diversify its production base.

National Employment Agency (NEA)

Building #3, Russian Federation Blvd.,
Sangkat Toek Laok, Khan Toul Kork,
Phnom Penh, Cambodia
Tel.: +855 23 635 7177
Email: info@nea.gov.kh

Website: www.nea.gov.kh

ILO Country Office for Thailand, Cambodia and Lao People's
Democratic Republic

ILO Regional Office for Asia and the Pacific

United Nations Building, 11th Floor
Rajdamnern Nok Avenue,
Bangkok 10200, Thailand
Tel.: +66 2288 1234, Fax.: +66 2288 3062
Email: BANGKOK@ilo.org

www.ilo.org/asia

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