

KEY POINTS

- The current skills mismatch, shortage, low education, and low skills in the workforce pose major constraints to diversifying the economy and enhancing competitiveness. The country's education and training system needs to produce an adaptable workforce with professional skills and workplace behaviors.
- Despite a clearly structured education and training system, meeting the demands of industry is a challenge given high general education dropout rates, low technical and vocational education and training graduation rates, curriculum gaps, and not enough industry engagement in technical and vocational education and training.
- Technical and vocational and university graduates are increasingly more prepared for entry-level jobs than those who complete general education, but basic skills and life skills are still lacking. This results in a workforce that is not performing to satisfactory industry standards.
- The government and private sector will need to focus on: (i) skills development by ensuring lifelong learning through flexible pathways that are gender-inclusive; (ii) bottom-up planning, which improves the quality and relevance of teaching and learning; (iii) attracting young people to the technical and vocational stream; (iv) improving industry engagement; and (v) strengthening coordination among stakeholders at the national and training institution levels in the short, medium, and longer term.

ISBN 978-92-9257-659-2 (Print)
ISBN 978-92-9257-660-8 (e-ISBN)
ISSN 2071-7202 (Print)
ISSN 2218-2675 (e-ISSN)
Publication Stock No. ABF168543

Policy Priorities for a More Responsive Technical and Vocational Education and Training System in Cambodia

This policy brief identifies binding constraints and makes recommendations to promote a technical and vocational education and training (TVET) system that is more responsive to Cambodia's labor market needs. The findings are drawn from a 2013 labor market survey of the skills needs of 222 large enterprises in five provinces: Battambang, Kampong Speu, Siem Reap, Svay Rieng, and Takeo; as well as the capital Phnom Penh.¹ The study was the first-ever attempt at assessing employers' skills needs at provincial and enterprise levels. The findings and recommendations were confirmed at a stakeholder consultation in June 2016. This brief is intended to provide TVET policy makers and planners with an analysis of education and workplace challenges; options to address the challenges in terms of local context, capacity, and priorities; and a menu of recommendations and suggestions for further research.

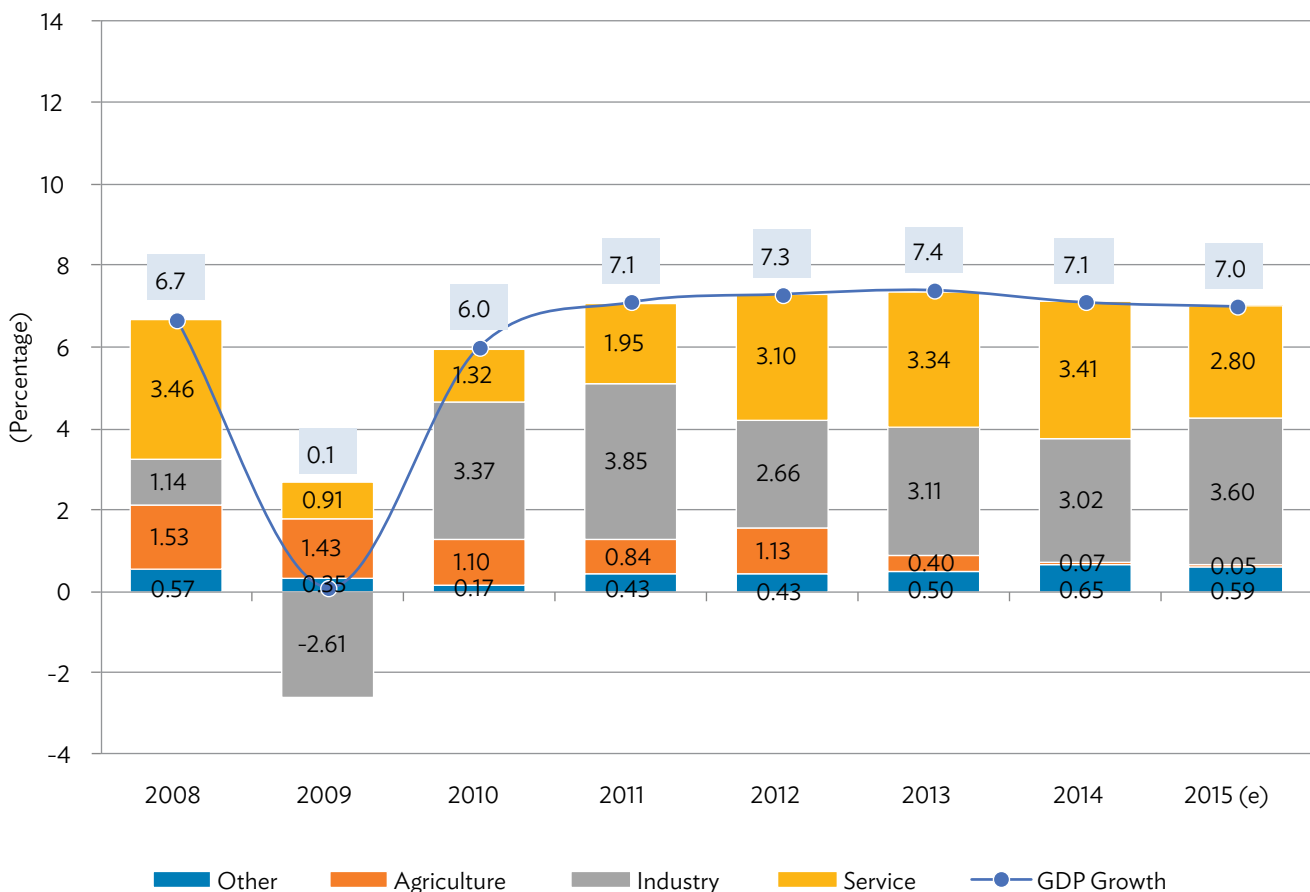
CAMBODIA'S ECONOMY NEEDS TO DIVERSIFY

Cambodia's economic growth over the past 2 decades has been impressive (Figure 1), but it has been largely driven by low-technology and low value-added industries. Garment manufacturing, which accounted for about 650,000 jobs in 2016, remains the country's economic backbone both in terms of formal employment and exports. The majority of employees in the garment sector are women from rural areas with primary or some secondary education. Despite the economic importance of the sector, there is no formal education or training institution or qualification. The lack of a responsive education and training system is also apparent in the construction and agriculture sectors. Both are characterized by a large unskilled or semiskilled workforce, for the most part informal.

Cambodia's workforce is youthful, but not for very much longer. The population in 2014 was 15.4 million. The population growth rate has declined steadily from around 3% per year during the first half of the 1990s to 1.63% in 2014, and the largest 5-year cohort

¹ The Asian Development Bank (ADB) commissioned the 2013 Survey of Large Enterprises and Their Skills Needs under its Technical and Vocational Education and Training Sector Development Program with the Ministry of Labor and Vocational Training. Large enterprises are defined as those employing 100 or more employees. For the full report, see ADB. 2013. Survey of Large Enterprises and their Skills Needs. Manila. www.adb.org/projects/documents/supply-and-demand-tvet-skills-cambodia-tacr

Figure 1: Sector Composition of Gross Domestic Product Growth in Cambodia, 2008–2015



e = estimate, GDP = gross domestic product.
 Source: ADB. 2016. *Asian Development Outlook 2016*. Manila.

is 20–24 years old.² The labor force comprises approximately 8.5 million people, or 56% of the total population of 15 million people.³ Women comprise 49% of the total labor force aged 15–64.⁴

The government aims at economic diversification and moving away from the reliance on low-skilled, low-wage, and low value-added industries. Cambodia, now part of the ASEAN Economic Community, launched a new Industrial Development Policy in 2015. The aim is to attract diversified industries and investment and move away from low-skilled employment. Creating diversified and skilled jobs requires a labor force with the skills and behaviors to adapt to new industrial environments. It also requires an education system that can respond to a changing economy.

In this context, education and skills have come to the forefront of policy discussions. It will be crucial to ensure that young people have access to an education and training system that equips them with the right skills and behaviors, and allows them to learn new skills more quickly.

THE EDUCATION AND TRAINING SYSTEM FACES CONSTRAINTS

The Cambodian education system has three streams: general education, TVET, and higher education (Table 1). General education includes 9 years of basic education plus 3 years of upper secondary education, and it includes a technical education stream.

² Cambodia Population Growth Rate (<http://www.indexmundi.com/facts/cambodia/indicator/sp.pop.grow>) and Cambodia Age Structure-Demographics (http://www.indexmundi.com/cambodia/age_structure.html)

³ World Bank. 2013. *World Development Indicators*. Washington, DC.

⁴ ADB. 2015. *Promoting Women’s Economic Empowerment in Cambodia*. Manila.

Table 1: The Cambodian Qualifications Framework

| Stream | General Education | TVET | Higher Education |
|-------------|--|--|--|
| Governance | Ministry of Education, Youth and Sport | Ministry of Labour and Vocational Training | Ministry of Education, Youth and Sport |
| CQF Level 8 | | Doctoral degree | Doctoral degree |
| CQF Level 7 | | Master’s degree (technology or business) | Master’s degree |
| CQF Level 6 | | Bachelor’s degree (technology or business) | Bachelor’s degree |
| CQF Level 5 | | Higher diploma (technology or business) | |
| CQF Level 4 | Upper Secondary School (Grades 10–12) | TVET Certificate 3 | |
| CQF Level 3 | | TVET Certificate 2 | |
| CQF Level 2 | | TVET Certificate 1 | |
| CQF Level 1 | Lower Secondary School (Grades 7–9) | Vocational certificate | |

CQF = Cambodian Qualification Framework, TVET = technical and vocational education and training.
Source: Ministry of Labour and Vocational Training.

The Cambodian Qualifications Framework (CQF) is a consistent and flexible national framework for all qualifications in education and training. It has eight levels starting with a vocational certificate (level 1) and leading up to a doctoral degree (level 8). The minimum entry requirement for a TVET certificate 1 training course (CQF level 2) is successful completion of lower secondary school, or grade 9. The TVET system is designed to enable young people to pursue a practical education at an early age, to equip them with the right skills and competencies for the workplace.

Providers for Technical and Vocational Education and Training

There are 325 TVET institutions registered across 12 different government ministries. Of these, 56 are public training providers, and the remainder can be considered education institutions (mostly nongovernment organizations focused on training). Most of the nonpublic training providers are small, family-run enterprises with contracted instructors who are paid based on student enrollment. The curriculum is often selected based on instructor expertise. There are no government-led strategies to encourage private investment in TVET facilities, and no framework for public-private partnerships. Cambodia has no training levy (a tax paid by companies to fund training schemes). Only recently have industries such as the garment and hotel sectors come together to start building industry-specific training centers.

Meeting Demand is a Challenge

Despite a clearly structured TVET system, meeting the demands of industry and a diversifying economy is a challenge. Using job vacancies as a proxy for industry demand, the TVET system

currently provides an annual supply of suitable graduates of less than 0.1% of vacancies (Figure 2). Four factors contribute to this major gap: high general education dropout rates, low TVET graduation rates, TVET curriculum gaps, and not enough industry engagement in TVET.

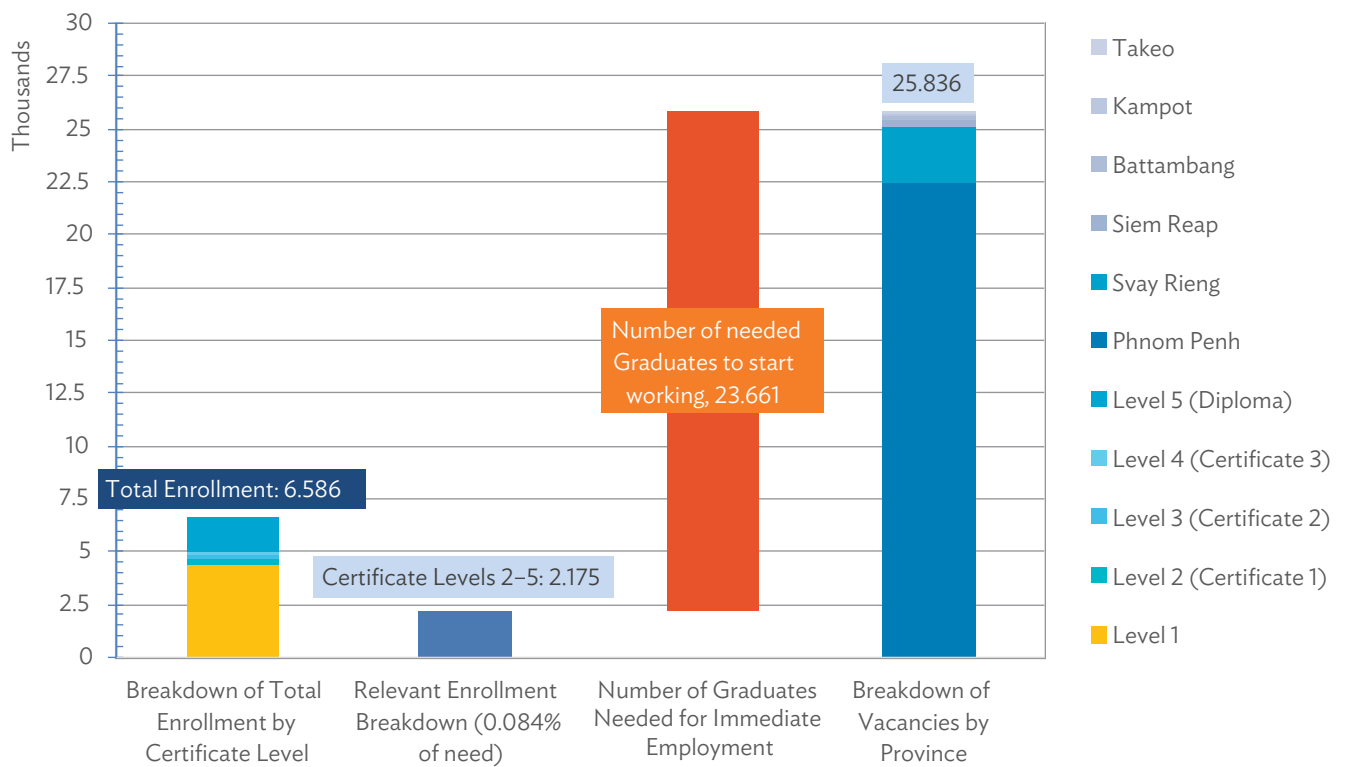
High Dropout Rates

Despite near-universal primary enrollment, 58% of students end up dropping out of primary school. Of those who do make it to lower secondary, another 32% will drop out. For those who enter upper secondary, another 10% will drop out.⁵ In other words, for every 100 children who start grade 1, only 29 will make it through grade 9. With such high dropout rates before completing grade 9, a majority of young people are not eligible to enter the TVET certificate level courses. How can the TVET system support dropouts and uneducated workers, some of whom have workplace experience? Even if students do complete grade 9, TVET institutions lament the quality of students they receive, in terms of basic literacy and numeracy skills. This puts an added strain not only on the TVET system as a whole (in terms of being able to produce graduates with the needed skills), but in the classroom as well, where instructors have to manage those able to learn, and those who do not have the necessary foundation. Improving the quality of general education is key to solving this challenge.

Attracting students to TVET is another issue. Most public TVET institutes offer courses free of charge, but there is still an obvious lack of interest among young people. Reasons include that there are still costs involved, such as food and transport, and giving up work to study full-time means no income. There is also a generally negative perception of TVET. Solutions to these challenges include providing cost-of-living stipends to disadvantaged youth; offering more

⁵ ADB. 2014. Labor Market Analysis Paper for Cambodia TVET Sector Development Program. Manila.

Figure 2: The Mismatch between Supply and Demand in Technical and Vocational Education and Training



Source: ADB. 2013. *Survey of Large Enterprises and Their Skills Needs*. Manila.

flexible course schedules so that students may keep working; and promoting TVET as a credible education alternative, with materials that resonate with young people and their aspirations. One way is to promote the resulting jobs and lifestyles, not just the courses.

Low Graduation Rates

TVET institutes today are producing fewer than 2,500 qualified graduates per year, which is simply not enough, regardless of skills or industry needs. The solution requires mapping and forecasting industry skills needs and TVET institution capacity—and making adjustments where needed—to ensure a sufficient number of students are progressing through the training system.

Gaps in the Curriculum

There is a missing middle when it comes to the TVET curriculum, and the course offering is not diverse enough. Most of the curriculum exists for the Certificate 1 (CQF 2) or the Diploma level

(CQF 5). There is no comprehensive curriculum for CQF levels 2–5, except in three specific job families.⁶ These courses focus on traditionally male-dominated occupations including air conditioning repair, automotive engineering, and electrician training. TVET options for young women are constrained. The limited course offerings contribute to the general perception among young people that TVET is for blue-collar workers and low-paying jobs, whereas university education is for professionals who command more attractive salaries. The curriculum gaps make it difficult to attract young people to TVET as there are no opportunities to progress to higher levels in existing specializations.

Not Enough Industry Engagement

TVET institutes have set up industry engagement committees and governing bodies, but their lack of understanding as to how to engage with industry is pronounced. Industry representatives are willing to engage, as it would be mutually beneficial, but given the lack of visible TVET improvements, they have little incentive to invest the time and effort that engaging with TVET institutes would

⁶ In the public sector, only air conditioning repair and automotive engineering have courses for CQF levels 2–5 at the national level. Only automotive service has courses for CQF levels 2–5 at the regional level. Both national and regional levels have electrician training for CQF levels 1–3 and 5; the regional level has a CQF level 4 electrician training. The private sector has no provision in any course for the full set of CQF levels 2–5.

KEY CONSTRAINTS

- Cambodia's education and training system needs to produce an adaptable workforce with professional skills and workplace behaviors.
- Formal technical and vocational education and training (TVET) fails to reach dropouts and less educated workers with experience.
- The low quality of general education means students lack fundamental numeracy and literacy skills to succeed in TVET.
- Labor market information and TVET data are lacking.
- The TVET curriculum still lacks midlevel skills and course diversity.
- Limited course options do not appeal to women. The existing curriculum is geared toward careers traditionally seen as for males.
- Most of the people who need TVET cannot afford to stop work. More flexible learning options such as part-time or evening and weekend classes would help.
- TVET and industry do not engage with each other enough. There are existing mechanisms for this, but industry tends to address challenges by itself rather than engaging with TVET.
- Duplication of higher education in TVET dilutes scarce resources, both human and financial, and the ability to focus on workforce priorities.
- Industry demand for qualified TVET graduates far exceeds the current supply of students enrolled. The government cannot address the skills mismatch alone. Collaboration with industry is essential.

involve. There is a clear need to bridge the gap between education and industry, particularly for public training providers, to make the training providers more responsive to labor market needs.

Although TVET infrastructure, teachers, and financing are not necessarily binding constraints yet, they are important elements of the TVET system as it develops and expands. It is clear that public TVET institutes are not fully utilized at the moment. They could enroll many more students with their current facilities. There is no lack of teachers per se, but there is a gap in the course offerings. Upgrading the curriculum and investing in teachers' professional development are crucial. There will be a need to improve the machinery and tools for more industry-related courses, but this investment has to come with an updated industry-relevant curriculum. An alternative to investing in machinery and tools could be to teach theory in the classroom and partner with industry for the practical hands-on application of skills directly in the workplace. This would be one direct way to bridge the gap between education providers and companies.

The task of building a TVET system responsive to an evolving labor market is enormous. While government strategies outline the priorities, institutes need to define how they will achieve these. Among other things, this requires

- (i) a vision of how TVET can contribute to the diversification agenda and equip the workforce with the right skills and behaviors;
- (ii) a focus on the priorities accompanied by clear time frames that demonstrate how TVET is becoming more responsive to industry;
- (iii) a vision for the Cambodian workforce to set the collective direction for how it will be differentiated within ASEAN; and

- (iv) a definition of the ways in which all stakeholders can contribute to, and invest in the skills development agenda.

LARGE EMPLOYERS REPORT COMMON WORKPLACE CHALLENGES

Medium to high employee turnover is pronounced. This is observed in each industry particularly in the job categories that represent the bulk of the workforce. Vacancies are taking a significant time to fill—up to 48 weeks. The negative consequences include delaying research and development, loss of orders, difficulties meeting customer service and quality standards, and increased operating costs. The most common reasons why vacancies are hard to fill include a lack of applicants with the required experience, skills, or education; negative perceptions of employment conditions; and increased competition among employers. Employers report that prospective applicants lack foreign language, leadership, teamwork, problem solving, and manual dexterity skills.

Workplace readiness and workforce performance is improving, but basic skills and life skills are still lacking. TVET and university graduates are increasingly more prepared for entry-level jobs but they do not always have the necessary basic skills and life skills. Those who only complete secondary school are even less prepared. As a result, the workforce is not performing to a satisfactory industry standard. The reasons for nonperformance are closely linked to the challenges of workplace readiness and turnover but include slow adaptation to the industrial working environment; a lack of motivation and self-discipline; and a slow ability to adapt when new methods of work, products, or services are introduced.

Almost all large employers have to invest in in-house training. This is a direct result of insufficient training supply. Employers have limited links with TVET providers, but they are willing to do more, for example, in providing inputs to curriculum development.

Employer views on TVET and its importance are clear: TVET needs to be coordinated, credible, and relevant. It also needs to be flexible and consider broader economic developments. Employers have three main recommendations for TVET: (i) facilities need better learning infrastructure, including machinery relevant to the workplace; (ii) relationships with industry should be strengthened, including at the enterprise level; and (iii) qualifications should be competency-based so that they are meaningful.

PROVINCES HAVE DOMINANT INDUSTRIES CONCENTRATED IN PARTICULAR AREAS

The emergence of industry clusters enables TVET providers to be more focused and responsive to industry and enterprise needs (Figure 3).

Figure 3: Characteristics and Dominant Occupations of Large Enterprises, by Province

| Province | Main Characteristics of Large Enterprises | Dominant Occupations ^a |
|---|--|---|
| <p>Battambang</p> <p>Other Professional Services 83% Hospitality 17% Other Manufacturing 0% Garment and Footwear 0%</p> | <p>Main industry: Other professional services followed by hospitality Ownership profile: Equally foreign and Cambodian-owned Main customer base: 67% Cambodian market</p> | <p>Priority for service related skills, rather than industrial</p> <p>Percentage</p> <p>Battambang Workforce Profile Total Large Enterprises Workforce Profile</p> <ul style="list-style-type: none"> Managers Professionals Technicians and associate professionals; clerical support workers Service and sale workers Craft and related trades workers Plant and machine operators; and assemblers Elementary occupations |
| <p>Kampot</p> <p>Other Professional Services 43% Hospitality 29% Other Manufacturing 14% Garment and Footwear 14%</p> | <p>Main industry: Diverse industry make up; other professional services, hospitality, and manufacturing Ownership profile: Majority foreign-owned Main customer base: 43% Cambodian market and the rest evenly distributed between Asian and international destinations</p> | <p>A blend of industry and service-related skills</p> <p>Percentage</p> <p>Kampot Workforce Profile Total Large Enterprises Workforce Profile</p> <ul style="list-style-type: none"> Managers Professionals Technicians and associate professionals; clerical support workers Service and sale workers Craft and related trades workers Plant and machine operators; and assemblers Elementary occupations |
| <p>Phnom Penh</p> <p>Garment and Footwear 79% Other Professional Services 13% Hospitality 6% Other Manufacturing 2%</p> | <p>Main industry: Garment and footwear Ownership profile: Majority foreign-owned. Main customer base: 75% international market and 17% Cambodian market</p> | <p>Plant and machine operations and assemblers^b</p> <p>Percentage</p> <p>Phnom Penh Workforce Profile Total Large Enterprises Workforce Profile</p> <ul style="list-style-type: none"> Managers Professionals Technicians and associate professionals; clerical support workers Service and sale workers Craft and related trades workers Plant and machine operators; and assemblers Elementary occupations |
| <p>Siem Reap</p> <p>Hospitality 96% Other Professional Services 4% Other Manufacturing 0%</p> | <p>Main industry: Hospitality Ownership profile: 65% Cambodian, 23% foreign, remaining Cambodian and foreign-owned Main customer base: Majority Asian market</p> | <p>Service and sales workers; technicians and associate professionals</p> <p>Percentage</p> <p>Siem Reap Workforce Profile Total Large Enterprises Workforce Profile</p> <ul style="list-style-type: none"> Managers Professionals Technicians and associate professionals; clerical support workers Service and sale workers Craft and related trades workers Plant and machine operators; and assemblers Elementary occupations |

| Province | Main Characteristics of Large Enterprises | Dominant Occupations ^a |
|---|--|---|
| Svay Rieng <p>Garment and Footwear 43%</p> <p>Other Manufacturing 18%</p> <p>Other Professional Services, 0%</p> <p>Hospitality 39%</p> | Main industry: Manufacturing (garment and footwear in particular); hospitality Ownership: 18% Cambodian, 82% foreign-owned Main customer base: 75% Asian market | Plant and machine operations and assemblers; service and sales workers. |
| Takeo <p>Garment and Footwear 75%</p> <p>Hospitality 0%</p> <p>Other Professional Services, 25%</p> <p>Other Manufacturing 0%</p> | Main industry: Garment and footwear; other professional services Ownership: 25%, Cambodian, 75% foreign-owned Main customer base: 50% international, the remaining evenly split between Cambodia and Asian market | Plant and machine operations and assemblers; technicians and associate professionals; clerical support workers. |

^a The black dotted line area represents higher education qualifications, red rc

^b In Phnom Penh, the importance of service and sales workers; and technicians, associate professionals, and clerical support workers should not be underestimated given that it is the capital city, and the study surveyed only large enterprises.

Source: ADB. 2013. Survey of Large Enterprises and their Skills Needs. Manila. www.adb.org/projects/documents/supply-and-demand-tvet-skills-cambodia-tacr

POLICY RECOMMENDATIONS AND FUTURE RESEARCH AREAS

The following policy recommendations aim to ease the key constraints faced by large employers (the demand side) and training providers (the supply side).⁷

Short- to Medium-Term Priorities

- (i) Define the TVET vision and priorities. Include practical strategies and supporting mechanisms to ensure life-long learning through flexible learning pathways that are gender-inclusive, and integrate these in the national TVET policy (being developed) and gender policy and action plan of the Directorate General of TVET. Identify clearly how to address the need for improved and diversified workforce skills and competencies.

- (ii) Do bottom-up strategic planning to ensure TVET's relevance. Each province has a specific employment and industry profile. Plan industrial learning strategies and priority institutional needs at the level of the province.
- (iii) Prioritize the missing middle of the curriculum. Select the priority courses that industry needs and develop skills standards, curriculum, and course materials, including links with skills standards in the region. Make the learning system more flexible (i.e., work and learn).
- (iv) Consider teacher training (skills, knowledge, teaching methodologies) in the development of curriculum. Equip teachers with teaching methodologies and practical knowledge, including know-how on use of equipment. Encourage teachers to get workplace experience through training in companies and exposure visits. Invite guest lecturers from industry for practical exposure.

⁷ These policy recommendations are based on the 2013 Survey of Large Enterprises and Their Skills Needs, updated in a June 2016 stakeholder consultation. Some of the recommendations are already being addressed under the ADB-financed TVET Sector Development Program and other government and development partner initiatives.

- (v) Develop a social marketing and communication strategy to attract students to TVET by linking learning, earnings, and career possibilities. Market attractive jobs, careers, and lifestyles, not just the courses.

Medium- to Long-Term Priorities

- (i) Plan investments for improving and expanding TVET infrastructure, including laboratories and machinery, as courses are developed and more students are attracted.
- (ii) Develop internship and apprenticeship programs for students and teachers, especially for women in certificate-level training courses in fields not traditionally seen as women's careers.
- (iii) Strengthen relationships with industry and conduct an annual provincial training needs assessment to support planning. Include employers' views on graduates and new training programs.
- (iv) Study the need for construction of dormitories and whether they have an impact on TVET enrollment and quality; or whether other options might be more effective, such as providing housing or transport allowances.
- (v) Develop electronic systems for understanding real-time labor market trends, (including curriculum database, students studying at TVET institutes, and their progress in the labor force) as well as economic developments in a region through the National Employment Agency. Establish links to other relevant government websites.

Coordination and National-Level Priorities

- (i) Accredite curriculum and TVET institutions, especially in the private sector. This includes developing a national database to track and share curriculums. Certified training programs should be made public to encourage more investment, diversification, and accessibility of TVET. Skills standards must be disseminated.
- (ii) Strengthen cooperation between industry and education providers including teacher training, curriculum development, apprenticeship programs to reinforce classroom learning, and practical application of theory at work.
- (iii) Introduce and implement recognition of prior learning, especially for workers who wish to up-skill or re-skill.
- (iv) Develop a national flagship TVET center as an example of excellence in TVET, a role model for all TVET institutions, a teacher-training platform, and as a learning and experience-sharing forum.
- (v) Assess the role of private training providers and industry in skills development and their incentives to train the workforce. Develop policy measures, either separate or as part of the law on investment (being amended); policies for public-private partnerships or other innovative mechanisms; and policies for applying information and communication technology to increase learning and workforce qualification.

About the Asian Development Bank

ADB's vision is an Asia and Pacific region free of poverty. Its mission is to help its developing member countries reduce poverty and improve the quality of life of their people. Despite the region's many successes, it remains home to half of the world's extreme poor. ADB is committed to reducing poverty through inclusive economic growth, environmentally sustainable growth, and regional integration.

Based in Manila, ADB is owned by 67 members, including 48 from the region. Its main instruments for helping its developing member countries are policy dialogue, loans, equity investments, guarantees, grants, and technical assistance.

ADB Briefs are based on papers or notes prepared by ADB staff and their resource persons. The series is designed to provide concise, nontechnical accounts of policy issues of topical interest, with a view to facilitating informed debate. The Department of External Relations administers the series.

The views expressed in this publication are those of the authors and do not necessarily reflect the views and policies of ADB or its Board of Governors or the governments they represent.

Asian Development Bank
6 ADB Avenue, Mandaluyong City
1550 Metro Manila, Philippines
Tel +63 2 632 4444
Fax +63 2 636 2444

www.adb.org/publications/series/adb-briefs

Corrigenda to ADB publications may be found at <http://www.adb.org/publications/corrigenda>

ADB Briefs aim to highlight achievements of ADB projects that support social protection initiatives in developing member countries.

pubsmarketing@adb.org



Creative Commons Attribution 3.0 IGO license (CC BY 3.0 IGO)

© 2016 ADB. The CC license does not apply to non-ADB copyright materials in this publication.