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Kingdom of Cambodia: Strengthening Technical and Vocational Education and Training Project II
(TASF)

Prepared by Austraining International &
BDLINK (Cambodia) Co., Ltd in collaboration with HRINC (Cambodia) Co., Ltd

For Ministry of Labour and Vocational Training
Directorate General of Technical and Vocational Education and Training

Asian Development Bank

This study was commissioned as part of the program assisting the Royal Government of Cambodia to meet the objectives of the Rectangular Strategy for Growth, Employment, Equity and Efficiency, Phase III[1], and its National Strategic Development Plan, 2014–2018[2] through (i) increased access to TVET programs, particularly for women and the poor; (ii) improved quality and relevance of the TVET system; (iii) increased involvement of employers in TVET delivery; and (iv) strengthened governance and management of the TVET system.

As part of an overall project implemented by Austraining International, this research and study was commissioned to BDLINK (Cambodia) Co., Ltd in collaboration with HRINC (Cambodia) Co., Ltd to review and better understand the demand for and supply of TVET education in Cambodia amongst Cambodia's large employers.

Implemented in late **2013** with a particular focus on skills applicable to certificate levels 2 – 5 under the framework of the Cambodia Qualifications Framework (CQF) for Technical Vocational Education and Training, the study addresses in particular the following objectives:

1. Understand the gaps and opportunities in and for TVET provision (supply side) and the needs of large employers (demand side)
2. The demand side of the survey reviews only large employers in Cambodia who employ more than 100 employees across key economic sectors and geographical areas. The demand side attempts to understand how TVET is responding to the needs of industry from the perspective of Cambodia's largest employers and identifies gaps, challenges and opportunities for TVET education from a policy and practical delivery perspective.
3. The supply side of the survey reviews a range of different types of TVET providers including public, private and not-for-profit skills training providers with the aims of understanding what currently exists today in terms of curriculums, teachers, students, facilities as well as the opportunities and gaps that exist.

The study outcomes provide a range of recommendations that identify gaps as well as opportunities at a national and provincial level as well as institutional level to enhance the provision, quality, outcomes and "engagement" of the TVET system as a whole in Cambodia. This with a particular aim to ensure TVET relevance *to* and engagement *with* industry, as well as its accessibility and relevance as an alternative education offering to Cambodian people within the framework of the National Strategic Development Plan.

[1] Government of Cambodia, *Rectangular Strategy for Growth, Employment, Equity, and Efficiency, Phase III.* Phnom Penh.

[2] Government of Cambodia, *National Strategic Development Plan 2014–2018.* Phnom Penh.

The supply of and demand for TVET skills in Cambodia

A study of Cambodia's large enterprises and TVET institutions

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Executive Summary

This study was commissioned as part of the program assisting the Royal Government of Cambodia to meet the objectives of the Rectangular Strategy for Growth, Employment, Equity and Efficiency, Phase III[1], and its National Strategic Development Plan, 2014–2018[2] through (i) increased access to TVET programs, particularly for women and the poor; (ii) improved quality and relevance of the TVET system; (iii) increased involvement of employers in TVET delivery; and (iv) strengthened governance and management of the TVET system.

As part of the overall project, this study was implemented in late 2013 to review both the demand and supply side of TVET education, with a particular focus on certificate levels 2 – 5. The study objectives include to understand the gaps and opportunities in and for TVET provision (supply side) and the needs of large employers (demand side).

More specifically, the demand side of the survey reviews only large employers in Cambodia. These are considered to be companies who employ more than 100 employees across key economic sectors and provinces. The demand side attempts to understand how TVET is responding to the needs of industry from the perspective of Cambodia's largest employers and identifies gaps, challenges and opportunities for TVET education from a policy and practical delivery perspective. A range of different types of TVET providers are reviewed including public, private and not-for-profit skills training providers.

THE DEMAND SIDE OF THE SURVEY

The demand side of the survey reviewed large employers only with a total sample of 222 employers across six provinces. While the survey represents 38 percent of large employers in the particular provinces interviewed, it is not intended to be representative of a total employment in a particular industry or location given that the largest employment numbers in Cambodia are generated by SMEs and smaller enterprises.

Large employers are considered those who employ over 100 employees. Most enterprises are foreign owned (74 percent) and majority of products and services are focussed on other internal market 59 percent and the Asia region 25 percent. These results show that large enterprises are integrated into regional and international value and supply chains. It is therefore important that business owners are able to ensure reliable delivery of products and services and are able to do this through a skilled and competent workforce that is recruited and placed at the right time.

The overall the sample is represented by 61 percent garment and footwear enterprises, 22 percent of hospitality enterprises, 13 percent other professional services and 4 percent other manufacturing. By province there is a diverse make-up of enterprises reflecting the key economic activities of each province

The workforce profile is particular to each industry. Overall the survey represents nearly 190 thousand workers (2013) with a forecast of up to 225,391 workers by 2015. In the garment sector, the majority of workers are plant and machine operators and assemblers (nearly 90 percent). In hospitality, the majority of workers are craft and related trades workers as well as service and sale workers making up around 70 percent of the total workforce. In other manufacturing, plant and machine operators and assemblers make up nearly 80 percent of the workforce. Other professional services has the most diversified mix of occupations with around 85 percent of the workforce made up of plant and machine operators and assemblers, craft and related trades workers as well as service and sale workers. There is an estimated 13 percent workforce increase by 2015 which is driven by the main occupations in each sector as described above.

Wage levels provided by industry showed that there is a clear progression in salaries from elementary up to management positions.

Large employers are struggling with medium to high turnover. Vacancies are taking a significant time to fill: Turnover is a challenge for all industries, in particular related to the majority employment positions in the industry. Coupled with medium to high turnover, industries in total recorded nearly 26,000 vacancies of which 92 percent are in the garment sector. Vacancies are hard to fill because work experience is a critical factor in filling vacancies and the perceptions of applicants towards industry are key factors. This suggests that there are challenges with the talent pool, as well as with industry. Other factors include competition amongst employers and compensation levels. The main skills lacking include ability to communicate effectively, team work and problem solving, management and supervisory and manual dexterity skills. The result of not filling vacancies is significant – industry is delaying the development of new products and services and business is being lost to

[1] Government of Cambodia. 2013. *Rectangular Strategy for Growth, Employment, Equity, and Efficiency, Phase III.* Phnom Penh.
[2] Government of Cambodia. 2013. *National Strategic Development Plan 2014–2018.* Phnom Penh.

competitors. Internally, existing staff in companies are getting additional workload and stressors to try to maintain the pace and development of the company. To address challenges, employers are increasing salaries and looking at new recruitment methods including diversifying advertising sources as well as going closer to communities to find people. Employers did not mention working closer with TVET institutions.

While turnover and vacancies are particularly pronounced and perhaps even alarming, employers are not taking a long term view to address the challenges they face. The survey showed that there was little focus on building skills for the next generation through internships, apprenticeship programs or other.

TVET graduates are increasingly more prepared for the workplace; however there are still basic skills and life skills lacking. There is a clear trend that TVET students and university graduates are more ready for the workplace whereas those graduating from secondary school are not that well prepared. Despite positive results on preparedness, the top skills lacking including lack of required basic skills or competencies and lack of life experience and maturity. Poor education formation, poor attitude and personality, lack of literacy and numeracy skills as well as lack of common senses were mentioned less, but still relevant skills lacking.

A large portion of the current workforce is not performing at desirable levels. A large challenge, likely driven in part by turnover and vacancies is the percentage of workers that are currently not performing at optimal levels. Employers were asked to indicate by occupation what percentage of the workforce was not performing. In terms of overall sample, the highest percentages mentioned range from 30 to 60 percent of the workforce in the most critical occupations to each sector. Looking at industry averages, the average percentage of total workforce not performing by occupation level ranges from 9 percent to 19 percent.

1. In garments and footwear the average percentage is 20 percent for plant and machine operators and assembles
2. For hospitality it is 50 percent for craft and related trade workers
3. In other manufacturing, an average of 20 and 22 percent respectively for service and sales workers and plant and machine operators and assemblers are not-performing at desired levels.
4. In professional services it is 40 percent for craft and related trades workers and 12 and 16 percent respectively for service and sales workers and plant and machine operators and assemblers.

The reasons for non-performance link to reasons for readiness for the workplace. Overall 48 percent of employers noted that workers are new to the workplace and jobs, and 43 percent noted staff lacks motivation and self-discipline. By sector, these challenges are more pronounced including additional challenges as follows:

1. In garments and footwear, the inability to recruit staff with the recruited skills and high turnover
2. In hospitality, the same as garments and footwear
3. In other manufacturing, the inability to recruit staff, introduction of new products and services and well as new work and technology practises are also pronounced
4. In professional services, inability to recruit, high staff turnover and introduction of new products and services are also pronounced.

Large employers are almost all investing in some sort of training and in majority provided through in house facilities. This is no surprise as most employers feel that there is limited provision of quality and relevant TVET training. Employers have training budgets and a total of almost 1.2 million United States Dollars is recorded amongst a limited number of respondents.

Employers however, have limited linkages with the TVET sector. The majority of linkages are seen in the hospitality sector and primarily the engagement with NGO TVET providers in Siem Reap. Employers are however willing to engage with TVET however our survey results suggest that it is TVET that needs to take the first steps. Over 65 percent of employers are willing to be engaged in setting up specific industry curriculum however they do mention that they need more information as to what TVET is doing. There is limited knowledge around course provision and strategic vision of TVET.

In majority, employers do not support a training levy. They do not see that there will be return on such a tax levy when little exists to today to support industry. Most employers recommend a public private partnership in improving skills training for industry.

A review of the five key questions posed in the terms of reference can be summarised as follows:

1. TVET training is not meeting the needs of employers in that there is limited training provision for industry. Graduates are somewhat ready for the workplace.
2. Employers do not have much awareness or understand about TVET provision in their areas or regions. There is very limited engagement with TVET overall.

3. While TVET graduates at entry level are showing promising trends in terms of being ready for the workplace, there are still critical foundation skills that are lacking. Almost all companies are providing industry and basic training in the workplace.
4. Emerging trends in skills needs of the workplace are focussed on the "majority employment" in each sector. There is not a need for new skills, but filling basic requirements of the workplace. Forecasted needs in the future are at least 13 percent growth by 2015 on the current employment numbers of 2013.
5. Employers are not focussed on recruiting from the TVET institutions, they use traditional methods of recruitment and are expanding in their recruitment methods and marketing and advertising. Employers are training their workforce and collectively, for those who responded, there is approximately 1.2 million United States Dollars in training budget provision amongst large employers.

Large employer skills needs are best reflected in their vacancies not being filled.

1. Plant and machine operations and assemblers account for nearly 24 thousand vacancies which had been vacant for 16 weeks at the time of the survey.
2. Service and sales workers 777 which had been open for 5 weeks at the time of survey.
3. Technicians and associate professionals and clerical support workers (613 vacancies) which had been open for 11 weeks at the time of the survey
4. Elementary occupations 301 which had been open for 8 weeks at the time of the survey
5. Craft and related trades workers 256 vacant for 10 weeks at the time of survey and
6. Professionals and managers a total of 59 positions at the time of the survey which had been vacant for 9 and 11 weeks respectively at the time of the survey.

To address the skills needed in large employers, and considering the locations of public TVET providers in particular, it appears that to have an impact in addressing the skills needs, TVET providers should have specific strategies for addressing skills needs in their locations, considering that large employers do not always represent the majority of skills needs in a particular area. In this regard a review of employment growth by province shows the following:

1. In Battambang, TVET supply needs to be more service driven, rather than purely an industrial focus.
2. In Kampot, TVET training needs to provide a blend of industry related skills as well as service skills.
3. Nearly all the demand in Phnom Penh is for plant and machine operations and assemblers. The importance of service and sales workers and technicians and associate professionals and clerical support workers should not be underestimated for Phnom Penh or deemed to be unimportant as a focus for TVET training in Phnom Penh given it is the capital city, and hosts all headquarters and large hotel establishments.
4. In Siem Reap our survey shows that the majority employment will be created in service and sales workers and a slight increase in technicians and associate professionals.
5. Svay Rieng employment growth in large enterprises will be industry focussed with a great increase in plant and machine operations and assemblers. However, demand for service and sales workers, which will predominantly be found in the hospitality sector is likely to be much more pronounced even than the forecast estimates if large hotels on the border, continue to employ and grow.
6. Takeo employment growth in large enterprises will be industry focussed with a great increase in plant and machine operations and assemblers as well as slight increases in technicians and associate professionals and clerical support workers. Further consideration in designing TVET strategies can be focussed on craft and related trades workers as well as service and sales workers required to support the traditional handicraft market.

Cambodia is also focussing on industrial diversification and more value added jobs. For industry to benefit from skilled youth graduating from TVET sector, there is need to ensure that TVET is coordinated, credible and relevant. In addition, the TVET sector needs to be flexible and consider the broader economic changes that will occur, so that its training remains relevant and so that curriculums can be updated to address changing industrial needs. Employers provided the following recommendations:

a. **TVET facilities require investment into infrastructure,** in particular machinery relevant to the workplace so that workers are able to experience the real work environment in their training and be better prepared for the workplace.
b. **TVET needs to strengthen its engagement with industry at an enterprise level.** This engagement impacts both the supply and quality of training as well as information sharing.
c. **TVET should focus on learning that will have an impact –** not short courses which have certificates, no skills acquired or learning. Competency based training and qualification frameworks are important in this

regard as well as ensuring that young people spend sufficient time to learn. Employers mention the importance of the length of training to be suitable to the skills being taught.

d. **TVET needs to have closer ties with industry.**

There is a clear need to enhance the quality of TVET training, the number of graduates graduating and to strengthen ties between industry and TVET education. While there is a clear willingness from industry to engage, our study suggests that it is necessary for TVET to provide information to industry as to what is needed to assist TVET. To date, the Garment and Footwear sector have taken a loan to build a private sector industry driven national training institute. In the hospitality sector, a public private partnership is being developed for a national culinary academy. The development of the national garment institute by private sector suggests that overall TVET was not responding to the needs of industry, despite the sector being the biggest formal employer in the country for over 10 years. TVET needs to be responsive, be constructive in its engagement.

SUPPLY OF TVET

The supply side of the survey reviews 32 TVET providers across six provinces with a particular focus on Level 2, 3, 4 and 5 under the Cambodian Qualifications Framework. There are a total of 325 TVET institutions are identified in the whole country of which there are 57 NGO, 211 Private, and 56 Public sector institutions which are registered across 12 different ministries, and under Phnom Penh Municipality. Level 2, 3, 4 qualification is equivalent to that of a secondary school year 12 qualification.

The study starts with identifying the levels of training that are provided across different types of TVET providers and discusses the different types of training courses that are provided. The study reveals the following:

There is a "Curriculum Missing Middle" with an almost non-existence and insubstantial provision of TVET at level 2 through 5. Almost all TVET training is focussed on Level 1 training which in majority covers agriculture in the public sector and a variety of different trainings in NGO and private sector. While Level 1 descriptions suggest 4 – 6 months of training, the implementation in reality is quite different. It can be as short as a few days, up to 1 year of training in the NGO TVET providers.

There is very little opportunity to build a career and development skills through TVET given the lack of curriculum offering and the curriculum missing middle. In public sector, only air-conditioning repair and auto engineering have Level 2 – 5 courses at National Level. Only automotive services have Level 2 – 5 at Regional Level. Both National and regional have electricity training for level 1, 2, 3 and 5 and regional level has a level 4 electricity training. In non-public sector, there is no provision in any course of a full set of Level 2 – 5 training. Of the complete set of trainings provided in public sector, most are focussed on traditionally male careers. Young girls and women have little TVET curriculum designed around traditional female careers and there is no provision of courses for careers typically perceived as more suitable for women. Given the provision of TVET courses is currently mostly focussed on male perceived and dominated careers, TVET provision may inadvertently create barriers for young women to access TVET education. The National Strategic Development Plan, 2014–2018[3] has a particular focus on "increased access to TVET programs, particularly for women and the poor." Given a lack of diversity in curriculum provision, young girls and women may be excluded from accessing TVET or discouraged from applying to TVET education courses.

There is a need to standardise the training offering (course name and content) across all institutions and to share curriculums amongst institutions that already have existing programs so as not to duplicate resources. There are 76 course names in both national and regional public facilities and 57 course names amongst the NGO and private sector providers. In standardising course names and content, this may have an impact on private sector in understanding exactly what young people are learning and what skills they are gaining through education.

The perceptions of young people are important. Although not studied, it is important to address the perceptions or possible perceptions associated with TVET. Young people who have completed high school and do not have the means to go to university may perceive doing a level 2, 3, 4 training as "going backwards" as it is going to give the same qualification as high school. It is well known that most young people believe that university education is the key to achieving the skills and knowledge to get a job while TVET is viewed as training for a "worker" and not a professional. The importance of TVET to the Rectangular Strategy for Growth, Employment, Equity and Efficiency, National Development and the National Strategic Development Plan of 2014 – 2015 stress clearly the importance of TVET to economic growth and prosperity. It is therefore important to consider the perceptions of young learners towards education systems and the returns of education to families.

[3] Government of Cambodia, *National Strategic Development Plan 2014–2018.* Phnom Penh.

Is training provision in TVET Sector addressing large employer needs? Simply, the answer is no in majority. There are over 25,000 job vacancies and there are approximately 7816 young people enrolled in TVET training in the public sector. More than 50 percent of these students studying in TVET are studying level 1 course which can be as long as a few weeks – 6 months. These courses are dominated by short courses in agriculture. There is little mapping of the needs of industry and forecasting skills needed. All NGO and private TVET providers in majority provide Level 1 training, with very limited supply on Level 2, 3, 4 and 5.

The majority of positions vacant and in demand from employers are plant machine operations and assemblers, which would ideally have completed secondary school, have the ability to read and write and understand instructions, in particular safety, emergency and health policies. Employers stress in the garment sector it would be good to have multi-talented operators who can work on several different machines. While most workers today have less than a secondary education and have learned on the job, to improve productivity, flexibility, versatility and adaptability of the workforce, training that provides learners with access to machinery and exposure to the industrial environment will help to ensure a smooth transition into the workplace for these types of workers. TVET Provision of sewing skills for industry is almost zero although it exists for domestic and home based businesses.

There is limited practical training at Level 2, 3, 4 given lack of curriculum and there is a need to improve the tools and technology available to teachers but also teacher capacity to be able to use tools and technology.

Are enrolment numbers increasing in TVET? A mixed picture appears as to the enrolment changes over the last 3 years. In Phnom Penh or national level public institutions, there appears to be a decline in enrolments numbers overall except for Level 5 instructions where there are slight increases. In regional training centres there appears to be an increase in enrolment for level 1 student only except in Svay Rieng where there has been a decrease. In general the results show that there is great need to focus on increasing enrolment numbers which are already low and not focussed on industry level training.

In the non-public TVET providers (NGO and For-Profit providers) there is link between the sophistication of types of providers, the more established institutions are experiencing increases while the smaller institutions are struggling with decreasing numbers or stagnant numbers which are creating overall institution sustainability challenges given the low course fees that are being charged.

There is extremely limited capacity to enrol students at Level 2 – 5 in the TVET sector. Level 5 represents around 30 percent of total enrolment in public sector which provides a qualification of a higher diploma or associate degree. For level 2, 3 and 4, only 10 percent of total capacity is able to be absorbed into public sector given the current facilities and equipment available.

In majority non-public sector does not have level 2 to 5 training courses and for the 1 institution that does provide such training, a total number of 800 students can be absorbed in Level 1 – 5.

Most public sector training is financed through scholarships by government and donor partners. TVET institutions mention how difficult it is to find good quality students for the scholarships. Sometimes too many scholarships are provided and the quality of students is poor. There needs to be more rigor in selection of students to ensure quality outcomes are achieved. The public sector in this regard faces a chicken and egg situation of having a financing to provide training however being “forced” to provide low quality training as the level of primary and secondary education remains poor. **There is a clear need to continue to focus on quality outcomes in primary and secondary education, to ensure that further education and training, regardless of TVET or university, is able to ensure that the future Cambodian workforce has the skills and competencies need in the workplace. In addition, to ensure that the workforce is acquiring qualifications that is relevant and perceived as credible by industry.**

Is TVET engaging with Industry? The Public TVET sector certainly at heart has the initiatives and structures in place to pursue engagement with industry. While structures and governing bodies exist, we frequently note the lack of capacity to engage with industry or how to start the engagement with industry. As noted in the demand side of the survey, most enterprises are foreign owned (74 percent) and large Cambodian owned enterprises represent 20 percent in the sample. Building the capacity and confidence of public TVET institutions is important and that will in majority come with a more comprehensive training offering (the “curriculum missing middle”) as well as an increase in trained graduates that are relevant to industry. There are some innovative and best practise examples demonstrated by national institutes in engaging directly at enterprise level in training, giving teachers and trainers real life experience of the workplace.

In the non-public sector, only large established NGOs had any form of industry liaison unit or advisory board. While more active the public sector, industry linkages are limited to a few large providers only.

For public TVET providers: Capacity building for industry liaisons units are important to enable staff to better engage with industry and contact industry. This includes networking with government agencies to understand which new business are setting up, as well as networking and accessing industry. Basic capacity building from relationship building, interviewing skills, contacting and engaging with the business community, networking and promoting the talented graduates is important. Directors of institutions are involved in this engagement with public sector and it is very intensive from a management time perspective to be effective.

In terms of advisory bodies, there is a clear need for public TVET providers to take a structured approach to engaging with industry. Firstly, to engage with industry it will be necessary to have a strategic plans that clearly provides industry an understanding of the institution strategy and priorities of what the TVET institution is going to pursue and how it is going to develop talent for industry, within its location as well as more broadly to industry overall. It is necessary to prioritise this plan and not try to do everything, but try to start with something and do it well, to encourage more constructive engagement from industry. Taking a first step with one course or curriculum that can really show progress in skills development, will help to create enthusiasm in industry that concrete steps are being taken and that engagement with TVET will result in necessary outcomes, not only for industry, but for the economy more broadly.

TVET infrastructure, teachers and financing: All public schools, except for Battambang, Svay Rieng, and Siem Reap which has limited land in the public sector, can grow their institution capacity in terms of building infrastructure. At the moment, current facilities are not fully utilised. There was no "lack of teachers" per se, however a need to improve teaching methods. There is a need to improve the machinery and tools available to teach more industry related skills, however, it appears that in the absence of relevant curriculum and corresponding teachers to teach Level 2, 3, 4 in particular, there needs to be a focus first on curriculum development and priorities to understand what the supporting workshops and machinery are needed.

Financing in public sector is mostly donor or government driven. In private and NGO and mix of types of financing exist from fee based or fee contributions to event promotion, to providing services for fees to the general public.

IMPORTANT THEMES EMERGING FROM THE STUDY

…is TVET a safety net for drop outs or focussed on providing "further education for all"

Our study does not focus on the perceptions of young people and their families however these are powerful and important influencing factors in the development of TVET. We have seen that the views on enrolment numbers are mixed. In areas with developing economic zones, often young people choose to work instead of study as the need to earn an income is critical to family. Level 2, 3 and 4 TVET is described and presented as the equivalent of a high school diploma however the provision of TVET at these levels is so important to the development of a skilled workforce. There appears to be broader challenge as to the objective and provision of TVET and these questions are put forward below for further consideration:

1. TVET at Level 2, 3, and 4 is presented as the equivalent of high school degree and requires that a student has a grade 9 education level. This in essence provides a safety net and alternative education path for the many who drop out of school after grade 9, the mandatory level of education in Cambodia. TVET at level 2, 3, 4 can therefore be viewed as extremely important as an alternative education path for young people who drop out or young people who would rather pursue a technical high school degree. However the reality is that 58 percent of primary school students will drop out of primary school and 32 percent of those entering lower secondary will drop out of lower secondary which ends at Grade 9. This leaves TVET level 2, 3, 4 qualifications in competition with higher secondary school to attract students. *The following pertinent questions arise, what is the provision of TVET for those who finish high school and want to pursue a technical or skills related job, and what is the provision of TVET for those who drop out in primary and lower secondary?*
2. Most young people want to pursue a higher education degree and go to university as TVET is generally viewed as education or training for "workers" and not professionals. In the current form and presentation, TVET does not provide an alternative education path for those who complete high-school and wish to pursue practical or skills related training. The only option for young people in this regard is to pursue higher education or an associate degree where these exist. *Is it possible to assume given the currently structure that a young person or their family that would require to invest in TVET would not want to gain a second "higher education diploma" as most families would not have the financial resources to do so? Thus, young people are rather encouraged into the workplace to earn a living rather than pursue further TVET education.*

...a need for bottom up-strategic planning and inclusive skills strategies

The study consolidates information at a national and regional level amongst TVET providers. While this providers a broad overview, it is clear that at an implementation level, there needs to be more involvement and strategic planning. Given the limited supply of TVET training across all the provinces and the unique economic make-up of different regions, it is necessary to build strategic plans from the bottom-up.

The study also provides results on employment for large employers only; however, the majority of employment in the country comes from SMEs. In this regard, planning at a provincial level is critical to ensure the relevance of TVET. *While addressing large enterprise needs is a starting point to addressing skills, there is a need to ensure inclusive growth and skills training which will not only benefit large employers, but the broader economy and business environment overall.*

As mentioned frequently by the supply side providers, there should be more empowerment and autonomy from the TVET provider institution to ensure how they can best operate their institution in a more effective and efficient manners. There should be a bottom up decision making on how the human resource is allocated and how the budget is spent on certain equipment to be purchasing items and equipment's that are currently relevant to their institution.

MOVING FORWARD: PRIORITIES AND SUGGESTIONS

The study shows that there are a host of challenges as well as opportunities. Most importantly, the study shows that there is an urgent need to move into action, if TVET is to be relevant and genuinely have an impact on skills development in the long run. It can be argued that public private partnerships could be a quicker and more effective way achieving results, given the urgent need to ensure that TVET is responding to industry needs, has relevant curriculums and is able to deliver results in a short term. The following list of activities could be practical and useful in moving forward for public sector.

...at a provider level: Short – Medium Term initiatives

a) Prioritising at an institution and provincial level. Close the missing middle (develop curriculum)
b) Teacher training (skills, knowledge, teaching methodologies must be considered in the development of curriculum).
c) Marketing and student attraction

...at a provider level: Medium to Long term Initiatives

d) Supporting laboratories and machinery for practical implementation.
   - Review what additional laboratories and workshops and practical tools are necessary.
e) Developing internship and apprenticeship programs
   - Internships
   - Apprenticeships
   - Exposure visits / field visit / Study tours
f) Strengthening engagement with industry and doing a regional TNA on an annual basis with employers on graduates, new training programs etc.
g) Consider and study the need for dormitories for students and teachers in the future and their links to improving enrolment and access to TVET education.

...suggested national level priorities

Accreditation of training programs and credibility of programs should be among the first priority for the government to ensure all institutions have a common understanding of the current and future TVET framework, so that the TVET providers knows the current status of their programs.

Financing strategies and planning for the improvement of the TVET physical infrastructures based on institution or regional level strategies in which it needs to take into account: infrastructure, particular HR needs for new training courses and tools and equipment needed to ensure training is relevant.

Stronger cooperation between the public and private sector is very important to focus on and this should be done at an industry level as well as provincial and institution level. Teachers and students could greatly benefit from greater engagement with private sector.

A need to emphasise and improve learning engagements in the classroom including teacher skills and teaching methodologies. Experience and knowledge sharing between private, NGO, and public sector should

be under a policy dialogue platforms designed under Ministry of Labour and Vocational Training and relevant industry.

Empowerment and autonomy from the public TVET providers should be considered particularly in relation to sustainability. At a national level, to promote excellent amongst TVET providers in public sector and non-public sector and consider turning a leading regional RTC into a flagship institution which helps all institutions achieve excellence.

National campaign on TVET training and lifelong learning. There is clear need to raise awareness of the importance of TVET to economic development and to the importance of the individual. There is a need both at a national level and institution level to coordinate strategies to promote TVET learning.

A need for a political champion on TVET training. It could be useful to have a political and public figure to champion TVET including industry role models who have been successful in starting their careers through TVET education and qualifications and progressing in their careers. Roles models for young people can help to change the perceptions that TVET is training for workers and low level professions. On the contrary, TVET should be viewed as an education qualification that can result in a good and well paid job.

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1 Study Background and Methodology

1.1 Demand side of the study

The objective of the study is to identify with particularly attention to skills development for Cambodian Qualifications Framework (**CQF) Level 2 – 5** the following:

1. Is TVET training meeting the needs of employers so that graduates are ready for the workplace? (Quality of training) How much awareness do employers have around TVET training facilities in their region?
2. What is the quality of the graduates coming out of TVET? Are they ready for the workplace? Do they have to undergo training from the beginning again? Is there a common standard amongst the graduates graduating?
3. What are the current skills/professions required in the workplace? What are the emerging skills/professions required in the workplace? What are the forecasted needs of employers 2014 – 2018
4. Where are employers recruiting workforce at the targeted level of CQF 2-5? Are there any links with TVET? How much are employers investing in training their workforce

The survey reviews large employers with more than 100 employees across 6 geographic locations: Battambang, Kampot, Siem Reap, Svay Rieng, Takeo and Phnom Penh. Only employers with 100 or more employees were selected from the Economic Census of Cambodia in 2011 conducted by National Institute of Statistics (NIS). A final sample of 222 employers was interviewed accounting for 38% of total NIS large establishments in the survey locations. The sample size is provided in the terms of reference and is not intended to be representative of an industry since it includes only large employers. The survey was implemented over July to September 2013 and was implemented through a structured questionnaire and one-on-one interviews with employers which lasted approximately 1 – 1.5 hours. The BDLINK team approached over 720 employers to achieve the final outcome. Senior managers responded to the questionnaires.

1.2 Supply side of the study

The supply side of the study seeks to answer the following questions

1. What courses exists currently in TVET institutions and at what levels? What future courses are planned? How are these future courses planned and based on what information?
2. How practical are the curriculums and do facilities have the practical technology and machinery in their facilities to link to work place needs?
3. How TVET facilities are engaging with industry to facilitate change in curriculum and what labour market information are they drawing on. How are TVET facilities matching the demand needs (forecasting and promoting skills training to youth) to ensure that graduates are employed post-graduation.
4. Do TVET facilities have linkages with industry to encourage apprenticeship training to ensure that youth get workplace training prior to graduation?

The survey was implemented over July to September 2013 and required an overview of **30 TVET providers across 5 provinces.** The final sample includes 32 TVET providers. For public sector, the questionnaire was dropped off with the director of the institution and a collected approximately a month later with all the information filled out. For NGO and private sector providers, a one-on-one interview was conducted as little structured administrative information existed within the institutions.

1.3 Challenges and overview of sample

The study challenges include the fact that the survey was implemented over the elections period in Cambodia which impacted the availability of participants to participate. The data sought after was particularly detailed on the supply side and not all TVET Providers were willing to share information or even had information that corresponded with the relevant data tables sought out. To this extent, the TVET side consolidates information as best as is possible and provides a more qualitative overview of the supply of TVET and relevant certifications in Cambodia.

On the demand side, the timing of the study was particularly challenge given the period over which the survey was conducted as well as the time allocated for data collection. Accessing large employers is a particularly timely process in achieving approvals and management buy in. The survey team, led by BDLINK Cambodia pursued more than 720 employers in total to return the survey sample. Another challenge related to accessing large employers is their relevant contact information. Government datasets often have the wrong information

resulting in the team having to seek for additional employers and enterprises with branches of more than 100 people and classified as large are considered in the initial census databases as several enterprises. Overall the study yields comprehensive results on the demand side for review by the geographical locations.

Despite challenges, the demand side results represent 151 large employers in Phnom Penh of which 120 are represented in the garment and footwear sector which represents at least 25 percent of this sector. For the provinces a total of 71 large employers were interviewed. These results are presented by location and sector classification in the *Table 1* below and reflect the realities of industry focus in each province. For example, Siem Reap is the tourism capital of Cambodia and therefore the majority of sample in Siem Reap reflects the hospitality sector. This does not mean that Siem Reap does not have any other industries, but large employers will be represented in majority by the particular characteristic and economic profile of the province.

Table 1: Final sample breakdown: by industry and province

	Garment and Footwear	Hospitality	Other manufacturing	Other professional services	Total
Battambang	0	1	0	5	6
Kampot	1	2	1	3	7
Phnom Penh	120	9	3	19	151
Siem Reap	0	25	0	1	26
Svay Rieng	12	11	5	0	28
Takeo	3	0	0	1	4
Total	136	48	9	29	222

On the supply side, a total of 32 TVET providers were accessed during the survey and the final sample listed in the *Table 2* below representing the most prominent TVET providers in NGO and private sector in particular.

Table 2: Final sample of TVET Providers

Public Sector Institutes	NGO & Private TVET Facilities
Phnom Penh TVET Institutes 1. National Polytechnic Institute of Cambodia 2. National Technical Training Institute 3. Preah Kossomak Polytechnique Institute 4. Industrial Technical Institute 5. National Institute of Business 6. Cambodia India Entrepreneurship Development Centre 7. Japan Volunteer Centre 8. Thai Skill Development Centre **Regional Training Centres** 1. Regional Training Centre in Svay Rieng (RTC Svay Rieng) 2. Regional Training Centre in Takeo (RTC Takeo) 3. Regional Training Centre in Siem Reap (RTC Siem Reap) 4. Regional Training Centre in Battambang (RTC Battambang) 5. Regional Training Centre in Kampot (RTCKampot)	**NGO** 1. Pour Un Sourire D'Enfant (Phnom Penh) 2. WEC International Cambodia Vocational Training Program (Phnom Penh) 3. Economics and Education Development Organization (Phnom Penh) 4. CYFA Computer Centre (Phnom Penh) 5. Cambodia Education Organization (Phnom Penh) 6. Computer Vocational Training Organization (Phnom Penh) 7. Paul Dubrule (Siem Reap) 8. SALA BAI (Siem Reap) 9. Community Empowerment and Legal Outreach Organization (Takeo) **Private** 1. Centre for Entrepreneurship Training and Practice (Phnom Penh) 2. Student Development Institute (Phnom Penh) 3. Information Technology and Electric Centre (Phnom Penh) 4. Kim Heng Technical Sewing and Repair School (Phnom Penh) 5. Dy Sovannarity Technical Training School (Phnom Penh) 6. Development of Economic Demographic Organization (Phnom Penh) 7. Institute of Automotive Techology (Phnom Penh) 8. Multi Skill Centre (Phnom Penh) 9. Angkor Computer Centre (Phnom Penh) 10. Information Technology Professional Centre (Phnom Penh)

2 Demand Side Survey Results

2.1 Definitions and structure of results

The survey results are summarised by location and industry in this report with particular groupings of companies to ensure data is consolidated and as meaningful as possible from a sector perspective. Given that the survey is not intended to be statistically representative of a particular sector and a sample size provided in the original terms of reference, the results provide a good indication of the views of employers employing over 100 employees. Some companies such as beverage production, bicycle assembly and cement require to be grouped together as other manufacturing, given the limited number of companies interviewed in each individual specialised manufacturing sector.

The particular groupings are clearly identified below as to what types of companies are in each industry classification in *Table 3* below.

Table 3: Industry Classifications

Industry Classifications	What's included
Garments and Footwear	All garment manufacturers and footwear manufacturers
Hospitality	Hotel, Restaurant, Coffee houses & Groups and Casinos
Other Manufacturing	Electrical factory, bicycle factory, Cement Factories, Beverages and Water Factory, Motorcycle Assembly.
Other Professional Services	MFI/Banking, ITC, Construction, Trader, Education Provider

Positions have been classified into standard international classifications as per the *Table 4* below.

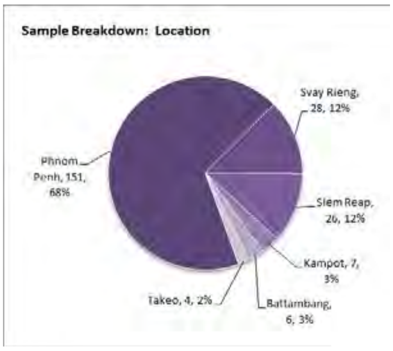
Table 4: Position Classifications

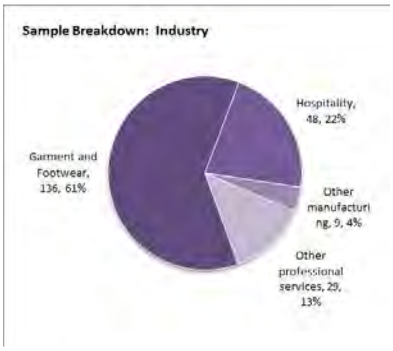
Occupation Category	Example of Positions in Garment Factory
Managers	General Managers; Administrative Managers
Professionals	Deputy Administrative Managers
Technicians and associate professionals/Clerical support workers	Technicians, Clerical Support Staff
Craft and related trades workers	Supervisors; Line Leaders
Plant and machine operators, and assemblers	Garment Workers
Elementary Occupations	Cleaners; Helpers

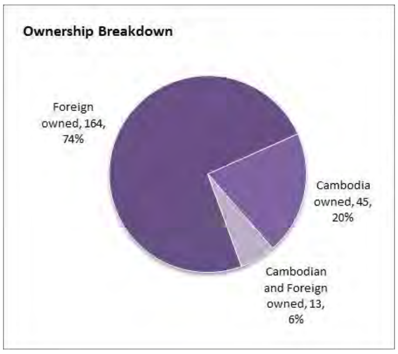
2.2 Characteristics of Enterprises and Employment

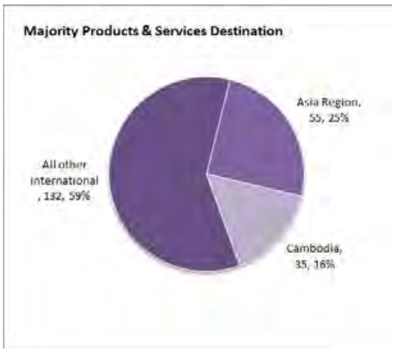
2.2.1 Enterprise profile and characteristics

Figure 1: Dataset profile: by location, industry, ownership, product destination





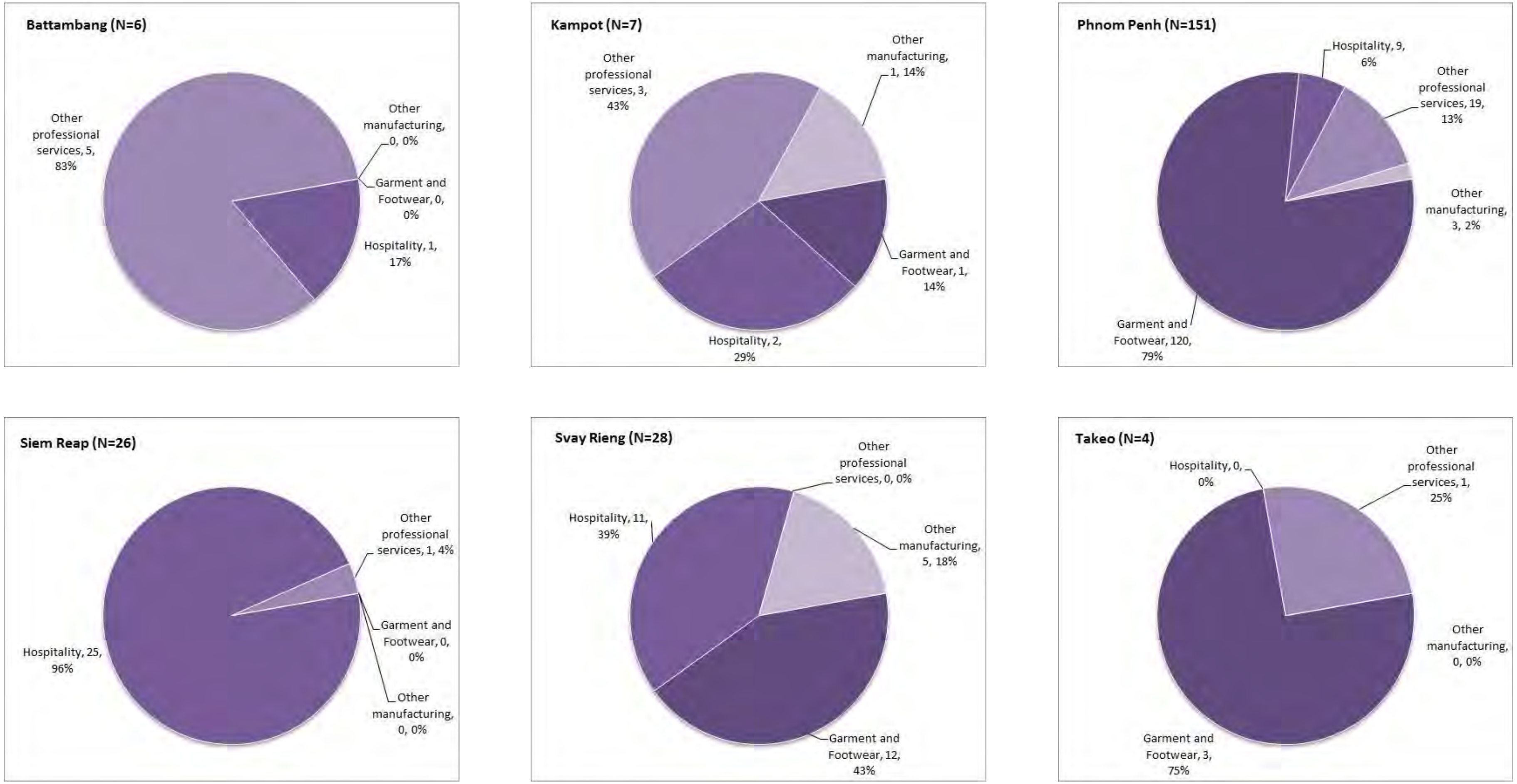




It is important to bear in mind that results represent large employers with more than 100 employees only and are not meant to be statistically representative of a particular area or industry. The total sample is dominated by large enterprises in Phnom Penh (68 percent) and garment and footwear factories (61 percent). Most of these large enterprises are foreign owned and relying on international markets for the products and service. These results are presented in the *Figure 1* with a detailed description of large enterprises by location outlined below. *Figure 2* below shows by province, the industries represented in each province.

1. **Battambang** has 17 large enterprises with a total of 6 interviewed in the survey. These are present in majority in the other professional services category. Battambang businesses are 50 percent owned by Cambodian owners and the other 50 percent foreigners. Sixty seven percent of business is focussed at the Cambodia market only.
2. **Kampot** has 8 large enterprises with a total of 7 interviewed in the survey. These are present across all the sectors with the most in other professional services (3) and other manufacturing (2). Kampot businesses are in majority foreign owned (57 percent) with an additional 29 percent being Cambodian and foreign owned. Forty three percent of business is focussed at the Cambodia' market only with the remaining distributed evenly between Asian and all other international destinations.
3. **Phnom Penh** has 467 large enterprises with a total of 151 enterprises interviewed in the survey and in majority large garment and footwear factories. While other industries are present given that Phnom Penh is the capital of Cambodia, the majority of large enterprises are manufacturing related. Phnom Penh large enterprises are in majority (83 percent) foreign owned with an additional 5 percent Cambodian and foreign owned. Seventy five percent of business is focussed at the international market while 17 percent for the Cambodia market.
4. **Siem Reap** is dominated by hospitality business with a total of 26 enterprises responding to the survey out of 45 of which 25 are in hospitality. Sixty five percent of large enterprises we interviewed are Cambodian owned and 23 percent foreign owned. The main market for products is for Asian destination.
5. **Svay Rieng** had 28 large enterprises respond to the survey out of 30 of which 12 are garment and footwear factories and 11 hospitality businesses. 82 percent are foreign owned and 18 percent of Cambodian owned. 75 percent of products and services are for the Asia region.
6. **Takeo** has 4 large enterprise respondents out of 11 of which 3 are garment and footwear factories and 1 other professional services. These businesses are 75 percent foreign owned and the remaining Cambodian owned. Fifty percent of Takeo businesses are focussed on all other international destinations with the remaining evenly split between Cambodia and Asia region.

Figure 2: Dataset profile: Provincial industry profile



The findings of the profile show that the large enterprises are in majority focussed on international markets. International linkages as well as the ability to be part of regional or international value and supply chains is therefore important as well as the ability to ensure that business delivers on time its products, production and services. In this context access to talent and skills and dynamic workforce is essential for business to succeed and grow in a competitive and more integrate business environment.

Respondents were asked whether or not they have skills building programs for the next generation[4] ? Respondents answered yes or no as to appointing interns from different education institutions or having apprenticeship programs. **Results show that there is little focus on building skills in the next generation.** 16 percent of industry has linkages with NGO training providers and 19 percent with university. Only 6 percent of industry had a link with public TVET institutions to enhance skills building for the next generation and these links are visible in Siem Reap (35 percent of enterprise) and Kampot (14 percent of enterprise). Where NGO training links exist, these are dominated in Siem Reap in the hospitality sector. With Universities internships it is also Siem Reap followed by Battambang 33 percent of enterprises. Surprisingly, apprenticeship programs did not exist at all within large enterprises (only 1 percent). While the labour law provides provisions for apprenticeship programs and employment contracts for up to 2 years, there is almost no implementation of such programs. **Apprenticeships would appear to be a great opportunity for large enterprises to have a steady supply of skilled workers emerging, building their brand and corporate social responsibility programs.**

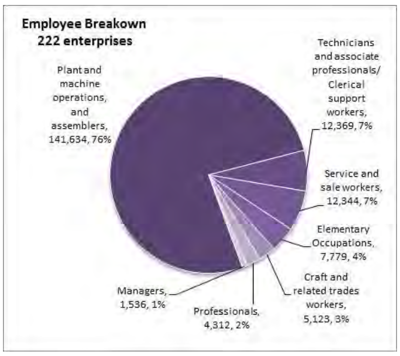
2.2.2 Workforce profile and characteristics[5]

Large employers were asked to present both full time and part time employee data. Only 23 employers or 10 percent of the sampled employers have need for part time or seasonal employment. These employment numbers generate between 700 – 800 jobs on an annual basis. The nature and length of employment was not discussed in detail in the survey implementation[6].

For part time employment, the majority of jobs are generated (at least 500 of the 700 – 800 part time jobs) in the hospitality sector for service and sales workers – these would generally be personnel who need to be hired for functions as functions are a large part of hotel revenue generation in Cambodia. Jobs are also created in high season when a lot of tourists come to visit Cambodia, typically towards the end of the year. The tourism industry creates a lot of opportunity for "apprenticeship and internship" programs in this regard, with intermittent jobs that are created which can facilitate class room learning and practical on the job training. Innovative and systematic engagement between TVET and industry could foster excellence in learning in this sector. While the majority of part time employment is generated in Siem Reap province due to the nature of industry, the number of part time jobs are also numerous in Phnom Penh for business and other functions. We could safely assume that if we considered smaller enterprises with 50 < 100 employees, government related functions that are regional like ASEAN events or particular event hosting, such part time employment can generate vastly more opportunities which, if linked to internships, work experience and apprenticeship programs could double or even triple the number of part time opportunities that do exist in Cambodia.

The other industry that creates employment for part time work is the **garment and footwear sector.** The types of jobs in this sector are mostly for plant and machine operators and assemblers. Job numbers generated vary greatly in this sector based on season and orders that are placed.

Figure 3: Full time Employee breakdown by occupational category



Full time employment: The workforce profile which represents 185,097 full time employees across all industries shows that the majority of people employed are plant and machine operators and assemblers. This reflects the fact that the majority of enterprise is represented by garment factories. In both hospitality and other professional services, the mix of occupations changes dramatically with an increase in service and sales workers in hospitality accounting for nearly 60 percent of the workforce and in Other professional services, technicians and association professionals and clerical support workers represent just under 69 percent of the workforce. The occupation representations also change by province reflecting the dominance of a particular industry in a particular province. These results are presented in the *Figure 4 and Figure 5* below.

4 Q23. Do you have skills building programs for next generation?
5 Q24, What are the job groups or functional areas in your company and how many people work there?
6 Q27. How many Part time or seasonal workers does your company have per year?

For TVET institutions to supply relevant and skilled workers to industry, it is clearly necessary to understand the industry active in the province as well as the workforce breakdowns presented to tailor TVET training to industry and encourage more trainees in particular programs. Of course, this does not stop TVET institutions who have already established programs that are perhaps not relevant to industry in their province, to build linkages across provinces and supply workforce beyond provincial borders.

Figure 4: Occupational breakdown by industry, full time employees (June 2012 – June 2013)

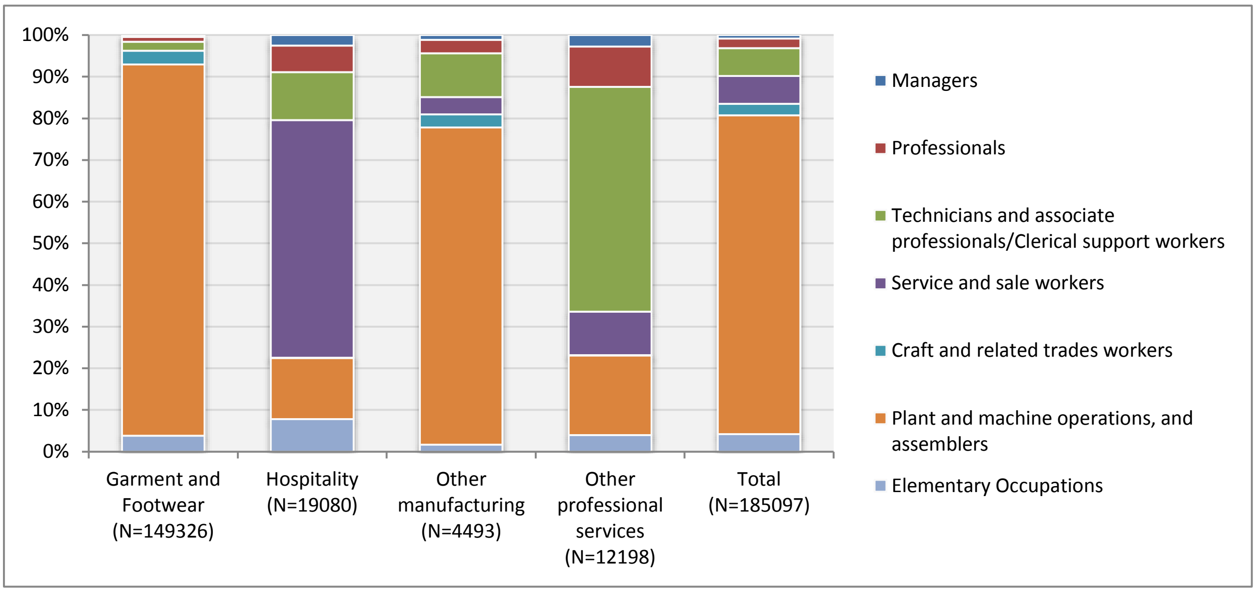
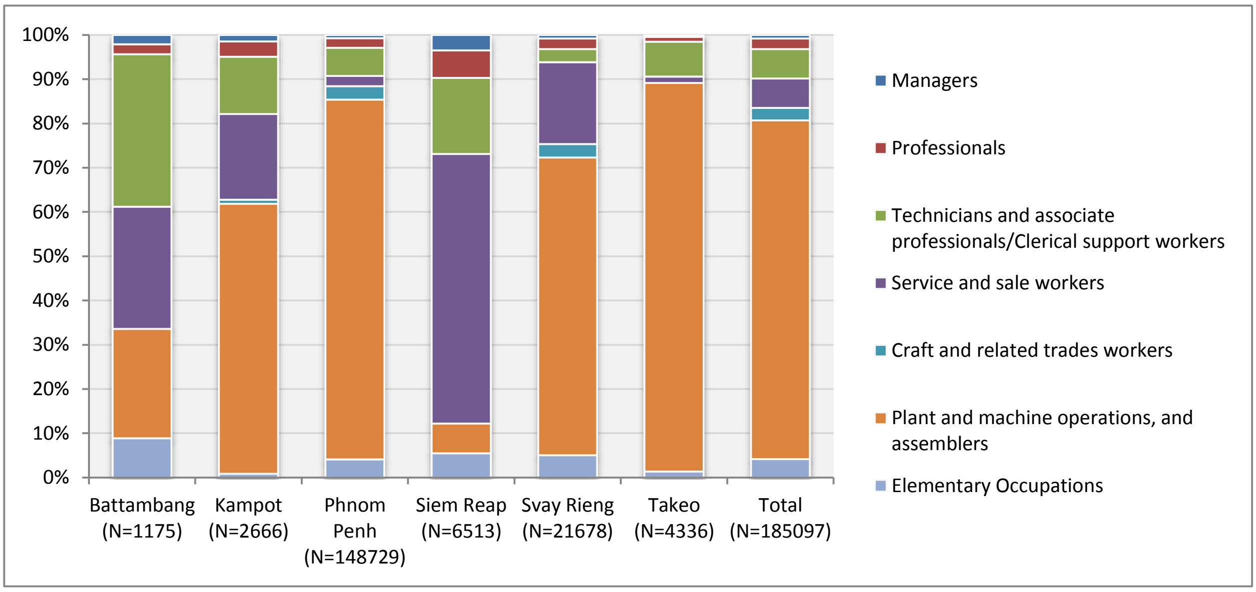


Figure 5: Occupational breakdown by province, full time employees (June 2012 – June 2013)



2.2.3 Employment growth and trends

Employment growth[7] will continue on a positive trend according to large enterprises participating in the survey with an increase of at least 10 percent every year. Employment numbers are likely to be higher due to a number of enterprises not wishing to share employment growth estimates. The final bar of 2015 (F) in *Figure 6* below has estimates on revised employment numbers based on the authors calculation and this shows a slightly higher number of jobs. Estimates made are discussed in each subsection per province as to how the estimates were made. *Table 5* provides a summary of workforce numbers.

The majority of growth is with plant and machine operators and assemblers and not university level education. This shows overall that the role of TVET is critical in the coming years to ensure that young people, especially those who do not complete secondary education have access to relevant skills training through TVET to ensure they are appropriately skilled and ready to enter the workplace. Employment growth within each province has its own unique characteristics and focus on occupation categories which can be helpful in driving provincial level training TVET initiatives.

Figure 6: Total workforce growth by occupation: 2011 - 2015

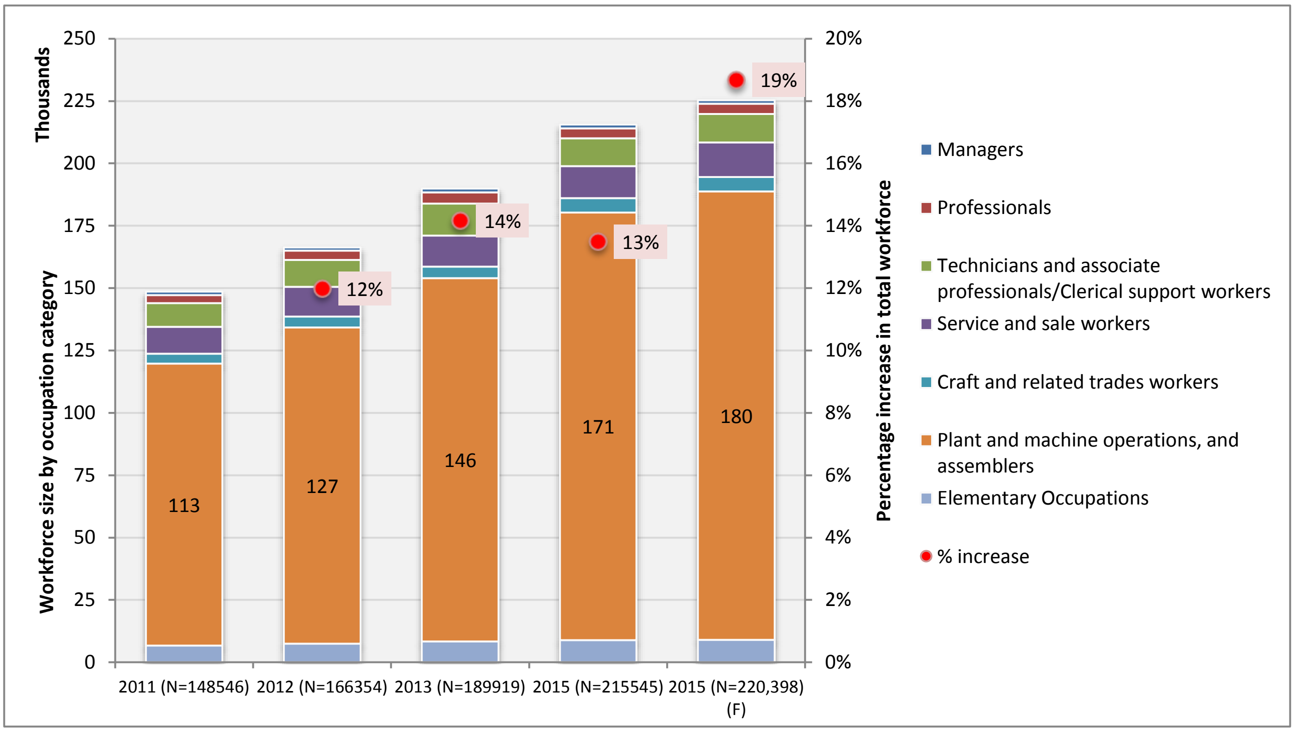


Table 5: Data table: total workforce numbers by occupation: 2011 – 2015

Occupation	2011 (N=148,546)	2012 (N=166,354)	2013 (N=189,919)	2015 (N=215,545)	2015 (N=220,398) (F)
Elementary Occupations	6,722	7,511	8,320	8,884	8,957
Plant and machine operations, and assemblers	113,055	126,752	145,702	171,448	179,807
Craft and related trades workers	3,981	4,278	4,613	5,695	5,837
Service and sale workers	10,763	11,942	12,439	12,846	13,803
Technicians and associate professionals/Clerical support workers	9,460	10,878	12,859	11,223	11,400
Professionals	3,261	3,647	4,444	3,998	4,065
Managers	1,304	1,346	1,542	1,451	1,522
% increase		12%	14%	13%	19%
Totals	**148,546**	**166,354**	**189,919**	**215,545**	**225,391**

[7] Question 25

In the following pages, we review workforce growth by province only for the specific purpose that the study reviews the supply of TVET for the demand required or what skills do employers need and where will the employment growth be for particular levels of qualification. For each province we provide a short provincial profile which helps the reader to understand the economy and industrial makeup of the province. While this survey in particular focusses on large employers only which provide "formal employment", a large part of Cambodia's economy and employment comes from the informal sector as well as the SME sector. The provincial profile is meant to provide context for each province so that any initiatives designed can consider a broader employment market.

Finally, given that the sample on the demand side reflects large employers, rather than a statistically representative sample of industry, the industry employment growth is not elaborated.

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2.2.3.1 Battambang Province

Battambang is the second largest city, a western province of Cambodia. It has land area of 11,702 Km^2 and is located about 350 Km west of Phnom Penh. This province shares border with Thailand giving population and business efficient access to a large international market for its reputable agricultural produce. Battambang also gets a reliable source of electricity from Thailand.

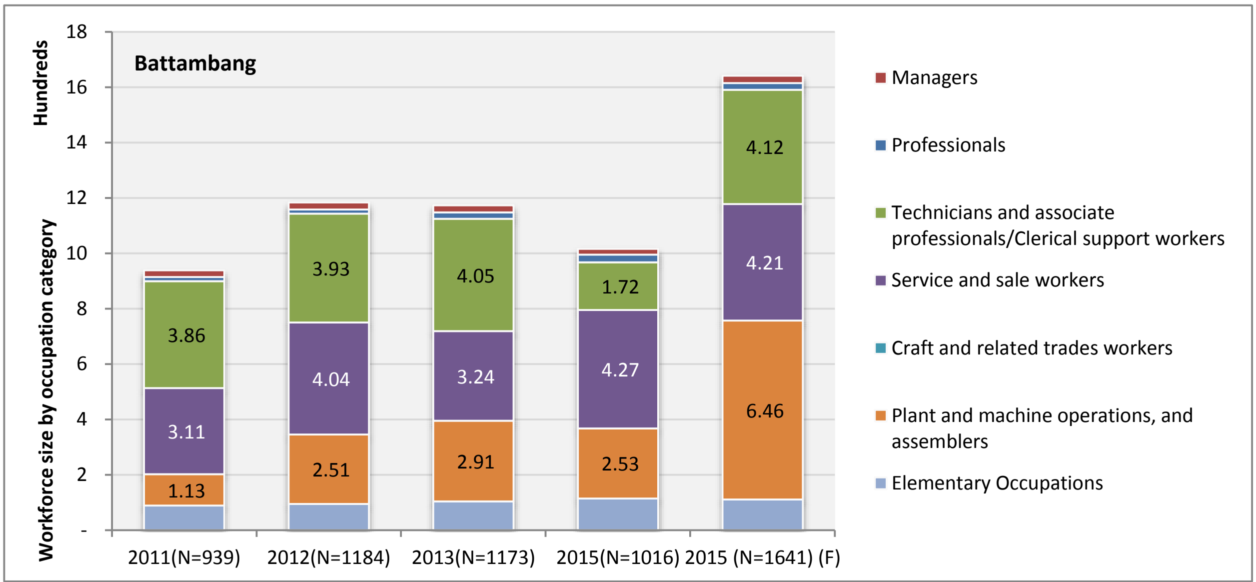
According to General Census 2008, the population in Battambang was around 1 million in 2008 and likely to have grown substantially over the years with the increase in infrastructure building in the city. General and adult literacy rate (in any language) is 79.3 percent and 78.9 percent, respectively.

Battambang shares a border with Thailand. Labor shortage is often mentioned as a challenge for business because of recent trend of labour to work in other countries such as Thailand and Korea given higher wages obtained. Battambang serves as the business centre of the north-western part of the country. There is a reasonable transport infrastructure linking Thailand and Phnom Penh and onward to Vietnam. The upgrade of the existing railways seems likely to improve the trade and transportation between Phnom Penh and Thailand.

In addition, Battambang has most fertile soil for the agriculture. It is reputable for not only paddy rice production but also other diverse agricultural products. About two thirds[8] of the provincial output is exported to neighbouring Thailand. For the industry sector, there are over 6,000 private enterprises including rice milling, brick manufacturing, food and beverage processing, professional service (including health care service), wholesalers and retailers and other kinds of businesses. Battambang is also one of the popular tourist destinations. There are totally 39 tourist sites including natural cultural sites, religious sites, historical sites and cultural villages. In response to the increase in popularity and tourists to the province, more accommodations such as hotels and guesthouses have been built in the last few years.

Large enterprise employment growth from the survey: In terms of employment growth, our survey shows somewhat skewed data as several enterprises could not forecast their particular needs. *Figure 7* provides the employment trend since 2011 by occupation category. To provide a more accurate forecast, we calculated the increase in employment over 2011 – 2012 and applied that total increase for 2014 and 2015 to review a possible scenario of employment growth for large enterprises. This shows a significant increase in plan and machine operations and assembler as well as technicians and associate professionals which could be a viable outlook given agriculture focus of the province and the growth in value added in the country. That said, there is a clear need for a mix of skills in Battambang and the skills profile is not dominated by plan and machine operations and assemblers as is the case for other provinces. This is because 83 percent of enterprises in this city are related to other professional services which represented by 5 large enterprises. Other enterprises include hospitality. **It is clear that TVET supply needs to be more service driven in Battambang, rather than purely an industrial focus.**

Figure 7: Battambang: Total workforce growth by occupation: 2011 - 2015



[8] Battambang Province's Investment Profile, January 2010.

2.2.3.2 Kampot Province

Kampot is a coastal province located 148 Km from Phnom Penh and shares border with Vietnam. Its land area is 4,873 Km^2. Kampot is linked to Phnom Penh, Sihanoukville and Vietnam by good transport infrastructure. The update of railway will further improve the transportation and trade between Phnom Penh and Kampot.

According to General Census 2008, the population in Kampot is around 0.59 million in 2008. Population of age 15-49 years is 51.3 percent of which 50.9 percent are female. General and adult literacy rate is 78.5 percent and 76.9 percent, respectively.

Kampot workforce is young and enthusiastic. Over 40 percent of the people are under the age of 18 and the amount is growing[9]. Kampot labour force is relatively developed with 29 percent employed in the service sector. Local skills have improved particularly in the area of tourism with English language that is the particular focus.

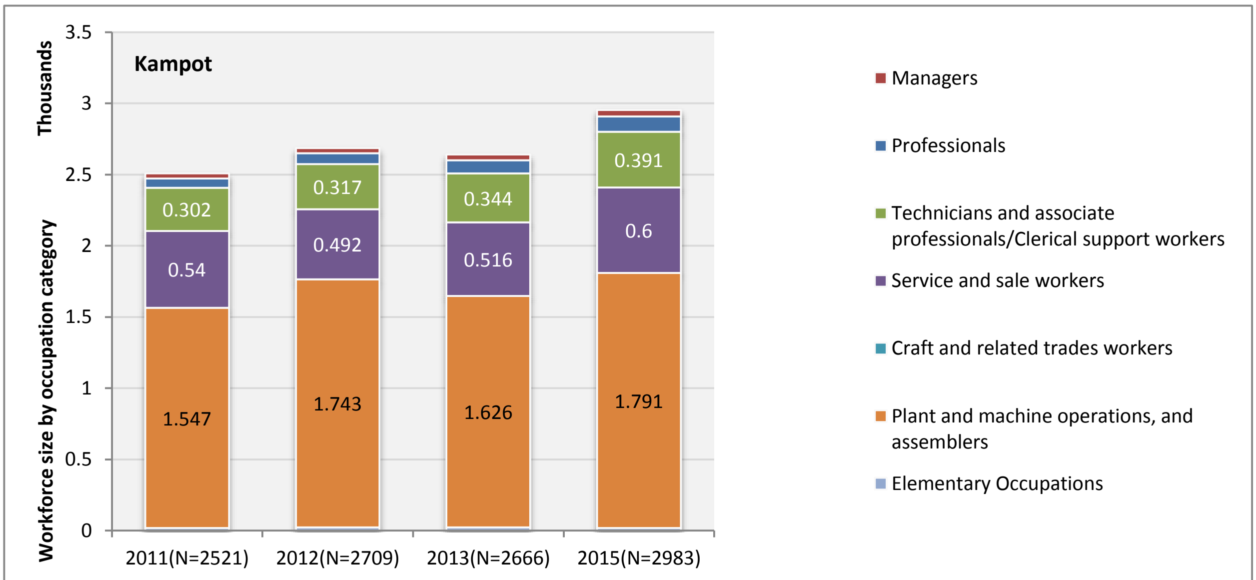
Agriculture is the main economic activity for Kampot, followed by industry and service. Rice is the main agricultural outputs for the province. The province is famous for pepper. Other main agricultural products include fruits, vegetables, sea salt, fishing and seaweed.

Regarding industry and service, there are 1,100 private enterprises including cement factories, brick factories, garment and footwear factories, fish sauces producers, furniture makers, hotels and guesthouse, and other businesses. Six cement factories have been approved in the province, of which one is active.

Kampot is home to Kampot special economic zone offering business opportunity for Kampot. SEZ is located not far from the town and will include the international standard sea port. Kampot is also the popular coastal and eco and agro tourism destination which also creates more jobs, and has great direct and indirect impacts on the livelihood of the local people.

Large enterprise employment growth from the survey: In terms of employment growth, it is important to note that some enterprises did not respond to the forecasting question. There are 7 large enterprises represented in Kampot, of which 3 are in other professional services, 2 in hospitality and 1 each in both garments and other manufacturing. *Figure 8* provides the employment trend since 2011 by occupation category. Employment forecast shows that a large proportion of the employment forecast is related to plant and machinery operations and assemblers as well as service and sales workers. There will be a slight increase in technicians and association professionals and clerical support workers. The nature of employment is diversified in Kampot, however still dominated by the plan and machine operations type of workers. **TVET training needs to provide a blend of industry related skills as well as service skills in Kampot.**

Figure 8: Kampot: Total workforce growth by occupation: 2011- 2015



[9] Kampot Province's Investment Profile, January 2010

2.2.3.3 Phnom Penh

Phnom Penh is the centre of economic and industrial activities of Cambodia. It is located on the bank of the Mekong River and has a land size of 678.46 Km^2.

Phnom Penh is the capital city of Cambodia where most enterprise headquarters are found. It is a city with a dynamic and diversified economic activity and is the primary destination for investors in pursuing business as all national ministries are located in the city. The population of Phnom Penh was estimated around 1.3 million in 2008. The population is youthful with 15-49 years accounting for 65.5 percent of which 65.7 percent are female. Phnom Penh has the highest Human Development Index in the country and boasts a high adult literacy rate at around 93 percent.

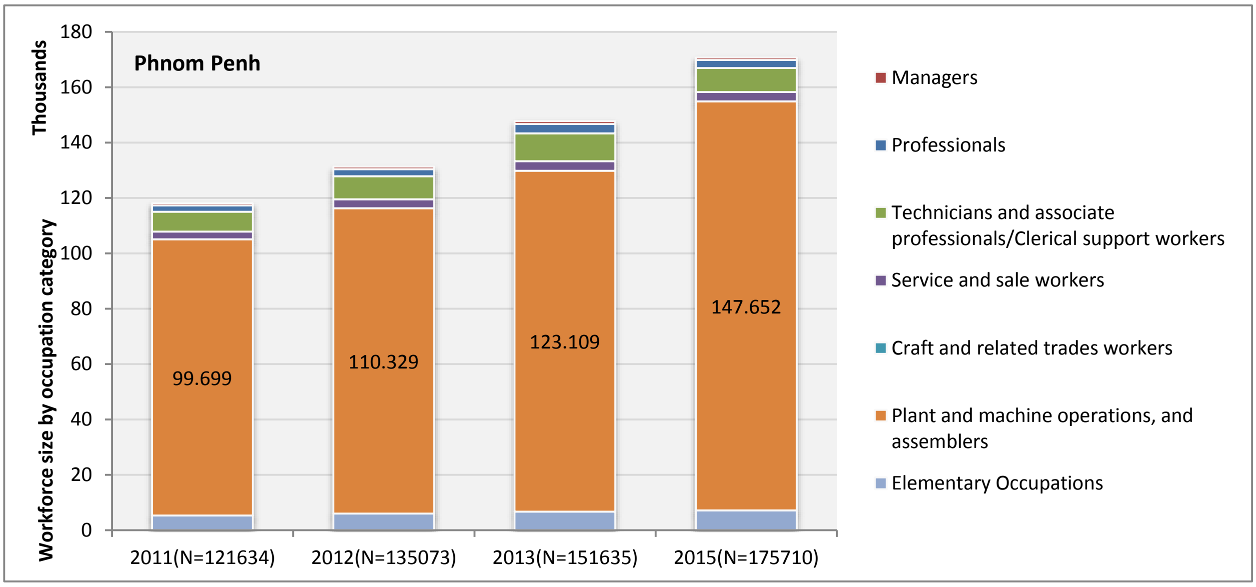
The main economy is based on commercial and industrial activities which include garments and footwear factories, trading, and small and medium enterprises. Tourism is also a main contributor in the city as it is one of the major tourist destinations of the country. All head offices of service sector enterprises in telecoms and banking are also hosted in Phnom Penh

With the continued development in various sectors in the city including increasing tourist arrivals, new development of infrastructures such as office and accommodation buildings, and other new establishments of shopping centres, restaurants, office buildings, new jobs are expected to be created for the people in the city and even for the people from other provinces.

Large enterprise employment growth from the survey: *Figure 9* provides the employment trend since 2011 by occupation category. In terms of employment growth in large enterprises, our survey shows (despite several nonresponses to forecasts) that the majority of employment will be created in low and skilled workers particularly in plant and machine operations and assemblers. It should be noted that the survey sample for Phnom Penh includes 120 garment and footwear manufacturers. There is clearly a forecasted demand of skilled qualification training needed to provide industry with the required skilled workforce to meet business demands – nearly all the demand is for plant and machine operations and assemblers in Phnom Penh. The importance of service and sales workers and technicians and associate professionals and clerical support workers should not be underestimated for Phnom Penh or deemed to be unimportant as a focus for TVET training in Phnom Penh given it is the capital city, and hosts all headquarters and large hotel establishments.

While the study focusses on large employers and Phnom Penh is dominated by garment and footwear enterprises in this category, there are an enormous number of enterprises and SMEs with less than 100 workers who require service and technical skills at a higher level as well as large number of restaurants, tourism sector and other enterprises in Phnom Penh that require service and sales workers as well as technicians and associate professionals. With the government focus on industrial diversification and supporting the growth of Cambodian SMEs, it is important not to discredit the importance of these employers and enterprises.

Figure 9: Phnom Penh: Total workforce growth by occupation: 2011 – 2015



2.2.3.4 Siem Reap Province

Siem Reap province has land area of 10,299 Km². It is located in the northwest of Cambodia, and is the most popular tourist destination of the country and has many tourist sites that attract the local and international tourists.

According to General Census 2008, the population in Siem Reap is around 0.9 million in 2008, up from 0.7 million in 1998. In 2008, the age group 15-49 years accounts for 53.9 percent of which 54 percent are female. General and adult literacy rate is 71.2 percent and 68.7 percent, respectively. Siem Reap workforce is young and educated. Over 40 percent of the population is under the age of 18. Like other provinces, Siem Reap people are also migrating not only within the country but also to other countries such as Thailand for a higher wages[10].

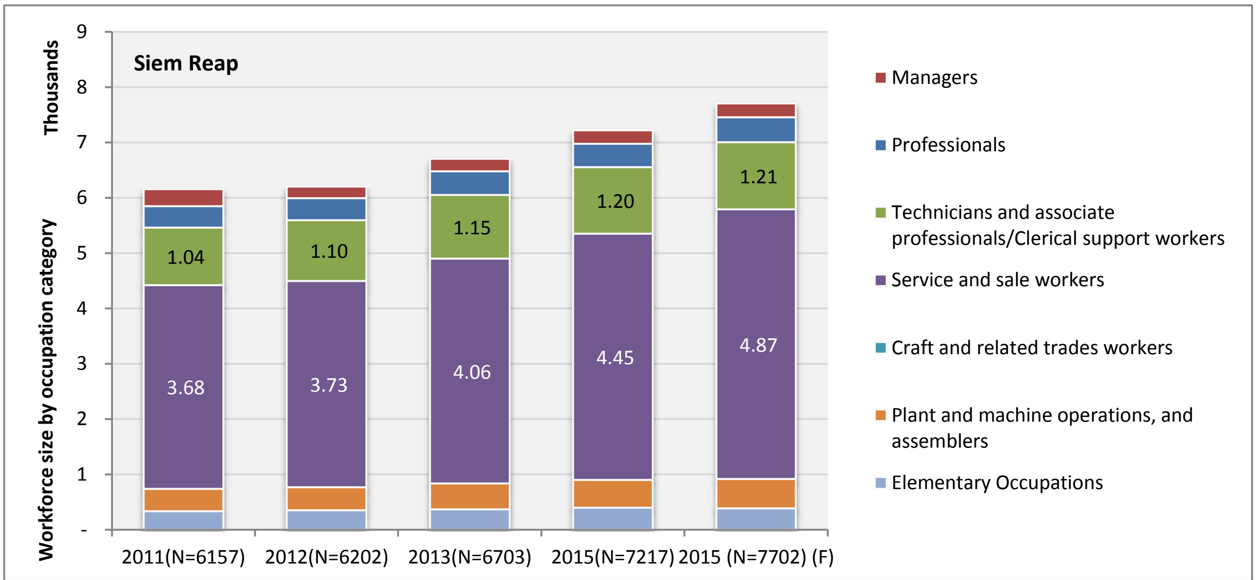
Agriculture is the main sector for the livelihood of the people in the province. Rice is the main agricultural crop; however, there are diverse crops such as cassava, soy bean, mung bean and sugar cane and other crops. Fishing is also an important contributor to the province's economy.

There are over 3,300 private enterprises in the province. About 116 hotels and 222 guest houses are operating in the province especially in the city. Hotels and other accommodation and restaurants are the main sector that employs most of the labour force in the province. Siem Reap has become an increasingly popular destination, with over two million visitors each year. Tourism sector employs a lot of people in the province directly and indirectly and has a great impact on the local people livelihoods.

Large enterprise employment growth from the survey: *Figure 10* provides the employment trend since 2011 by occupation category. In terms of employment growth in large enterprises, our survey shows that the majority employment will be created in service and sales workers and a slight increase in technicians and associate professionals. This is true for both the actual data received plus forecasted dated given that some employers did not answer the questions and a new forecast provided based on 2012-2013 growth by occupation. These positions in which there will be employment growth are particularly pertinent for the tourism sectors which in this survey are representing 96 percent of large enterprises in Siem Reap.

Given target numbers of tourists are increasing in the coming years, it is important more broadly to consider other industries that are created as a result of the tourism and hospitality. It is likely that craft and related trade occupations will also increase in numbers – although most, if not all of these workers will not be in large enterprises but small and medium enterprises. With 3,300 private enterprises in the provinces, as well as 222 guest houses which in general are smaller, family owned businesses, the focus on service and sales workers as well as the general supporting industries to the tourism sector, will be important employment occupations to consider in employment forecasting for this province in particular. We have not considered these inputs in the growth forecasts as the growth forecasts are related to large employers only, however, in designing TVET, further consideration can be given to smaller and important employers in this province.

Figure 10: Siem Reap: Total workforce growth by occupation: 2011 - 2015



[10] Siem Reap Investment Profile, Jan 2010)

2.2.3.5 Svay Rieng Province

Svay Rieng is the primary trade route between Ho Chi Minh City and Phnom Penh. The province has land area of 2,966 Km^2 and shares borders with Vietnam. It enjoys good road infrastructure connecting to local and export market especially to Vietnam.

According to General Census 2008, the population in Svay Rieng is around 0.48 million in 2008, up from 0.47 million in 1998. Population of age 15-49 years is 52.4 percent of which 51.5 percent are female. General and adult literacy rate is 80.1 percent and 78.7 percent, respectively.

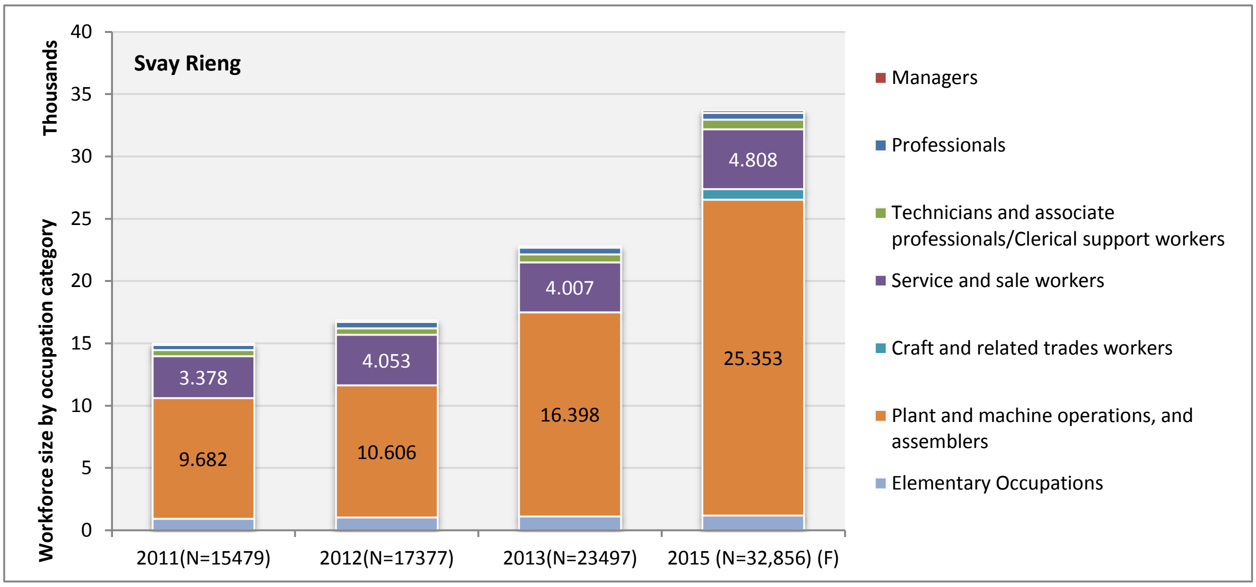
The province workforce is young. 23 percent of the province workforce is employed in the industry and service sector. An indicator of the attractiveness of Svay Rieng is the high level of inward migration. It is one of the few provinces in Cambodia with positive net inward interprovincial migration[11].

Beside its agriculture sector, the province also has economic potential through more investment in SEZs. The current operational SEZs in the province include Tay Seng I and II, Manhatten, and Shan Tong Sun Shell. These SEZs are further enhancing the province's reputation as a provider of a superior business environment. The factories in the SEZs are producing and exporting shoes, garments and textile, bicycles etc.

The number of tourists from Vietnam across the province is significantly increasing. To further encourage regional tourism, 7 casinos in Bavet are also proving popular with Vietnamese tourists. Also, hotels are built at Bavet. The above mentioned SEZs which are home to factories, and Casino and Hotels are a source that could employ a lot of local people.

Large enterprise employment growth from the survey: *Figure 11* provides the employment trend since 2011 by occupation category. 2015 data does not represent the total sample of respondent as employers could not forecast that far ahead. In this respect, the authors provided their own calculations by applying the same growth of 35 percent from 2012 – 2013 for the two year period of 2014 – 2015 as an estimate. This shows that if there is a similar growth pattern, Svay Rieng employment growth in large enterprises will be industry focussed with a great increase in plant and machine operations and assemblers. However, the service and sales workers categories, which will predominantly be found in the hospitality sector is likely to be much more pronounced even than the forecast estimates if large hotels on the border, continue to employ and grow.

Figure 11: Svay Rieng: Total workforce growth by occupation: 2011 - 2015



11 Svay Rieng Investment Profile, January 2010

2.2.3.6 Takeo Province

Takeo province has land area of 3,563 Km^2. It is located in the southwest of Cambodia, 1.5 hours drive from Phnom Penh and shares border with Vietnam.

According to General Census 2008, the population in Takeo is around 0.84 million in 2008, rising from 0.79 million in 1998. The population is youthful with 50.2 percent of the population aged 15-49 years of which 49.7 percent are female. General and adult literacy rate is 78.9 percent and 77.4 percent, respectively.

Takeo is one of the major agricultural producers, especially of rice, in the country. In 2008 the province produced a total of 879,875 tonnes of paddy rice, about 12% of the Cambodian total. Much of this crop is exported to other provinces and to Vietnam and Thailand.[12]

In addition to rice, Takeo also produces significant quantities of vegetables, sugarcane, and sweet potato. Takeo accounts for around 5% of Cambodia's inland fish catch and also has 25 hatcheries producing around 10 million fingerlings per year for the local aquaculture industry. Takeo also has a significant annual prawn catch.

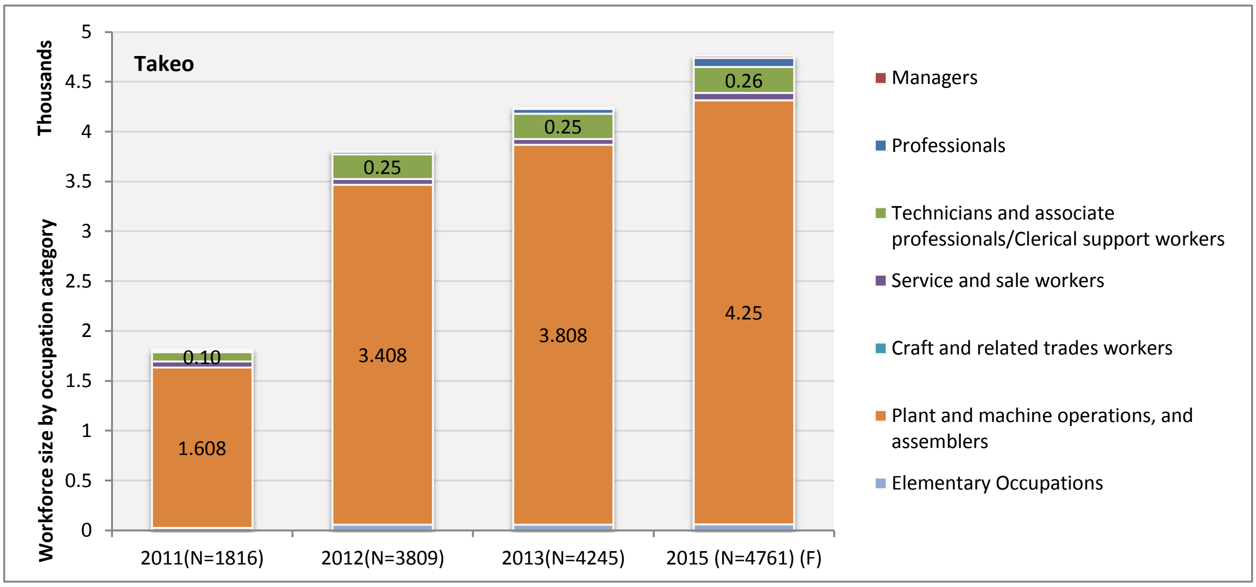
More than 6,000 private enterprises are operating in Takeo. Some garments and footwear factories are also moving into Takeo to be closer to the labour supply. Takeo is also the home to Duong Chhiv SEZ which is 1 Km from the Phnom Den International border with Vietnam. In addition, upgrading the railway from Phnom Penh to Sihanoukville running through Takeo would improve the transportation and increase the trade.

Takeo's weavers are famous for producing high-quality silk handicrafts. This sector is growing and employing a lot of local household for weaving, especially in the form of contracting with the middlemen. In addition to the mentioned main economic activities in Takeo, the tourism sector has potential for the province given its existing tourist sites together with the current trend of tourist arrivals to Cambodia and other significant opportunity to develop tourism potential.

Large enterprise employment growth from the survey: *Figure 12* provides the employment trend since 2011 by occupation category. 2015 data does not represent the total sample of respondent as employers could not forecast that far head. In this respect, the authors provided their own calculations by applying the same growth of 11 percent from 2012 – 2013 for the two year period of 2014 – 2015 as an estimate. This shows that if there is a similar growth pattern, Takeo employment growth in large enterprises will be industry focussed with a great increase in plant and machine operations and assemblers as well as slight increases in technicians and associate professionals and clerical support workers.

Further consideration in designing TVET strategies can be focussed on craft and related trades workers as well as service and sales workers required to support the traditional handicraft market.

Figure 12: Takeo: Total workforce growth by occupation: 2011 - 2015



[12] Takeo Investment Profile, January 2010

2.3 Work Place Matters

2.3.1 Wages

The survey asked employers to provide wage levels for different categories of workers to better understand the progression of wages in the sector[13]. It is difficult to comment broadly on wages given that minimum wage negotiations are under way and in particular in the garment sector, total earnings received monthly will consider a host of different incentives provided. Unions today are requesting a basic salary of 150 United States Dollars per month up from the current minimum wage of around 80 United States Dollars per month excluding mandatory allowances. The HRINC 2013-14 Garment sector salary survey shows that total monthly earnings of a worker is around 150 United States Dollars per month including incentive pay, over time and other allowances provided[14]. There will be a significant increase in the minimum wage in percentage terms in 2014, and general perceptions are indicating anything from 100 dollar minimum wage which would be an approximate 25 percent increase on the current minimum wage up to 120 United States Dollars which would reflect a 50 percent increase on the current minimum wage. Regardless of what the final outcome of minimum wage negotiations will be and whatever the increase in the minimum wage, it is going to have an impact on the broader Cambodia labour market and certainly, it will have an impact on the views and perceptions of young people pursuing education for better wages. Today a university graduate without experience can get a starting salary from 150 – 200 United States Dollars. The revision of minimum wages in the garment sector is going to have an impact on how you people and their families view education and training.

What can be seen from the wages data collected in this survey is that there is a clear incentive for workers to improve skills as the progression of salaries from elementary salaries to management salaries are progressive. That said, to get from an elementary position to a more skilled position requires that a worker understands the benefits of investing in education and the companies also understand that investment in education and training requires at some point an increase in the earnings. The HRINC 2013-14 Garment sector salary survey also shows that in general there are relatively high turnover of workers particularly in the plant and machine operators and most will leave their employer, not necessarily for a better or higher position, but a slightly higher salary. Turnover results in this survey are discussed later in the chapter and also reflect these findings.

A bigger challenge for workers to get from elementary or skilled positions to higher level positions in particular in labour intensive industries such as manufacturing, is the time available to attend training. In general, workers are working a standard 48 hour work week, 6 days per week with around 2 hour over time per day making their work day a 10 hour work day. Compounded with travel to and from home and living conditions that are often substandard with many people staying in a small room if workers are migrating and living in cities, there is very little free time to pursue qualifications and training at an individual level. At a broader level and considering semi-skilled positions, another challenge may also be that training provision does not match the available free time that workers have or provision of more flexible education hours or schedules.

This survey collected the monthly wages of full time workers. Wage levels certainly have an impact on the opportunity cost of education. There is not much research or analysis that exists on the perceptions or views of workers or their family members who have significant influence on young people and their choices to pursue education when they are young. It would be useful to understand whether or not a young worker sees the value in pursuing further education or skills development and whether or not they would invest in that further. It is clear however from the data collected that there is an incentive to pursue upgrading of skills and acquiring new skills, given the progression of wages. One way to qualify a highly unqualified workforce is to provide skills assessment of competencies that recognise skills and competencies as a qualification and allow the worker to make a case for a higher wage and pursue new skills opportunities in the work place.

Important note: It is not appropriate to make direct comparisons between industries or provinces given the nature of the sample and number of enterprises represented. In addition, certain sectors have minimum wages while others do not. The data collected therefore does not allow for direct comparison however shows clearly that by province and industry, there is a clear progression in wages as you climb the career ladder. To this extent, the data provides a foundation to understand that salaries progress the more skilled workers become both in location and sector however to say that one province pays more than another, or one industry is more attractive than another, is a not an appropriate comparison to make in the broader context of employment in Cambodia. The results are presented in the *Figure 13 and Figure 14* and *Table 6, to Table 8* below.

[13] Question 28
[14] HRINC 2013-14 Garment sector salary survey, draft survey outcomes on total compensation

Figure 13: Average Wages by occupational category and industry

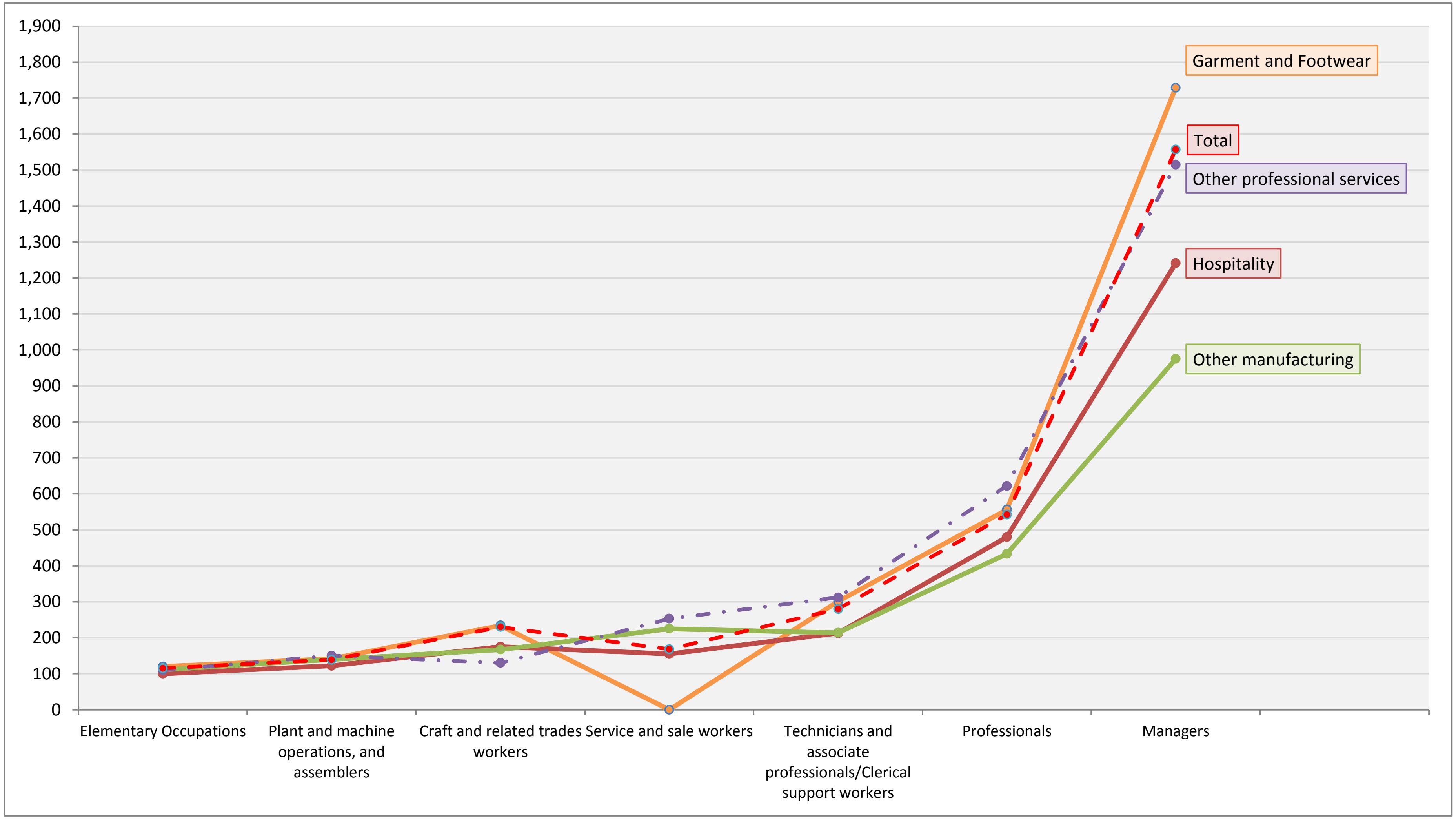


Figure 14: Average Wages by occupational category and province

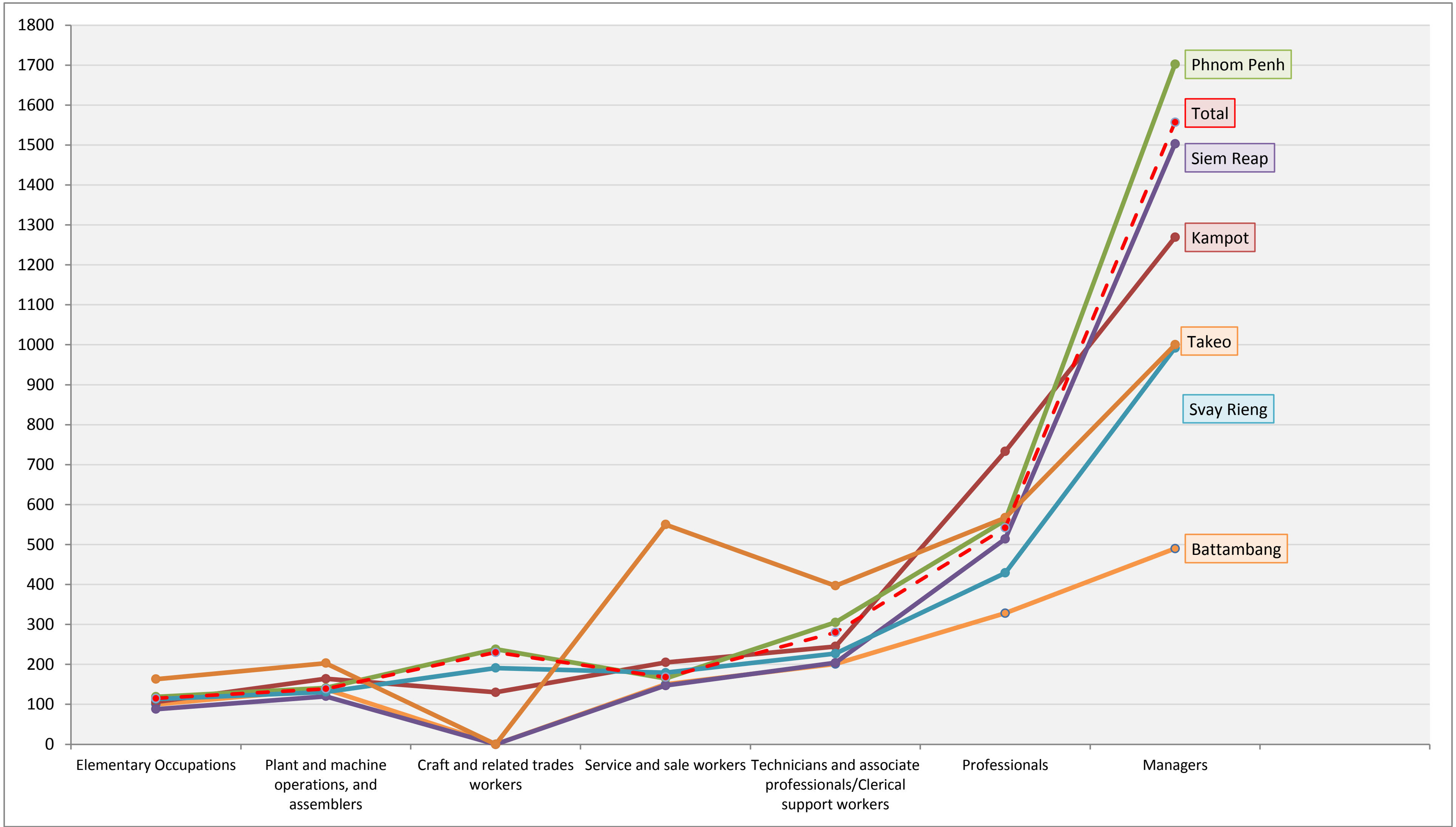


Table 6: Mean and Median wages by occupational category and location (1 of 2)

Monthly salary of full time staff by location	Battambang		Kampot		Phnom Penh		Total	
	Mean	Median	Mean	Median	Mean	Median	Mean	Median
Managers	490	490	1,269	1,450	1,702	1,500	1,557	1,250
Professionals	328	305	733	780	561	500	542	450
Technicians and associate professionals/Clerical support workers	201	185	245	243	305	280	280	250
Service and sale workers	150	150	205	225	165	150	168	150
Craft and related trades workers	.	.	130	130	238	220	230	220
Plant and machine operators, and assemblers	138	135	164	150	141	140	139	130
Elementary Occupations	100	100	106	108	119	120	115	110

Table 7: Mean and Median wages by occupational category and location (2 of 2)

Monthly salary of full time staff by location	Siem Reap		Svay Rieng		Takeo		Total	
	Mean	Median	Mean	Median	Mean	Median	Mean	Median
Managers	1,503	1,200	992	675	1,000	1,000	1,557	1,250
Professionals	514	400	429	350	567	700	542	450
Technicians and associate professionals/Clerical support workers	204	200	227	230	397	350	280	250
Service and sale workers	147	120	179	175	550	550	168	150
Craft and related trades workers	.	.	191	200	.	.	230	220
Plant and machine operators, and assemblers	120	113	131	120	203	210	139	130
Elementary Occupations	88	80	113	110	163	163	115	110

Table 8: Mean and Median wages by occupational category and sector

Monthly salary of full time staff by sector	Garment and Footwear		Hospitality		Other manufacturing		Other professional services		Total	
	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median
Managers	1,729	1,500	1,241	1,088	975	975	1,515	1,500	1,557	1,250
Professionals	556	500	480	350	433	375	622	585	542	450
Technicians and associate professionals/Clerical support workers	301	280	213	200	214	225	312	268	280	250
Service and sale workers	.	.	155	140	225	225	253	200	168	150
Craft and related trades workers	234	220	175	175	167	150	130	130	230	220
Plant and machine operators, and assemblers	142	137	122	120	140	122	150	150	139	130
Elementary Occupations	120	120	100	90	111	113	110	100	115	110

2.3.2 Turnover and vacancies

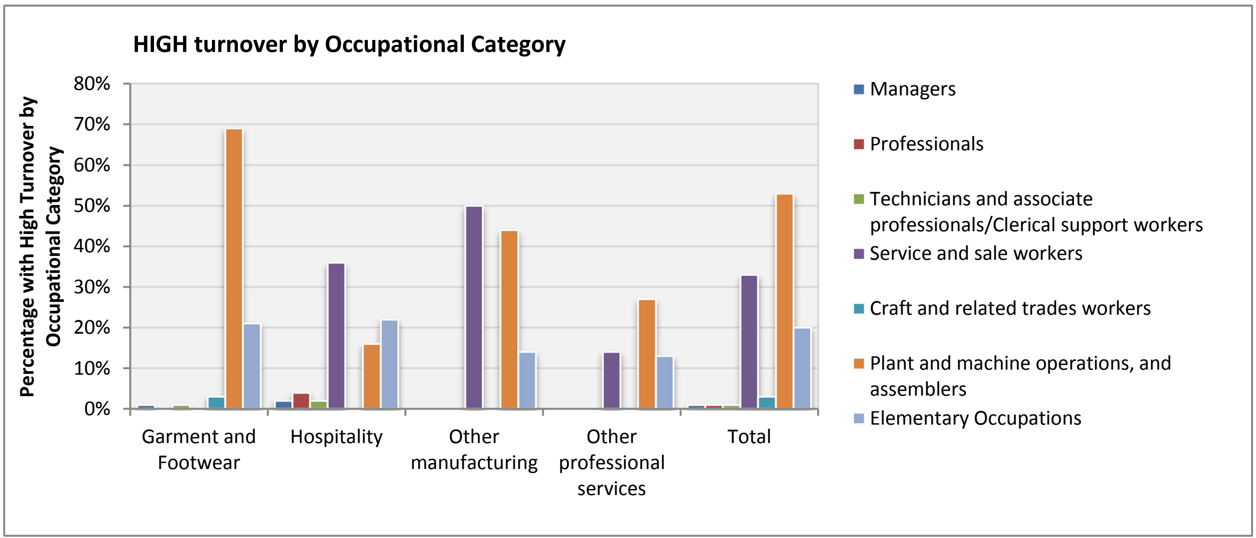
2.3.2.1 Turnover

Turnover is an important HR metric not frequently used by HR Managers in Cambodia. Turnover is the number of people who leave the company in a particular period of time and in some cases can be a positive thing as it allows for promotions, new talent recruitment and innovation in the company. On the other hand, it can be detrimental and costly if key personnel are lost or if turnover is high and the company is continuously training and retraining personnel to keep up with production or business. The cost of turnover is often not well understood and includes not only lost time in production or operations and the time invested in training new people, but also the cost of recruitment, building up client relationships from the beginning and ensuring that services remain at a high level. In the context of skills development, it is important to understand the impact of turnover on business in Cambodia as well as how long it takes to recruit new talent as recent surveys show that Cambodian businesses are losing out on innovation, services development and expanding business due to the inability of companies to fill positions in a timely manner.

In this study, employers were asked to rank whether or not turnover in particular categories is low, medium or high. Our survey results show that[15] turnover is medium or high in particular for positions that are critical to a particular industry. In other words, turnover is pronounced amongst occupations where the majority employment is found in industry.

The figures below show high and medium turnover levels by sector *(Figure 15 and Figure 17)* and location *(Figure 16 and Figure 18).* In garments and footwear, turnover is medium and high for elementary and plant and machine operators and assemblers. In hospitality it is in particular stressed for the service and sales workers. In other manufacturing it is service and sales workers and plant and machine operators. Service and sales workers in other manufacturing are in particular critical for the distribution of products and services and getting the product to the market in the supply chain. In other professional services turnover is not as stressful as other industries but still impacting how business is able to operate.

Figure 15: High Turnover by occupational category and industry



[15] Question 31: How is the situation of staffs' turnover at your company?

Figure 16: High Turnover by occupational category and location

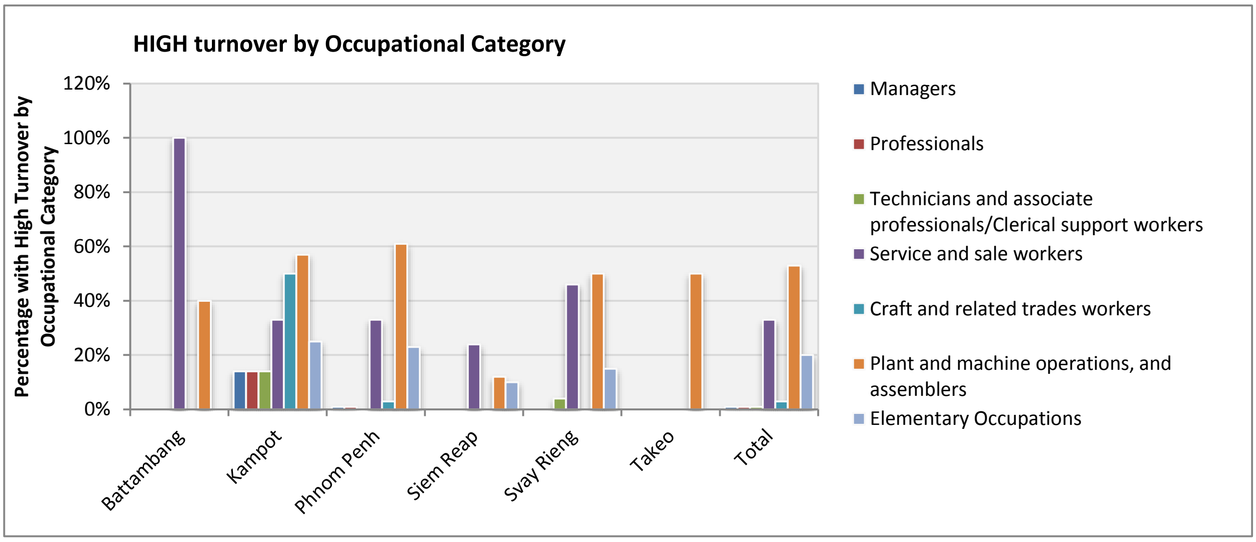


Figure 17: Medium Turnover by occupational category and industry

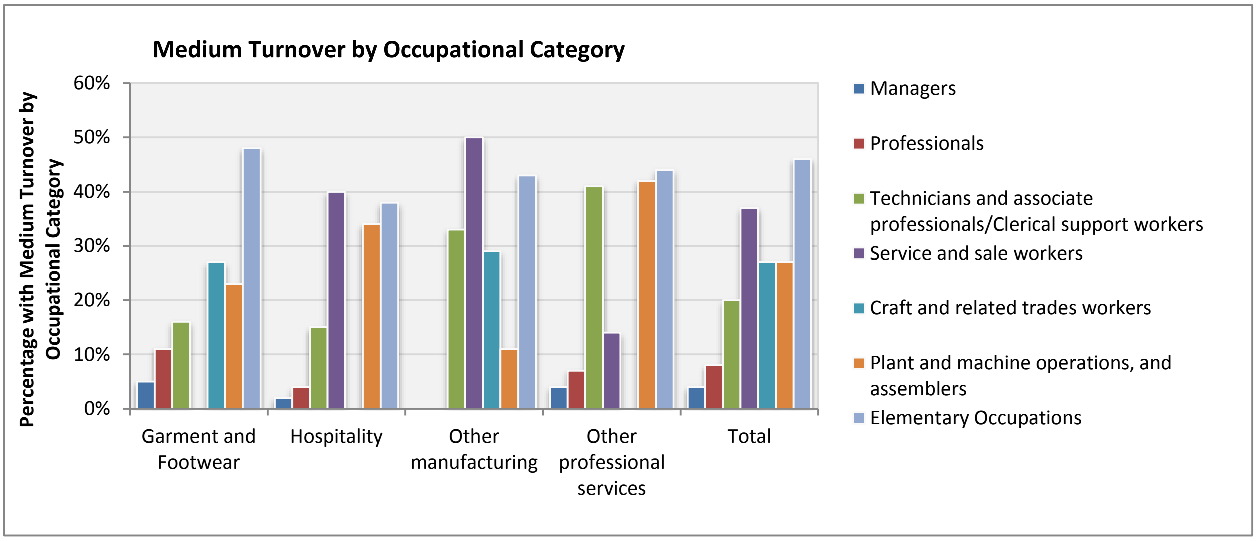
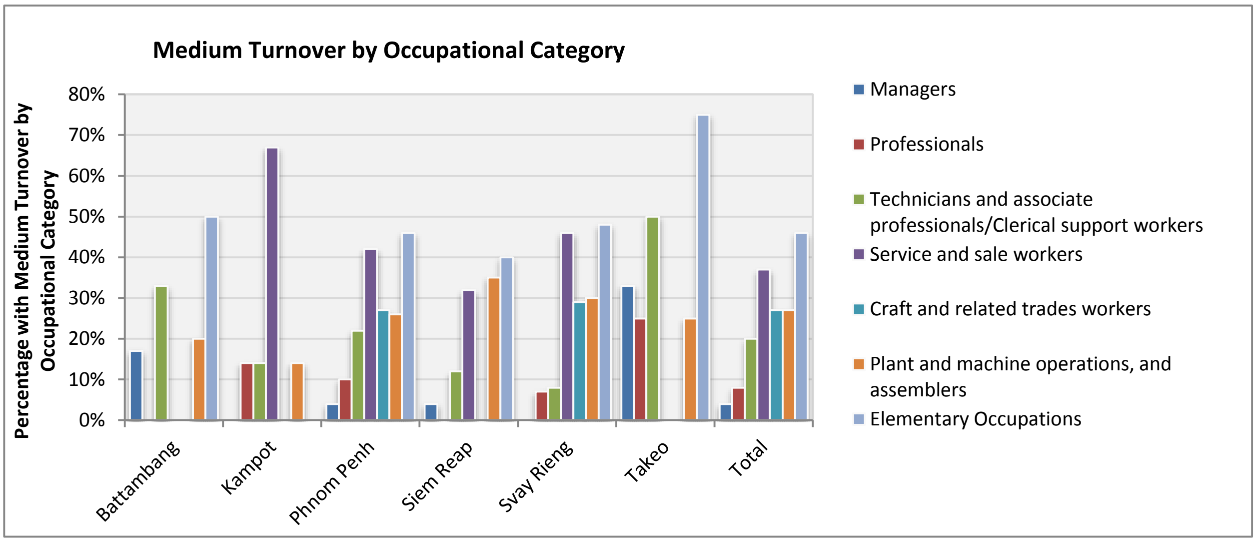


Figure 18: Medium Turnover by occupational category and location



Box 1: Understanding turnover and the impact of turnover on business

What causes turnover? There are many reasons why an employee leaves a job from stress, to boredom to better opportunities, supervisor conflict and poor management, better career opportunities, better wages or simply opportunistic due to lack of knowledge or information.. Well researched and documented analysis in western organisations shows that the following seven factors are particularly important[16]

1. **The economy:** In exit interviews one of the most common reasons given for leaving is the availability of higher paying jobs. Some minimum wage workers report leaving one job for another that pays only 50 cents an hour more. Obviously, in a better economy the availability of alternative jobs plays a role in turnover, but this tends to be overstated in exit interviews.
2. **The performance of the organization:** An organization perceived to be in economic difficulty will also raise the spectre of impending layoffs. Workers believe that it is rational to seek other employment.
3. **The organizational culture:** Much has been written about organizational culture. It is sufficient to note here that the reward system, the strength of leadership, the ability of the organizations to elicit a sense of commitment on the part of workers, and its development of a sense of shared goals, among other factors, will influence such indices of job satisfaction as turnover intentions and turnover rate.
4. **The characteristics of the job:** Some jobs are intrinsically more attractive than others. A job's attractiveness will be affected by many characteristics, including its repetitiveness, challenge, danger, perceived importance, and capacity to elicit a sense of accomplishment. A job's status is also important, as are many other factors.
5. **Unrealistic expectations:** Another factor is the unrealistic expectations and general lack of knowledge that many job applicants have about the job at the time that they receive an offer. When these unrealistic expectations are not realized, the worker becomes disillusioned and decides to quit.
6. **Demographics:** Empirical studies have demonstrated that turnover is associated in particular situations with demographic and biographical characteristics of workers. But to use lifestyle factors (e.g. smoking) or past employment history (e.g. many job changes) as an explicit basis for screening applicants, it is important for legality and fairness to job applicants to verify such bio data empirically.
7. **The person:** In addition to the factors listed above, there are also factors specific to the individual that can influence turnover rates. These include both personal and trait based factors. Personal factors include things such as changes in family situation, a desire to learn a new skill or trade, or an unsolicited job offer. In addition to these personal factors, there are also trait based or personality features that are associated with turnover. These traits are some of the same characteristics that predict job performance and counterproductive behaviours such as loafing, absenteeism, theft, substance abuse on the job, and sabotage of employer's equipment or production. These traits can be measured and used in employee screening to identify individuals showing lower probability of turnover

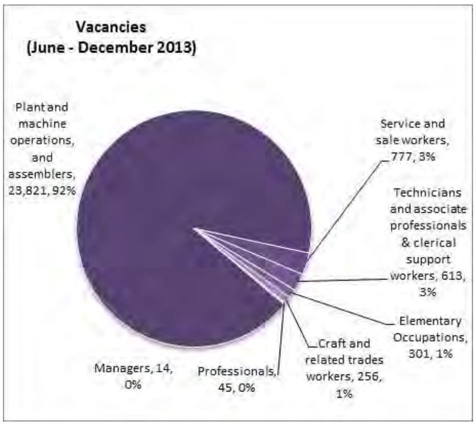
What are the real costs associated with turnover[17]?

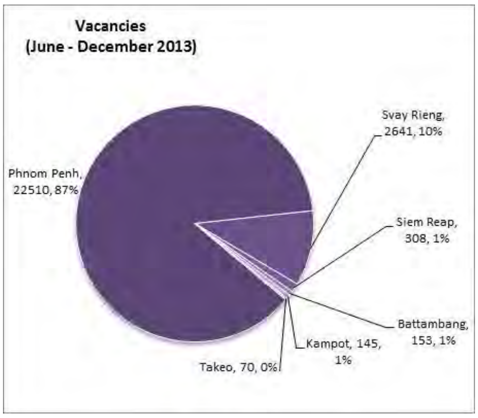
1. Recruitment of replacements, including administrative expenses, advertising, screening and interviewing, and services associated with selection, such as security checks, processing of references, and, possibly, psychological testing.
2. Administrative hiring costs.
3. Lost productivity associated with the interim period before a replacement can be placed on the job.
4. Lost productivity due to the time required for a new worker to get up to speed on the job.
5. Lost productivity associated with the time that co-worker’s must spend away from their work to help a new worker.
6. Costs of training, including supervisory and co-worker time spent in formal training, as well as the time that the worker in training must spend off the job.
7. Costs associated with the period prior to voluntary termination when workers tend to be less productive.
8. In some cases costs associated with the communication of proprietary trade secrets, procedures, and skills to competitive organizations.
9. Public relations costs associated with having a large number of voluntary or involuntary terminations in the community spreading gossip about the organization.
10. Increased unemployment insurance costs.

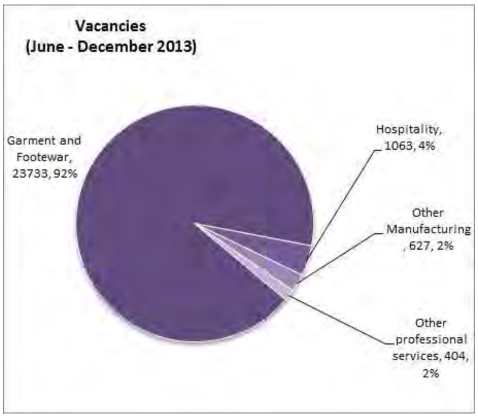
[16] http://www.sigmaassessmentsystems.com/articles/empturnover.asp
[17] Ibid.

2.3.2.2 Vacancies

Figure 19: Number of vacancies snapshot







Employers were asked several questions in the survey related to vacancies to better understand the situation of vacancies.[18] A total of 25,827 vacancies currently exist amongst the surveyed large employers. Of the total vacancies, 92 percent are for the garment sector in Phnom Penh as are plant machine operators and assemblers. In general, these would be workers on the production floor. Service and sale workers account for 3 percent of vacancies.

As mentioned above, turnover can have both a positive and negative impact on industry. Vacancies are linked to turnover as they not only represent "new jobs" that are created if a company is growing, but also, replacement positions for those who have left. In particular to fill vacancies for positions where people have left is critical for a company to be able to fill the vacancy as soon as is possible so as to ensure continued services and production.

Employers were asked a range of questions regarding to filling vacancies and these results are presented in the figures below but can be summaries as follows:

1. **Why are vacancies hard to fill[19]?** While work experience remains a critical factor in filling vacancies and will be more pronounced in service and sales positions, the perceptions of applicants or prospective employees towards employers and industry are an emerging challenge. In particular amongst the top five reasons employers note that (a) competition amongst employers is an increasing challenge suggesting that amongst employers, there is a need to better focus on HR management and the management of employees within the workforce including appropriate strategies in compensation to retain employees. (b) Perceptions of prospective applicants' views on industry and compensation are a challenge. Other reasons in the top five include lack of qualifications and low number of applications with the right skills.
2. **What are the main skills lacking[20]?** The ability to communicate as expressed through language barriers in particular foreign languages, team work and problem solving, management and supervisory skills and manual dexterity. Most of the skills listed reflect a need to stress the importance of soft skills and interpersonal skills training at an early age and certainly within TVET training so that young people are better able to integrate into the workplace and be a productive part of the employment world.
3. **What are the consequences of not filling vacancies[21]?** The results show that Cambodia overall loses competitiveness if business is not able to fill vacancies with the right people in a timely manner. Nearly 50 percent of respondents noted that not filling vacancies results in delays in developing new products or services which will over time can have a severe impact on Cambodia's ability to continue to diversify its economy.
4. **What are companies doing to overcome filling the vacancies[22]?** More the 50 percent of employers noted that they are increasing salaries to overcome the challenges with vacancies and 35 percent of employers are looking at new recruitment methods to diversify the sources of talent recruitment.

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[18] Q32. How many job vacancies do you current have for each occupation category and how many weeks have they been vacant approximately? How easy or difficult is it to find these staff?

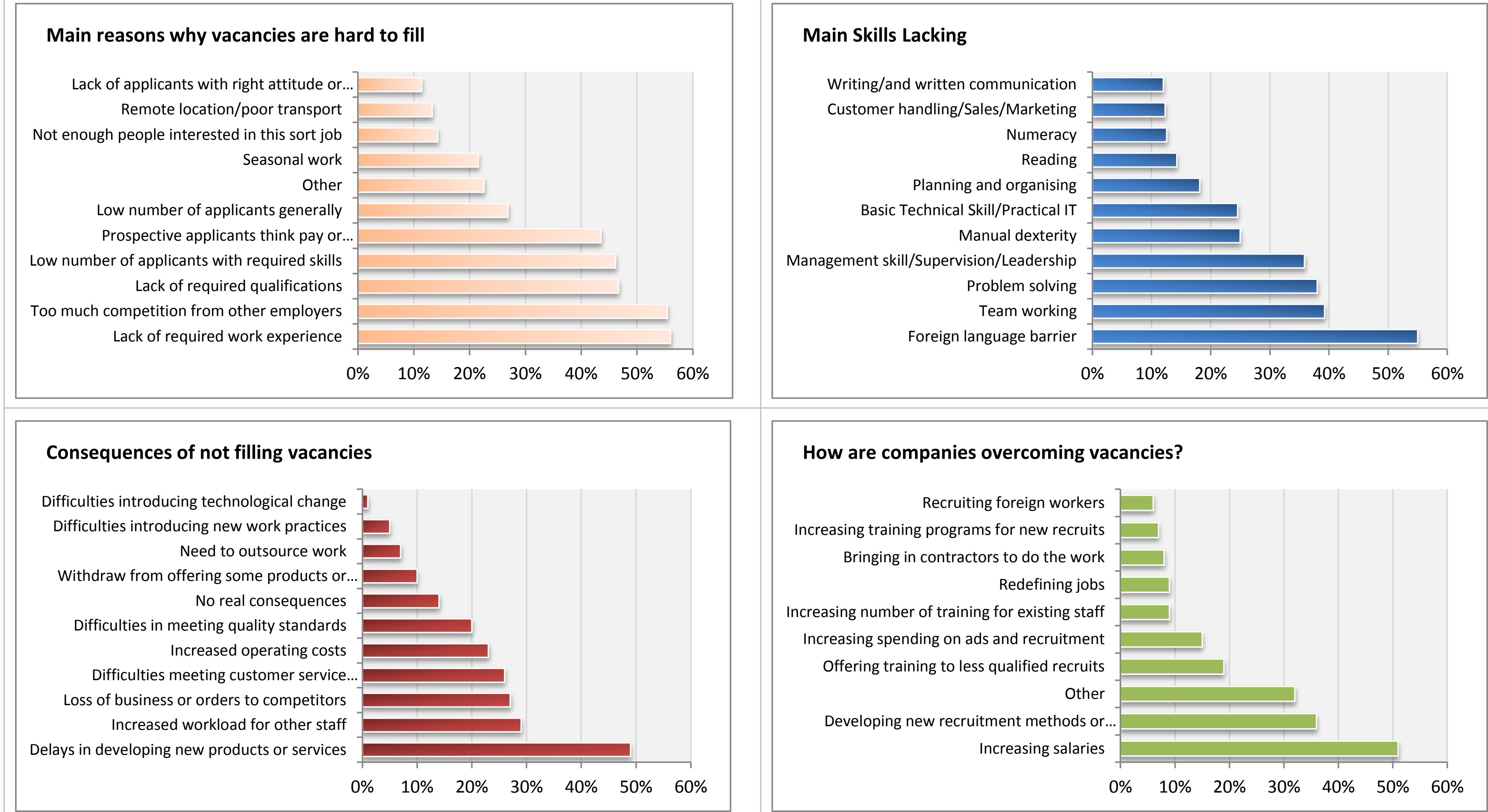
[19] Q33. Of the above occupations, what are the main reasons they are hard to fill. Select top 3.

[20] Q34. What are the skills lacking that are hard to fill for the occupation categories mentioned. Select top 5.

[21] Q35. What are the main consequences of these hard to fill occupation on the company?

[22] Q36. How is the company dealing with overcoming the vacancies?

Figure 20: Hard to fill vacancies, their consequences and how companies are overcoming shortages



Vacancy data by province as presented in *Table 9* shows that Phnom Penh and Svay Rieng lead in the number of vacancies with 22,510 and 2,641 vacancies respectively. Overall, vacancies reflect the nature of industry in each province.

Table 9: Vacancies by province and occupation (June – December 2013)

Occupation	Battambang	Kampot	Phnom Penh	Siem Reap	Svay Rieng	Takeo	Total vacancies
Elementary Occupations	32		220	31	18		301
Plant and machine operations, and assemblers	31	102	**21,137**	21	**2,460**	70	23,821
Craft and related trades workers		1	215		40		256
Service and sale workers	80	31	333	228	105		777
Clerical support workers							
Technicians and associate professionals	10	11	**550**	28	14		613
Professionals			41		4		45
Managers			14				14
Totals	**153**	**145**	**22,510**	**308**	**2,641**	**70**	**25,827**

Vacancies by sector presented in *Table 10* show that the majority of vacancies are in the garment and footwear sector, however hospitality and other manufacturing have more than 500 vacancies in service and sale workers and plant and machine operations and assemblers respectively. These occupations are the heart of a business in this sector. Vacancies above 200 and just below 300 include technicians and associate professionals and clerical support workers in both the hospitality and professional services sector.

Table 10: Vacancies by sector and occupation (June – December 2013)

Occupation	Garment & Footwear	Hospitality	Other manufacturing	Professiona l Services	Total Vacancies
Elementary Occupations	207	56	1	37	301
Plant and machine operations, and assemblers	**23,199**	30	**560**	32	23,821
Craft and related trades workers	226	.	30	.	256
Service and sale workers	.	**687**	5	85	777
Technicians and associate professionals/Clerical support workers	77	***287***	24	***225***	613
Professionals	23	3	5	14	45
Managers	1	.	2	11	14
Totals	**23,733**	**1,063**	**627**	**404**	**25,827**

The time taken to fill vacancies is substantial when reviewing the data as the most important positions in industry take time to fill. Employers were asked to provide the number of weeks vacancies are vacant and in general how long it takes to fill a vacancy. Results are presented by location as well as sector.

By Location: Current vacancies overall have been open for anywhere from 5 weeks for service and sales workers to 16 weeks for plan and machine operators and assemblers, (highlighted red cells in the All locations in *Table 11*). When reviewing by location, the results are particularly stressed in Battambang and Takeo for Technicians and associate professionals/Clerical support workers (48 weeks) and in Svay Rieng for craft and related trades workers for 21 weeks. Phnom Penh has the highest number of weeks vacancies are vacant for plant and machine operators at 17 weeks. Phnom Penh represents in majority garment and footwear section which stresses the lost economic and business success opportunity, as these are core occupations to the sector.

By Location: General time taken to fill vacancies overall varies anywhere from 5 weeks for service and sale workers to 16 weeks or 4 months for managers (*Table 12*, red cells). Results by province are stressed again by Battambang and Svay Rieng for Technicians and associate professions / Clerical support workers as well as Svay Rieng for craft and related traders workers. In Phnom Penh, it is also the plant and machine operators and assemblers in the garment sector that take the longest to fill at around 15 weeks and 16 weeks for managers.

Table 11: Number weeks vacancies vacant (at time of survey) by location

Number of week of vacant by location	Battambang	Kampot	Phnom Penh	Siem Reap	Svay Rieng	Takeo	All locations
Managers	.	.	11	.	.	.	11
Professionals	.	.	8	.	11	.	9
Technicians and associate professionals/Clerical support workers	***48***	12	9	10	***18***	.	11
Service and sale workers	10	4	9	4	4	.	**5**
Craft and related trades workers	.	8	9	.	***21***	.	10
Plant and machine operators, and assemblers	13	4	***17***	7	10	1	**16**
Elementary Occupations	12	.	11	2	10	.	8

Table 12: How long does it normally take to fill a vacancy: by location

Time to fill vacancies by location (Week)	Battambang	Kampot	Phnom Penh	Siem Reap	Svay Rieng	Takeo	All locations
Managers	.	.	***16***	.	.	.	**16**
Professionals	.	.	10	.	11	.	11
Technicians and associate professionals/Clerical support workers	***24***	12	11	7	***18***	.	11
Service and sale workers	16	8	5	4	4	.	**5**
Craft and related trades workers	.	12	9	.	***14***	.	10
Plant and machine operators, and assemblers	14	12	***15***	3	8	1	14
Elementary Occupations	12	.	12	2	10	.	9

By Sector: The results show that the number of weeks **current vacancies have been vacant** are in particular high in "other manufacturing" as well as the key jobs in each sector i.e. where the most number of employees are represented. For example, in hospitality, it is the technicians and associate professionals and clerical support workers that have the highest number of weeks that vacancies are open at 10 weeks. In the garment and other manufacturing sectors, it is plant and machinery operators and assemblers at 16 weeks and craft and related trades workers at 21 weeks respectively. In addition, elementary occupations in garment and footwear and other manufacturing we see that vacancies have been vacant for 15 and 22 weeks respectively.

Similarly, the results for how long it takes to fill positions also reflect that the core positions of an industry take the longest to fill. *Table 13 and Table 14 below* present the number of weeks that vacancies were vacant at the time of the survey as well as how long it normally takes to fill positions by sector and occupational category.

Table 13: Number weeks vacancies vacant (at time of survey) by sector

Number of week of vacant by sector	Garment and Footwear	Hospitality	Other manufacturing	Other professional services	All sectors
Managers	1	.	4	14	11
Professionals	9	.	11	8	9
Technicians and associate professionals/Clerical support workers	14	10	11	8	11
Service and sale workers	.	5	3	4	**5**
Craft and related trades workers	9	.	***21***	.	10
Plant and machine operators, and assemblers	***16***	8	12	10	**16**

Number of week of vacant by sector	Garment and Footwear	Hospitality	Other manufacturing	Other professional services	All sectors
Elementary Occupations	***15***	3	***22***	8	8

Table 14: How long does it normally take to fill a vacancy: by sector in weeks

Time to fill vacancies by sector (Week)	Garment and Footwear	Hospitality	Other manufacturing	Other professional services	All sectors
Managers	8	.	8	18	16
Professionals	9	12	13	11	11
Technicians and associate professionals/Clerical support workers	14	9	12	10	11
Service and sale workers	.	5	3	8	5
Craft and related trades workers	8	.	21	.	10
Plant and machine operators, and assemblers	14	5	14	12	14
Elementary Occupations	15	4	22	10	9

It is clear when looking at the number of weeks positions are vacant as well as how long the positions are vacant that accessing talent and well qualified workers is essential as it is those positions that are predominant in each sector that face the longest vacancy times as well as take the longest to fill. Workforce planning is extremely important and finding ways to reduce turnover are important to ensure that Cambodian enterprises do not forfeit opportunities in growing their business. The number of productive days lost in taking time to fill vacancies is significant impacting the competitiveness of industry. One possible solution is to invest in building the next generation of skills by providing internships and apprenticeship programs which to date, have found little existence in all the sectors and provincial locations. TVET providers can plan an important role in facilitating labour market matching and planning in this regard if there are strong and proactive links between education and industry.

2.3.3 The cost of vacancies and impact on the economy

In *Box 1: Understanding turnover and the impact of turnover on business*, we provided some understanding on the cost of turnover to a company. To really put a value on the impact of vacancies and how long they take to fill, the authors have done some basic calculations on the dataset which show that wages lost to the economy which represent "cash" that could've been invested in the economy or used to purchase goods and services, in particular in the rural economy. Our calculations show that vacancies have caused a loss of approximately **11.8 million** United States Dollars to the economy if we take the number of vacancies, average wages and length of time it normally takes to fill a position. (*See Table 15*) Of this 11.8 million United States Dollars, *10.9 million of wages is plant and machine operators and assemblers which in majority are rural workers who send a large portion of the money back to family in the province and in the garment sector*. These numbers are considerable as they reflect the potential wages that could be invested back into rural communities, SME businesses, upgrading farmers and sending family members to school as well as purchasing power of the economy.

The economy as well as business loose when there are insufficient skills for the market or resources to fill positions, or access to labour is strained and employers are unable to fill vacancies in a timely manner. Besides individual company competitiveness, industry overall suffers as well reliability of services. While the calculations are meant to provide indications of the severity of not filling vacancies at a timely manner, in particular in critical positions in a company, they are not meant to be absolute as there are a variety of other costs and earnings that have not been calculated. It is not only wages that could've been used in the economy, it is the time lost in manufacturing, the increased stresses on other workers, the loss of exports, the loss of taking on additional orders or innovating, the loss of tax revenues etc.

Table 15: Cost of not filling jobs in lost wages

Total productive weeks lost given number of weeks it takes to fill vacancies….

Total Weeks of production lost due to not filling vacancies	Garment & Footwear	Hospitality	Other manufacturing	Professional Services	Total Vacancies
Elementary Occupations	3,105	224	22	370	**2,709**
Plant and machine operations, and assemblers	324,786	150	7,840	384	**333,494**
Craft and related trades workers	1,808		630		**2,560**
Service and sale workers		3,435	15	680	**3,885**
Technicians and associate professionals / Clerical support workers	1,078	2,583	288	2,250	**6,743**
Professionals	207	36	65	154	**495**
Managers	8		16	198	**224**
Total Weeks lost	***330,992***	***6,428***	***8,876***	***4,036***	***350,110***

What are the average wages?

Average Wage in USD per month	Garment & Footwear	Hospitality	Other manufacturing	Professional Services	
Elementary Occupations	120	100	111	110	--
Plant and machine operations, and assemblers	142	122	140	150	--
Craft and related trades workers	234	175	167	130	--
Service and sale workers	0	155	225	253	--
Technicians and associate professionals / Clerical support workers	301	213	214	312	--
Professionals	556	480	433	622	--
Managers	1729	1241	975	1515	--

Wages not earned or spent in the economy: wages contribute to consumer spending economic growth and rural development

Part of the economic opportunity lost	Garment & Footwear	Hospitality	Other manufacturing	Professional Services	Total wages lost
Elementary Occupations	85,984.62	5,169.23	563.54	9,392.31	**101,109.69**
Plant and machine operations, and assemblers	10,642,987.38	4,223.08	253,292.31	13,292.31	**10,913,795.08**
Craft and related trades workers	97,632.00	-	24,279.23	-	**121,911.23**
Service and sale workers	-	122,867.31	778.85	39,701.54	**163,347.69**
Technicians and associate professionals / Clerical support workers	74,879.54	126,964.38	14,222.77	162,000.00	**378,066.69**
Professionals	26,559.69	3,987.69	6,495.00	22,104.92	**59,147.31**
Managers	3,192.00	-	3,600.00	69,223.85	**76,015.85**
Total wages not earned / spent in the economy	**10,931,235.23**	**263,211.69**	**303,231.69**	**315,714.92**	**11,813,393.54**

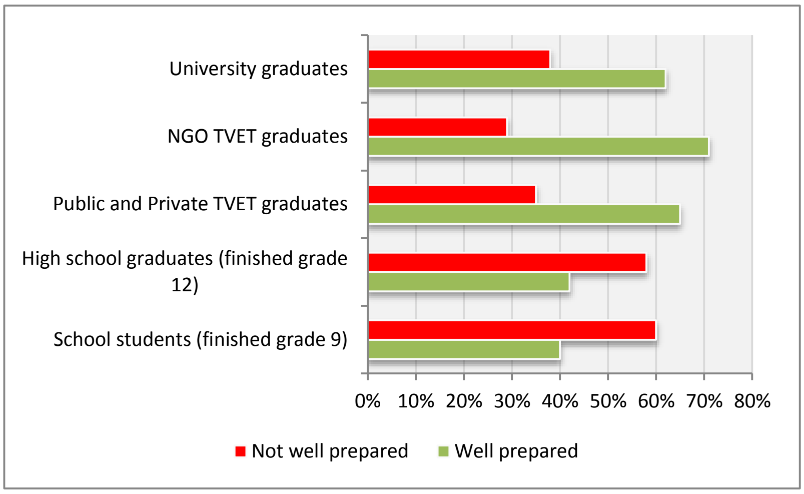
Notes: **Monthly wage x 12 = annual wage (A). Total weeks to fill vacancies / 52 = number of years lost at the time of survey (B).**
AxB = wages lost / or money to spend in the economy lost at the time of the survey

2.3.4 Workplace readiness

The survey asked employers to review the readiness of graduates for the workplace[23] at entry level positions as well as review the main skills lacking at entry level[24] given different education levels.

Encouragingly, there is a clear trend that TVET students and university graduates are more ready for the workplace than high school and school students. TVET students are better prepared than university students. The results are presented in *Figure 21.*

Figure 21: How prepared are graduates for the workplace?

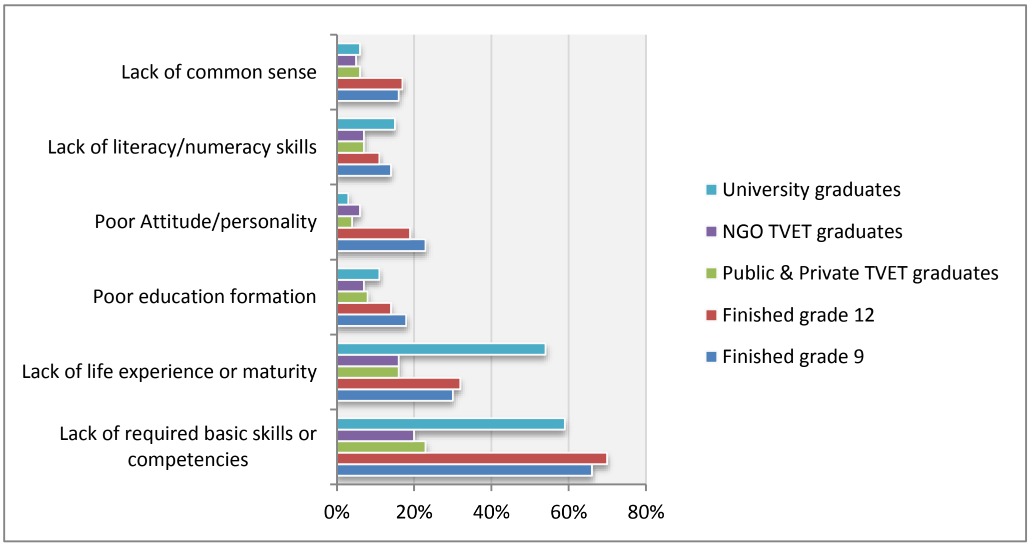


However, there is still a substantial portion of students that is not ready for the workplace. Employers continue to stress the lack of required basic skills and competencies amongst graduates and the lack of life experience and maturity of graduates.

Key challenges for grade 9 and 12 students include poor education and poor attitude or personality as well as a lack of common sense. To a lesser degree, literacy and numeracy skills were a challenge for grade 9 and 12 students but more of a challenge with university graduates.

For all TVET graduates most skills lacking were *less of an issue* compared to university, grade 12 and 9 graduates. This indicates perhaps that TVET graduates are getting better quality training or exposure or curriculums are perhaps more practical. More detailed study should be conducted on these outcomes but the findings suggest that TVET education is graduating a better quality graduate. It is only poor attitudes or personalities amongst TVET graduates that employers say are more of a challenge than university graduates but significantly less than grade 9 and 12 students.

Figure 22: Top 2 skills lacking at entry level



[23] Question 29: How do you perceive the work readiness of the following types of graduates at entry level when you recruit?
[24] Question 30: for the different types of graduates listed above, what would you say are the top 2 skills lacking at entry level?

2.3.5 Current workforce performance and challenges

Employers were asked what percentage of the current workforce is not performing at the required level and what the reasons are for this non-performance.

What percentage of the current workforce is not performing at the required level[25]: The results show that the lowest average percentage of workforce not performing at the desired level is 9 percent and the higher percentage noted is 60 percent of the workforce? *In Table 16: Highest percentage indicated of non-performing employees: By industry and Table 17: Average Percentage of Non-performing employees: By industry*, cells highlighted in red, indicate non-performance of at least 20 percent or more. Not all occupations have the same number of respondents; the total numbers of employers indicate represent the highest number of employers who has responded to the question or an occupation. The results below show the following

Reviewing Highest Percentage of Non-performing workers indicated:

1. The highest percentage of non-performing employees indicated by an employer can be found in the technicians and associate professionals and clerical support workers as well as plant and machinery operators and assembler (see total column Green Cells in *Table 16*). In particular these percentages were mentioned in "Other professional services" sector and garment and footwear sector respectively.
2. For all industries and professions, the highest indicated non-performing percentage is 20 percent or more. Particularly in other manufacturing where there are limited enterprises, the numbers are alarming.

Table 16: Highest percentage indicated of non-performing employees: By industry

Max % not performing	Garment and Footwear	Hospitality	Other manufacturing	Other professional services	Total
Manager	30	30	20	20	30
Professionals	30	50	20	30	50
Technicians and associate professionals/clerical support workers	*30*	*40*	*30*	*60*	*60*
Service and sale workers	*.*	*40*	*20*	*20*	*40*
Craft and related trades workers	*50*	*50*	*50*	*40*	*50*
Plant and machine operators and assemblers	*60*	*50*	*50*	*50*	*60*
Elementary occupations	*50*	*50*	*30*	*30*	*50*
Max # Enterprises	**83**	**45**	**8**	**25**	**150**

Reviewing the average Percentage of Non-performing workers which has been calculated: The lowest total average of non-performing employees is in the management occupation (9 percent). All other occupations have an overall average of higher than 10 percent with a highest average of 19 percent for plant and machine operators and assemblers. The lowest occupation averages are found in Management and professional's occupational category in garments and other professional services. (See *Table 17* bold and underlined numbers)

If we look at the data from a sectorial perspective the average percentage of non-performing employees, we can say the following:

1. The highest percentage of non-performing employees is found in the occupations that are most pertinent and important to the functioning of the enterprise. This is relevant to all sectors. (See highlighted red cells in *Table 17)*
2. In each sector, TVET level positions (presented in italics in the table) have more than 10 percent average of employees not performing at the right level with the following highs:
   a. Average of 20 percent of plan and machinery operators and assemblers in garments
   b. Average of 50 percent of craft related trades workers in the hospitality sector
   c. An average of 20 and 22 percent respectively for service and sales workers and plant and machinery operators and assemblers in other manufacturing
   d. An average of 40 percent of craft and related trades workers in other professional services.

[25] Q 39

This is quite significant when considering the time taken to fill vacancies and the current vacancies available. If the current "core workforce" has a significant number of employees not performing to the required level, the challenges business face in growing are stressed and the importance of relevant and quality TVET training is also equally if not more stressed.

Table 17: Average Percentage of Non-performing employees: By industry

Average % not performing	Garment & Footwear	Hospitality	Other manufacturing	Other professional services	Total
Manager	9	11	11	8	9
Professionals	10	13	10	9	11
Technicians and associate professionals/clerical support workers	*12*	*13*	*14*	*11*	*12*
Service and sale workers		*16*	*20*	*12*	*16*
Craft and related trades workers	*14*	*50*	*19*	*40*	*15*
Plant and machine operators and assemblers	*20*	*13*	*22*	*16*	*19*
Elementary occupations	13	15	16	12	13
Max # enterprises that responded	**83**	**45**	**8**	**25**	**150**

From a provincial perspective we see that Kampot has a higher number of occupations with over 20 percent of non-performance with a high of 30 percent for service and sales workers and elementary occupations – both important positions to the TVET sector. It is not possible to say one province is better performing than the other, what can be said is that all TVET related positions that are currently employing a workforce have a high percentage of non-performing workers.

Table 18 and Table 19 below provide the average and highest percentage indicated by province. Highlighted red cells indicate a percentage of the workforce that non-performing of at least 30 percent. Not all employers responded to all the occupations and therefor the number of employers represents the highest number of employers that responded to one of the occupations overall.

Table 18: Average Percentage of Non-performing employees: By province

Average %	Battambang	Kampot	Phnom Penh	Siem Reap	Svay Rieng	Takeo	Total
Manager	15	13	9	8	10		9
Professionals	15	17	11	11	9	8	11
Technicians and associate professionals/clerical support workers	*14*	*22*	*11*	*12*	*13*	*22*	*12*
Service and sale workers	*10*	*30*	*18*	*15*	*12*		*16*
Craft and related trades workers		*23*	*15*		*15*		*15*
Plant and machine operators and assemblers	*18*	*21*	*19*	*12*	*22*	*17*	*19*
Elementary occupations	*13*	*30*	*14*	*12*	*12*	*5*	*13*
Max # enterprises that responded	**5**	**6**	**91**	**26**	**26**	**3**	**150**

Table 19: Highest percentage indicated of non-performing employees: By province

Max %	Battambang	Kampot	Phnom Penh	Siem Reap	Svay Rieng	Takeo	Total
Manager	20	20	30	20	30	.	30
Professionals	30	30	50	40	25	10	50
Technicians and associate professionals/clerical support workers	*20*	*30*	*40*	*30*	*30*	*60*	*60*
Service and sale workers	*10*	*40*	*40*	*40*	*30*	*.*	*40*
Craft and related trades workers	*.*	*40*	*50*	*.*	*50*	*.*	*50*
Plant and machine operators and assemblers	*30*	*50*	*60*	*40*	*50*	*20*	*60*
Elementary occupations	*15*	*30*	*50*	*30*	*50*	*5*	*50*
Max # enterprises that responded	**5**	**6**	**91**	**26**	**26**	**3**	**150**

To understand employer perceptions on the percentage of employees that do not perform to the required levels, we asked further what the reasons for non-performance are[26]. Data was collected for overall perceptions and not by occupational category.

Employers state that the challenges are related to workers being new to the job (48 percent) which corresponds with the need for life experience and workplace experience mentioned above in vacancies. Secondly is lack of motivation and self-discipline (43 percent) which is related to foundation education and the discipline in school and learning. Fourth is the inability to find staff with the required skills listed by 27 percent of employers. This might also explain why such a high proportion of the workforce in general is performing below expectations but also, that education systems are not training or teaching industry relevant skills. Also, high staff turnover mentioned by 22 percent of employers which is particularly pronounced in Phnom Penh and Siem Reap, also results in impacting the performance of others, either due to work overload or increased stress on the job.

By Location: It is worthy to review Phnom Penh, Siem Reap and Svay Rieng in terms of number of respondents. Although the main challenges are related to workers being new and staff lacking the motivation and self-discipline, in Phnom Penh, employers also stress that they are unable to recruit staff with required skills and high turnover as key reasons – more than 25 percent. In Siem Reap, the same challenges are faced as in Phnom Penh. In Svay Rieng it is the introduction of new products and services that are key reasons (29 percent) to non-performance of staff. These results are presented in *Table 20 below.*

Table 20: Reasons for non-performance by location

Main factors that cause employees not able to perform by location	Battambang	Kampot	Phnom Penh	Siem Reap	Svay Rieng	Takeo	Total
Workers are new	33%	29%	51%	42%	43%	50%	48%
Staff lack motivation and self-discipline	67%	57%	40%	42%	57%	25%	43%
Other	33%	57%	31%	23%	14%	0%	28%
Unable to recruit staff with required skills	33%	57%	31%	27%	4%	0%	27%
High staff turnover/difficult to keep staff	0%	14%	26%	27%	7%	0%	22%
Introduction of new products or services	17%	14%	19%	8%	29%	0%	18%
Introduction of new work practices	17%	0%	10%	8%	4%	50%	10%
Workers have not received appropriate training	0%	0%	10%	12%	4%	25%	9%
Introduction of new technology	17%	29%	7%	4%	7%	0%	7%
Workers training is only partly completed	17%	0%	3%	15%	4%	0%	5%
Workers training is in effective	17%	0%	2%	0%	0%	0%	2%
No main factors	0%	0%	2%	0%	0%	0%	1%

[26] Q40: Which are the main factors that cause your employees not to be able to perform at the required level? Select all relevant.

By Sector: By sector, the main trend remains with additional peculiarities per sector as follows and presented in *Table 21 below*:

1. **In garments and footwear,** inability to recruit staff with the required skills (27 percent) and high turnover (22 percent) are pronounced challenges.
2. **In Hospitality,** the same challenges as garment sector are faced with 23 percent represented for both reasons.
3. **In other manufacturing,** there are limited responses and inability to recruit staff with the required skills, introduction of new products and services as well as new work practises and technologies introduction all present challenges for non-performance of employees in the sector.
4. **In other professional services**, it is the inability to recruit staff with the required skills (35 percent), high staff turnover (28 percent) and introduction of new products and services (21 percent) that are the most pronounced challenges in non-performance of employees in the sector.

Table 21: Reasons for non-performance by sector

Main factors that cause employees not able to perform by sector	Garment and Footwear	Hospitality	Other manufacturing	Other professional services	Total
Workers are new	51%	40%	56%	45%	48%
Staff lack motivation and self-discipline	43%	50%	56%	28%	43%
Other	35%	19%	11%	21%	28%
Unable to recruit staff with required skills	27%	23%	33%	35%	27%
High staff turnover/difficult to keep staff	22%	23%	0%	28%	22%
Introduction of new products or services	19%	13%	22%	21%	18%
Introduction of new work practices	9%	8%	22%	10%	10%
Workers have not received appropriate training	7%	8%	0%	21%	9%
Introduction of new technology	4%	8%	22%	14%	7%
Workers training is only partly completed	1%	17%	11%	3%	5%
Workers training is in effective	1%	2%	0%	7%	2%
No main factors	2%	0%	0%	3%	1%

2.3.5.1 Priority skills that need improvement in the current workforce today

Employers were asked to list the five job priority skills that need improvement in their total workforce[27]. Employers were not provided classifications to select from. We have classified the skills provided into two categories (a) Interpersonal skills which include all communication and management type of skills as well as (b) technical and hard skills. We can see from the results presented in *Table 22* that there is a blend of not only technical and hard skills needed, but importantly the interpersonal skills which are hard to "learn" from a book and require both a theoretical knowledge base as well as experience, mentors and coaches who transfer such skills in the classroom as well as in the workplace. Across all provinces the need for foreign languages in the work place was mentioned. This is not surprising given the nature of enterprise. Most large enterprises are engaged in providing products and services in majority to international markets or customers. Employers mention not only the ability to speak, but to understand context and culture when it comes to foreign languages and working internationally. These skills are critical for the future of Cambodia's workforce, in particular with ASEAN Economic Community. Management, leadership and supervisory skills are also expressed as the ability to communicate and engage with people effectively as well as to motivate them to do things. This reflects again the need for not only language but strong interpersonal skills.

[27] Q41. What are the main 5 job priority skills that need improvement in the total workforce in your company

Table 22: Top 5 job skills that need improvement in the current workforce: By location

Type of Skills	Battambang	Kampot	Phnom Penh	Siem Reap	Svay Rieng	Takeo
Interpersonal skills	Language skill Management skill	Language skill Customer service Other skills such as management	Foreign language Management, leadership, supervisory	Foreign language Customer service Management, leadership, supervisory	Foreign language Management, leadership, supervisory	Foreign language Other basic skills
Technical / Hard skills	Technician and machinery skill Quality control skill Other skills such as engineering, IT, accounting and finance, and logistics skills	Engineering skill Sewing Other skills such as computer and mining	Sewing Quality control and assurance Mechanic and electrical	Mechanic and electrical Cooking	Sewing Mechanic and machinery Quality control	Other basic skills

When reviewing the top 5 skills needs by industry as presented in *Table 23* we see that industries focus more on the technical and hard skills with hospitality related skills being more focussed on the interpersonal skills.

Table 23: Top 5 job skills that need improvement in the current workforce: By industry

Type of Skills	Garment and Footwear	Hospitality	Other Manufacturing	Professional Services
Interpersonal skills	Management, leadership, supervisory	Foreign language skill Management, leadership, supervisory Customer service/sale and marketing	Management, leadership, supervisory	Management, leadership, supervisory Sales and Marketing Skills
Technical / Hard skills	Sewing skill Quality Control skill Laundry skill Technical & mechanical Skill	Mechanical skill Cooking skill	Technical and mechanical skills Quality Control skill Assembling skill	Accounting skill Technical and mechanical skill Engineering and IT skill Sales and Marketing

2.4 Large Employers, Training and the TVET sector

2.4.1 Are large employers training their workforce?

Training programs provided by employers: *Table 24 and Table 25* present the results of training programs provided by employers by location and industry. The results show that all employers are currently providing some sort of training to their employees in particular related to foundation training to their workers. All employers are providing induction training and nearly all are providing occupational health and safety training. When new products and services are being introduced, training is also provided.

While there is varying degrees of training provided based on location and industry, it is encouraging that employers are investing in training to enhance workforce capabilities. Additional training programs provided by the different sectors that are more pronounced (in addition to the above training programs mentioned) are presented in *Table 23* as follows:

1. **In the Garment and Footwear sector:** Office tasks and administration as well as training in new technology are provided by 39 and 38 percent of respondents respectively
2. **In the Tourism Sector:** Supervision and environmental protection (69 percent), office tasks and administration (65 percent), accounting and finance and foreign languages (63 percent)
3. **In the Other manufacturing:** Training in new technology (56 percent), supervision and environmental protection (44 percent),
4. **In the Other professional Services:** Office tasks / administration and accounting and finance (69 percent), supervision 55 percent and training in new technology 48 percent.

Table 24 and Table 25 are sorted by the total column from highest to lowest. Coloured bars are included in the table to enable to reader to see the results more clearly.

Table 24: Training programs provided by employers: by sector

Training topics by sector	Garment and Footwear	Hospitality	Other manufacturing	Other professional services	Total
Induction training	100%	100%	100%	100%	100%
Occupational health and safety	96%	94%	67%	52%	88%
Training for new services/proc	78%	85%	67%	76%	79%
Office tasks/administration	39%	65%	33%	69%	48%
Supervision	30%	69%	44%	55%	42%
Accounting and finance	30%	63%	33%	69%	42%
Training in new technology	38%	27%	56%	48%	38%
Environmental protection	27%	69%	44%	28%	37%
Foreign language	4%	63%	22%	28%	21%
IT training	12%	23%	0%	41%	18%
Literacy/numeracy	7%	27%	0%	3%	10%

Table 25: Training programs provided by employers: by location

Training topics by location	Battambang	Kampot	Phnom Penh	Siem Reap	Svay Rieng	Takeo	Total
Induction training	100%	100%	100%	100%	100%	100%	100%
Occupational health and safety	83%	100%	87%	96%	86%	75%	88%
Training for new services/products	67%	71%	78%	96%	75%	75%	79%
Office tasks/administration	50%	43%	46%	92%	25%	0%	48%
Supervision	33%	57%	36%	81%	36%	50%	42%
Accounting and finance	50%	43%	38%	92%	21%	0%	42%
Training in new technology	67%	43%	39%	23%	43%	0%	38%
Environmental protection	50%	57%	29%	69%	39%	25%	37%
Foreign language	33%	29%	12%	77%	14%	0%	21%
IT training	17%	29%	19%	31%	0%	0%	18%
Literacy/numeracy	17%	29%	7%	12%	21%	0%	10%

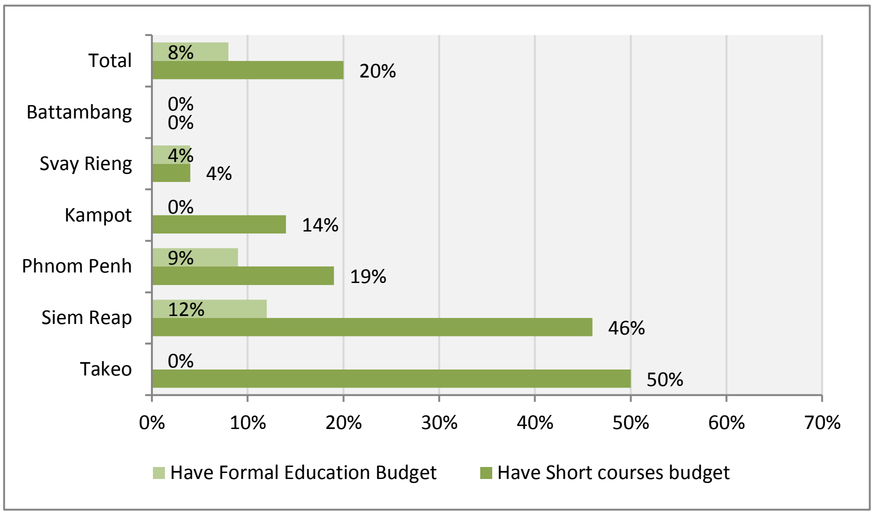
When reviewing how training is provided[28] we see that the majority of training provided is through internal training provision and the company provides such training to employs at a particular period in time. There are very few linkages with external training provide and in rare cases, international training provision is used. Given the limited use of external training provision, there is not much feedback on the quality of training provision[29] on external providers. In particular, supervisory training has the lowest provision of training internally (76 percent).

Table 26: Training courses provided and how they are provided

	Do you provide this training? % Yes		How is the training provided: % Internal training provided	
	#	%	#	%
Induction training	222	100%	222	100%
Occupational health and safety	196	88%	186	95%
Literacy/numeracy	23	10%	23	100%
Foreign language	46	21%	41	89%
IT training	39	18%	35	90%
Supervision	94	42%	71	76%
Training in new technology	84	38%	76	90%
Training for new services/products	175	79%	165	94%
Environmental protection	81	37%	78	96%
Office tasks/administration	107	48%	103	96%
Accounting and finance	94	42%	90	96%

2.4.2 Do employers have a training and development budget line?

Figure 23: Employers with short courses and formal education budgets: By location

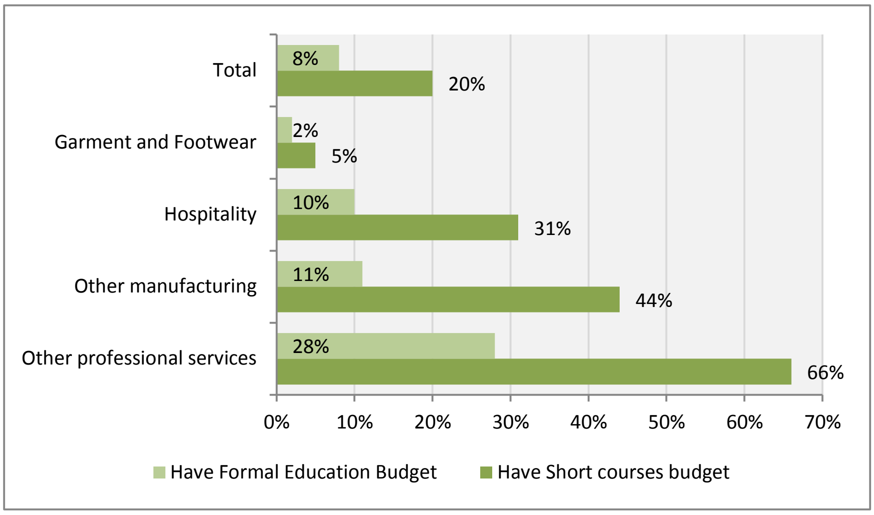


Employers were requested to identify if they have a formal education budget and short courses budget[30]. The objective is to understand whether or not employers have a financial provision for short courses training as well as formal education. This would provide TVET providers an understanding of whether or not engagement with private sector on specialised training for their companies through short course training as well as engagement for qualifying the workforce is an initiative worth pursuing.

The results are presented by location and section in *Figure 23 above and Figure 24 below*. Overall, 20 percent of large employers have a short courses training budget and around 8 percent a formal education budget however results are particular different per sector and location[31].

[28] Q42: How is training provided? Select from different listed providers
[29] Q43: Did you experience any difficulties with the training providers and Q44 Please list down the training providers that you have difficulties with.
[30] Question 37 and 38
[31] It is not clear if training budgets mentioned include training personnel in companies

Figure 24: Employers with short courses and formal education budgets: By sector



While industries are clearly training and making financial provision for training, it is clear from their lack of engagement with TVET above, that the TVET sector is likely losing out on an important opportunity in engaging with industry and vice versa if industry is not aware of relevant training providers. In this survey, employers were not requested to identify how much of the training budget is provided for which occupational categories. We can speculate that given high turnover rates in sectors are related to the majority positions in a particular sector, most of training budgets are allocated to semi-professional and professional staff who tend to have a higher tenure with a company. It is not common from the authors' experience that short term training will be invested for example in a seamstress, rather on a supervisor and a formal education budget will be reserved for pursuing a bachelor degree or specialised training such as ACCA or accounting qualifications. We know for example that factories will have a training floor for training up seamstresses and multi skilled workers.

A good example from our experience in working with industry is a factory based in a special economic zone in BAVET that needs to develop a workforce of over 1000 workers in a year. They have a specialised training floor that holds around 200 - 300 seamstresses (in shifts) who go through 3 months of training on machines. They will start with sewing on paper and step by step move onto fabrics and complex sewing. When they are ready, the move straight onto the product floor and a full time job. While this is a facility hosted by the factory including the trainers, the cost of such a facility and its resources might be in the training and development budget line for workers.

The above example shows that while budgets exist and encouragingly they do exist, further analysis and qualitative study should be done to understand how budgets are designed and used and given that most training is conducted internally. Particular questions should be asked as to how much of any particular budget is used for external training providers as opposed to an internal training team.

In addition to understanding for what type of training budgets are provided, employers were asked to provide the approximate annual training budget. The results are presented by location and industry and data is provided to understand the varying budgets available including providing the mean and maximum data point as well as the total sum of budget available. The values provided are limited to the number of responses provided. Employers did not want to share their budgets so the data presented is limited and therefore no further interpretation is provided. What is important is that training budgets amongst the 34 companies who responded to the questions, is almost 1.2 million United States Dollars in 2012. This shows that if TVET provision were targeted to industry skills needs, the training was genuinely quality in having an impact in the workplace; there is budget in industry, to pay for training provision. The budgets lines received from companies, given the limited number of companies, appears significant given that many industries are providing training internally.

Results are presented in *Table 27* below.

Table 27: Training budgets in USD by location and sector (2012)

Training budget for short training in 2012 by location		
Battambang	Maximum	.
	Mean	.
	Sum	.
	Valid N	0
Kampot	Maximum	40,000
	Mean	40,000
	Sum	40,000
	Valid N	1
Phnom Penh	Maximum	227,000
	Mean	47,732
	Sum	1,050,100
	Valid N	22
Siem Reap	Maximum	35,000
	Mean	6,056
	Sum	48,450
	Valid N	8
Svay Rieng	Maximum	25,000
	Mean	25,000
	Sum	25,000
	Valid N	1
Takeo	Maximum	500
	Mean	450
	Sum	900
	Valid N	2
Total	Maximum	227,000
	Mean	34,249
	Sum	1,164,450
	Valid N	34

Training budget in USD for short training in 2012 by sector		
Garment and Footwear	Maximum	10,000
	Mean	3,029
	Sum	21,200
	Valid N	7
Hospitality	Maximum	5,000
	Mean	1,931
	Sum	15,450
	Valid N	8
Other manufacturing	Maximum	200,000
	Mean	88,333
	Sum	265,000
	Valid N	3
Other professional services	Maximum	227,000
	Mean	53,925
	Sum	862,800
	Valid N	16
Total	Maximum	227,000
	Mean	34,249
	Sum	1,164,450
	Valid N	34

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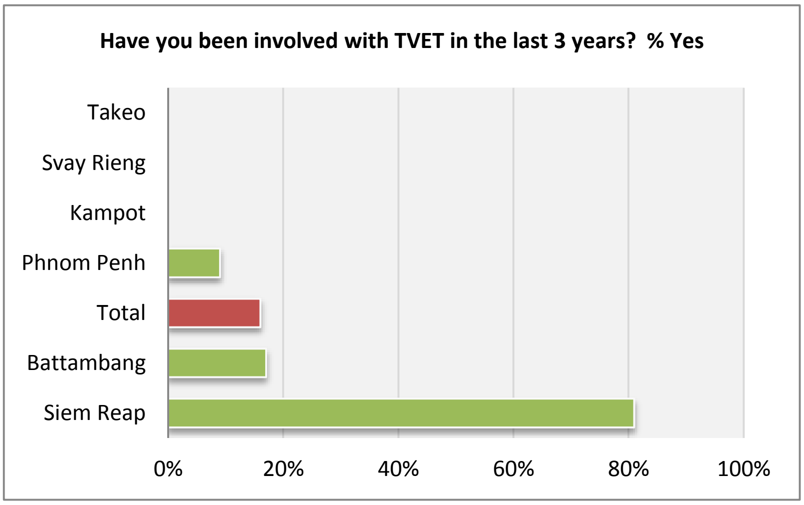
2.4.3 Do large employers have any linkages with the TVET sector?

Figure 25: Have you been involved with TVET in the last 3 years? By location



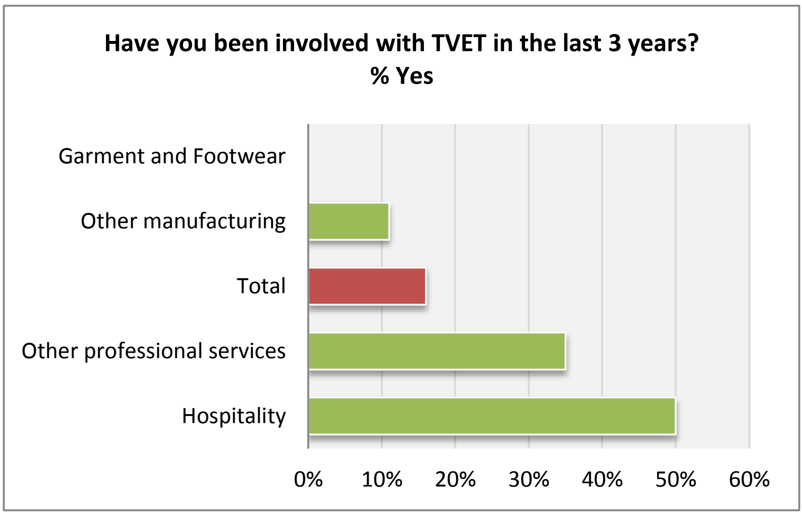
As described earlier in *enterprise profile and characteristics,* employers are currently training the next generation and there is almost no existence of apprenticeship programs or investment into workforce development for the future. Employers were further asked whether or not they have been involved with TVET in the last 3 years[32] to better understand whether or not there are existing linkages with TVET that can built on. The results are not surprising as **large employers do not have very strong linkages with TVET providers.**

Figure 25 presents results by province and *Figure 26* by industry.

By province: Siem Reap is a province that is focussed on hospitality and has several hospitality TVET providers, in particular NGO providers that are reputable, however focussed on training provision for mostly, the poorest of the poor or disadvantaged communities. Around 80 percent of respondents in Siem Reap have been involved in TVET in the last 3 years. One might deduce from Siem Reap that if TVET provision is providing numbers of students of at a reasonable quality that there would be a close engagement between TVET and industry. This however is anecdotal as the particular reasons were not discussed with employers. It is possible to assume that quality education providers would have sought after students and employers would want to work closely with such education providers, regardless of whether or not they are TVET or higher education institutions.

Somewhat surprisingly, Battambang had the second highest engagement of large employers with TVET[33]. In Phnom Penh, where most public sector institutions exist, there seem to be very little engagement with TVET and this is not particularly surprising. Phnom Penh large enterprises are dominated by garment manufacturers and there is little substantial TVET provision for this sector. In Kampot, Svay Rieng and Takeo there were no linkages identified with the TVET sector.

Figure 26: Have you been involved with TVET in the last 3 years? By industry



By sector, it is hospitality that dominates engagement with TVET, followed by other professional services. Garments and footwear have no relationship with TVET providers as there are no TVET providers supplying workers to the sector. The garment manufacturer association (GMAC) is going to establish a private sector national training institute for the sector by 2016. Construction of the institution is currently underway.

In the hospitality sector, there is also the development of a public private partnership for a national culinary school in collaboration with the Ministry of Tourism.

While there is a need for TVET providers to engage with industry, it is clear that there appears to be little engagement from industry with TVET. Reasons for this can be numerous however were not explored in this

[32] Q45: Has your company ever been involved with TVET training providers in the past 3 years.
[33] Battambang represents only 6 large enterprises

study. We can however say that there is a great opportunity to improve industry and TVET relationships to enhance learning and facilitate labour market matching.

2.4.4 How willing and ready are large employers to engage with TVET sector?

The challenges related to TVET training at any level require the engagement of industry to ensure that training meets the needs of industry. There are many ways this can be done including through skills and advisory councils, individual employer contributions to helping education facilities or sitting on their boards, paying training levy's or even providing facilities and internship or apprenticeship programs to young graduates. There are few sophisticated mechanisms in Cambodia that bring industry and education facilities closer together.

In this survey we asked employers whether or not they are willing to engage in setting up industry curriculum[34]. *Table 28 and Table 29* below summarise the responses by location and industry.

The results show that 65 percent of employers are willing to be engaged in setting up specific industry curriculum. For all provinces the response was in majority positive, except for Svay Rieng. By industry sector, there is a clear willingness to engage and support better curriculum development. These results are further strengthened by *what employers feel public TVET needs to do to improve training*, which is discussed in 2.4.7 below. Employer's recommendations point to closer engagement with industry, in particular in engaging with industry and informing what training and programs exist as well as leveraging the experience of industry in teaching to provide students with teachers that have workplace experience. It is clear that industry is willing to engage and support public TVET in its pursuit to satisfy the demand for training; however, it also appears that given the limited engagement from industry with TVET, industry expects TVET to take the first step towards such an engagement.

Table 28: Willing to engage in setting up specific industry curriculum? By Location

	Battambang		Kampot		Phnom Penh		Siem Reap		Svay Rieng		Takeo		Total	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Yes	4	67%	5	71%	98	65%	23	89%	12	43%	3	75%	145	65%
No	2	33%	2	29%	53	35%	3	12%	16	57%	1	25%	77	35%
Total	6	100%	7	100%	151	100%	26	100%	28	100%	4	100%	222	100%

Table 29: Willing to engage in setting up specific industry curriculum? By industry

	Garment and Footwear		Hospitality		Other manufacturing		Other professional services		Total	
	#	%	#	%	#	%	#	%	#	%
Yes	81	60%	36	75%	7	78%	21	72%	145	65%
No	55	40%	12	25%	2	22%	8	28%	77	35%
Total	136	100%	48	100%	9	100%	29	100%	222	100%

2.4.5 Are training taxes or training levy's welcome?

Employers in majority do not support a training levy or tax for training purposes[35]. While there is some support by 37 percent of employers, this taxation likely requires further study. It is difficult to analyse each province given that in some provinces, there are a limited number of large enterprises. For example, Battambang and Kampot province have a majority, 67 and 71 percent respectively, in favour of a tax levy. These provinces represent 6 and 7 enterprises respectively which is 3 percent of the total sample. These provinces do not represent a majority of large enterprises and also do not represent employers that have strong linkages with TVET. Kampot has no relationships while 17 percent of Battambang enterprises do have relations as presented above.

Generally, respondents who agreed with introduction of a levy provided a "disclaimer" to their response. While in principle they agree with the idea of a levy, the mentioned that the money collected needs to be utilised in a transparent, accountable and reliable manner ensuring that such a tax is used for training only. In addition, there needs to be an indication that there is training that employers will get for their workforce if such a tax is introduced, as some felt there was no relevant training.

[34] Q47. Does your company want to engage in setting up specific industry curriculum for TVET provider
[35] Q49. Do you support a tax introduction on employers to be used by TVET as an investment to improve the workforce?

A tax levy is complex and should support more than just large employers and also consider the SME sector where the majority employment in Cambodia is generated. As mentioned above, in the garment industry, private sector is creating and investing in a national institute taking on a loan upwards of 5 million United States Dollars and the tourism sector is looking to create a national culinary academy with the Ministry of Tourism. While awareness of such developments may influence responses to the question of a training levy, further study should be done to ensure that levies are inclusive of a broader Cambodia and genuinely contribute to training that will have an impact on young people's opportunities to pursue higher value added jobs, move up the career ladder and by so doing, industries grow and the economy as whole wins.

Table 30 and Table 31 below provide the results of respondents by location and industry. Readers should take note of the number of enterprises responding by particular category so as not to make incorrect assumptions.

Table 30: Do you support the introduction of tax levy? By location

	Battambang		Kampot		Phnom Penh		Siem Reap		Svay Rieng		Takeo		Total	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Yes	4	67%	5	71%	55	36%	11	42%	6	21%	0	0%	81	37%
No	2	33%	2	29%	96	64%	15	58%	22	79%	4	100%	141	64%
Total	6	100%	7	100%	151	100%	26	100%	28	100%	4	100%	222	100%

Table 31: Do you support the introduction of tax levy? By sector

	Garment and Footwear		Hospitality		Other manufacturing		Other professional services		Total	
	#	%	#	%	#	%	#	%	#	%
Yes	44	32%	21	44%	2	22%	14	48%	81	37%
No	92	68%	27	56%	7	78%	15	52%	141	64%
Total	136	100%	48	100%	9	100%	29	100%	222	100%

Employers were further asked whether or not paying a levy or tax would influence their current investment in training and development of their workforce[36]. The results show that 75 percent of employers will not invest less if a training levy is introduced but in general our discussions with employers suggest that there is little credibility that such a tax would result in real training for industry as there is little credible training today that is a benefit for industry. While this may be a result of ignorance as to what does exist in terms of TVET supply, the reality is that there has been little credible supply of TVET to address the growing needs of industry from an employer's perspective. There is clearly a need to build consensus and a deeper understanding amongst stakeholders as to a need for a training levy and how it will be used. Results are presented in *Table 32 and*

Table 33 *below.*

By location, only Kampot province would invest less; however, it does not have a significant representation of large enterprises. By industry, all industries would not invest less. In general, the decision around investing more or less would depend on how heavy the training levy would be and how credible training provision is in genuinely supporting the growth of skills and access to labour supply. In this regard, further study should be done as employers are not really convinced that a levy or tax will result in the desired outcomes for their industry or their enterprise. Employers remain concerned at poor education formation and foundation which hamper further learning and development. While not the most important factor that was lacking when hiring entry level staff, it did rank in the top 4 generally for all types of graduates from grade 9, 12, TVET and university.

Table 32: Would you invest less in training if you paid a training levy/tax? By location

	Battambang		Kampot		Phnom Penh		Siem Reap		Svay Rieng		Takeo		Total	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Yes	3	50%	5	71%	31	21%	10	39%	6	21%	0	0%	55	25%
No	3	50%	2	29%	120	80%	16	62%	22	79%	4	100%	167	75%
Total	6	100%	7	100%	151	100%	26	100%	28	100%	4	100%	222	100%

[36] Q50. If you pay this tax, will your company invest less in training?

Table 33: Would you invest less in training if you paid a training levy/tax? By sector

	Garment and Footwear		Hospitality		Other manufacturing		Other professional services		Total	
	#	%	#	%	#	%	#	%	#	%
Yes	25	18%	19	40%	2	22%	9	31%	55	25%
No	111	82%	29	60%	7	78%	20	69%	167	75%
Total	136	100%	48	100%	9	100%	29	100%	222	100%

2.4.6 How large employers feel training challenges should be tackled

In general, employers recommend public-private-partnerships (PPPs) as a credible way to enhance training in Cambodia[37]. 51 percent of employers recommend PPPs while 28 percent recommend that training be left to employers alone to pursue. Only 5 percent of employers thought that a training levy is the most appropriate mechanism through which to enhance training provision in Cambodia.

Review of data should consider representativeness of enterprises given the limited number of enterprises and responses in some areas specifically. *Table 34 and Table 35* below provide the results by location and industry.

Table 34: Employers views: How should industry training be managed? By location

	Battam-bang		Kampot		Phnom Penh		Siem Reap		Svay Rieng		Takeo		Total	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Let companies manage their needs…	1	17%	0	0%	37	25%	4	15%	18	64%	2	50%	62	28%
The industry association…	0	0%	1	14%	23	15%	9	35%	4	14%	0	0%	37	17%
A Public-Private-Partnership (PPP) …	5	83%	6	86%	84	56%	12	46%	5	18%	1	25%	113	51%
A Training levy (tax) is the best option…	0	0%	0	0%	7	5%	1	4%	1	4%	1	25%	10	5%
Total	**6**	**100%**	**7**	**100%**	**151**	**100%**	**26**	**100%**	**28**	**100%**	**4**	**100%**	**222**	**100%**

Table 35: Employers views: How should industry training be managed? By industry

	Garment and Footwear		Hospitality		Other manufacturing		Other prof'nal services		Total	
	#	%	#	%	#	%	#	%	#	%
Let companies manage their needs…	39	29%	14	29%	3	33%	6	21%	62	28%
The industry association…	18	13%	12	25%	3	33%	4	14%	37	17%
A Public-Private-Partnership (PPP) …	70	52%	21	44%	3	33%	19	66%	113	51%
A Training levy (tax) is the best option…	9	7%	1	2%	0	0%	0	0%	10	5%
Total	***136***	***100%***	***48***	***100%***	***9***	***100%***	***29***	***100%***	***222***	***100%***

[37] Q51. How do you want training for your industry to happen? Select 1 only?

2.4.7 What large employers feel public TVET providers should do to improve training programs

Respondents were providing an opportunity to provide their thoughts on what public TVET providers should do to improve their training[38].

Results are presented by sector given that particular sectors had particular views. The results show the following:

2.4.7.1 ...in the garment sector

There is no supply of training or TVET to the garment manufacturing industry specifically. While a lot of sewing courses exist around the country, they are focussed on domestic enterprises and not on industry skills needs. As mentioned earlier, the GMAC is establishing a national training institute for the sector which is currently under construction.

For public TVET to have a marked impact on the sector, it is clear that that there is a need to (a) have the facilities and infrastructure (machinery) to train workers and (b) to engage with industry and (c) to provide quality industry specific training, in particular related to technical positions such as quality control, patternmaking, merchandising, fixing machinery etc. and (d) to provide training that will enable the young Cambodian workforce to move up the career ladder to positions where they will earn higher wages including supervisory, management and other soft skills training and finally (e) to ensure that TVET is marketing their courses and services so that the sector is aware of what is available and on offer.

Industry specific comments

- Focus on sewing skills with an ability to use 3 different kinds of machines
- Be more specific on technical training (QC, mechanical skill, designing skill, etc.)
- Train specific practical skills; quality control; cutting skills;
- Train on soft skills; basic numeric skills; foreign language
- Focus on the quality of training
- Use up to date machine to train workers
- Be responsive to the needs of factories
- Need to understand the development of garment sector and introduce new technology that reflect the needs of factories;
- Train on managerial and supervisory skills
- Connect with factories directly and try to understand the demand of skills
- Train all kinds of skills in the production line from the beginning until the end
- Promote what public TVET is doing to factories

2.4.7.2 ...in the hospitality sector

There is not a significant supply of hospitality sector graduates from TVET in the public sector. In particular related to practical skills such as cooking or food and beverages. There is the development of the national culinary academy mentioned earlier which will be a public private partnership between the Ministry of Tourism and Tourism interested private sector.

For public TVET to have a market impact on the hospitality sector it is clear that there is a need to (a) have the infrastructure and equipment to provide young students with practical skills, whether cooking, housekeeping, cleaning, setting tables or other, (b) to enhance training by leveraging experts in industry or bringing guest speakers to share real life experience with young learners (c) focus on quality of curriculums and teachers and ensure that training is meaningful and not a "quick hit" which means that courses need be sufficiently long enough for learners to really learn (d) build stronger relationships with private sector to really understand their needs, market what TVET is doing so that industry knows what is available and finally (e) given the lack of relevant curriculum, start with identifying key programs that can be delivered effectively and ensure the private sector is aware of the offering.

Industry specific comments

- Provide specific training skills in Hotel and restaurant, such as food and beverage, housekeeping, customer service, managerial skill
- Improving the quality of training

[38] Q49. What should public TVET providers do to improve their training?

- Provide longer training course
- Invite experts to share practical experiences
- TVET providers should contact the companies directly
- Provide skill building program to hotel sector

2.4.7.3 ...in the other manufacturing sector

Similar to garments, there is little to no training for other manufacturing. Minebea, a giant Japanese electronics assembly plant sent all their workers to Thailand and Malaysia for training due to the lack of provision of training for this emerging industry. Within other manufacturing in this survey food and beverage producers are represented who require that young people have a very clear understanding of cleanliness and quality so as to ensure quality standards can be met.

For public TVET to have a market impact on the other manufacturing sector it is clear that there is a need to (a) have the infrastructure and equipment to provide young students with practical skills in particular for manufacturing, technical, mechanical and electrical jobs, (b) ensure that training is liked to industry needs and improve the engagement with industry (c) leverage the sector and its players to provide internship experiences as well as apprentices to the industry.

Industry specific comments

- Provide training for specific skills for manufacturing sector, such as technical and mechanical and electrical skills
- Improve the quality of training
- TVET should connect with factories

2.4.7.4 ...in the other professional services sector

The professional services sector does not have any development of a national training body or institute however within the banking sector as an example, there are national associations who provide specific training to their sector as part of association services. Another example is the MFI national training institute for microfinance which is run by ACLEDA bank and anecdotally discussions with the CEO note that the institute has international students from around the region. The professional services sector is diverse and typically recruits university graduates as jobs in this sector are perceived as glamorous – it is common that a credit agent or a cashier working in any professional services company will have a bachelor degree, which will make such an employee overqualified for their position by international standards.

For public TVET to have a market impact on the professional services sector it is clear that there is a need to (a) have the infrastructure and equipment to provide young students with practical skills in particular in IT areas, (b) a need for more soft skills training and business specific training like sales, marketing, accounting etc. (c) a need to improve the quality of training curriculum which can be achieved by greater engagement with the sector to support TVET in being relevant (d) collaborate with private sector to use their employees to lecture and teach students so that the quality of teaching improves and students get more real life understanding of what they are learning and finally (e) TVET providers should engage more deeply in getting students internship and apprenticeship programs so as to put their learning into practise early on in the learning process.

Industry specific comments

- Provide training for specific skills related to professional services, such as supervision skill, marketing and sale, accounting and finance, mechanical skill
- Improving quality of training
- Use up to date machines for training
- TVET providers should contact the companies directly
- Collaborate with technicians working in the companies to provider training to TVET providers
- TVET providers should look for internship opportunities for their students

2.4.7.5 ...to summarise

While different industries have made particular recommendations for their sector, there are several recommendations that are applicable to all industries and can be summarised as follows.

For public TVET to have a market impact on large employers and industry, large employers have identified the following key areas as essential to improve the provision of TVET such that is has a beneficial impact on skills development and workforce ability:

b. **TVET facilities require investment into infrastructure,** in particular machinery relevant to the workplace so that workers are able to experience the real work environment in their training and be better prepared for the workplace; or collaboration with private sector to train students in the workplace (apprentice/intern)
c. **The TVET systems and TVET education institutions needs to strengthen its engagement industry at an enterprise level.** This engagement impacts both the supply and quality of training as well as information sharing.
    i. **Information sharing:**
        – Provide industry with necessary information on what training programs exists and what TVET is doing or planning to do in terms of training.
        – Ensure employers are aware of training programs available and how much they cost as well as the schedule of training programs
        – Share the number of graduates that are graduating so that young people finishing studies can move directly into the workplace
        – More relevant marketing of TVET to industry
    ii. **Supply and quality of training**
        – Draw on industry to support the development of curriculum and training programs
        – Draw on enterprises to provide trainers and lecturers or speakers to young learners so that they can understand in practical terms about what they are learning and what they will do
        – Encourage exposure trips to industry for learners
        – Encourage teachers to engage with industry and visit industry so that they are more aware of the realities of the work place
d. **Focus on learning that will have an impact –** not short courses which have no certificates, no skills acquired or learning. Competency based training and qualification frameworks are important in this regard as well as ensuring that young people spend sufficient time to learn. Employers mention the importance of the length of training to be suitable to the skills being taught.
e. **At a national level, the TVET system needs to conduct a training needs analysis** and ensure that the development of skills training is appropriate to address industry needs. TVET needs to prioritise curriculum for the provincial needs or industry needs and make sure that for a first step, key priorities are being address. "Do less well rather than more poorly."
f. TVET systems and TVET education institutions need to engage closer with private sector in order to **provide internships and exposure** to the workplace of new learners as well as teachers
    i. Develop internship programs
    ii. Develop longer term apprenticeship programs which are currently non-existent

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2.5 Demand Side Summary

The demand side of the survey reviewed large employers only with a total sample of 222 employers across six provinces. While the survey represents 38 percent of large employers, it is not intended to be representative of a total employment in a particular industry or location given that the largest employment numbers in Cambodia are generated by SMEs and smaller enterprises. The set out to answer the following questions in particular as set out in the terms of reference. These include:

1. Is TVET training meeting the needs of employers so that graduates are ready for the workplace?
2. How much awareness do employers have around TVET training facilities in their region?
3. What is the quality of the graduates coming out of TVET? Are they ready for the workplace? Do they have to undergo training from the beginning again? Is there a common standard amongst the graduates graduating?
4. What are the current skills/professions required in the workplace? What are the emerging skills/professions required in the workplace? What are the forecasted needs of employers 2014 – 2018
5. Where are employers recruiting workforce at the targeted level of CQF 25? Are there any links with TVET? How much are employers investing in training their workforce

2.5.1 …large employer profile and breakdown

Respondents in this survey are all large employers employing over 100 employees. It is important for readers to understand the profile of respondents and their representativeness by location. Overall the sample is represented by 61 percent garment and footwear enterprises, 22 percent of hospitality enterprises, 13 percent other professional services and 4 percent other manufacturing. In terms of location, the results show the following:

a) Battambang had 6 large employers of which other professional services accounted for 83 percent of enterprises and hospitality 17 percent of enterprises
b) Kampot had 7 large employers with 43 percent in other professional services, 29 percent in hospitality and 14 percent or 1 enterprise each in other manufacturing and garment and footwear
c) Phnom Penh accounted for 68 percent of the total sample or 151 enterprises. The majority of respondents are garment factories (79 percent). Other industries with large employers included other professional services 13 percent, hospitality 6 percent and other manufacturing 2 percent.
d) Siem Reap accounted for 26 large employers of which 96 percent are hospitality enterprises.
e) Svay Rieng accounted for 28 large employers or 12 percent of the sample of which 43 percent are garment and footwear, 39 percent hospitality and 18 percent other manufacturing.
f) Takeo had 4 enterprises represented of which 75 percent are in the garment and footwear industry and 25 percent in other professional services.

Most enterprises are foreign owned (74 percent) and majority of products and services are focussed on other internal market 59 percent and the Asia region 25 percent. These results show that large enterprises are integrated into regional and international value and supply chains. It is therefore important that business owners are able to ensure reliable delivery of products and services and are able to do this through a skilled and competent workforce that is recruited and placed at the right time.

2.5.2 …where are all the jobs?

Overall the survey represents nearly 190 thousand workers (2013) with a forecast of up to 221,000 workers by 2015. In the garment sector, the majority of workers are plant and machine operators and assemblers (nearly 90 percent). In hospitality, the majority of workers are craft and related trades workers as well as service and sale workers making up around 70 percent of the total workforce. In other manufacturing, plant and machine operators and assemblers make up nearly 80 percent of the workforce. Other professional services has the most diversified mix of occupations with around 85 percent of the workforce made up of plant and machine operators and assemblers, craft and related trades workers as well as service and sale workers. There is an estimated 13 percent workforce increase by 2015 which is driven by the main occupations in each sector as described above.

Wage levels provided by industry showed that there is a clear progression in salaries from elementary up to management positions.

2.5.3 …large employers are struggling with turnover and filling vacancies

Turnover and vacancies: Turnover is a challenge for all industries, in particular related to the majority employment positions in the industry. Coupled with medium to high turnover, industries in total recorded nearly 26,000 vacancies of which 92 percent are in the garment sector. Vacancies are hard to fill because work experience is a critical factor in filling vacancies and the perceptions of applicants towards industry are key factors. This suggests that there are challenges with the talent pool, as well as with industry. Other factors include competition amongst employers and compensation levels. The main skills lacking include ability to communicate effectively, team work and problem solving, management and supervisory and manual dexterity skills. The result of not filling vacancies is significant – industry is delaying the development of new products and services and business is being lost to competitors. Internally, existing staff in companies are getting additional workload and stressors to try to maintain the pace and development of the company. To address challenges, employers are increasing salaries and looking at new recruitment methods including diversifying advertising sources as well as going closer to communities to find people. Employers did not mention working closer with TVET institutions.

While turnover and vacancies are particularly pronounced and perhaps even alarming, employers are not taking a long term view to address the challenges they face. The survey showed that there was little focus on building skills for the next generation through internships, apprenticeship programs or other.

2.5.4 …are graduates ready for the workplace?

There is a clear trend that TVET students and university graduates are more ready for the workplace whereas those graduating from secondary school are not that well prepared. Despite positive results on preparedness, the top skills lacking including lack of required basic skills or competencies and lack of life experience and maturity. Poor education formation, poor attitude and personality, lack of literacy and numeracy skills as well as lack of common senses were mentioned less, but still relevant skills lacking.

A large challenge, likely driven by turnover and vacancies is the percentage of workers that are currently not performing at optimal levels. Employers were asked to indicate by occupation what percentage of the workforce was not performing. In terms of overall sample, the highest percentages mentioned range from 30 to 60 percent of the workforce in the most critical occupations to each sector. Looking at industry averages, the average percentage of total workforce not performing by occupation level ranges from 9 percent to 19 percent.

1. In garments and footwear the average percentage is 20 percent for plant and machine operators and assembles
2. For hospitality it is 50 percent for craft and related trade workers
3. In other manufacturing, an average of 20 and 22 percent respectively for service and sales workers and plant and machine operators and assemblers are not-performing at desired levels.
4. In professional services it is 40 percent for craft and related trades workers and 12 and 16 percent respectively for service and sales workers and plant and machine operators and assemblers.

The reasons for non-performance link to reasons for readiness for the workplace. Overall 48 percent of employers noted that workers are new to the workplace and jobs, and 43 percent noted staff lacks motivation and self-discipline. By sector, these challenges are more pronounced including additional challenges as follows:

5. In garments and footwear, the inability to recruit staff with the required skills and high turnover
6. In hospitality, the same as garments and footwear
7. In other manufacturing, the inability to recruit staff, introduction of new products and services and as well as new work and technology practises are also pronounced
8. In professional services, inability to recruit, high staff turnover and introduction of new products and services are also important.

2.5.5 …training the workforce and TVET linkages

Large employers are almost all investing in some sort of training and mostly provided through in house facilities. This is no surprise as most employers feel that there is limited provision of quality and relevant TVET training. Employers have training budgets and a total of almost 1.2 million United States Dollars is recorded amongst a limited number of respondents.

Employers however, have limited linkages with the TVET sector. The majority of linkages are seen in the hospitality sector and primarily the engagement with NGO TVET providers in Siem Reap. Employers are however willing to engage with TVET however our survey results suggest that it is TVET that needs to take the

first steps. Over 65 percent of employers are willing to be engaged in setting up specific industry curriculum however they do mention that they need more information as to what TVET is doing. There is limited knowledge around course provision and strategic vision of TVET.

In majority, employers do not support a training levy. They do not see that there will be return on such a tax levy when little exists to today to support industry. Most employers recommend a public private partnership in improving skills training for industry.

2.5.6 …what should be done to improve TVET training

Employers provided several recommendations to improve TVET training. These include

e. **TVET facilities require investment into infrastructure,** in particular machinery relevant to the workplace so that workers are able to experience the real work environment in their training and be better prepared for the workplace.
f. **TVET needs to strengthen its engagement industry at an enterprise level.** This engagement impacts both the supply and quality of training as well as information sharing.
g. **TVET should focus on learning that will have an impact –** not short courses which have certificates, no skills acquired or learning. Competency based training and qualification frameworks are important in this regard as well as ensuring that young people spend sufficient time to learn. Employers mention the importance of the length of training to be suitable to the skills being taught.
h. **TVET needs to have closer ties with industry.**

2.5.7 …where to next?

If we review the five key questions they can be simply summarised as follows:

1. TVET training is not meeting the needs of employers in that there is limited training provision for industry. Graduates are somewhat ready for the workplace.
2. Employers do not have much awareness or understand about TVET provision in their areas or regions. There is very limited engagement with TVET overall.
3. While TVET graduates at entry level are showing promising trends in terms of being ready for the workplace, there are still critical foundation skills that are lacking. Almost all companies are providing industry and basic training in the workplace.
4. Emerging trends in skills needs of the workplace are focussed on the "majority employment" in each sector. There is not a need for new skills, but filling basic requirements of the workplace. Forecasted needs in the future are at least 13 percent growth by 2015 on the current employment numbers of 2013.
5. Employers are not focussed on recruiting from the TVET institutions, they use traditional methods of recruitment and are expanding in their recruitment methods and marketing and advertising. Employers are training their workforce and collectively.

Large employer skills needs are best reflected in their vacancies not being filled.

1. Plant and machine operations and assemblers account for nearly 24 thousand vacancies which had been vacant for 16 weeks at the time of the survey.
2. Service and sales workers 777 which had been open for 5 weeks at the time of survey.
3. Technicians and associate professionals and clerical support workers (613 vacancies) which had been open for 11 weeks at the time of the survey
4. Elementary occupations 301 which had been open for 8 weeks at the time of the survey
5. Craft and related trades workers 256 vacant for 10 weeks at the time of survey and
6. Professionals and managers a total of 59 positions at the time of the survey which had been vacant for 9 and 11 weeks respectively at the time of the survey.

To address the skills needed in large employers, and considering the locations of public TVET providers in particular, it appears that to have an impact in addressing the skills needs, TVET providers should have specific strategies for addressing skills needs in their locations, considering that large employers do not always represent the majority of skills needs in a particular area. In this regard a review of employment growth by province shows the following:

7. In Battambang, TVET supply needs to be more service driven, rather than purely an industrial focus.
8. In Kampot, TVET training needs to provide a blend of industry related skills as well as service skills.
9. In Phnom Penh, nearly all the demand is for plan and machine operations and assemblers. The importance of service and sales workers and technicians and associate professionals and clerical

support workers should not be underestimated for Phnom Penh or deemed to be unimportant as a focus for TVET training in Phnom Penh given it is the capital city, and hosts all headquarters and large hotel establishments.

10. In Siem Reap our survey shows that the majority employment will be created in service and sales workers and a slight increase in technicians and associate professionals.
11. Svay Rieng employment growth in large enterprises will be industry focussed with a great increase in plant and machine operations and assemblers. However, demand for service and sales workers, which will predominantly be found in the hospitality sector, is likely to be much more pronounced even than the forecast estimates if large hotels on the border, continue to employer and grow.
12. Takeo employment growth in large enterprises will be industry focussed with a great increase in plant and machine operations and assemblers as well as slight increases in technicians and associate professionals and clerical support workers. Further consideration in designing TVET strategies can be focussed on craft and related trades workers as well as service and sales workers required to support the traditional handicraft market.

A recent model forecasting employment developed by The Supreme National Economic Council (SNEC) in collaboration with a Korean university makes a first attempt to forecast employment growth. "It is forecasted that the annual average number of new jobs for the entire Cambodian economy for the 2012 – 2015 period is 1,125,965. Among this new job creation, 406,856 is expected to be generated in agriculture, 284,649 in industry and 434,460 in service. Thus, the service sector will be the main engine of job creation. The increase in agricultural jobs is almost equal to that of the service sector, hence it si still an important source of job creation."

Cambodia is also focussing on industrial diversification and more value added jobs. For industry to benefit from skilled youth graduating from TVET sector, there is need to ensure that TVET is coordinated, credible and relevant. In addition, the TVET sector needs to be flexible and consider the broader economic changes that will occur, so that its training remains relevant and so that curriculums can be updated to address changing industrial needs.

There is a clear need to enhance the quality of TVET training, the number of graduates graduating and to strengthen ties between industry and TVET education. While there is a clear willingness from industry to engage, our study suggests that it is necessary for TVET to provide information to industry as to what is needed to assist TVET. To date, the Garment and Footwear sector have taken a loan to build a private sector industry driven national training institute. In the hospitality sector, a public private partnership is being developed for a national culinary academy. The development of the national garment institute by private sector suggests that overall TVET was not responding to the needs of industry, despite the sector being the biggest formal employer in the country for over 10 years.

This survey provides an indication of industry needs, and if tangible strategies are developed to address industry needs with concrete outcomes, our survey suggests that industry will engage to support the TVET sector in curriculum building and relevant inputs to assist the sector in genuinely contributing to the needs of industry.

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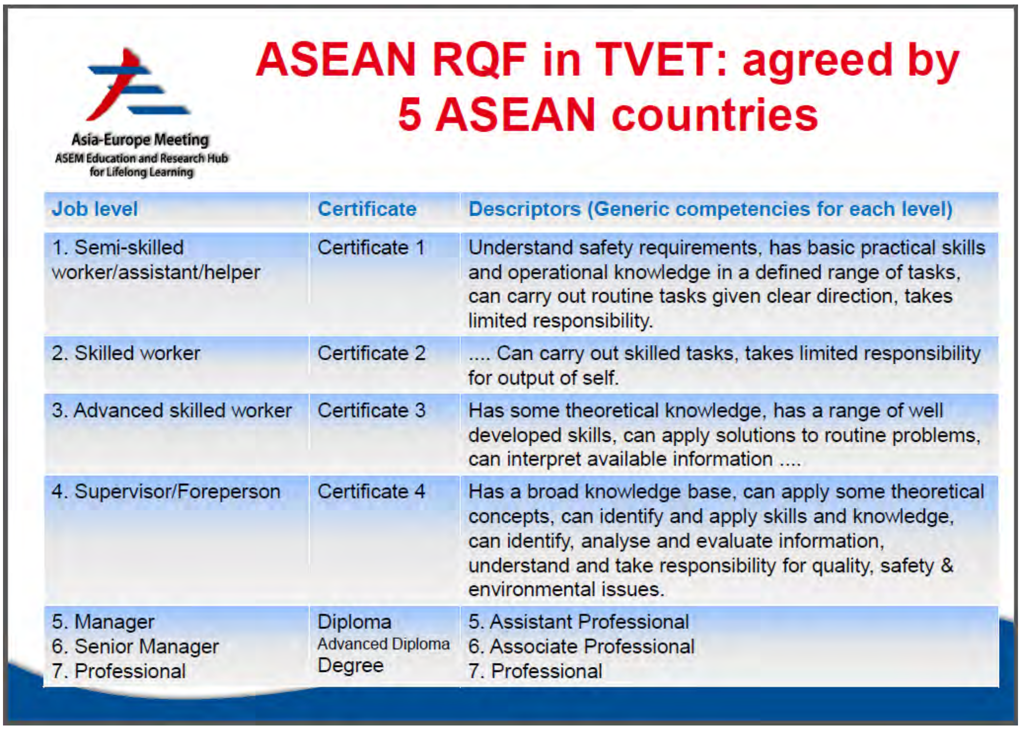
3 Supply Side Survey Results

3.1 Cambodia's TVET system

The study focuses on skills certificates Level 2, 3, 4 and 5 under the current Cambodian Qualification Framework (CQF). In the context of ASEAN economic integration, we provide briefly existing ASEAN Regional Qualifications frameworks (RQF) for reference. Not all ASEAN countries have agreed with the levels and descriptions however, for information purposes, we felt it necessary to provide an overview of regional developments. For the ASEAN Regional Qualifications Framework in TVET, 4 levels of certificate have been agreed by 5 ASEAN countries namely Cambodia, Lao PDR, Myanmar, Vietnam and Thailand[39].

Figure 27: ASEAN RQF in TVET



Job level	Certificate	Descriptors (Generic competencies for each level)
1. Semi-skilled worker/assistant/helper	Certificate 1	Understand safety requirements, has basic practical skills and operational knowledge in a defined range of tasks, can carry out routine tasks given clear direction, takes limited responsibility.
2. Skilled worker	Certificate 2	.... Can carry out skilled tasks, takes limited responsibility for output of self.
3. Advanced skilled worker	Certificate 3	Has some theoretical knowledge, has a range of well developed skills, can apply solutions to routine problems, can interpret available information ....
4. Supervisor/Foreperson	Certificate 4	Has a broad knowledge base, can apply some theoretical concepts, can identify and apply skills and knowledge, can identify, analyse and evaluate information, understand and take responsibility for quality, safety & environmental issues.
5. Manager 6. Senior Manager 7. Professional	Diploma Advanced Diploma Degree	5. Assistant Professional 6. Associate Professional 7. Professional

For this survey study, the Cambodia Qualification Framework (CQF) is used as a frame work to collect information, in particular with a focus on Level 2 - 5. Qualification levels in TVET system consist of 8 levels starting with a certificate all the way to a doctoral degree (PhD). The first four levels of the Cambodian Qualification Framework which include the vocational training certificate, TVET Certificate Level 1, 2, and 3, are *deemed to be equivalent to a high school degree in Cambodia or upper secondary school qualification based on qualification*. At least 30 credits are required to achieve each of the first four qualification levels (see table 36). Student training hours can be reduced based on job experiences, previous training and current competency.

The first five steps of the Cambodian qualification framework[40] is outlined in the table below which provides the characteristics of the particular level as well as the minimum credits required to obtain a certification.

[39] http://tempus.tpf.hu/eqf/docs/Workshop_5_Que_Anh_Dang.pdf
[40] Source: Cambodia Qualification Framework (CQF)

Table 36: Cambodia Qualification Framework (CQF)

Level	TVET	Characteristics	Minimum Credits required
1	Vocational Training Certificate	This training program required more practice than in class theory until student acquires designated skill in training program. This training program required a full time participation from 4 to 6 months or equivalence.	30
2	TVET Certificate I	This training program required more practice than in class theory until students acquire designated skill in training program. This training program required one year full time participation or equivalence	30
3	TVET Certificate II	Study duration from year.	30
4	TVET Certificate III	This training program consists of practices in workshops or lab and presentation in classroom until students acquire designated skills in training program. Candidate who finished TVET Certificate III required one year full time participation or equivalence. This qualification has equivalence of at least 30 credits.	30
5	Diploma/Advanced Diploma	This training program consists of practices in workshop or lab and presentation in classroom until students acquire designated skills in training program. Candidate who finished qualification level 4 or high school diploma required two years full time study and participation or equivalence. This qualification has equivalence of at least 60 credits or more than qualification level 4 in 30 credits.	60

The table below provides an understanding of how the TVET learning stream which is governed under Ministry of Labour and Vocational Training and the Ministry of Education work. TVET also reports to the national training board (NTB) which is chaired by the Deputy Prime Minister and includes representatives from employers, workers and relevant ministries involved in TVET.

Table 37: Cambodia National Qualifications Framework[41]

NQF	General Education System (MoEYS)	TVET System (MoLVT)	H.E System (MoEYS)
8		Doctoral degree	Doctoral Degree
7		Master of Technology / Business	Master Degree
6		Bachelor of Technology/ Business	**Bachelor Degree**
5		Higher Diploma of Technical/Business	
4	Upper Secondary School Certificate	TVET Certificate Level III	
3		TVET Certificate Level II	
2		TVET Certificate Level I	
1	Lower Secondary School Certificate	*Vocational Training Certificate*	

Figure 28 below provides a visual depiction of Cambodia's education system from primary through to higher education and the relationship again between different streams of education. General and technological streams are managed through the Ministry of Education and Technical and vocational stream by Ministry of labour and technical and vocational training (MoLVT).

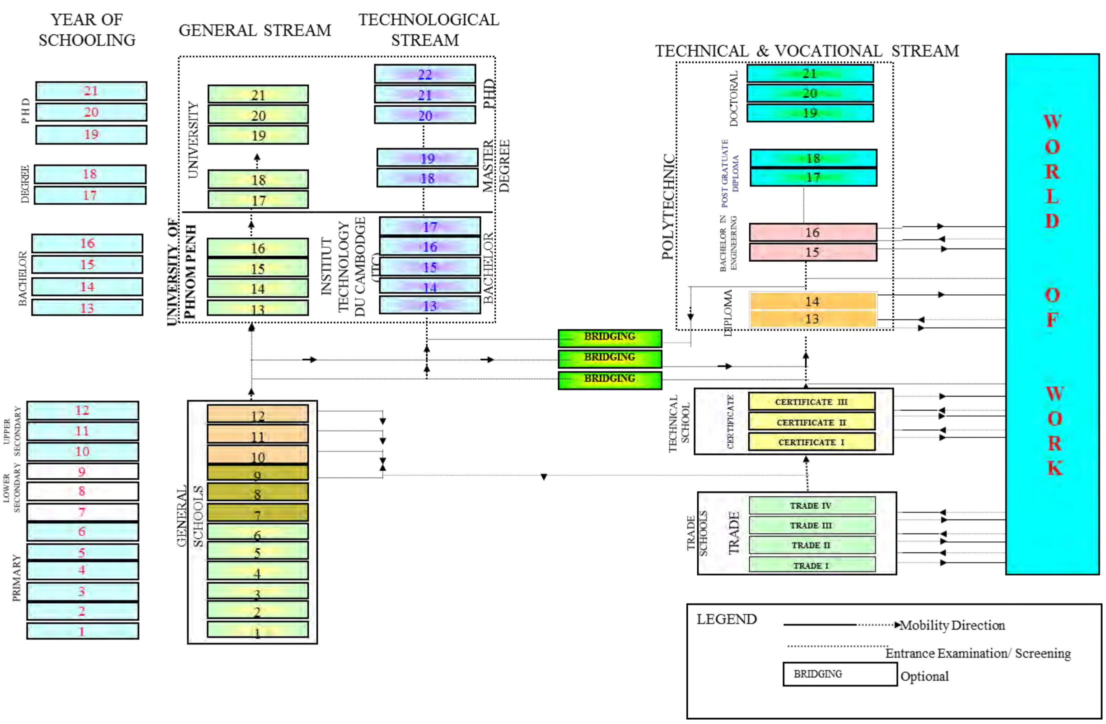
[41] *Source: A draft NQF presented on 02 November 2011 by Tep Oeun, Deputy Director General, Ministry of Labour and Vocational Training presented on "Current Status &Future TVET Policy Direction."*

It is striking that both the TVET system and Higher Education system provide higher education degrees and that certificate levels. When looking at the CQF in relation to the ASEAN framework, it also appears that that the current Certificate levels as described in the CQF appear to provide alternative training and education for those who drop out of school or wish to pursue skills training to start working earlier, and thereby allowing "dropouts in particular to gain appropriate qualifications to re-enter back into the education system.

It is important to point that 58 percent of students drop out at primary school. Of those entering lower secondary, 32 percent more will drop out and of those entering upper secondary school, another 10 percent will drop out[42]. So pertinent questions need to be raised:

1. TVET Technical Schools are competing for a small pool of students who are able to complete the mandatory minimum education of Grade 9. Should TVET provision not be geared to a different target segment of the population?
2. There is limited TVET provision that exists to capture those that drop out before Grade 9. Should TVET not be focused on supporting drop outs before Grade 9 to re-enter the formal education streams?
3. There appears to be no TVET provision for a student who completes Grade 12, and does not wish to pursue university degree but flexible short term and practical training that will allow young people to gain skills and work experience. Should TVET not provide an alternate education path that enables a young person to re-enter formal education streams at university, or provide an already qualified person with refresher skills training?

Figure 28: Education and Training System in Cambodia[43]



3.1.1 *Existing TVET providers in Cambodia*

Latest datasets on TVET institutes in Cambodia suggest there are around 325 TVET institutes registered in Cambodia across 12 different ministries and the Phnom Penh Municipality). Provinces visited in the survey are highlighted in yellow in *Table 38 below*.

The overall list of TVET providers by province shows that selected provinces visited have a high number of TVET providers compared to other provinces. Takeo province has the smallest number of TVET providers overall. In all the surveyed provinces NGO and Private sector facilities have a higher percentage of institutions compared to public sector. A higher number of institutions do not necessarily reflect a higher number of graduates graduating or a higher quality of training. Our survey suggests that NGO and Private TVET providers are in majority quite

[42] *Primary and Secondary Education statistics from the Labour Market Analysis, Russel*
[43] *Ibid*

informal and family run businesses. Many, even the more developed institutions, do not have good administration systems to track students or enrolments. Many of the private TVET providers that we interviewed in the survey, are providing Level 1 training this is likely the same for the majority of NGO and Private TVET providers. Quality data of what really exists, in terms of quality certified curriculums, trainers, teachers as well as number of students graduating and in which study areas is not available for the TVET sector. There is no private TVET association coordinating Private TVET (NGO and For Profit TVET providers).

Table 38: Number of TVET providers in all provinces by type

	NGO		Private		Public		Do not know		Total	
	#	%	#	%	#	%	#	%	#	%
Banteay Meanchey	5	33%	7	47%	3	20%	0	0%	15	5%
Battambang	4 (0)*	17%	16 (0)	70%	3 (1)	13%	0	0%	23	7%
Kampong Cham	0	0%	9	90%	1	10%	0	0%	10	3%
Kampong Chhnang	1	25%	2	50%	1	25%	0	0%	4	1%
Kampong Speu	3	33%	3	33%	3	33%	0	0%	9	3%
Kampong Thom	0	0%	8	89%	1	11%	0	0%	9	3%
Kampot	3 (0)	10%	24 (0)	83%	2 (1)	7%	0	0%	29	9%
Kandal	4	19%	16	76%	1	5%	0	0%	21	6%
Kep	3	75%	0	0%	1	25%	0	0%	4	1%
Koh Kong	0	0%	0	0%	1	100%	0	0%	1	0%
Kratie	2	33%	3	50%	1	17%	0	0%	6	2%
Mondul Kiri	0	0%	0	0%	1	100%	0	0%	1	0%
Oddar Meanchey	0	0%	0	0%	1	100%	0	0%	1	0%
Pailin	1	10%	7	70%	2	20%	0	0%	10	3%
Phnom Penh	16 (6)	18%	63 (10)	72%	8 (8)	9%	1	1%	88	27%
Preah Sihanouk	0	0%	0	0%	1	100%	0	0%	1	0%
Preah Vihear	0	0%	5	56%	4	44%	0	0%	9	3%
Prey Veng	0	0%	2	50%	2	50%	0	0%	4	1%
Pursat	0	0%	5	71%	2	29%	0	0%	7	2%
Rattanak Kiri	0	0%	4	80%	1	20%	0	0%	5	2%
Siem Reap	3 (2)	14%	15 (0)	71%	3 (1)	14%	0	0%	21	6%
Sihanouk Ville	3	30%	7	70%	0	0%	0	0%	10	3%
Stung Treng	2	33%	2	33%	2	33%	0	0%	6	2%
Svay Rieng	3 (0)	16%	6 (0)	32%	10 (1)	53%	0	0%	19	6%
Takeo	2 (1)	33%	3 (0)	50%	1 (1)	17%	0	0%	6	2%
Do not know	2	33%	4	67%	0	0%	0	0%	6	2%
Total	**57 (9)**	**18%**	**211 (10)**	**65%**	**56 (13)**	**17%**	**1**	**0%**	**325**	**100%**

* (…) means number of TVET providers interviewed.

3.2 Understanding non-public TVET providers and their characteristics

Non-public TVET providers are classified as NGO (Not-for-Profit) and private TVET providers. It is important to provide context about these TVET providers as this is pertinent to understanding the provision of non-public TVET in Cambodia. Except for large established NGO TVET providers which are known to be reputable and graduate skilled employees, most non-public TVET providers, in particular private TVET providers are small "home-based" operations. TVET providers in this study stated they are struggling to survive – in particular in the NGO sector and small private institutions.

Except for reputable NGO TVET providers, most of the non-public establishments are rather informal and do not have strict management systems. They leverage mostly contract teachers when they have students as well as request teachers to find students. All TVET providers regardless of being big or small, more established or not, in majority provider mostly Level 1 training only with an isolated few providing level 2 – 5 training courses.

It is only the large established TVET providers that have linkages with industry. Smaller private TVET providers generally can be viewed as a service company that provides a facility and service of learning rather than being a traditional education facility. There is little sophistication overall in the non-public TVET sector.

3.2.1 Not-for-Profit TVET providers

Not-for-Profit TVET providers are referred to as NGO TVET providers in the study. There are a total of57 NGO TVET providers in the whole country. There are a few large reputable NGO training providers in Cambodia and all of the large reputable NGOs were approached for the survey. Final results include Paul Dubrule and Sala Bai in Siem Reap and PSE in Phnom Penh. Don Bosco and the French PN IT TVET NGO are also a well-known NGO TVET providers however did not participate in the survey despite several attempts to contact the institution. Both of these facilities are based in Phnom Penh.

The study reviewed 9 NGO providers in the study. The majority NGOs (6) are located in Phnom Penh.

Most NGOs did not have robust administration systems, particularly the smaller NGO organisations. Larger NGOs did not have sophisticated systems enough, to be able to fill out the survey in detail. As such, quality of data is omitted in reporting student numbers.

The smaller NGOs interviewed in this survey are currently struggling with financing and further development. Most teachers are contract teachers and often they turn to fee paying operations to try to sustain their operations. Most of the smaller NGOs we spoke too suggested that their operations were failing.

About Paul du Brule: A well-established and reputable NGO TVET provider

1,204 students have successfully graduated since 2002.

96% of the graduates from Paul Dubrule have found work since 2002.

45 partners from both inside and outside Cambodia.

41 teachers and staff, among whom over 90% are Cambodians.

32% of students benefited from a scholarship during the academic year 2010 - 2011.

16% salary increase over a 3year period with Paul Dubrule's school diplomas.

A first month salary that is 37% above the average wages in Cambodia.

Source: www.ecolepauldubrule.org

While the quality of education was not assessed, it varies greatly amongst NGOs. HRINC studies in the past have identified frustration on the side of employers as to the different standards and focus of TVET provision in the NGO sector. As an example, while Paul Dubrule School might be classified as level 1 training provision, it is far superior to other hospitality training centres when it comes to cooking qualifications and how it teaches. It is not possible to compare this NGO to others. A key challenge that employers mention is the standardisation of qualification and curriculum across NGOs so that employers get similar graduates with similar competencies when students graduate.

Except for reputable NGOs that are well established, almost all other NGO infrastructure is confined to small flats or apartments with very few teachers that are hired on contract basis when sufficient students are recruited. One can view these TVET providers rather as service providers providing a coach and very basic facility for learning, rather than an education institution.

It is only the larger NGOs that have a well established reputation that have strong linkages with industry. These include Paul Dubrule, PSE, Salabai. These schools will have direct links with industry to place internship students as well as a strong drive to help students find jobs. These schools also have an advisory board which consists of industry professionals who provide inputs into various aspects of curriculums and education provision of the schools. Advisory boards generally function through meetings and take a significant amount of effort and energy to coordinate and engage the private sector and industry.

3.2.2 Private TVET Providers

At a country level there are 211 Private TVET Providers in all provinces in Cambodia. There are 64 Private TVET providers in 5 provinces in the survey study, Svay, Takeo, Siem Reap, Battambang, and Takeo Province with the highest concentration of TVET providers in Phnom Penh (63 institutions).

The 10 private TVET providers that participated in this survey are all located in Phnom Penh. Several attempts were made to contact private providers in the province but they did not want to participate in the survey, or were not available at the time. The providers interviewed are all considered to be small providers, or similar to how we have described the NGO providers, service organisations that provide a service, rather than a traditional education facility. Almost all of the teachers used by the private TVET providers are contract teachers that are called upon when there are sufficient students as well as putting the responsibility of recruitment of students on the teacher. Only the Student Development institute had a total of 35 staff that were considered full time staff, although not always a full 8 hours per day. Full time in the sense that they had regular classes to attend and teach and had a part time job.

Most of these private providers are based in a 4 by 6 metre flat or apartment and do not have any management systems. They do not keep records of their students and enrolment numbers and generally function on a day to day basis or a course to course basis. The majority of these private TVET providers said they were finding it hard to sustain their business, while only one was considering to expand by renting a new flat.

3.2.3 Summary of non-public TVET provision

Non-public TVET providers are classified as NGO (Not-for-Profit) and private TVET providers. Except for large established NGO TVET providers which are known to be reputable and graduate skilled employees, most non-public TVET providers, are small "home-based" operations. TVET providers in this study stated they are struggling to survive and find students – sustainability was particularly pounced for the NGO sector as they are dependent on funding and turning to fee based operations.

Except for reputable NGO TVET providers, most of the non-public establishments are rather informal and do not have strict management systems. They leverage mostly contract teachers when they have students as well as request teachers to find students. All TVET providers regardless of being big or small, more established or not, in majority provider mostly Level 1 training only with an isolated few providing level 2 – 5 training courses. Large established NGO TVET providers did not always have sophisticated management tracking tools for their students either.

It is only the large established TVET providers that have linkages with industry. Smaller private TVET providers generally can be viewed as a service company that provides a facility and service of learning rather than being a traditional education facility. There is little sophistication overall in the non-public TVET sector.

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3.3 What levels of skills training exist in the TVET sector today

The study focusses on Level 2 – 5 under the Cambodian Qualification Framework. **There is a "Curriculum Missing Middle"** with an almost non-existence and substantial provision of TVET at level 2 through 5. While there are a few government institutions that provide these levels, there is not at all a sufficient provision of Level 2 – 5 to service large employers in industry. Almost all TVET training is focussed on Level 1 training. While Level 1 descriptions suggest 4 – 6 months of training, the implementation in reality is quite different. It can be as short as a few days, up to 1 year of training in the NGO TVET providers.

There is very little opportunity to build a career and development skills through TVET given the lack of curriculum offering and the curriculum missing middle.

The perceptions of young people are important. Young people who have completed high school and do not have the means to go to university may perceive doing a level 2, 3, 4 training as "going backwards" as it is going to give the same qualification as high school. It is well known that most young people believe that university education is the key to achieving the skills and knowledge to get a job while TVET is viewed as training for a "worker" and not a professional.

To answer the questions that the survey set out to answer, it is useful to simply start with understanding what levels of training exist today amongst the different training providers. This survey is focussed on the Level 2 – 5 training in TVET sector.

Table 39 to Table 42 provides an overview of the different levels of training programs that TVET providers are currently engaged in. In the tables, the green indicates the existence of curriculum at a particular level and the grey and N/A means that no curriculum exists at a particular level. The tables represent government national institutes all located in Phnom Penh, government regional training centres all located in the provinces, NGO and then private sector.

The tables represent what levels of training institutions provides. Having all levels of training does not mean that any one curriculum has a full set of curriculum from Level 2 – 5. In public sector there are around 67 different training courses and in non-public sector around 57 different training courses provided in this study. This is discussed further in the next chapter.

The results of mapping the provision of different levels of training are alarming and show that there is a great need to focus on curriculum development.

1. **There is a "Curriculum Missing Middle":** For all institutions, there is a limited offering of a full "set of training from Level 1 – Level 5 which indicates that students are not necessarily going to be able to pursue a full qualification.
    a. Only the industrial technical institute (*National Training Institute in Table 40),* the RTC Kampot institute *(Table 41, RTC TVET Providers)* has all levels of training.
    b. Only Pour Un Sourire D'Enfant providers Level 2 – 5 training without a level 1 training program.
    c. Interestingly, the Centre for Entrepreneurship Training and Practice in private sector tried to launch a Level 5 Diploma certificate but discontinued the program as it was not successful. Further reasoning as the failures were not provided.
2. **Little opportunity for young people to grow and get further educated or pursue a TVET qualification that will enhance their chances of a higher skilled and paid job.** Young people have mostly the option of Level 1 or Level 5. The completion of Level 2, 3, 4 is meant to provide young people with the equivalent of a high school diploma which means that there is little skills training options for young people who complete school and what to pursue a technical career.
    a. **It is well known that young people perceive university education as education that will result in a good job.** With TVET provision providing the equivalent of high school diplomas, there is no incentive for young people to pursue TVET or skills education.
    b. The current TVET offering is really focused on capturing those who have completed the mandatory grade 9 education level. The majority of people dropping out of school before grade 9 will not meet the minimum requirements for TVET entry. While the structure of Levels in TVET exist to provide young people with an alternative path to re-enter into formal education systems, it appears there has been a lack of focus on developing curriculums that will enable young people to genuinely pursue a career. There is clearly a need to focus on the Trade Certificates to ensure that the large proportion of drop out, do have an education option to re-enter formal education or higher TVET levels of training.

3. **TVET Certificate levels 1, 2, 3 are the equivalent of a "technical high-school" stream**, rather than a genuine TVET stream where young people can build up skills or refresh their skills to pursue higher value added jobs. For young people completing high school and not able to pursue university, TVET does not provide a credible option of training at present, to engage young people into more practical training or "higher skills". The perceptions of young people are extremely important to consider in the development of TVET.

3.3.1 ...in the public sector

***Table 39:** Existing Levels at 8 National Institutes TVET Providers in Phnom Penh*

	National Institutes	Degree of Training According to Survey Data Collection school year 20132014				
		Level 1	Level 2 (C1)	Level 3 (C2)	Level 4 (C3)	Level 5 (Diploma)
1	National Polytechnic Institute of Cambodia	Exist	Exist	N/A	N/A	Exist
2	National Technical Training Institute	Exist	Exist	Exist	N/A	Exist
3	Preah Kossomak Polytechnic Institute	Exist	N/A	N/A	Exist	Exist
4	Industrial Technical Institute	Exist	Exist	Exist	Exist	Exist
5	National Institute of Business	N/A	N/A	N/A	N/A	Exist
6	Cambodia India Entrepreneurship Development Centre	Exist	Exist	N/A	N/A	Exist
7	Japan Volunteer Centre	Exist	Exist	Exist	N/A	Exist
8	Cambodia Thai Skill Development Centre	Exist	Exist	N/A	N/A	N/A

***Table 40:** Existing Levels at 5 RTC TVET Providers in Provinces*

	Regional Training Centres	Degree of Training According to Survey Data Collection school year 20132014				
		Level 1	Level 2 (C1)	Level 3 (C2)	Level 4 (C3)	Level 5 (Diploma)
1	RTC Svay Rieng	Exist	N/A	N/A	N/A	Exist
2	RTC Takeo	Exist	Exist	N/A	N/A	Exist
3	RTC Siem Reap	Exist	Exist	N/A	N/A	Exist
4	RTC Battambang	Exist	N/A	N/A	N/A	Exist
5	RTC Kampot	Exist	Exist	Exist	Exist	Exist

3.3.2 ...in the non-public sector

Table 41: Existing Levels at NGO Providers in Provinces

	Private TVET Providers: NGO	Degree of Training According to Survey Data Collection school year 20132014				
		Level 1	Level 2 (C1)	Level 3 (C2)	Level 4 (C3)	Level 5 (Diploma)
1	Pour Un Sourire D'Enfant	N/A	Exist	Exist	Exist	Exist
2	WEC International Cambodia Vocational Program	Exist	N/A	N/A	N/A	N/A
3	Economics and Education Development Organization	Exist	N/A	N/A	N/A	N/A
4	CYFA Computer Centre	Exist	N/A	N/A	N/A	N/A
5	Cambodia Education Organization	Exist	N/A	N/A	N/A	N/A
6	Computer Vocational Training Organization	Exist	N/A	N/A	N/A	N/A
7	Paul Dubrule	Exist	X	N/A	N/A	N/A
8	Sala Bai	Exist	N/A	N/A	N/A	N/A
9	Community Empowerment and Legal Outreach Org	Exist	N/A	N/A	N/A	N/A

Table 42: Existing Levels at Private Providers (Phnom Penh Only)

	Private TVET Providers: For Profit	Degree of Training According to Survey Data Collection school year 20132014				
		Level 1	Level 2 (C1)	Level 3 (C2)	Level 4 (C3)	Level 5 (Diploma)
1	Centre for Entrepreneurship Training and Practice	Exist	N/A	N/A	N/A	Exist (fail in Operation)
2	Student Development Institute	Exist	N/A	N/A	N/A	N/A
3	Information Technology and Electric Centre	Exist	Exist	N/A	N/A	N/A
4	Kim Heng Technical Sewing Repair School	Exist	N/A	N/A	N/A	N/A
5	Dy Sovannarith Technical Training School	Exist	N/A	N/A	N/A	N/A
6	Development of Economic Demographic Organization	Exist	N/A	N/A	N/A	N/A
7	Institute of Automotive Technology	Exist	N/A	N/A	N/A	Exist
8	Multi Skill Centre	Exist	Exist	N/A	N/A	N/A
9	Angkor Computer Centre	Exist	N/A	N/A	N/A	N/A
10	Information Technology Professional Centre	Exist	Exist	N/A	N/A	N/A

3.4 What skills training courses exist today

The findings show that there are 76 course names in both national and regional public facilities and 57 course names amongst the NGO and private sector providers.

In public sector: Only air-conditioning repair and auto engineering have Level 2 – 5 courses at National Level. Only automotive services have Level 2 – 5 at Regional Level. Both National and regional have electricity training for level 1, 2, 3 and 5 and regional level has a level 4 electricity training as well.

In non-public sector: there is no provision in any course of a full set of Level 2 – 5 training.

While some public sector training allows students to pursue a high school diploma and proceed further, there is no such provision in the non-public sector. Courses that are being provided by public sector are in high demand in terms of skills, however mostly geared towards a male audience or male perceived professions Young girls and women have little TVET curriculum designed around traditional female careers and there is no provision of courses for careers typically perceived as more suitable for women. While there is no doubt that in today's work-world women can pursue careers in a typically male dominated career such as engineering, for young girls, particularly in the rural area, the absence of TVET curriculum for more traditional women oriented professions could in the long run, disadvantage young girls, if parents do not perceive electrical or automotive studies as suitable for their daughters.

There is a need to standardise the training offering (course name and content) across all institutions and to share curriculums amongst institutions that already have existing programs so as not to duplicate resources. In standardising course names and content, this may have an impact on private sector in understanding exactly what young people are learning and what skills they are gaining through education.

3.4.1 ...in the public sector

In the public sector, 76 course names exist for both national and regional training centres. The only courses that have a full certificate program from level 2 – 5 are the following courses:

1. Air-conditioning Repair: level 1, 2, 3, 4, 5 at National Level
2. Auto Engineering, Level 2, 3, 4, 5 at National Level
3. Automotive Servicing, Level 2, 3, 4, 5 at Regional Level
4. Electricity, Level 1, 2, 3, and 5, at National level and Level, 1, 2, 3, 4, 5 at Regional Level

Table 43: Skills training programs in the Public TVET sector (2013)

#	Course Names in Alpha Order	National Level 1	National Level 2 (C1)	National Level 3 (C2)	National Level 4 (C3)	National Level 5 (Diploma)	Regional Level 1	Regional Level 2 (C1)	Regional Level 3 (C2)	Regional Level 4 (C3)	Regional Level 5 (Diploma)
1	Accounting	N/A	N/A	N/A	N/A	Exist	Exist	N/A	N/A	N/A	N/A
2	Accounting and Finance	Exist	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Exist
3	Administrative Assistant	N/A	N/A	N/A	N/A	N/A	N/A	Exist	N/A	N/A	N/A
4	Agriculture processing	N/A	N/A	N/A	N/A	N/A	Exist	N/A	N/A	N/A	N/A
5	Air condition Repair	Exist	Exist	Exist	Exist	Exist	Exist	Exist	N/A	N/A	N/A
6	Animal Science	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Exist
7	Auto Electric Repairing	N/A	N/A	N/A	N/A	N/A	Exist	N/A	N/A	N/A	N/A
8	Auto Engineering	N/A	Exist	Exist	Exist	Exist	N/A	N/A	N/A	N/A	N/A
9	Auto Repair	N/A	Exist	Exist	N/A	N/A	Exist	N/A	N/A	N/A	N/A
10	Automotive Engineering	N/A	N/A	N/A	N/A	Exist	N/A	N/A	N/A	N/A	Exist
11	Automotive Air Condition Service	N/A	N/A	N/A	N/A	N/A	N/A	Exist	N/A	N/A	N/A
12	Automotive Servicing	N/A	N/A	N/A	N/A	N/A	N/A	Exist	Exist	Exist	Exist
13	Beauty Salon/Make Up/Wedding Planning	Exist	N/A	N/A	N/A	N/A	Exist	N/A	N/A	N/A	N/A
14	Business Management	N/A	N/A	N/A	N/A	Exist	N/A	N/A	N/A	N/A	N/A
15	CAD/CAM	N/A	N/A	N/A	N/A	Exist	N/A	N/A	N/A	N/A	N/A
16	Car AC Repair	Exist	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
17	Car Engine Repair	Exist	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
18	Cattle Raising	N/A	N/A	N/A	N/A	N/A	Exist	N/A	N/A	N/A	N/A
19	Chicken Raising	N/A	N/A	N/A	N/A	N/A	Exist	N/A	N/A	N/A	N/A
20	Civil Construction	N/A	N/A	N/A	N/A	Exist	N/A	N/A	N/A	N/A	N/A
21	Civil Engineering	N/A	N/A	N/A	N/A	Exist	N/A	N/A	N/A	N/A	Exist
22	Classic Auto Repair	Exist	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
23	Clothes Design	N/A	N/A	N/A	N/A	N/A	Exist	N/A	N/A	N/A	N/A

#	Course Names in Alpha Order	National Level 1	National Level 2 (C1)	National Level 3 (C2)	National Level 4 (C3)	National Level 5 (Diploma)		Regional Level 1	Regional Level 2 (C1)	Regional Level 3 (C2)	Regional Level 4 (C3)	Regional Level 5 (Diploma)
24	Computer Basic	N/A	N/A	N/A	N/A	N/A		Exist	N/A	N/A	N/A	N/A
25	Computer Design	Exist	N/A	N/A	N/A	N/A		N/A	N/A	N/A	N/A	N/A
26	Computer Repair	Exist	N/A	N/A	N/A	N/A		Exist	N/A	N/A	N/A	N/A
27	Computer Servicing	N/A	N/A	N/A	N/A	N/A		N/A	Exist	N/A	N/A	N/A
28	Cooking	N/A	Exist	N/A	N/A	N/A		Exist	N/A	N/A	N/A	N/A
29	Cow Raising	N/A	N/A	N/A	N/A	N/A		Exist	N/A	N/A	N/A	N/A
30	Duck Raising	N/A	N/A	N/A	N/A	N/A		Exist	N/A	N/A	N/A	N/A
31	Earth Worm Raising	N/A	N/A	N/A	N/A	N/A		Exist	N/A	N/A	N/A	N/A
32	Electric	N/A	N/A	N/A	N/A	N/A		Exist	N/A	N/A	N/A	N/A
33	Electric Auto Repair	Exist	N/A	N/A	N/A	N/A		N/A	N/A	N/A	N/A	N/A
34	Electric Engineering	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	N/A	Exist
35	Electrical Repair	Exist	N/A	N/A	N/A	N/A		N/A	N/A	N/A	N/A	N/A
36	Electricity	Exist	Exist	Exist	N/A	Exist		Exist	Exist	Exist	Exist	Exist
37	Electronic	Exist	Exist	N/A	N/A	Exist		Exist	N/A	N/A	N/A	N/A
38	Electronic Repair	Exist	N/A	N/A	N/A	N/A		N/A	N/A	N/A	N/A	N/A
39	English Literature	N/A	N/A	N/A	N/A	Exist		N/A	N/A	N/A	N/A	Exist
40	Fertilizer	N/A	N/A	N/A	N/A	N/A		Exist	N/A	N/A	N/A	N/A
41	Finance and Accounting	N/A	N/A	N/A	N/A	Exist		N/A	N/A	N/A	N/A	N/A
42	Finance and Banking	N/A	N/A	N/A	N/A	Exist		N/A	N/A	N/A	N/A	N/A
43	Fishery	N/A	N/A	N/A	N/A	N/A		Exist	N/A	N/A	N/A	N/A
44	Fishery (Worm Raising)	N/A	N/A	N/A	N/A	N/A		Exist	N/A	N/A	N/A	N/A
45	Frog raising	N/A	N/A	N/A	N/A	N/A		Exist	N/A	N/A	N/A	N/A
46	Graphic Design	Exist	Exist	N/A	N/A	N/A		Exist	N/A	N/A	N/A	N/A
47	Hair Cut, Nail, Salon, Hair Dressing	N/A	N/A	N/A	N/A	N/A		Exist	N/A	N/A	N/A	N/A
48	Hen Raising	N/A	N/A	N/A	N/A	N/A		Exist	N/A	N/A	N/A	N/A
49	Hospitality	N/A	N/A	N/A	N/A	N/A		Exist	Exist	N/A	N/A	N/A
50	Information Technology	N/A	N/A	N/A	N/A	Exist		N/A	N/A	N/A	N/A	Exist
51	Information Communication Technology	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	N/A	Exist
52	Compost / Fertilizer	N/A	N/A	N/A	N/A	N/A		Exist	N/A	N/A	N/A	N/A
53	Management	Exist	N/A	N/A	N/A	Exist		N/A	N/A	N/A	N/A	N/A
54	Marketing	Exist	N/A	N/A	N/A	N/A		N/A	N/A	N/A	N/A	N/A
55	Masonry	N/A	N/A	N/A	N/A	N/A		Exist	Exist	N/A	N/A	N/A
56	Metal Engineering	N/A	Exist	N/A	N/A	Exist		N/A	N/A	N/A	N/A	N/A

#	Course Names in Alpha Order	National Level 1	National Level 2 (C1)	National Level 3 (C2)	National Level 4 (C3)	National Level 5 (Diploma)	Regional Level 1	Regional Level 2 (C1)	Regional Level 3 (C2)	Regional Level 4 (C3)	Regional Level 5 (Diploma)
57	Mobile Repair	Exist	N/A	N/A	N/A	Exist	Exist	N/A	N/A	N/A	N/A
58	Motor Repair	Exist	N/A	N/A	N/A	N/A	Exist	N/A	N/A	N/A	N/A
59	Mushroom Growing	N/A	N/A	N/A	N/A	N/A	Exist	N/A	N/A	N/A	N/A
60	NTF	Exist	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
61	Pig Raising	N/A	N/A	N/A	N/A	N/A	Exist	N/A	N/A	N/A	N/A
62	Post Harvest Technology	Exist	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
63	Rice Growing/One/Plantation	N/A	N/A	N/A	N/A	N/A	Exist	N/A	N/A	N/A	N/A
64	Sales and Marketing	N/A	N/A	N/A	N/A	Exist	N/A	N/A	N/A	N/A	N/A
65	Sewing	N/A	N/A	N/A	N/A	N/A	Exist	N/A	N/A	N/A	N/A
66	Small Engine/Repairing	Exist	N/A	N/A	N/A	N/A	Exist	N/A	N/A	N/A	N/A
67	Steel Fabrication & Fixing	N/A	N/A	N/A	N/A	N/A	N/A	Exist	N/A	N/A	N/A
68	Tailoring	Exist	N/A	N/A	N/A	N/A	Exist	Exist	Exist	N/A	N/A
69	Technique in harvesting	N/A	N/A	N/A	N/A	N/A	Exist	N/A	N/A	N/A	N/A
70	TV Repair	N/A	N/A	N/A	N/A	N/A	Exist	N/A	N/A	N/A	N/A
71	Vegetable Growing	N/A	N/A	N/A	N/A	N/A	Exist	N/A	N/A	N/A	N/A
72	Veterinary	N/A	N/A	N/A	N/A	N/A	Exist	N/A	N/A	N/A	Exist
73	Weaving	Exist	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
74	Welding	N/A	N/A	N/A	N/A	N/A	Exist	N/A	N/A	N/A	N/A
75	Wiring System	Exist	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

3.4.2 …in the non-public TVET sector

A total of 57 different course names that exist amongst the NGO and private TVET providers. In both the NGO and Private TVET Sector, there is no existence of a full offering of training or TVET services in terms of qualification. It appears that TVET institutions are simply doing very basic training (secondary school level). None of the provision of TVET in private TVET sector allows a young student to obtain their secondary education by completing the required certificate levels.

A full table of courses names is provided in Alpha order to understand the vast range of coursers provided however, not all courses having a name that is meaningful and explains a "qualification" as would traditionally be the case to help in marketing training courses.

Table 44: Skills training programs in the private TVET sector (2013)

#	Course Names	NGO Level 1	NGO Level 2 (C1)	NGO Level 3 (C2)	NGO Level 4 (C3)	NGO Level 5 (Diploma)	Private Level 1	Private Level 2 (C1)	Private Level 3 (C2)	Private Level 4 (C3)	Private Level 5 (Diploma)
1	Accounting	Exist	N/A	N/A	N/A	N/A	Exist	N/A	N/A	N/A	Exist
2	Adobe (Photoshop, Cs4,illustrator)	Exist	N/A	N/A	N/A	N/A	Exist	N/A	N/A	N/A	N/A
3	Air-condition & Refrigeration Repair	Exist	N/A	N/A	N/A	N/A	Exist	N/A	N/A	N/A	Exist
4	All kind of heavy machinery repair	N/A	N/A	N/A	N/A	N/A	Exist	N/A	N/A	N/A	N/A
5	Architecture Design & Printing	Exist	N/A	N/A	N/A	N/A	Exist	Exist	N/A	N/A	N/A
6	Basic Administration	Exist	N/A	N/A	N/A	N/A	Exist	N/A	N/A	N/A	N/A
7	Basic Computer	Exist	N/A	N/A	N/A	N/A	Exist	Exist	N/A	N/A	N/A
8	Beauty & Spa/Salon	Exist	Exist	Exist	N/A	N/A	N/A	N/A	N/A	N/A	N/A
9	Business	N/A	N/A	N/A	Exist	Exist	N/A	N/A	N/A	N/A	N/A
10	Chinese	Exist	N/A	N/A	N/A	N/A	Exist	N/A	N/A	N/A	N/A
11	Computer Advance, Repair & Maintenances	Exist	N/A	N/A	N/A	N/A	Exist	Exist	N/A	N/A	N/A
12	Construction	N/A	N/A	Exist	N/A	N/A	Exist	N/A	N/A	N/A	N/A
13	Cooking	N/A	Exist	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
14	Database Programing/Dev	Exist	N/A	N/A	N/A	N/A	Exist	Exist	N/A	N/A	N/A
15	Design	Exist	N/A	N/A	N/A	N/A	Exist	N/A	N/A	N/A	N/A
16	Early Child Education	N/A	N/A	Exist	N/A	N/A	N/A	N/A	N/A	N/A	N/A
17	Electric	N/A	N/A	N/A	N/A	N/A	Exist	N/A	N/A	N/A	Exist
18	Electronic	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Exist
19	Engineering	N/A	N/A	N/A	N/A	N/A	Exist	N/A	N/A	N/A	N/A
20	English Language	Exist	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
21	English Literature	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Exist
22	Entrepreneurship	N/A	N/A	N/A	N/A	N/A	Exist	N/A	N/A	N/A	Exist
23	Film Editing	Exist	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
24	Foreign Languages	Exist	N/A	N/A	N/A	N/A	Exist	N/A	N/A	N/A	N/A
25	French	Exist	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
26	General English Program	N/A	N/A	N/A	N/A	N/A	Exist	N/A	N/A	N/A	N/A
27	Home and Food Management	N/A	N/A	Exist	N/A	N/A	N/A	N/A	N/A	N/A	N/A
28	Hospitality	Exist	Exist	Exist	Exist	N/A	N/A	N/A	N/A	N/A	N/A
29	House Maid Training	N/A	N/A	Exist	N/A	N/A	N/A	N/A	N/A	N/A	N/A
30	Information Technology	N/A	N/A	N/A	Exist	N/A	N/A	N/A	N/A	N/A	N/A

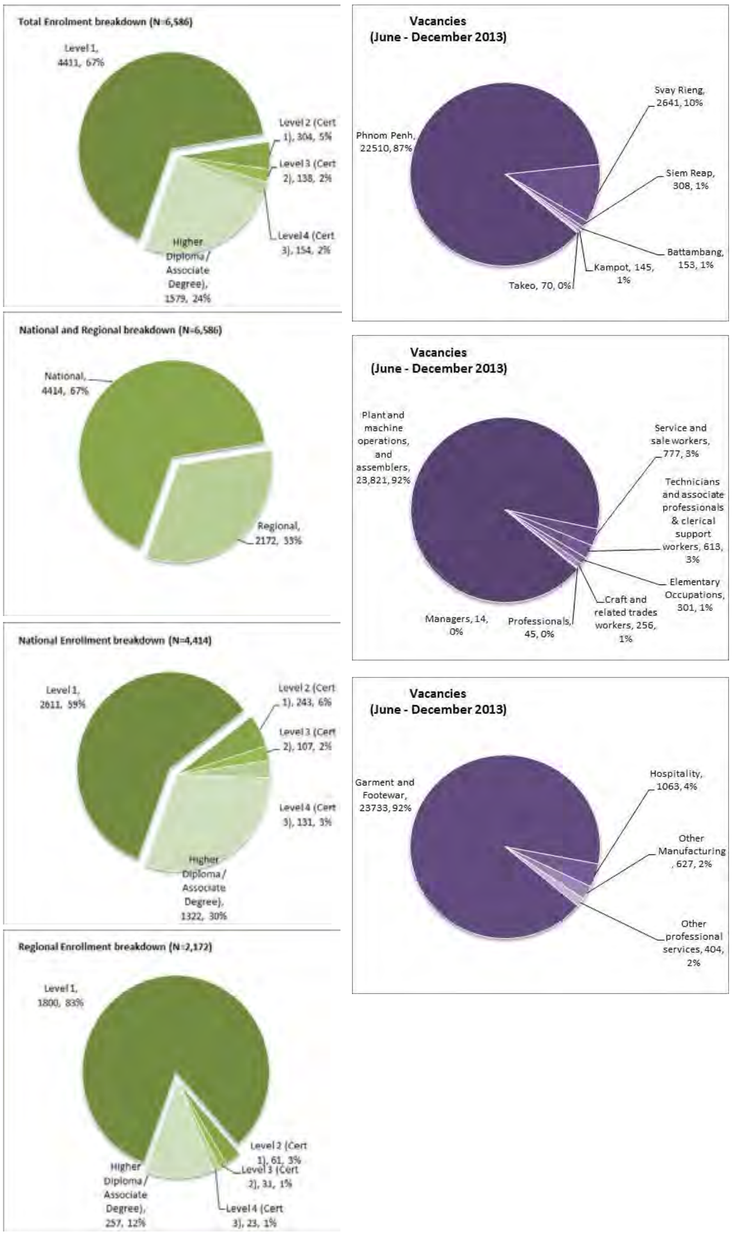
#	Course Names	NGO Level 1	NGO Level 2 (C1)	NGO Level 3 (C2)	NGO Level 4 (C3)	NGO Level 5 (Diploma)	Private Level 1	Private Level 2 (C1)	Private Level 3 (C2)	Private Level 4 (C3)	Private Level 5 (Diploma)
31	Internet Programming	N/A	N/A	N/A	N/A	N/A	N/A	Exist	N/A	N/A	N/A
32	Iron Making	Exist	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
33	Korean Language	Exist	N/A	N/A	N/A	N/A	Exist	N/A	N/A	N/A	N/A
34	Laundry Repair	N/A	N/A	N/A	N/A	N/A	Exist	N/A	N/A	N/A	N/A
35	Management	N/A	N/A	N/A	N/A	N/A	Exist	N/A	N/A	N/A	N/A
36	Marketing	N/A	N/A	N/A	N/A	N/A	Exist	N/A	N/A	N/A	N/A
37	Mechanics	N/A	N/A	Exist	N/A	N/A	N/A	N/A	N/A	N/A	N/A
38	Men Clothes retailing	N/A	N/A	N/A	N/A	N/A	Exist	N/A	N/A	N/A	N/A
39	Micro Enterprise in Family	N/A	N/A	N/A	N/A	N/A	Exist	N/A	N/A	N/A	N/A
40	Mobile Repair	Exist	N/A	N/A	N/A	N/A	Exist	N/A	N/A	N/A	N/A
41	Networking/ Network Admin/Engineering	Exist	N/A	N/A	N/A	N/A	Exist	Exist	N/A	N/A	N/A
42	Pastry and Baking	N/A	Exist	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
43	Peachtree	N/A	N/A	N/A	N/A	N/A	Exist	N/A	N/A	N/A	N/A
44	Preparatory Hospitality Course	Exist	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
45	Professional Video Editor	N/A	N/A	N/A	N/A	N/A	N/A	Exist	N/A	N/A	N/A
46	Programming	Exist	N/A	N/A	N/A	N/A	Exist	N/A	N/A	N/A	N/A
47	Quick Book	N/A	N/A	N/A	N/A	N/A	Exist	N/A	N/A	N/A	N/A
48	Machinery Repair	N/A	N/A	N/A	N/A	N/A	Exist	N/A	N/A	N/A	N/A
49	Restaurant Service	N/A	Exist	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
50	Scanner Monitoring	N/A	N/A	N/A	N/A	N/A	Exist	N/A	N/A	N/A	N/A
51	Sewing	Exist	N/A	N/A	N/A	N/A	Exist	N/A	N/A	N/A	N/A
52	Sewing machine repair	N/A	N/A	N/A	N/A	N/A	Exist	N/A	N/A	N/A	N/A
53	Silk Screen	N/A	N/A	N/A	N/A	N/A	Exist	N/A	N/A	N/A	N/A
54	Tour Guide Program	Exist	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
55	Tourism	N/A	Exist	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
56	Veterinary	Exist	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
57	Video Editing, Studio, Web Design	N/A	N/A	N/A	N/A	N/A	Exist	Exist	N/A	N/A	N/A

3.5 Students and Enrolments

3.5.1 How many students are pursuing TVET?

The majority of students studying in TVET are studying level 1 course which can be as long as a few weeks – 6 months. These courses are dominated by short courses in agriculture. The majority of positions vacant and in demand from employers are plant machine operations and assemblers, which would ideally have completed secondary school (grade 12), have the ability to read and write and understand instructions, in particular safety, emergency and health policies. Employers stress in the garment sector it would be good to have multi-talented operators who can work on several different machines. While most workers today have less than a secondary education and have learned on the job, to improve productivity, flexibility, versatility and adaptability of the workforce, training that provides learners with access to machinery and exposure to the industrial environment will help to ensure a smooth transition into the workplace for these types of workers. TVET Provision of sewing skills for industry is almost zero.

Figure 29: Public Sector Enrolment breakdown (2013) (Green) / Vacancies Data (2013)



TVET providers were asked to provide enrolment and graduation rates. In the private TVET sector, such data was not available as either it was not possible to collect information as it is not tracked accurately. In addition, given the absence of skills training provision for Levels, 2 3, 4 in general as presented above, the results will not be significantly different for the key focus areas of the study. For the public sector, data was accurate however not always complete. The summary results are presented by National Institutes as well as Regional Institutes summary.

In total there are around 6,586 trainees enrolled in public TVET in 2013. Sixty seven percent of these students are enrolled at national level. Of all the students enrolled, Level 1 certificates account for 59 percent of enrolment followed by Level 5 with 30 percent of the total enrolment. Level 2 accounts for 6 percent of enrolment with Level 3 and Level 4 a total of 5 percent of total enrolment which corresponds with the fact that there is limited Level 2, 3, and 4 curriculums as identified about.

National enrolment which accounts for 4,414 students for 67 percent of total enrolment is made up of 59 percent of students in Level 1 training, 30 percent in Level 5, and Level 2, 3, and 4 account for a total of 11 percent together or 6, 2 and 3 percent respectively.

Regional enrolment which accounts for 2,172 students or 33 percent of total enrolments has 83 percent of enrolments in Level 1, 12 percent of enrolment in Level 5 and level 2, 3 and 4 together accounts for 5 percent or 3, 1 and 1 percent respectively.

Enrolment results are presented in *Figure 29* with student enrolment presented in the green figures and vacancies in industry in the purple figures. It is clear that the nearly 25,000 vacancies, TVET supply is not producing sufficient graduates to meet the demand of industry.

3.5.2 What levels and courses of TVET are students enrolled in?

Table 45 provides a summary overview of enrolment and completion by national and regional level. *Table 46 and 47* shows a vast number of courses being provided.

Table 45: Summary of public sector enrolments by certificate level

Enrolments and estimated completions 2013					
National	**Enrolled**	**Completion**	**% complete**	**# Institutions with enrolment data**	**# Institutions Completion Data**
Level 1	2611	2200	84%	7	7
Level 2 (Cert 1)	243	161	66%	6	6
Level 3 (Cert 2)	107	91	85%	3	2
Level 4 (Cert 3)	131	120	92%	2	1
Level 5 (Higher Diploma / Associate Degree)	1322	830	63%	7	4
Totals	**4414**	**3402**	**77%**		
Regional	**Enrolled**	**Completion**	**% complete**	**# Institutions with enrolment data**	**# Institutions Completion Data**
Level 1	1800	1800	100%	5	
Level 2 (Cert 1)	61	0	0%	2	Not available, just start
Level 3 (Cert 2)	31	0	0%	1	Not available, just start
Level 4 (Cert 3)	23	0	0%	1	Not available, just start
Level 5 (Higher Diploma / Associate Degree)	257	56	22%	5	1 only, all others not available
Totals	**2172**	**1856**	**85%**		
Total Public TVET Enrolled	**National**	**Regional**	**Total**		
Level 1	2611	1800	4411		
Level 2 (Cert 1)	243	61	304		
Level 3 (Cert 2)	107	31	138		
Level 4 (Cert 3)	131	23	154		
Higher Diploma / Associate Degree)	1322	257	1579		
Totals	**4414**	**2172**	**6586**		
Number Permanent Teachers	**458**	**272**	**730**		
Students per teacher	*9.64*	*7.98*	*9.02*		
Total workforce	**840**	**375**	**1215**		
Students per workforce	*5.25*	*5.79*	*5.4*		

Table 46: Consolidated Courses Name in the 8 National Institutes and Number enrolment and Completion in 2013

Consolidated Course Names in the 8 National Institutes and Number Enrolment and Completion Estimates in 2013				
Level 1	**Level 2(C1)**	**Level 3(C2)**	**Level 4(C3)**	**Level 5(Diploma)**
(1)Post Harvest Technology, (2)Electronic, (3) Wedding Make Up, (4) Tailor, (5) Electrical Repair (6) Air Conditioner Repair, (7) Computer Design, (8) Marketing, (9) Body Make Up, (10) Wiring System, (11) Management, (12) Accounting and Finance, (13) Motor Repair, (14) Computer Repair, (15) Small Engine, (16) Tailor, (17) Graphic Design, (18) Weaving, (19) Phone Repair, (20) Electronic Repair, (21) Car Engine Repair, (22) Car AC Repair,(23) Electronic Auto Repair	1)Post Harvest Technology, (2) Culinary Art and Management (3) Electricity (4) Air conditioning (5) Auto engineering (6) Metal Engineering (7) Electronic (8) Graphic Design (9) Auto Repair	(1) Electricity, (2) Air conditioning (3) Auto engineering (5) Auto Repair	(1) Civil Construction, (2) Electronic, (3) Electricity, (4) (5) Air Conditioning, (6) Auto Engineering	(1) CAD/CAM, (2)Automobile, (3) Electricity,(4) Electronic, (5) English, (6) Civil Engineering, (7) Civil Construction, (8) Management, (9)Accounting and Finance, (10) Marketing,(11) Air Con, (12) Auto Engineering, (13) Metal Engineering, (14) Business Management,(15) Sale and Marketing, (16) Finance and Banking, (17) Information Technology,(18) Automotive Engineering
Total Enrol=2611	Total Enrol=243	Total Enrol=107	Total Enrol=131	Total Enrol=1322
Total Complete=2200 (84%)	Total Complete: 161, 66%	Total Complete=91 (85%)	Total Complete=120 (92%)	Total Complete=830 (63%)

Table 47: Consolidated Courses Name in all 5 RTC and Number enrolment and Completion in 2013

Consolidated Course Names in the 8 National Institutes and Number Enrolment and Completion in 2013				
Level 1	**Level 2(C1)**	**Level 3(C2)**	**Level 4(C3)**	**Level 5(Diploma)**
(1) Sewing, (2) haircut, (3) computer repairing, (4) air-conditioning, (5) auto electric repairing, (6) small engine repairing,(7) motor repairing,(8) auto repairing, (9) veterinary, (10) welding, (11) make Up & hairdressing & Beauty Salon or Hair, Nail, Salon,(12) masonry, (13) electricity, (14) electronic, (15) frog raising, (16) cattle raising, (17)earth worm raising, (18) pig raising, (19) chicken raising, (20) Compost fertilizer, (21) vegetable growing, (22) mushroom, (23) rice one, (24) Accounting, (25) Clothes Design and Tailoring & Sewing, (26) Hen raising,(27) Mobile repair, (28) Pig raising, (29) Rice plantation, (30) Wedding planning, (31) Air-condition, (32) Cooking & Hospitality, (33) Agriculture processing, , (34) Cow raising,(35) Duck raising, (36) Fertilizer, (37) Fishery, (38) Graphic Design,(39) Motor Repair, (40) Mushroom growing, (41) Pig raising, (42) Technique in harvesting, (43) TV Repair.	(1) Administrative Assistant, (2) Automotive Air Condition Service, (3) Automotive Serving, (4) Computer Servicing, (5) Masonry, (6) Steel Fabrication &Fixing, (7) Air-condition,(8) Electricity, (9) Hospitality, (10) Automotive Service, (11) Tailoring.	(1) Automotive service, (2) Electricity, (3)Tailoring	(1) Automotive service, (2) Electricity	(1) Electricity, (2) Animal Science, (4) English Literature, (5) Accounting and Finance, (6) Automotive Engineering, (7) Civil Engineering, (8) Electric Engineering, (9) Information Communication Technology & Information Technology, (10) Veterinary, (11) Automotive service.
Total Enrol=1800	Total Enrol=61	Total Enrol=31	Total Enrol=23	Total Enrol=257
Total Complete=1100 (61%)	Not available	Not available	Not available	Not available

3.5.3 Are enrolment numbers growing or declining?

A mixed picture appears as to the enrolment changes over the last 3 years. In Phnom Penh or national level public institutions, there appears to be a decline in enrolments numbers overall except for Level 5 instructions where there are slight increases. In regional training centres there appears to be an increase in enrolment for level 1 student only except in Svay Rieng where there has been a decrease. In general the results show that there is great need to focus on increasing enrolment numbers which are already low and not focussed on industry level training.

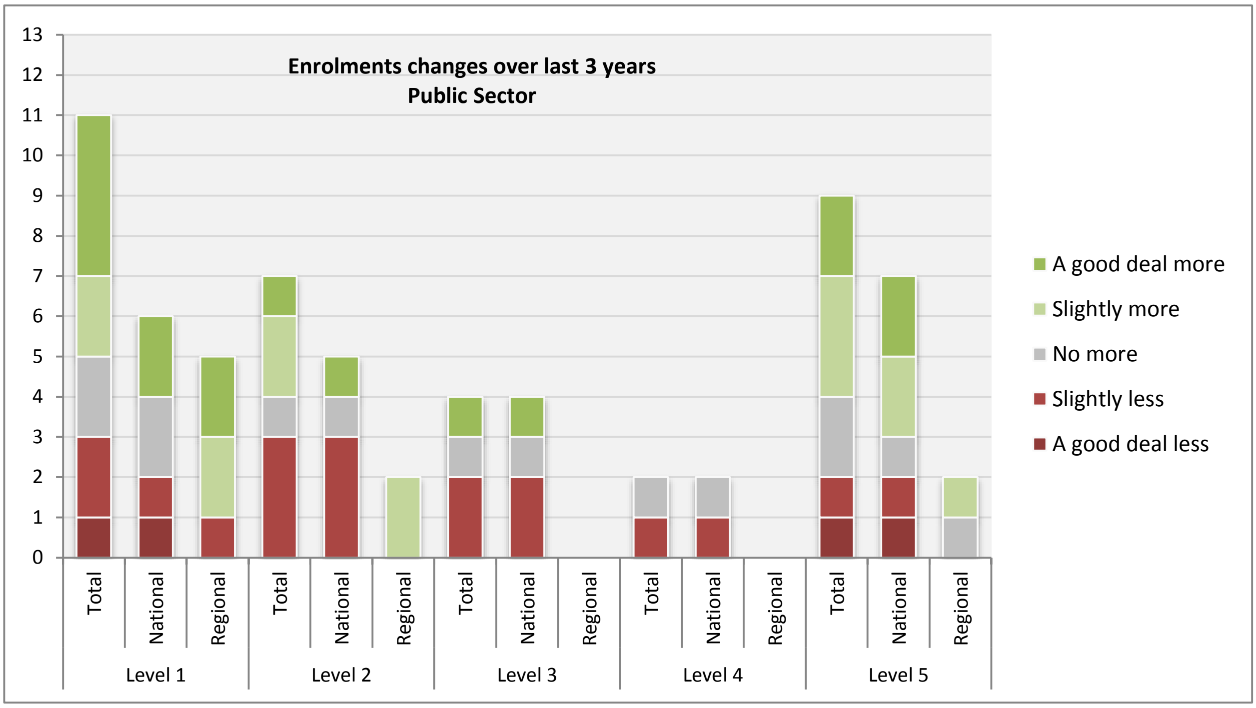
In the non-public TVET providers (NGO and For-Profit providers) there is link between the sophistication of types of providers, the more established institutions are experiencing increases while the smaller institutions are struggling with decreasing numbers or stagnant numbers which are creating overall institution sustainability challenges given the low course fees that are being charged.

Respondents were asked to provide an indication of whether or not enrolment numbers have been increasing or decreasing over the last 3 years. They were requested to provide such an indication for each level of training. Results are discussed in in detail for public sector and for NGO and private sector, a general sense of what providers are saying is detailed.

Figure 30 below consolidates all national and regional level public sector views on enrolment changes over the last 3 years. In general there is a mixed picture as to enrolments and these vary greatly from a national and regional perspective. The red bars indicate the number of institutes that indicated declining numbers while the green indicates increasing enrolments. The grey indicates no movement.

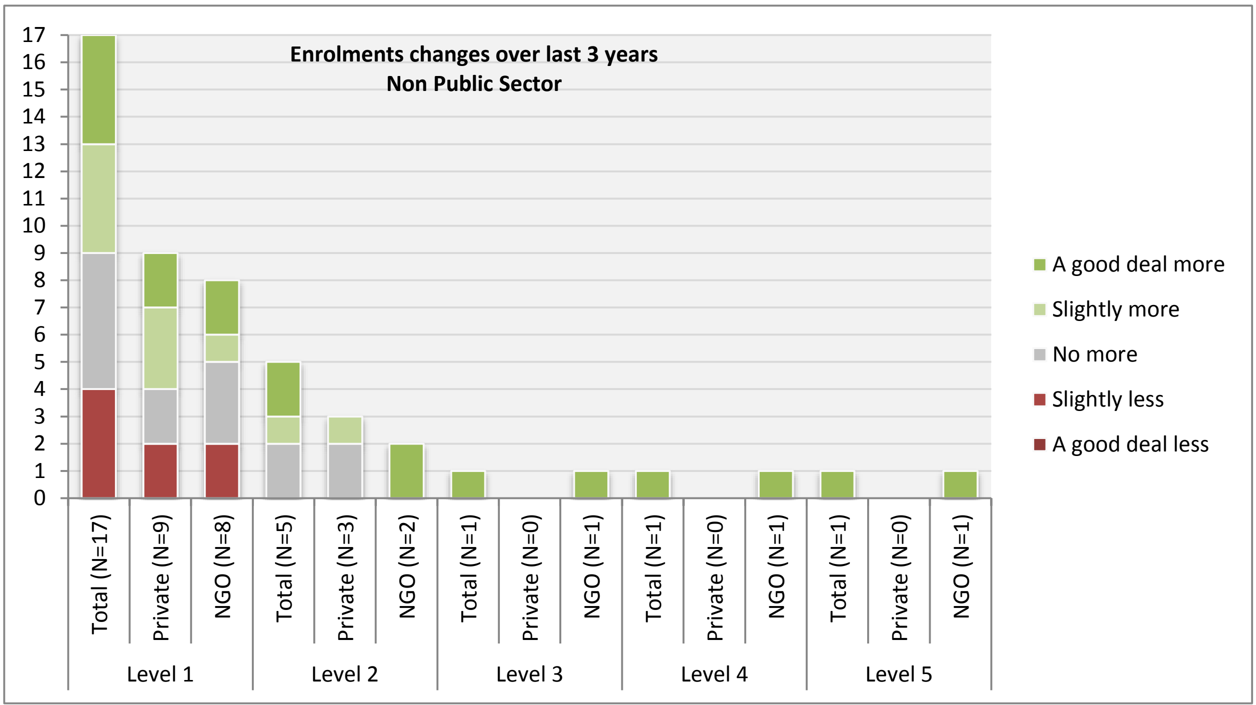
- Level 1 training is increasing at a regional level, however at a national level is more stagnant with only 2 institutes indicating an increase.
- Level 2 training also has a mixed response with a one national institution saying enrolments are increasing but the majority decreasing (3). At regional level, an increase for one institution. Most RTCs are just introducing these courses so number of graduates is not clear yet.
- Level 3 and 4 see mostly a decrease or stagnant enrolment numbers with no changes in enrolment rates. At regional level there is no indication provided.
- At level 5 we see overall that 4 institutes have a stagnant or declining enrolment rate and 5 institutions an increase. Declining rates are found national level only for 2 institutions. Increases in enrolment rates are in majority driven by national level institutions. Only 1 regional institution saw a slight increase.

Figure 30: Enrolment changes over last three years: Total public sector



Private TVET Providers: Non-public sector enterprises also provided a mixed picture in terms of enrolments. There appears to be a link between the sophistication of types of providers, the more established institutions are experiencing increases while the smaller institutions are struggling with decreasing numbers or stagnant numbers which are creating overall institution sustainability challenges given the low course fees that are being charged. Results are presented in *Figure 31 below*.

Figure 31: Enrolment changes over last three years: Total non-public sector



3.5.4 Enrolment Capacity of TVET institutions

There is extremely limited capacity to enrol students at Level 2 – 5 in the TVET sector. Level 5 represents around 30 percent of total enrolment in public sector which provides a qualification of a higher diploma or associate degree. For level 2, 3 and 4, only 10 percent of total capacity is able to be absorbed into public sector given the current facilities and equipment available.

In majority non-public sector does not have level 2 to 5 training courses and for the 1 institution that does provided such training, a total number of 800 students can be absorbed in Level 1 – 5.

In the public sector, there is extremely limited capacity for Level 2 – 5. Of total enrolment capacity which estimates 6123 students, the overwhelming majority of enrolment is in Level 1 courses (59 percent), Level 2, 3, 4 collectively account for 10 percent capacity and Level 5 30 percent which is equivalent to an associate degree or higher diploma. In 2 institutions, enrolment is entirely dependent on the number of scholarships available or provided by government and as such, no data was provided. Despite non-responses, it is not possible to increase the number of enrolments dramatically to meet the needs of industry at this point.

In the non-public sector, given that the overwhelming majority of training is provided in Level 1, there is almost no capacity in this non-public sector for Level 2, 3, 4 and 5 courses. For one institution who plans to increase student enrolment by 60 percent up to 800 students per year, these 800 students are spread across Level to 5 courses, not boosting numbers presented in the public sector below.

Table 48 below provides the total enrolment capacity of public sector.

Table 48: Enrolment Capacity: Public Sector

Enrolment capacity by institute and certificate level training	Level 1	Level 2 (Cert 1)	Level 3 (Cert 2)	Level 4 (Cert 3)	Level 5 [44]	Other	Totals	% of Nat/Reg capacity	% total Capacity
NPIC							***0***	0%	0%
NTTI	250	50	50	50	300		***700***	28%	11%
Preah Kossomak Polytechnic Institute				40	40	40	***120***	5%	2%
Industrial Technical Institute	20	35			35	25	***115***	5%	2%
National Institute of Business					400		***400***	16%	7%
Cambodia India Entrepreneurship Centre	240	50			240		***530***	21%	9%
Japan Volunteer Centre	360	40	83		85		***568***	23%	9%
Cambodia Skill Development Centre	25	25					***50***	2%	1%
Totals National	**895**	**200**	**133**	**90**	**1100**	**65**	***2483***	**100%**	**41%**
Svay Rieng RTC	1790				450		***2240***	62%	37%
Takeo							***0***	0%	0%
Siem Reap	400	200			200		***800***	22%	13%
Battambang Polytechnic	500				100		***600***	16%	10%
Kampot Institute of Polytechnic							***0***	0%	0%
Totals Regional	**2690**	**200**			**750**	**0**	***3640***	**100%**	**59%**
Grand Total Capacity	**3585**	**400**	**133**	**90**	**1850**	**65**	***6123***	**--**	**100%**
% of Grand total capacity	**59%**	**7%**	**2%**	**1%**	**30%**	**1%**	***100%***	**--**	**--**

Notes:
NPIC did not provide data
Takeo RTC: Level 1 and 5 capacity is dependent on how many scholarships are provided from government
Kampot RTC: Level 1 to 5 capacity is dependent on how many scholarships are provided from government

[44] Higher Diploma / Associate Degree

3.6 Is the TVET sector engaging with industry?

The Public TVET sector certainly at heart has the initiatives and structures in place to pursue engagement with industry. While structures and governing bodies exist, we frequently note the lack of capacity to engage with industry or how to start the engagement with industry. As noted in the demand side of the survey, most enterprises are foreign owned (74 percent) and large Cambodian owned enterprises represent 20 percent in the sample. Building the capacity and confidence of public TVET institutions is important and that will in majority come with a more comprehensive training offering (the "curriculum missing middle") as well as an increase in trained graduates that are relevant to industry. There are some innovative and best practise examples demonstrated by national institutes in engaging directly at enterprise level in training, giving teachers and trainers real life experience of the workplace.

In the non-public sector, only large established NGOs had any form of industry liaison unit or advisory board. While more active the public sector, industry linkages are limited to a few large providers only.

For public TVET providers: Capacity building for industry liaisons units are important to enable staff to better engage with industry and contact industry. This includes networking with government agencies to understand which new business are setting up, as well as networking and accessing industry. Basic capacity building from relationship building, interviewing skills, contacting and engaging with the business community, networking and promoting the talented graduates is important.

In terms of advisory bodies, there is a clear need for public TVET providers to take a structured approach to engaging with industry. Firstly, to engage with industry it will be necessary to have a strategic plans that clearly provides industry an understanding of the institution strategy and priorities of what the TVET institution is going to pursue and how it is going to develop talent for industry, within its location as well as more broadly to industry overall. It is necessary to prioritise this plan and not try to do everything, but try to start with something and do it well, to encourage more constructive engagement from industry. Taking a first step with one course or curriculum that can really show progress in skills development, will help to create enthusiasm in industry that concrete steps are being taken and that engagement with TVET will result in necessary outcomes, not only for industry, but for the economy more broadly.

Respondents were asked to provide an indication of whether or not enrolment numbers were increasing or not.

In the demand side of the survey we tried to understand whether or not industry is engaging with the TVET sector and how that engagement is happening. We saw that there was very limited engagement with TVET overall with the hospitality sector having the most engagement, in particular in Siem Reap province. Most engagements from industry with TVET are not with the public sector and results suggest that while industry is willing to engage with the TVET sector in supporting curriculum development, providing industry visits and guest lecturers as well as other areas, industry requires more information on what TVET is doing and pursuing to be able to help. Results also suggest that industry requires TVET to make the first step for this engagement.

It is clear from the above that there is limited provision of skills training that this study focusses on. Level 1 skills training is not the focus of the study and Level 5 training is the equivalent of an associate degree which would generally, from perceptions, classify a young student as "university" level education. As such, it appears that any engagement with industry would not necessarily be productive unless it has a key focus on developing the missing middle on curriculums and course offerings as there is no need to focus resources on a more sophisticated engagement in job placement as there are limited students graduating.

Best Practice Example: Japan Volunteer Center (JVC).

An example of the intensity of engagement needed to build relationships with industry…

The Japan Volunteer Center (JVC) has an industry liaison unit which the director of JVC leads. In particular, it is the director who gets in touch with industry to find jobs for graduates and speak to industry executives. He also gets in touch with industry to discover new needs for courses and training to enhance curriculum and relevance of the institutes training. Today, as a result of these efforts, companies will automatically submit job announcements to the institute and ask the director to recommend and allocate new graduates for internships and full time jobs.

The TVET sector was asked whether or not they have an industry liaison unit and what the function of that unit is and how many staff are dedicated to the supporting industry-TVET engagement. Industry liaison units in general will do one or more of the following tasks identified in the study:

1. job matching and finding jobs for graduates

2. meeting with industry to find out any new courses they need or the institution should deliver
3. working with industry for sponsorship or fundraising on equipment and machinery.
4. ask companies for advice, guidance on content of existing courses

In addition, we asked whether or not TVET providers have an industry advisory board and what the agenda of that advisory board is by selecting from a pre-determined list which included curriculum, skills and competencies, proposition of new courses and teach qualifications.

3.6.1 …at a national level (public sector)

Industry liaison units: At a national level, all institutions indicated they have an industry liaison unit which is responsible for helping students to find jobs. Only seven institutions provided staffing numbers which range from 0 – 5 full time staff with a total of 18 full time staff amongst six institutions. The institution with zero staff utilised 2 part time staff members. Only one other institution also leveraged 2 part time staff.

Advisory bodies: Only 4 institutions had an industry advisory board or a special industry advisory board of which 2 institutions had between either 2 or 4 meetings scheduled per year. For all four institutions the agenda for the advisory board includes curriculum, skills and competencies and teachers qualification. Only three of the four institutions also discussed the proposition of new courses for industry.

Questionnaire results show that there are initiatives to engage with industry but in reality, the engagement is not always an active engagement as it should be or as constructive and innovate as it can be as noted by respondents. There is a great need to foster stronger and more active engagement with private sector but that will only be possible and relevant if TVET is pursuing industry relevant training that is linked to the job market.

Other types of representation and industry engagement: Several of the institutions sit on national committees and bodies as well as industry boards. Several institutions also provide training at the workplace to enhance the engage between the institution and industry which gives teachers and trainers more practical experience and understanding of the workplace.

Best Practice Example: National Polytechnic Institute of Cambodia (NPIC)

For the past three years, NPIC has been involved in providing industry with training programs at the work place. Company curriculums are used and NPIC trainers come in to do a section of the training as well as supplement training with additional materials from the school if necessary. In this exchange, both the NPIC trainer gets hands on company experience and engagement and understand the workplace and can transfer this back to the classroom have a multiple knock on effect. In addition, trainers get workplace experience as to the real challenges on the job, more diversified teacher and trainer materials and they are provided with material support from the company.

In the appendix a summary table is provided titled *National TVET providers: Industry Linkages*

3.6.2 …at a regional level (public sector)

Industry liaison units: At a regional and provincial level, all institutions except the Kampot institute of Polytechnic indicated they have an industry liaison unit which is responsible for helping students to find jobs. Only Siem Reap did not have full staffing but employed 6 part time staff. Svay Rieng, Takeo and Battambang each had 7, 1, 2 full time staff respectively and no part time staff. While the industry liaison unit exists and is making efforts to contact industry, directors mention the need for capacity building to help government institutions better engage with industry. Staffing numbers are generally young people with limited knowledge of industry and not a core priority of the institution leaving staff to their own devices to lead the industry engagement. Respondents in general mention that the engagement with industry is increasingly important and are aware that much more diversified and innovative methods of engagement need to be pursued, but in reality, are not sure where to start.

Advisory bodies: All the regional centres, except for Siem Reap had either an industry advisory board or a special industry advisory board. Both Takeo and Kampot institutions engaged monthly with their boards while Svay Rieng and Battambang engaged twice and one per year respectively. In Battambang, Takeo and Kampot curriculum, skills and competencies, proposals for new courses and teacher qualifications were discussed while in Svay Rieng only skills and competencies were discussed.

Again, questionnaire results show that there are initiatives to engage with industry and at vastly different levels of engagement and activeness amongst the interviewed RTC. Similar to National Institutes, the reality of engagement needs work to foster stronger and more constructive dialogue and inputs with private sector. But

again, this will only be possible and relevant if TVET is pursuing, developing and implementing a skill training that is industry relevant and linked to the needs of industry and the broader job market.

Other types of representation and industry engagement: Only Battambang Provincial Training Centre mentioned being represented on a national board or committee and industry institution governing board.

In the appendix a summary table is provided titled *Regional TVET providers: Industry Linkages*

3.6.3 …amongst non-public TVET providers

Only more established prominent NGOs have any industry-focussed services or governance committees. These include Pour Un Sourire D'Enfant (PSE) in Phnom Penh, WEC International Cambodia Vocational Training program as well as Paul Dubrule and Sala Bai in Siem Reap. Non of the private providers has an industry liaison unit or an advisory board.

Industry liaison units: All NGOs except for WEC International Cambodia Vocational Training program had an industry liaison unit helping students to find placements. Only 2 organisations provided staffing numbers which include only full time staff – in PSE there are 10 full time staff and in Sala bai there are 4. Paul Dubrule declined to provide staffing numbers for this unit. For many of these NGOs, often foreign directors or personnel are very involved in the initial engagement with private sector, to help companies understand their responsibilities and to encourage corporate social responsibility. Often the engagement can be more social in nature appealing to corporate social responsibility side of business and bringing in the "skills and talent" as a secondary . The role of industry liaison units is purely to focus on job placements and feedback on students from employers.

> *"The engagement with NGO institutions is mostly social in nature rather than a focus on skills. There are very few NGOs that really deliver on the skills aspect and if they do, we increase our engagement to attract talent. Mostly the big NGOs produced skilled talent. If the skills are lacking, we may or may not support placements and internships, it depends on our capacity to manage and the amount of business we have. NGOs need to consolidate their standards so that we don't have to retrain staff to the same standards"*
>
> *HRINC client, General Manager of five Star Hotel in Siem Reap*

Advisory bodies: All the large NGOs have an industry advisory board to support them. Meetings range from 1 time per year at Paul Dubrule to more than 12 times per year at WEC. It is clear that the nature and involvement of advisory boards vary greatly. In terms of matters that the advisory boards discuss, none of NGO's discusses curriculums and competencies with the advisory board. While no in-depth discussions were had on these matter, we can speculate from our work in the sector that often the curriculum provision and competencies are defined by the NGOs and its main sponsors or founders, particularly the long standing NGOs. The curriculum is set with clearly perceived outcomes given the mission and vision of the NGO, which is often the challenge in getting NGOs to collaborate and share curriculum and standardise curriculums.

Paul Dubrule and WEC the proposition of new courses and teachers qualifications with their advisory boards while PSE focusses mainly on teacher qualifications.

Other types of representation and industry engagement: No other types or representation or industry engagement were identified in the study.

In the appendix a summary table is provided titled *NGO TVET providers: Industry Linkages*

3.7 TVET Infrastructure

One question that has been frequently discussed and debated in this study is *"What is necessary to modernise the TVET sector, in particular in public sector?"* While modernising the sector is important in terms of infrastructure, there are clear baseline challenges that need to be addressed. First the curriculum missing middle, second the decline in student enrolments and third the overall perception that TVET training is only for workers and not going to result in a good job. The perceptions of young people towards TVET have not been a core part of this study but are mentioned as they may be one of several important factors that might be impacting enrolments overall that cannot be quantified. Other challenges that have also not been studied are the perceptions around pursuing Level 2, 3, 4 that equate the equivalence of a high school degree and do families and young people feel that pursuing another higher education degree (regardless of whether or not it will result in a good job) is a worthwhile effort and investment to make, when getting a job can yield a financial return for families. There are several such challenges which are not part of this study, which should be considered in the overall strategy of modernising and making TVET relevant.

Modernising infrastructure can be an expensive exercise and needs to be a worthwhile investment to make. Technology also changes quickly and can become out of date very quickly. Investment into modernising public sector TVET can greatly impact the views and perceptions of young people on TVET, however needs to come with (a) the right curriculums for industry (b) teachers who are able to use modern equipment effectively to teach students and (c) an excellent marketing campaign that links TVET training to great jobs and opportunities in industry. More than just a job, TVET needs to sell long term development and opportunities in growing as an individual and moving up the career ladder. To modernise the public TVET sector there needs to not only be a focus on technology or "hardware" but the marketing of TVET to make it more appealing, the curriculum, the teachers and teaching methods etc.

Besides simply the modernising of the sector, the terms of reference specifically sets out to understand the following question in terms of infrastructure. "Do facilities have the practical technology and machinery in their facilities to link to work place needs? The study requested respondents to detail their equipment numbers as well as indicate working conditions. Limited data was provided overall as to the specific numbers of equipment and facilities. That said, with limited curriculum and students at Level 2, 3, 4 in particular, it is somewhat self-explanatory that there is insufficient practical technology as curriculums currently do not exist and these need to be developed.

We know, however, given enrolment capacities, what is the capacity that schools can accommodate. If we review the current capacity and enrolment numbers at Level 1, 2, and 5 we see the following:

1. Particularly at regional level, facilities are underutilised at the moment. *Table 49 shows* that at level 5, there is capacity for 740 students to be enrolled however there are only 257 enrolled. At national level, it appears that facilities are 20 percent over utilised which means that there are too many students for the facilities available.
2. At Level 2 training, regional level is 70 percent *underutilised* and at national level also 22 percent over utilised.
3. For level 1 courses, it is difficult to state completely whether or not facilities are over or underutilised as often training is done in the field, hence the very large numbers on enrolment.

Looking at summary capacity to enrol and current enrolment shows that current facilities are underutilised and there is a clear need to as a first step, try to utilise existing facilities fully. It is essential that addressing challenges are not done merely at a country or macro level, but that individual institutions are coordinating provincial level strategies. It appears that for the TVET sector to modernise, a bottom up strategic approach needs to be taken where regional training centres need to clear identify enrolment numbers, enrolment forecasts, current capacity and required capacity. Regardless of country level capacity, at an individual level facilities need to function effectively and use their existing facilities fully. If one facility is over enrolled with poor quality training and another under-enrolled with limited training courses or exceptional courses, interventions designed at a national level to address training challenges, might not have the desired impact at the regional and implementation level.

Table 49: Are current facilities fully utilised?

	Level 1	Level 2 (Cert 1)	Level 5 (Dip)	Totals
National Capacity	895	200	1100	2418
Regional Capacity	2690	200	750	3640
Grand Totals	**3585**	**400**	**1850**	**6058**
Current Enrolment	**Level 1**	**Level 2 (Cert 1)**	**Level 5 (Dip)**	**Totals**
National Enrolment	2611	243	1322	4414
Regional Enrolment	1800	61	257	2172
Grand Total Enrolment	**4411**	**304**	**1579**	**6586**
% over or under enrolled (Red)	**Level 1**	**Level 2 (Cert 1)**	**Level 5 (Dip)**	**Totals**
National	192%	22%	20%	83%
Regional	-33%	-70%	-66%	-40%
Grand Total	**23%**	**-24%**	**-15%**	**9%**

Our discussions with directors of training institutions provided some very useful insights which we have tried to classify into stages. However, the consultants caution against “one-size-fits-all” approach as each region should prioritise clearly what it is capable of doing, where it can focus, and what it can deliver realistically. The authors provide none the less an approach which can be considered which draws on the feedback and inputs from the different regions.

To be able to increase the number of student in Level 2, 3, 4, 5 there is a clear need for development of several areas.

Phase 1 – critical areas to address and coordinate

a) Close the missing middle (develop curriculum)
   - Identify what industry priorities are pertinent that the centre can address.
   - Choose 3 curriculums, build curriculum with industry inputs and support – and start to implement. Ensure practical elements are easy to implement at first including exposure and study tours.
   - Identify what the institution is capable to deliver on what resources it can draw from other centres so as not to duplicate efforts.
   - Consider teacher capacity in this development.

b) Teacher training (skills, knowledge, teaching methodologies must be considered in the development of curriculum).
   - Equip teachers with practical knowledge and teaching methodologies.
   - Ensure teachers know how to use any equipment.
   - Encourage teachers to get workplace experience through training in companies. Exposure visits and company trips or study tours in country.
   - Get guest lectures from industry into the classroom to support implementation and realistic practical exposure and experience for young learners.

c) Marketing and student attraction
   - TVET needs better marketing that is appealing to students that links investment in learning to good jobs and future learning and growth

Phase 2 – critical areas to address and coordinate

d) Supporting laboratories and machinery for practical implantation.
   - Review what additional laboratories and workshops and practical tools are necessary.

e) Developing internship and apprenticeship programs
   - Internships
   - Apprenticeships
   - Exposure visits / field visit / Study tours

f) Strengthening engagement with industry and doing a regional TNA on an annual basis with employers on graduates, new training programs etc.

g) Consider the need for dormitories for students and teachers in the future.

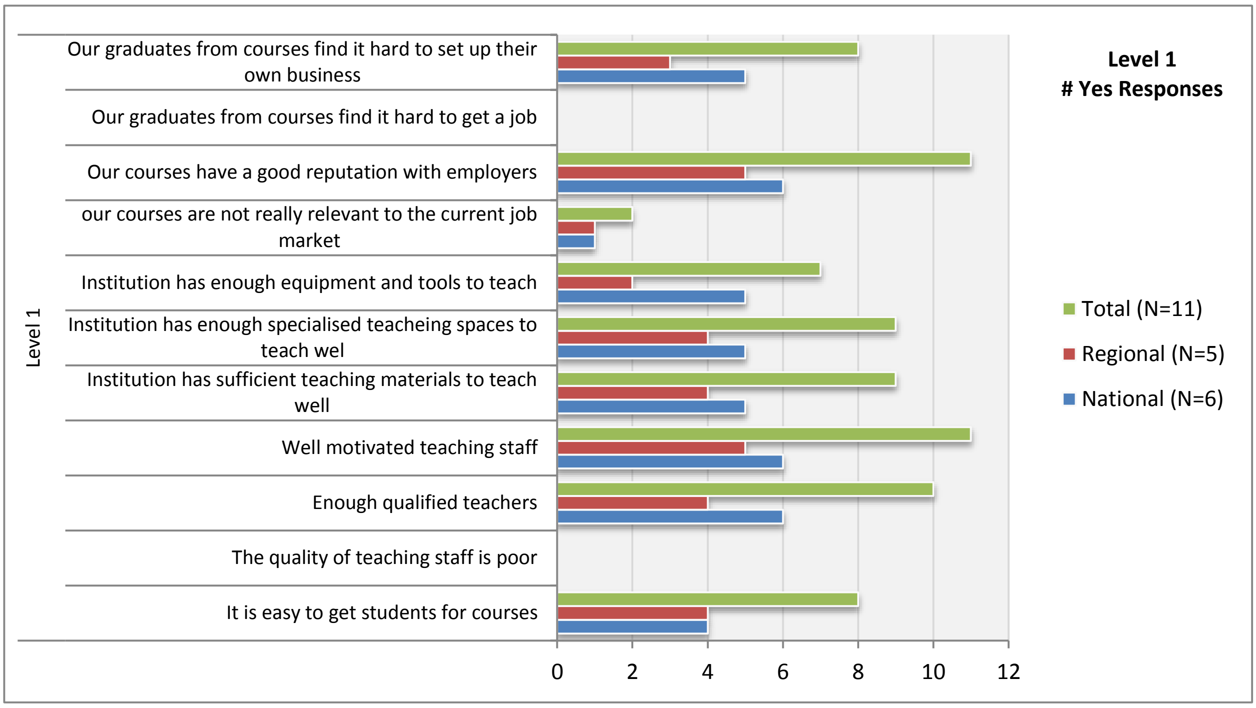
3.7.1 Perceptions of directors relating to staffing, equipment, curriculum and students

Respondents were asked to answer yes or no to the following question: How do you rate your courses on the following in each level. We have not extrapolated the responses into percentages due to the following reasons (a) limited number of institutions involved (b) some institutions who provided a particular level of courses have just started the implementation of courses and could not respond to questions and (c) given that not all institutions responded to all questions in a particular level, providing a percentage result would mislead the reader. The figures below out

Level 1

a) Respondents state that it is easy to get students to enrol in courses and that in general, there are sufficient teachers who are motivated. Institutions generally have sufficient teaching materials, and teaching spaces, however to a lesser extent equipment and tools to teach suggestion sufficient infrastructure in terms of building but not sufficient hardware within the institutions.
b) Most institutions feel their courses are relevant to the market and have a good reputation with employers and graduates find it easy to find a job. It is difficult however for students to set up their own business.

Figure 32: How do you rate your courses on the following? Level 1



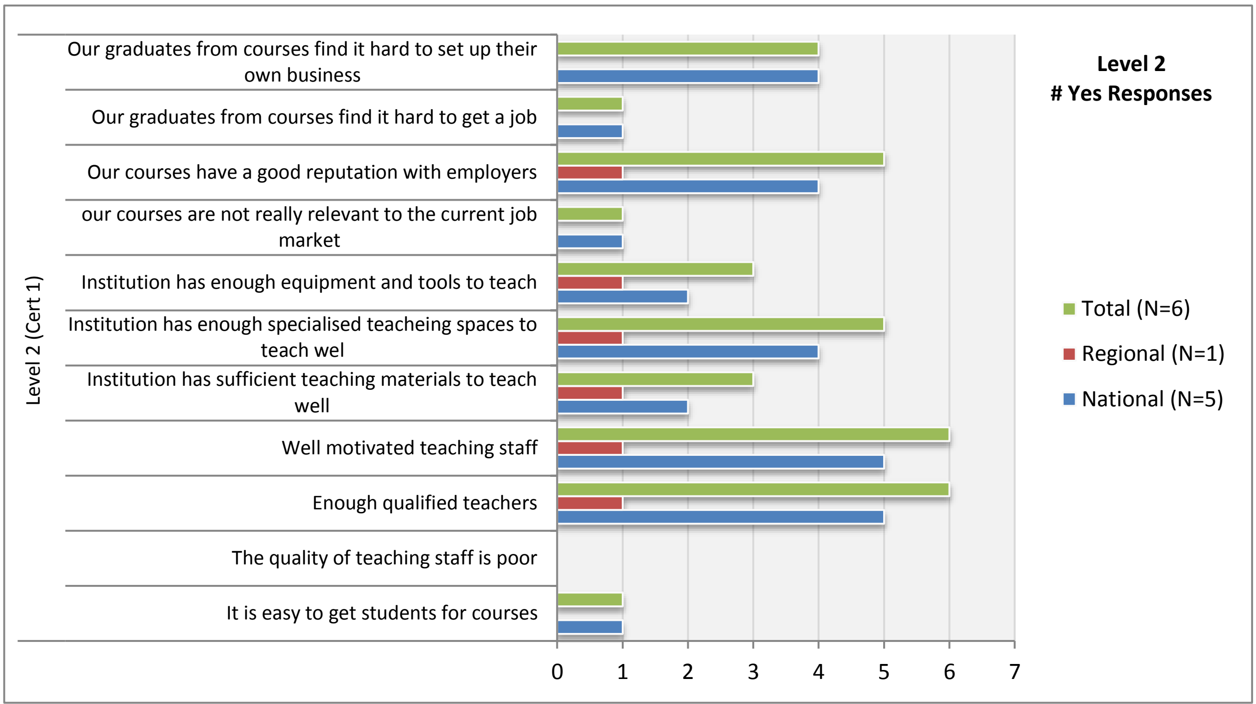
Level 2

a) At level 2, there are limited responses on ease of getting students. Institutions find the quality of teaching staff reasonable, at least not poor although please see case studies described in this section. There are sufficient teachers and they are qualified and motivated. However, there is a less positive response to sufficient teaching materials and specialised tools to teach.

b) Courses could do with further development to be relevant to the job market although they currently have a good reputation with employers

c) Only 1 institution said it was hard for their students to find a job. Four of the five national institutions, said that graduates find it hard to set up their own business. No further questions were asked as to why, but we can assume it is financing which is the first hurdle for SMEs to overcome in starting up their business.

Figure 33: How do you rate your courses on the following? Level 2



Level 3 & 4

a) Only national level institutions responded to these questions. It is not always easy to get students for this level of training.
b) There is sufficient teachers who are qualified and motivated however, teaching materials, specialised tools and equipment are not always as abundant.
c) Courses have a good reputation with employers.
d) Institution feels it is hard for some of their students to find a job, but not all. For all institutions, they said that graduates find it hard to set up their own business. No further questions were asked as to why, but we can assume it is financing which is the first hurdle for SMEs to overcome in starting up their business.

Figure 34: How do you rate your courses on the following? Level 3

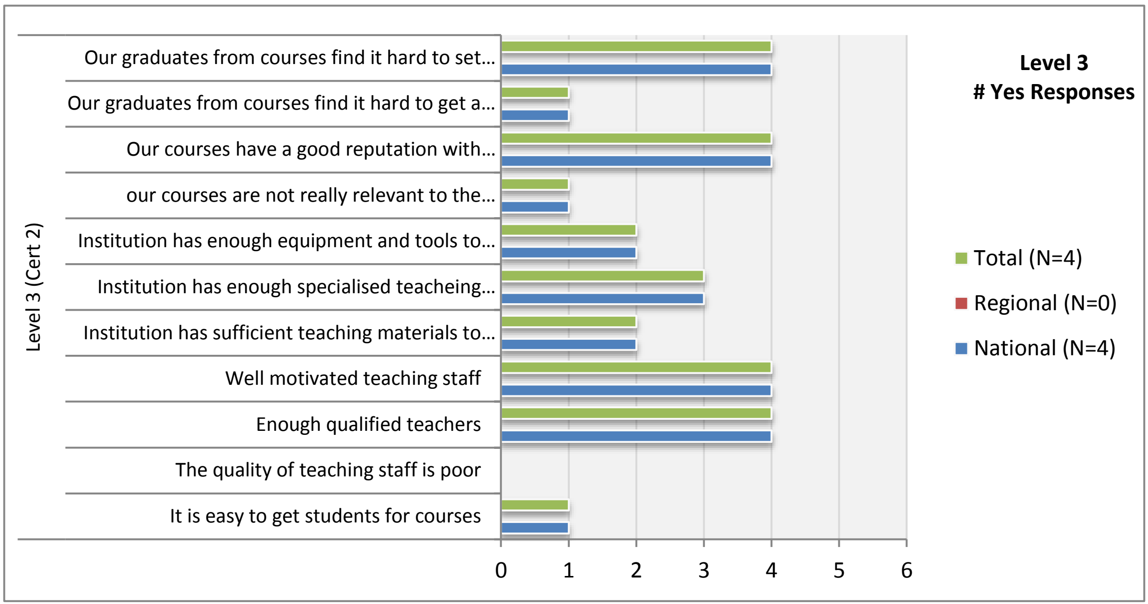
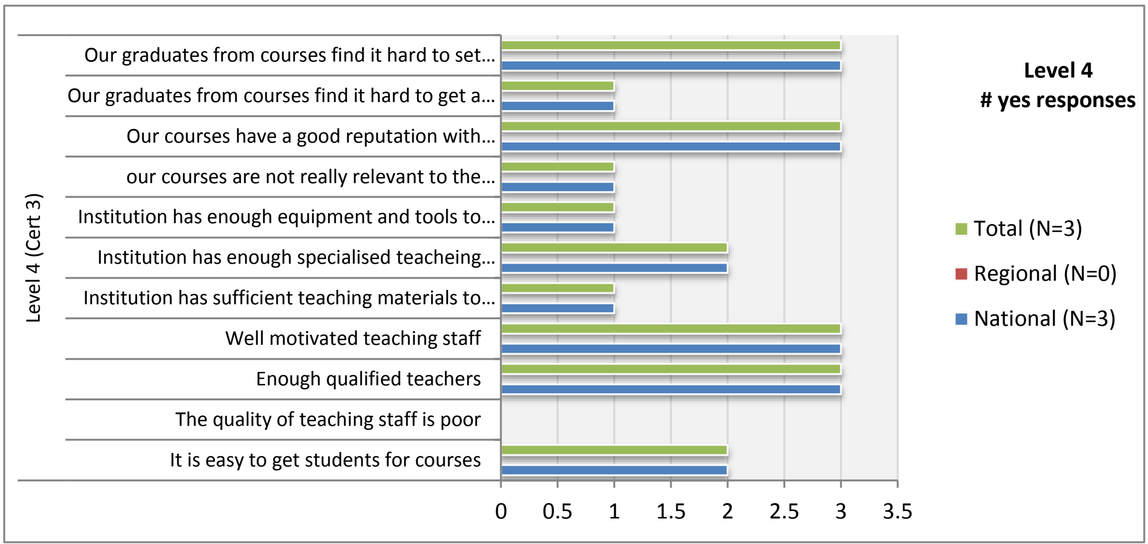


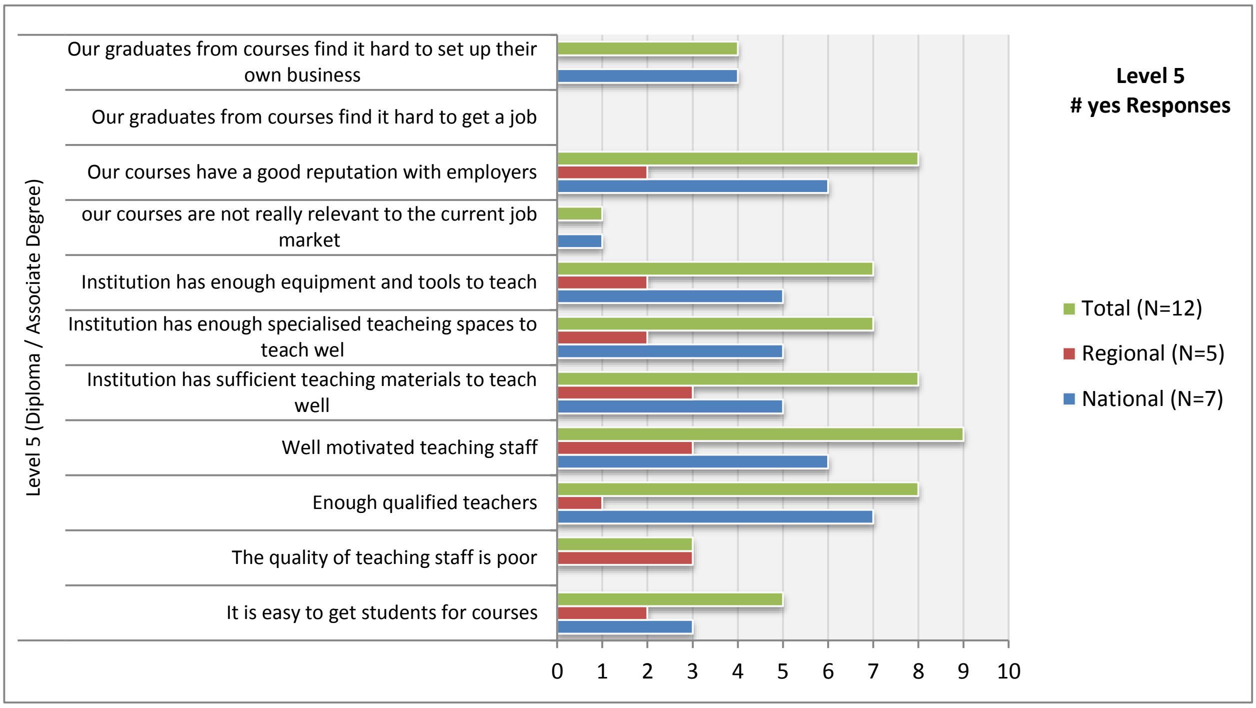
Figure 35: How do you rate your courses on the following? Level 4



Level 5

a) It is not always easy to get students for this level of training. Less than 50 percent answered positively to this statement
b) For the first time, 3 institutions have mentioned that the teaching staff are poor. For all other levels, there was no such mention. Only 8 of 12 institutions mentioned that there were enough qualified teachers, and only 1 of these is at national level. In general teaching staff are motivated.
c) There is a varying degree of sufficient teaching materials and teaching spaces as well as teaching equipment and tools. In general national level had a lower positive response than regional in terms of number of responses out of the total institutions who responded.
d) Only 1 national institution felt their courses were not relevant to the job market and a large number of all the institutions agreed that their courses have a good reputation with employers. Graduates find jobs easily and more than half of national respondents mentioned it was difficult to set up their own business after graduation.

Figure 36: How do you rate your courses on the following? Level 5



3.7.2 What are the teacher numbers?

In public sector, there are a total of 1215 teachers of which 730 are permanent teachers. Of the total permanent teachers 458 and 272 are represented national and regional centres respectively (*see Figure 37)*. At a national level, there are around 131 contract teachers and a limited number used at regional institutions (38). The remaining workforce is made up of non-teaching managers and administrators as well as non-teaching staff. 21 percent of the workforce is female at national level and around 27 percent at regional level. Overall (*see Figure 38)* excluding contract teachers, permanent teachers account for 65 percent of the workforce at national level and around 80 percent at regional level. This suggests that there is a larger administration burden perhaps at national level.

Figure 37: Public sector workforce breakdown: By national and regional

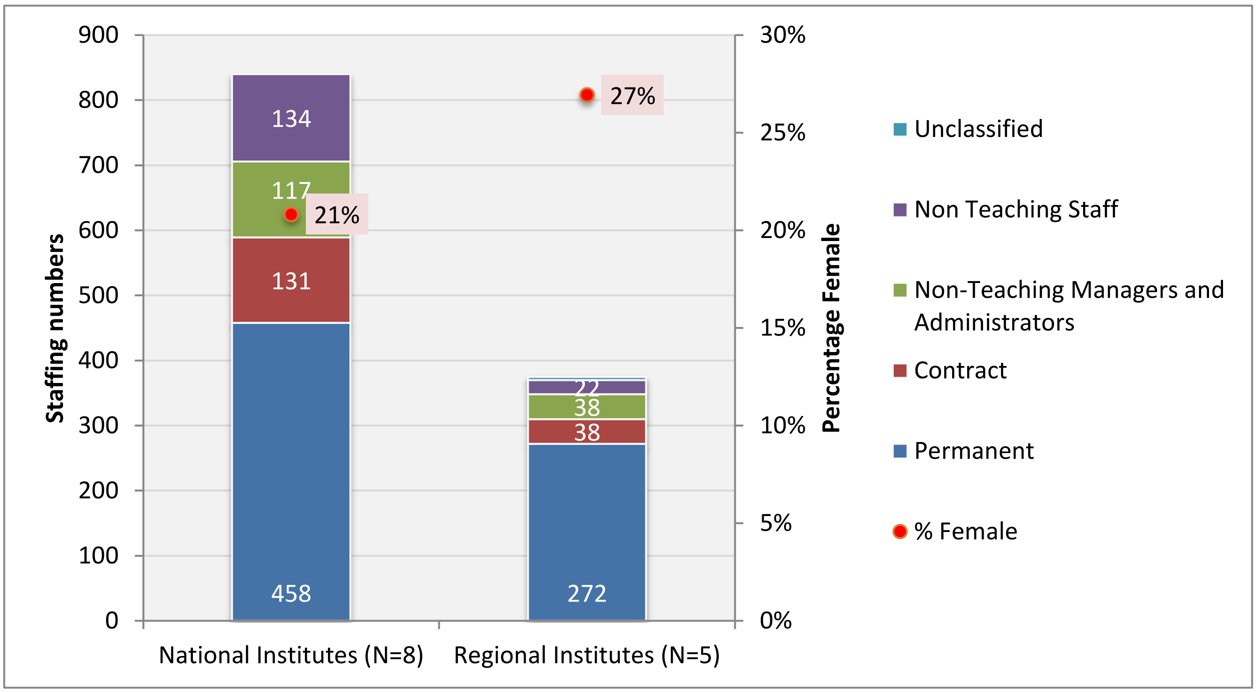
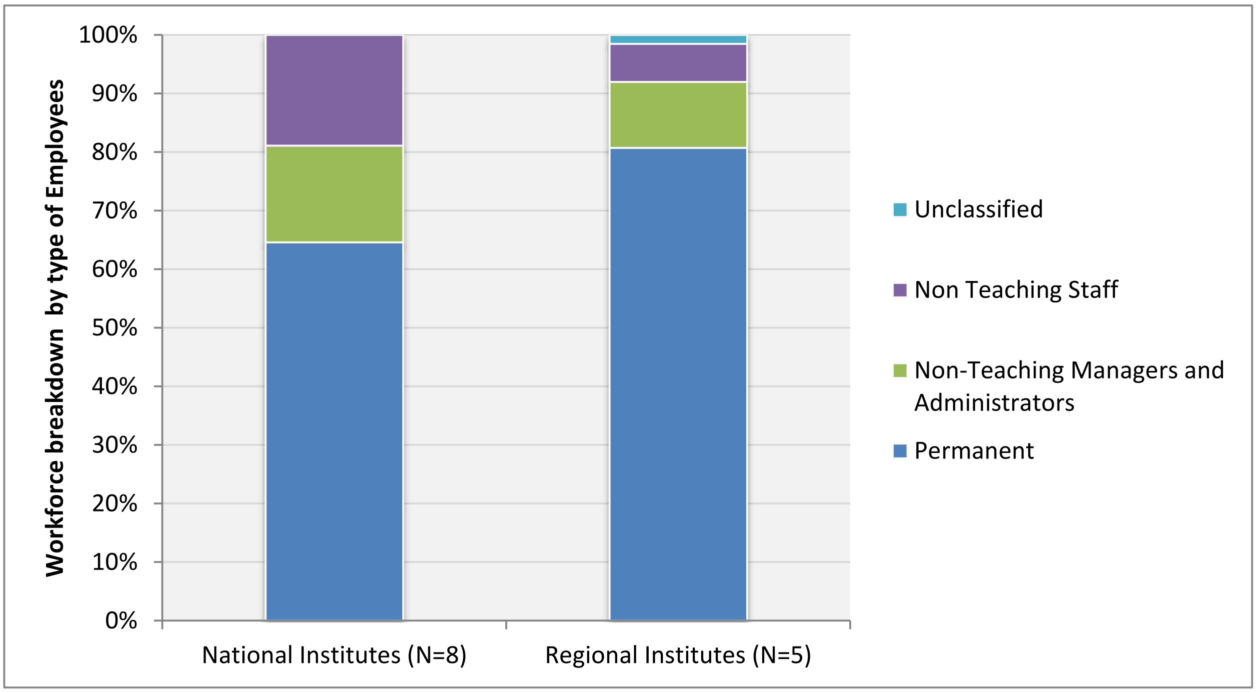


Table 50: Data Table: Public Sector Teachers

	National Institutes (N=8)	Regional Institutes (N=5)	Total
Permanent	458	272	730
Contract	131	38	169
Non-Managers and Administrators	117	38	155
Non-Teaching Staff	134	22	156
Unclassified	0	5	5
Totals	**840**	**375**	**1215**
% Female	***21%***	***27%***	***23%***

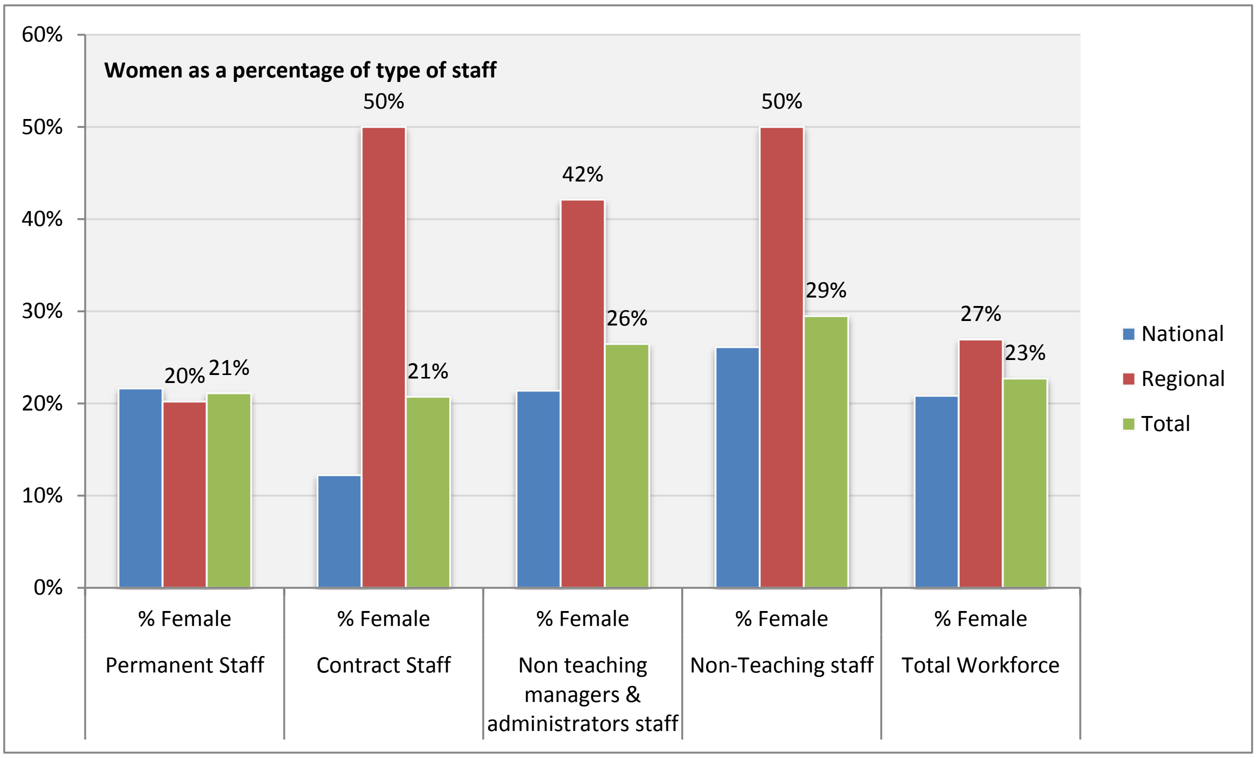
Figure 38: Percentage breakdown of public sector workforce: By national and regional



The workforce is predominantly male with higher percentages of women in contract teaching staff (50 percent) around 42 percent as non-teaching managers and administrators and around 50 percent in non-teaching staff at national level. Overall at national level female representation of the total workforce is slightly higher (27 percent) than regional level (23 percent)

At regional level, women are represented between 20 to 30 percent for all staffing levels. These results are presented in *Figure 39 below.*

Figure 39: Women as a percentage of different categories of staff



Overall, the teaching workforce in the public sector is well qualified with experience however, we did not ask whether or not work experience includes industry or government only experience. There are limited numbers of teachers with less than an associate degree in the public sector. The majority experience ranges from 1 – 10 years highlight in bold, italics and underling in *Table 51* below.

Table 51: Public Sector Teachers: Education and Experience by Gender

Education and Experience Levels by Gender Breakdown: Teaching workforce in Public sector	Total Workforce		< 1 year		1 - 5 years		6 - 10 years		11 - 15 years		16 - 20 years		> 20 years	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F
< Grade 9	3	1	0	0	0	0	0	0	0	0	3	1	0	0
Lower Secondary	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Upper Secondary	4	5	0	0	0	0	0	0	0	0	2	4	2	1
Level 2 (Cert 1)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Level 3 (Cert 2)	8	0	0	0	0	0	0	0	8	0	0	0	0	0
Level 4 (Cert 3)	2	0	0	0	0	0	0	0	0	0	0	0	2	0
Higher Diploma / Associate Degree	*71*	*10*	*4*	*1*	***36***	***4***	***23***	***3***	*5*	*0*	*1*	*1*	*2*	*1*
Bachelor Degree	*398*	*113*	*39*	*17*	***245***	***79***	***72***	***13***	*13*	*0*	*8*	*1*	*21*	*3*
Masters	*119*	*32*	*6*	*1*	***44***	***20***	***35***	***9***	*19*	*0*	*6*	*2*	*9*	*0*
Other	1	0	0	0	0	0	1	0	0	0	0	0	0	0
Total Staffing	**606**	**161**	**49**	**19**	**325**	**103**	**131**	**25**	**45**	**0**	**20**	**9**	**36**	**5**

Note: 3 national institutes provided total workforce profile as some managers teach

3.7.2.1 Public sector teacher salaries

Respondents were asked to provide teaching salaries and incentives and these are classified by national and regional to look at the differences in salaries. *Table 52 and Table 53* present public sector wages and incentives for teachers.

1. Results show that there is an average salaries increase at national level for higher course levels.
2. At a national level, incentives are used at all course levels whereas at regional level, only one institution provided incentives and these were hourly based, based on the number of hours taught.
3. There is no difference between men and women salaries – all salaries were the same.
4. Contract teaching salaries are generally higher than permanent teaching salaries however do not include incentives. Overall earnings at national level are higher for permanent teachers than for contract teachers.

Table 52: Public Sector: National level wages for different course levels

Course levels	Permanent Teachers Salaries (USD)			Contract Teachers Salaries (USD)		
	Min	Average	Max	Min	Average	Max
Level 1	**101.65**	**109.16**	**112.50**			
Incentive	*100.00*	*121.33*	*160.00*			
Certificate I - III	**101.65**	**141.04**	**200.00**			
Incentive	*60.00*	*108.00*	*160.00*			
Higher diploma / Associate Degree	**101.65**	**140.73**	**200.00**	**150.00**	**175.00**	**200.00**
Incentive	*20.80*	*95.27*	*160.00*			
Bachelor or higher degree	**101.65**	**156.63**	**200.00**	**170.00**	**285.00**	**400.00**
Incentive	*140.00*	*160.50*	*171.50*			

Note: *Blank cells means no reporting*

<u>**Notes on permanent teachers data**</u>

Japan Volunteer Centre did not provide data
Not all national institutions are represented in every level
All men and women get paid the same

<u>**Notes on contract teachers data**</u>

Only data for NPIC and NTTI data for Higher diploma and above
No incentives paid to contract teachers
Men and women get paid the same

Table 53: Public Sector: Regional level wages for different course levels

Salary Levels in USD	Permanent Teachers (USD)			Contract Teachers (USD)		
	Min	Average	Max	Min	Average	Max
Level 1	**100.00**	**131.00**	**162.50**	**112.50**	**145.83**	**200.00**
Incentive						
Certificate I - III	**100.00**	**135.00**	**155.00**	**125.00**	**162.50**	**200.00**
Incentive	*See notes*	*See notes*	*See notes*			
Higher diploma / Associate Degree	**100.00**	**138.50**	**162.50**	**125.00**	**125.00**	**125.00**
Incentive	*See notes*	*See notes*	*See notes*			
Bachelor or higher degree	**162.50**	**162.50**	**162.50**			
Incentive	*See notes*	*See notes*	*See notes*			

Notes: Blank cells means no reporting

<u>**Notes on Permanent Teachers**</u>

All regional institutions represented
Only Battambang Provided incentives:
2.5 per hour for level 1 and 3 per hour for Level 5 and above
Men and women get paid the same

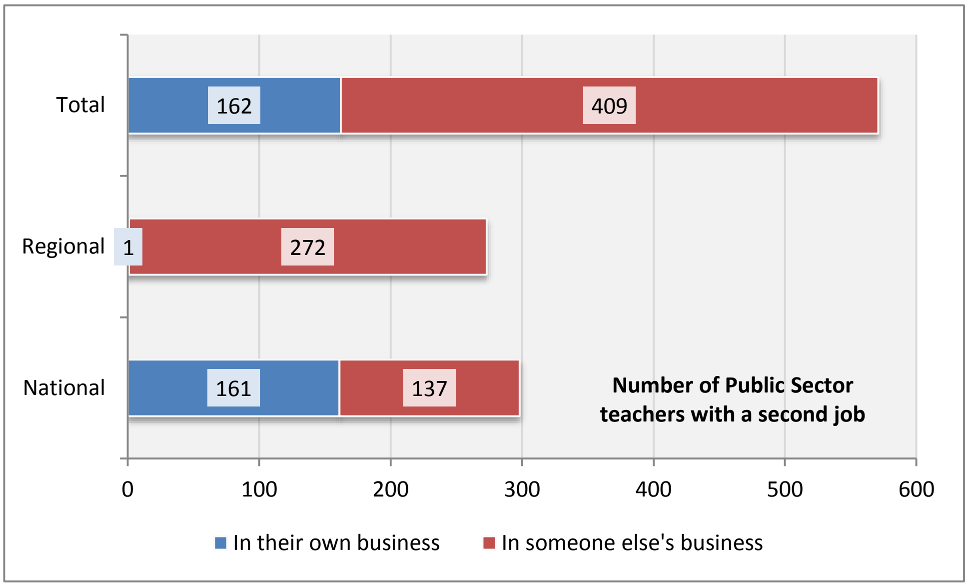
<u>**Notes on contract teachers**</u>

Data provided in Svay Rieng, Takeo and Siem Reap Only
No incentives are present for contract teachers
Men and women get paid the same

Private and NGO teacher salaries, except for large NGO's, are very low. They range anywhere from 50 or 60 United States Dollars to around 150 United States Dollars. The salaries are very much linked to how professional each institution is. For the large NGOs with full time staff, teacher salaries are 375 to 400 United States Dollars per month. There are no incentives payments that we see in government. For the large established NGOs, there is not opportunity for a second job. For the smaller TVET providers where teachers are mostly contract based, they all have a second job.

A large number of teachers in public sector have a second job and the most of these jobs are a second job in another business. No detailed questions were asked as to whether or not the second job is related to industry or the expertise of teaching.

Figure 40: Number public sector teachers with a second job



3.7.3 Financing and fees in the TVET sector

Respondents were asked to provide a list of the source of financing for their TVET programs.

The following results were received:

1. In the NGO sector, it is donor and other sources of financing as well as student fees that contribute to the sustainability of institutions, however, particularly smaller providers have noted that they are struggling to survive. NGO TVET providers that traditional relied on donor funds are now moving towards fees.
2. A wide mix of financing is seen in the NGO sector and these include:
    a. External financing (donors, contributions etc.)
    b. External financing and charging tuition fees
    c. Hosting events to raise funds and promote the industry
    d. Having facilities such as restaurants that service the general public and help students to gain practical skills during learning.
    e. Contributions from employers for internships have also been seen in industry as NGOs during internship period ask for employers to contribute salaries to the NGO rather than given them to the individuals. The distribution of salaries during internships allows all students to get the "same amount" rather than some getting higher or lower internship salaires.
3. In the public sector almost all financing is scholarships provided by government and donors and project related financing for students. There are limited fee charges which is possibly an area to focus on in the future. This is particularly sensitive given that current Level 2, 3, 4 is considered as a secondary school qualification and all primary and secondary schooling is currently for free.

3.8 Most important things for TVET Providers to do to improve?

In this section of the questionnaire, respondents were asked, "What are the most important things for TVET providers to do to improve their training and employability of their graduates[45] (Choose 5)". The results are sorted from highest to lowest (green bar, from bottom to top) in *Figure 41* below. The results indicate the following:

The top 4 important things to improve from a facility perspective include improving teachers and trainer's technical and teaching skills and upgrading equipment and tools as well as providing more training IN the workplace. While these are no doubt important to achieve, it is appears from overall results that there needs to be bottom up strategic approach to improving TVET provision in Cambodia, as descried earlier.

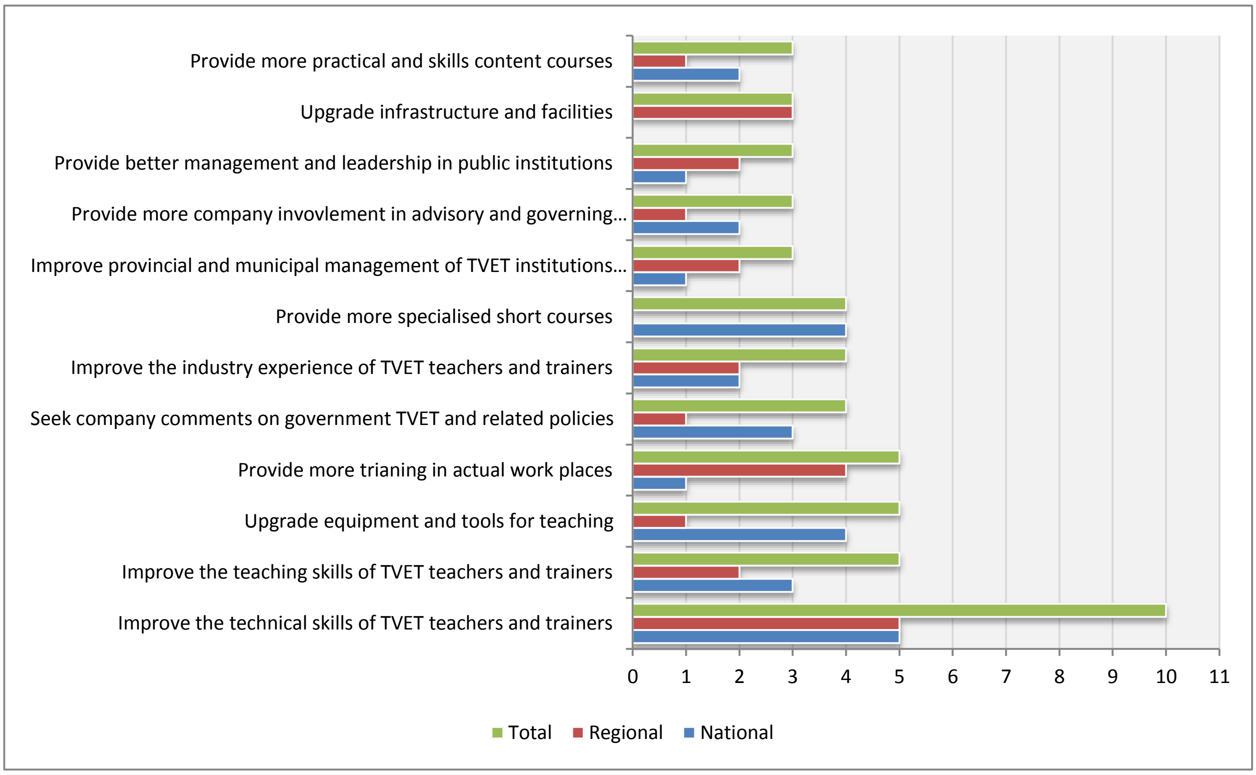
Strategically, there needs to be plans and a review of what is needed. Lists need to be tailored to priorities that can be achieved and not all at once. While results have been aggregated by regional and national, institutions at an implementation level have particular challenges that can easily be addressed and better managed through a bottom up planning approach that really addresses the needs to the population and the industry.

Challenges go beyond just traditional challenges but the quality of primary and secondary education….

"…. I am extremely concerned over the quality of students graduated from high schools nowadays. There is a remarkably decrease in basic skill and literature, knowledge from the formal education. From the management's perspective in order to ensure employability of students, I believe that there should be more involvement from companies in advisory and governing board for this institution. There should be further improvement on the industry experience of TVET teachers and trainers. Furthermore, there should be more specialized short courses and more trainings in work attitudes and practical training in the real work places."

Director, 2013

Figure 41: What the top 5 most important things for TVET providers to improve… (Q42)



45 Q42.

3.8.1.1 Public Sector: Management Quotes

"In Takeo Provincial Training Centre, students who enrol for the program are the government scholarship students. Even though, the facility has enough building and infrastructure to accept new students, it is often a huge challenge to select quality of students based on the number of scholarship required.

A request to the scholarship provider is to limit the amount of number of students provided given the limited human resources of the teachers and the scarce of finding the right qualified student to meet the targeted numbers based on the amount of scholarship provision."

Interview, 2013

"From the management's perspective to improve their training and employability of their graduates, there are still some work needs to be improved. First, the institution should seek company comments on government TVET and related policies, improve their own technical skills of teachers and trainers. The institution needs to revise all content in course that companies are interested in. Furthermore, there should be an upgrade of teaching's equipment and tools. Finally, the institution should also provide more soft skills both literacy and numeracy."

From the management's perspective as a TVET provider to ensure the employability of their graduates, the institute should provide more avenues for consultation between Ministry of Labour and Vocational Training and industry. There should be an improvement on provincial and municipal management of TVET institutions by Departments of Labour and Vocational Training. As a TVET provider, there should be an improvement on the teaching skills of TVET teachers and trainers.

Interview, 2013

"One teacher raised a concern that the mobile phones used to teach students to do phone repairing I currently out of date. The Director responded that if the equipment are up to trend in the market, it also becomes an issues because the teachers will not be able to use the equipment and are not qualified enough to use the equipment and tools for classroom instruction. The infrastructure has to go along with the upgrading of skill technical teachers.

Project Team Focus Group, Takeo 2013

"The director emphasised the need of having adequate land for students to practice on <u>courses related to agricultures</u>. Even the current physical facilities and equipment, the maximum of trainees that could enrol each year is not going to be an issue to absorb the number of students. However, quality of students to be selected to meet the target of the provision of the scholarships has raised concerns to teachers because they find it is very hard to select qualified students."

<u>Interview, 2013</u>

"Raising awareness of the TVET education programs is so important because we need to find more students to enrol for the course. Most the diploma students get jobs easily."

<u>Interview, 2013</u>

"Some of our alumni graduates persuaded the director to establish a car repair program for the bachelor degree education. A few diploma graduates started up their own garage."

<u>Interview, 2013</u>

"In general we need better leadership and management in public sector." <u>Interview, 2013</u>

3.8.1.2 Critical Feedback from Institutions

"In my point of view, STVET I was not successful I would say. Training was given to a few staff with a few selected candidates to go abroad for 3 months. The same persons often go on trainings and do not have time to work in the real workplace and share knowledge to other public officials. They also often get transferred to work in Phnom Penh after the training so now at a provincial level there is a loss of all that preparation time to go overseas and three months of training. In my opinion, there should be international trainers coming to train teachers' locally in Cambodia and occasionally people can be sent abroad for shorter period of time, not 3 months. It is wiser to spread knowledge to many co-workers rather than only a few.

Budgeting should be properly allocated: For example, in my school there are no teachers who fix air conditioners and there is no such program provided. However, there are many air conditioners that were sent to the school for practical teaching. This is a waste of national budget and everything is sitting in the warehouse. The information from top down should be properly captured.

Quality of TVET training should be nationally standardised. There should also be a strong cooperation with PPP. The directors find TVET have many infrastructure need to be reformed because it si a very important area to emphasise. After participating and working in the area for over 10 years with limited progress, we are discouraged. When I heard about this research, I did not want to participate. It's the same old thing."

<<Intentionally left blank>>

3.9 Key themes coming from all TVET Providers

There are a total of 325 TVET institutions are identified in the whole country of which there are 57 NGO, 211 Private, and 56 Public sector institutions which are registered across 12 different ministries, and under Phnom Penh Municipality. Thirty two TVET providers from the different sectors participated in this study. The study focusses on Level 2 – 5 under the Cambodian Qualification Framework. Level 2, 3, 4 qualification is equivalent to that of a secondary school qualification.

The supply side of the study seeks to answer the following questions

1. What courses exists currently in TVET institutions and at what levels? What future courses are planned? How are these future courses planned and based on what information?
2. How practical are the curriculums and do facilities have the practical technology and machinery in their facilities to link to work place needs?
3. How TVET facilities are engaging with industry to facilitate change in curriculum and what labour market information are they drawing on. How are TVET facilities matching the demand needs (forecasting and promoting skills training to youth) to ensure that graduates are employed post-graduation.
4. Do TVET facilities have linkages with industry to encourage apprenticeship training to ensure that youth get workplace training prior to graduation?

3.9.1 What level of training exists and what programs are provided?

The study starts with identifying the levels of training that are provided across different types of TVET providers and then discusses the different types of training courses that are provided. The study reveals the following:

There is a "Curriculum Missing Middle" with an almost non-existence and substantial provision of TVET at level 2 through 5. Almost all TVET training is focussed on Level 1 training which in majority covers agriculture in the public sector and variety of different trainings in NGO and private sector. While Level 1 descriptions suggest 4 – 6 months of training, the implementation in reality is quite different. It can be as short as a few days, up to 1 year of training in the NGO TVET providers. Most level 1 training is focussed on the agriculture sector.

There is very little opportunity to build a career and development skills through TVET given the lack of curriculum offering and the curriculum missing middle. In public sector, only air-conditioning repair and auto engineering have Level 2 – 5 courses at National Level. Only automotive services have Level 2 – 5 at Regional Level. Both National and regional have electricity training for level 1, 2, 3 and 5 and regional level has a level 4 electricity training. In non-public sector, there is no provision in any course of a full set of Level 2 – 5 training. Of the complete set of trainings provided in public sector, most are focussed on traditionally male careers. Young girls and women have little TVET curriculum to pursue a career.

There is a need to standardise the training offering (course name and content) across all institutions and to share curriculums amongst institutions that already have existing programs so as not to duplicate resources. There are 76 course names in both national and regional public facilities and 57 course names amongst the NGO and private sector providers. In standardising course names and content, this may have an impact on private sector in understanding exactly what young people are learning and what skills they are gaining through education.

The perceptions of young people are important. Although not studied, the authors feel it is important to comment on perceptions. Young people who have completed high school and do not have the means to go to university may perceive doing a level 2, 3, 4 training as "going backwards" as it is going to give the same qualification as high school. It is well known that most young people believe that university education is the key to achieving the skills and knowledge to get a job while TVET is viewed as training for a "worker" and not a professional.

3.9.2 Is training provision in TVET Sector addressing large employer needs?

Simply, the answer is no in majority. There are over 25,000 job vacancies and there are approximately 6586 young people enrolled in TVET training. More than 50 percent of these students studying in TVET are studying level 1 course which can be as long as a few weeks – 6 months. These courses are dominated by short courses in agriculture. There is little mapping of the needs of industry and forecasting skills needed. In total there are are 1579 students in Level 5, 154 in level 4, 138 in level 3 and 304 in Level 2

The majority of positions vacant and in demand from employers are plant machine operations and assemblers, which would ideally have completed secondary school, have the ability to read and write and understand instructions, in particular safety, emergency and health policies. Employers stress in the garment sector it would be good to have multi-talented operators who can work on several different machines. While most workers today have less than a secondary education and have learned on the job, to improve productivity, flexibility, versatility and adaptability of the workforce, training that provides learners with access to machinery and exposure to the industrial environment will help to ensure a smooth transition into the workplace for these types of workers. TVET Provision of sewing skills for industry is almost zero although it exists for domestic and home based businesses.

There is limited practical training at Level 2, 3, 4 given lack of curriculum and there is a need to improve the tools and technology available to teachers but also teacher capacity to be able to use tools and technology.

3.9.3 Are enrolment numbers increasing in TVET?

A mixed picture appears as to the enrolment changes over the last 3 years. In Phnom Penh or national level public institutions, there appears to be a decline in enrolments numbers overall except for Level 5 instructions where there are slight increases. In regional training centres there appears to be an increase in enrolment for level 1 student only except in Svay Rieng where there has been a decrease. In general the results show that there is great need to focus on increasing enrolment numbers which are already low and not focussed on industry level training.

In the non-public TVET providers (NGO and For-Profit providers) there is link between the sophistication of types of providers, the more established institutions are experiencing increases while the smaller institutions are struggling with decreasing numbers or stagnant numbers which are creating overall institution sustainability challenges given the low course fees that are being charged.

There is extremely limited capacity to enrol students at Level 2 – 5 in the TVET sector. Level 5 represents around 30 percent of total enrolment in public sector which provides a qualification of a higher diploma or associate degree. For level 2, 3 and 4, only 10 percent of total capacity is able to be absorbed into public sector given the current facilities and equipment available.

In majority non-public sector does not have level 2 to 5 training courses and for the 1 institution that does provided such training, a total number of 800 students can be absorbed in Level 1 – 5.

Most public sector training is financed through scholarships by government and donor partners. TVET institutions mention how difficult it is to find good quality students for the scholarships. Sometimes too many scholarships are provided and the quality of students is poor. There needs to be more rigor in selection of students to ensure quality outcomes are achieved. The public sector in this regard faces a chicken and egg situation of having a financing to provide training however being "forced" to provide low quality training as the level of primary and secondary education remains poor. **There is a clear need to continue to focus on quality outcomes in primary and secondary education, to ensure that further education and training, regardless of TVET or university, is able to ensure that the future Cambodian workforce has the skills and competencies need in the workplace. In addition, to ensure that the workforce is acquiring qualifications that is relevant and perceived as credible by industry.**

3.9.4 Is TVET engaging with Industry?

The Public TVET sector certainly at heart has the initiatives and structures in place to pursue engagement with industry. While structures and governing bodies exist, we frequently note the lack of capacity to engage with industry or how to start the engagement with industry. As noted in the demand side of the survey, most enterprises are foreign owned (74 percent) and large Cambodian owned enterprises represent 20 percent in the sample. Building the capacity and confidence of public TVET institutions is important and that will in majority come with a more comprehensive training offering (the "curriculum missing middle") as well as an increase in trained graduates that are relevant to industry. There are some innovative and best practise examples demonstrated by national institutes in engaging directly at enterprise level in training, giving teachers and trainers real life experience of the workplace.

In the non-public sector, only large established NGOs had any form of industry liaison unit or advisory board. While more active the public sector, industry linkages are limited to a few large providers only.

For public TVET providers: Capacity building for industry liaisons units are important to enable staff to better engage with industry and contact industry. This includes networking with government agencies to understand

which new business are setting up, as well as networking and accessing industry. Basic capacity building from relationship building, interviewing skills, contacting and engaging with the business community, networking and promoting the talented graduates is important. Directors of institutions are involved in this engagement with public sector and it is very intensive from a management time perspective to be effective.

In terms of advisory bodies, there is a clear need for public TVET providers to take a structured approach to engaging with industry. Firstly, to engage with industry it will be necessary to have a strategic plans that clearly provides industry an understanding of the institution strategy and priorities of what the TVET institution is going to pursue and how it is going to develop talent for industry, within its location as well as more broadly to industry overall. It is necessary to prioritise this plan and not try to do everything, but try to start with something and do it well, to encourage more constructive engagement from industry. Taking a first step with one course or curriculum that can really show progress in skills development, will help to create enthusiasm in industry that concrete steps are being taken and that engagement with TVET will result in necessary outcomes, not only for industry, but for the economy more broadly.

3.9.5 TVET infrastructure, teachers and financing

All schools, except for Siem Reap which has limited land in the public sector, can grow their institution capacity in terms of building infrastructure. At the moment, current facilities are not fully utilised. There was no "lack of teachers" per se, however a need to improve teaching methods. There is a need to improve the machinery and tools available to teach more industry related skills, however, it appears that in the absence of relevant curriculum and corresponding teachers to teach Level 2, 3, 4 in particular, there needs to be a focus first on curriculum development and priorities to understand what the supporting workshops and machinery are needed.

Financing in public sector is mostly donor or government driven. In private and NGO and mix of types of financing exist from fee based or fee contributions to event promotion, to providing services for fees to the general public.

3.9.6 Important themes emerging from the study

3.9.6.1 ...is TVET a safety net for drop outs or focussed on providing "further education for all"

Our study does not focus on the perceptions of young people and their families however these are powerful and important influencing factors in the development of TVET. We have seen that the views on enrolment numbers are mixed. In areas with developing economic zones, often young people choose to work instead of study as the need to earn an income is critical to family. Level 2, 3 and 4 TVET is described and presented as the equivalent of a high school diploma however the provision of TVET at these levels is so important to the development of a skilled workforce. There appears to be broader challenge as to the objective and provision of TVET and these questions are put forward below for further consideration:

1. TVET at Level 2, 3, and 4 is presented as the equivalent of high school degree and requires that a student has a grade 9 education level. This in essence provides a safety net and alternative education path for the many who drop out of school after grade 9, the mandatory level of education in Cambodia. TVET at level 2, 3, 4 can therefore be viewed as extremely important as an alternative education path for young people who drop out or young people who would rather pursue a technical high school degree. However the reality is that 58 percent of primary school students will drop out of primary school and 32 percent of those entering lower secondary will drop out of lower secondary which ends at Grade 9. This leaves TVET level 2, 3, 4 qualifications in competition with higher secondary school to attract students. *The following pertinent questions arise, what is the provision of TVET for those who finish high school and want to pursue a technical or skills related job, and what is the provision of TVET for those who drop out in primary and lower secondary?*
2. Most young people want to pursue a higher education degree and go to university as TVET is generally viewed as education or training for "workers" and not professionals. In the current form and presentation, TVET does not provide an alternative education path for those who complete high-school and wish to pursue practical or skills related training. The only option for young people in this regard is to pursue higher education or an associate degree where these exist. *Is it possible to assume given the currently structure that a young person or their family that would require to invest in TVET would not want to gain a second "higher education diploma" as most families would not have the financial resources to do so? Thus, young people are rather encouraged into the workplace to earn a living rather than pursue further TVET education.*

3.9.6.2 ...a need for bottom up-strategic planning and inclusive skills strategies

The study consolidates information at a national and regional level amongst TVET providers. While this providers a broad overview, it is clear that at an implementation level, there needs to be more involvement and strategic planning. Given the limited supply of TVET training across all the provinces and the unique economic make-up of different regions, it is necessary to build strategic plans from the bottom-up.

The study also provides results on employment for large employers only; however, the majority of employment in the country comes from SMEs. In this regard, planning at a provincial level is critical to ensure the relevance of TVET. *While addressing large enterprise needs is a starting point to addressing skills, there is a need to ensure inclusive growth and skills training which will not only benefit large employers, but the broader economy and business environment overall.*

As mentioned frequently by the supply side providers, there should be more empowerment and autonomy from the TVET provider institution to ensure how they can best operate their institution in a more effective and efficient manners. There should be a bottom up decision making on how the human resource is allocated and how the budget is spent on certain equipment to be purchasing items and equipment's that are currently relevant to their institution.

3.9.7 Moving forward: Priorities and Suggestions

The study shows that there are a host of challenges. The authors have complied a list of activities that could be practical and useful in moving forward for public sector.

3.9.7.1 ...at a provider level: Short – Medium Term initiatives

h) Prioritising at an institution and provincial level. Close the missing middle (develop curriculum)

There is a shortage in electronic, engineering, automotive service in supply, but there is a much higher supply of student's in agriculture, tourism and hospitality. Since, Cambodia is also moving ahead toward industrial and service in the future; there should be a strong foundation in formal education

- Identify what industry priorities are pertinent that the centre can address.
- Choose 3 curriculums, build curriculum with industry inputs and support – and start to implement. Ensure practical elements are easy to implement at first including exposure and study tours.
- Identify what the institution is capable to deliver on what resources it can draw from other centres so as not to duplicate efforts.
- Consider teacher capacity in this development.
- Share curriculums and teaching methodologies where they exist so as to not duplicate efforts

i) Teacher training (skills, knowledge, teaching methodologies must be considered in the development of curriculum).
   - Equip teachers with practical knowledge and teaching methodologies.
   - Ensure teachers know how to use any equipment.
   - Encourage teachers to get workplace experience through training in companies. Exposure visits and company trips or study tours in country.
   - Get guest lectures from industry into the classroom to support implementation and realistic practical exposure and experience for young learners.

j) Marketing and student attraction
   - TVET needs better marketing that is appealing to students that links investment in learning to good jobs and future learning and growth

3.9.7.2 ...at a provider level: Medium to Long term Initiatives

k) Supporting laboratories and machinery for practical implantation.
   - Review what additional laboratories and workshops and practical tools are necessary.

l) Developing internship and apprenticeship programs
   - Internships
   - Apprenticeships
   - Exposure visits / field visit / Study tours

m) Strengthening engagement with industry and doing a regional TNA on an annual basis with employers on graduates, new training programs etc.

n) Consider the need for dormitories for students and teachers in the future.

3.9.7.3 …suggested national level priorities

Accreditation of training programs and credibility of programs should be among the first priority for the government to ensure all institutions have a common understanding of the current and future TVET framework, so that the TVET providers knows the current status of their programs.

Financing and improvement of the TVET physical infrastructures based on institution or regional level strategies in which it needs to take into account: infrastructure, particular HR needs for new training courses and tools and equipment needed to ensure training is relevant.

Stronger cooperation between the public and private sector is very important to focus on and this should be done at an industry level as well as provincial and institution level. Teachers and students could greatly benefit from greater engagement with private sector.

A need to emphasise and improve engagements to ensure pedagogy improvement. Experience and knowledge sharing between private, NGO, and public sector should be under a policy dialogue platforms designed under Ministry of Labour and Vocational Training and relevant industry.

Empowerment and autonomy from the public TVET providers should be considered particularly in relation to sustainability. At a national level, to promote excellent amongst TVET providers in public sector and non-public sector and consider turning a leading regional RTC into a flagship institution which helps all institutions achieve excellence.

National campaign on TVET training and lifelong learning. There is clear need to raise awareness of the importance of TVET to economic development and to the importance of the individual. There is a need both at a national level and institution level to coordinate strategies to promote TVET learning.

A need for a political champion on TVET training. It could be useful to have a political and public figure to champion TVET including some industry role models who have been successful in starting their careers through TVET training and progressing in their careers. It is not studied, but from the authors view point, critical for young people to have role models and leaders they can aspire too and want to be, to change the perceptions that TVET is training for workers and low level professions. It is on the contrary an education and qualification that can result in a good job quickly and TVET can give you the edge in becoming prosperous and helping to achieve your dreams.