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Enhancing the Collaboration between TVET Institutions and the Private Sector in Cambodia: Implications for Skills Provision

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Acronyms and abbreviations

ADB	Asian Development Bank
CoE	Centres of Excellence
CQF	Cambodia Qualifications Framework
IIEP	International Institute for Educational Planning
ICT	Information and communication technology
ILU	Industrial liaison unit
KII	Key informant interview
MoEYS	Ministry of Education, Youth and Sport
MoLVT	Ministry of Labour and Vocational Training
MOU	Memorandum of understanding
NEA	National Employment Agency
PPP	Public-private partnership
RGC	Royal Government of Cambodia
SDF	Skills Development Fund
SMART	Specific, measurable, achievable, realistic, and timely
SSC	Sector Skills Centres
TH	Triple Helix
ToT	Training of trainers
TVET	Technical and vocational education and training
UNESCO	United Nations Educational, Scientific and Cultural Organisation

Executive summary

Collaboration with the private sector has been an influential tool in addressing a variety of complex issues or problems in both developed and developing economies around the globe. Like many countries, Cambodia has strongly promoted collaboration with the private sector across all education sectors. In the Cambodian TVET sector, the Royal Government of Cambodia has emphasised public-private partnerships (PPP) in its national TVET Policy 2017-2025 and Skills Development Roadmap 2023-2035. Such collaboration can make TVET more industry-relevant by increasing the private sector's role, duties, and participation in Cambodia's workforce skills development by strengthening and expanding the linkage between training providers and companies nationwide. TVET institutions often highly value their collaborative activities with the private sector. However, there is still scepticism about the forms, benefits, and degrees of collaboration between training providers and private companies. In this respect, ramping up research into private-sector collaboration in the Cambodian TVET sector is timely. To that end, this study aims to investigate different forms, benefits, and degrees of collaboration between training providers and the private sector. It also examines the challenges training providers face in collaboration with the private sector. An exploration of the perspectives of key stakeholders regarding collaboration gives insights into the under-researched collaborations within the context of the Cambodian TVET sector. The evidence from the study enables training providers, policymakers, practitioners, and relevant stakeholders to address collaboration issues and further build and strengthen collaboration efforts to align skills provision with industrial skills needs.

The study is based on a qualitative analysis of the data from the "Skills for Industry" project. The phase-1 data includes 36 interviews with 18 case-study companies. The phase-2 data comprises 36 interviews with 20 training providers, nine government bodies, four industry associations, and three labour unions. The study adopted a qualitative content analysis approach to analyse different perspectives of key stakeholders on collaboration-related aspects. A qualitative data matrix using an Excel programme enabled the collation of relevant data and information corresponding to codes and themes predefined and emerging during the analysis stage.

The study found that training providers use different identified forms of collaboration with the private sector. These included student internships, job announcement dissemination, participation in curriculum development, consultative meetings/workshops, workplace visits/tours, the provision of industrial skills training, and joint engagement in research and development activities. These collaborative activities benefited training providers and employers, explicitly and implicitly. The benefits included collection of input for increasing the relevance of newly developed or updated curriculum development/update to meet industrial skills needs; knowledge and skills transfer; access to advanced training facilities, equipment, tools, and materials; and funding for training-related research and development activities. Most training providers had conducted collaborative activities, though these were limited to student internships, job announcement dissemination, participation in curriculum development, consultative meetings/workshops, and workplace visits/tours, commonly executed less regularly and ad hoc, making collaboration efforts less effective and sustainable. Some forms of collaborative activities, like the provision of industrial skills training and joint research and development activities, were relatively small-scale or even absent. As repeatedly reported by various training providers, collaborations could not be built, strengthened or intensified due to several key factors. These factors were insufficient critical conditions including the availability of funding, the capacity of institutions and instructors, the extent of trust in the relevance and quality of TVET programmes, the extent of integration with action plans and implementation,

the extent of legal enforcement of frameworks and policies supporting collaboration, and the perception of mutual benefits for the parties. These conditions affected the scope and quality of collaboration with private companies.

Based on the findings, the study advances the following recommendations for training providers, policymakers, practitioners, and relevant stakeholders for consideration when building and implementing collaborations with one another.

- *Ensure mutual benefits between collaborators or stakeholders*: All stakeholders, especially training providers and companies, should openly discuss their concerns, needs, and expectations when collaborating. Identifying both explicit and implicit advantages is essential to ensure all parties concur on and commit to formal agreements. Formal agreements should clearly define the level of formalisation, co-decision-making, goals, resource sharing, and other key actors in the collaboration.
- *Strengthen institutional and instructor capacity*: Training providers need to enhance their institutional capacities and resources to ensure that training outcomes are aligned with industrial skills needs. Instructors need to improve their skills through professional development and hands-on training at partner companies. TVET institutions also require further support from the government and stakeholders to better anticipate and develop skills required by the labour market.
- *Enforce supportive frameworks and policies for collaborations*: It is essential to formulate and enforce clear legal frameworks, policies, or guidelines with full support for the school-industry cooperation. The government and industry associations should facilitate such cooperation by identifying incentives (tax/levy exemptions or special conditions) for employers who voluntarily collaborate with training providers. Additionally, a monitoring and evaluation system should be implemented to track the progress of these collaborations at the national level.
- *Streamline collaboration activities through full integration and implementation*: Training providers need to fully integrate the collaboration efforts into their school action plan and implementation. Establishing an industrial liaison unit (ILU) with a clear direction, action plan, and adequate resources can strengthen ties with the private sector. ILUs should consult with all relevant stakeholders, including instructors and employers, to ensure effective and consistent implementation that fosters their collaboration with the private sector.

1. Introduction

Collaboration has become an influential mechanism in solving economic and social development issues. Sørensen and Torfing (2011) view collaboration as a strategy for mobilising innovative solutions to complex problems. Collaboration theory emphasises the increasing importance of inter-organisational cooperation in accomplishing a shared goal that no single organisation could achieve independently (Gray 1989; Wood 1991; Wood and Gray 1991; Gajda 2004). As collaboration involves stakeholders' interests, common purposes and shared rules, and pooled resources (Kezar 2005), it is not easy to implement and sustain successfully (Huxham 1996). Moreover, the concept of collaboration is complex to understand. It can be easily confused with other terms (joint ventures, coordination, cooperation, networks, partnerships, coalitions, collaboratives, alliances) while these terms could be used interchangeably (Gajda 2004; Morris and Miller-Stevens 2016).

Although collaboration has proliferated globally for many years (Kezar 2005; Gajda 2004), there has been virtually little research on collaboration in the context of developing countries like Cambodia. In Cambodia's national TVET Policy 2017-2025, one of its goals is to promote public-private partnerships (PPP) and mobilise resources from relevant stakeholders to support skills development (RGC 2017). Such collaboration is purportedly seen as a key to closing a skills gap and bridging a mismatch between the supply and demand sides. However, the term "collaboration" has not been defined extensively nor understood clearly by relevant stakeholders while it is widely used in the Cambodian TVET policy documents. Depending on stakeholders, collaboration could take on different meanings in terms of type and degree of inter-organisational or inter-personal relationships (Gajda 2004). Simply put, whether such collaboration between key stakeholders constitutes a true relationship is a real puzzle in the Cambodian context. This ambiguity makes it difficult for those seeking to collaborate to put it into practice or evaluate it with certainty or confidence.

The government has put a great deal of effort and resources into promoting PPP and other collaboration forms to improve TVET's relevance, quality, and sustainability. For instance, the Royal Government of Cambodia (RGC) has recently embarked on the Cambodia Skills Development Roadmap 2023-2035 (MoLVT 2023), aligned with other existing initiatives, including the Industrial Transformation Map for Textile and Apparel Industry 2023-2027 (RGC 2023), the Automotive and Electronics Sectors Development Roadmap (RGC 2022), the Industrial Development Policy 2015-2025 (RGC 2015), and the new Law on Investment (RGC 2021). These policies and strategies are all intertwined with human capital development. Thus, multi-stakeholder collaboration in TVET is much needed to realise the goals of these policies and initiatives.

Skills mismatch is also a primary concern for both the government and the private sector (NEA 2018; Veung 2021; Veung and Ven 2021b). There is acknowledgement that tackling this problem requires close collaboration from multiple stakeholders, including government bodies, development partners, employers, and other actors in the TVET sector. Against this backdrop, the study seeks to fill the knowledge gap by examining the nature of collaboration between key stakeholders. This study is essential for improving multi-stakeholder partnerships in the Cambodian TVET context. To contribute to the scarce literature on collaboration in TVET in Cambodia, building upon existing collaboration theory, this study focuses on collaboration at the inter-organisational level between training providers and companies. Also, it looks at some of the existing supporting documents or initiatives at the government body level that are supposed to enrich such relationships.

The study examines the forms, benefits, and degrees of such inter-organisational relationships to see whether collaborations at this level are genuine. It also investigates challenges and potential solutions to building and sustaining such beneficial relationships between training providers and companies in TVET. The following research questions are formulated to guide the study and analysis of findings:

1. How do training providers and companies collaborate with one another?
2. What benefits do collaborations yield for training providers and companies?
3. To what extent do they collaborate with one another?
4. What are the challenges faced by training providers in collaboration with companies?

2. Literature review

2.1. Collaboration theory

Collaboration has been widely recognised as a research topic since the 1980s as more scholars like Colbry, College, and Adair (2014), Gray (1989), Ring and Van De Ven (1994), Trist (1977; 1979), and Wood (1991) seek to understand how common goals or conflicts of interest can be solved or achieved through collaboration. Collaboration theorists emphasise the increasing importance of inter-organisational collaboration designed to accomplish shared goals that no single entity can achieve by acting alone (Gray 1989; Wood 1991; Wood and Gray 1991; Gajda 2004). Such inter-organisational relationships comprise strategic alliances, partnerships, coalitions, joint ventures, franchises, research consortia, and various forms of network organisations (Ring and Van De Ven 1994, 90). As collaboration plays an increasingly crucial role between and across public, non-profit, and for-profit sectors, it has now become a norm in both intragovernmental and intergovernmental relationships (Morris and Miller-Stevens 2016, iii).

A successful collaboration requires individual organisations to work closely and together to achieve a vision (Gajda 2004, 65). A fruitful collaboration can enhance inter-organisational ties, ensure wider actor involvement, give viable solutions to problems, and ease the implementation of a shared goal (Wondirad, Tolkach, and King 2020, 3). Collaborating can enable individual organisations or stakeholders to pool scarce resources and reduce duplication of services to accomplish a shared vision or decision that would be impossible if individual actors worked alone and independently (Gajda 2004, 67). According to Ring and Van De Ven (1994, 90), these inter-organisational relationships are bound to particular motivations such as gaining access to new technologies, markets, economies of scale, and complementary skills. In the same vein, Lawson (2004, 225) believes that collaboration has potential benefits for stakeholders with improved efficiency, effective use of resources, enhanced capacity, and legitimacy, as well as other social development benefits.

Although it has emerged as a key solution to addressing a multifaceted social problem, the term "collaboration" is challenging and complex to understand and easily confused by many people due to its elusive, inconsistent, and theoretical definition (Gajda 2004; Morris and Miller-Stevens 2016). In her book "Collaborating: Finding Common Ground for Multiparty Problems," Gray (1989, 5) defined collaboration as "a process through which parties who see different aspects of a problem can constructively explore their differences and search for solutions that go beyond their own limited vision of what is possible." There are also more specific definitions such as the one from Lawson (2004, 225), which defines collaboration as a complex intervention that involves both a process innovation and a product innovation.

This innovation entails institutional or organisational development and change; otherwise, such collaboration is impossible. Similarly, Sørensen and Torfing (2011) see collaboration as a strategy for mobilising innovative solutions to a complex social problem. According to Kezar (2005, 833), in collaborative efforts, stakeholders often align their interests, establish shared goals and guidelines, and pool their resources to achieve a common purpose.

Collaborators or stakeholders, in other words, are critical to the success of collaboration. As Gray (1989, 5) pointed out, "stakeholders include all individuals, groups, or organisations that are directly influenced by actions others take to solve the problem." Each stakeholder sees the problem differently, so ensuring all the stakeholders have a deeper and more thorough understanding of the same problem is challenging. Ensuring equal benefit sharing or interests is another barrier to collaboration success. According to Huxham (1996), inter-organisational collaboration is a significant means of achieving organisational objectives in turbulent environments, yet implementation can be challenging. Therefore, building trust between and among stakeholders is necessary, ensuring action taken to solve a common problem is transparent and beneficial to all interest groups. Huxham (1996, 7) argued that "collaboration is taken to imply a very positive form of working in association with others for some form of mutual benefit."

2.2. Collaboration in education and training

The literature on collaboration has debated extensively about collaboration models, including, for example, the triple helix model developed by Henry Etzkowitz and Loet Leydesdorff in the 1990s, the quadruple helix suggested by Elias Carayannis and David Campbell in 2009, and the quintuple helix co-developed by Elias Carayannis and David Campbell in 2010 (MacGregor and Carleton 2012). According to Wu and Siswanto (2020, 523), the triple helix model is a dynamic interaction approach that enables the government, industry, and academia to generate innovative products continuously in response to the global knowledge-based economic trend. Specifically, this model plays a crucial role in integrating universities, businesses, and governments, whose close interaction and optimal collaboration contribute to the advancement of countries by fostering wealth creation and the development of knowledge-based societies, resulting in innovation as the outcome of the interaction (Sarpong et al. 2017). The triple helix model reflects the transformative role of academia or universities from teaching and research to entrepreneurial institutions (Wu and Siswanto 2020). Noticeably, the triple helix has been applied extensively in education and training. For example, in French higher education, educational institutions, corporations, and local governments work together to strategically distribute graduates around the nation and increase the likelihood that their skills are relevant to industrial needs. Another example is that of the Massachusetts Institute of Technology in the United States of America, which used the model to develop its academic programmes (Bolgova, Grodskaya, and Kurnikova 2020).

As an upgraded version of the triple helix innovation model, the quadruple helix integrates "Civil Society" as a fourth helix into the innovation system (Afonso, Monteiro, and Thompson 2012). This model comes in to fulfil the insufficiency of the triple helix for long-term innovation growth in meeting society needs by including the perspective of citizens and community as beneficiaries of the innovation (Ibid.). The quintuple helix model is broader and more comprehensive, contextualising the quadruple helix and considering the natural environments of society as the fifth helix for the innovation model (Carayannis, Barth, and Campbell 2012). The quintuple helix supports the formation of a win-win situation between

ecology, knowledge, and innovation, creating synergies between economy, society, and democracy (Ibid.). All the aforementioned models stress the primary role of stakeholders in moving towards a shared goal or value (MacGregor and Carleton 2012).

In many other countries like Germany, Switzerland, Austria, Hungary, and South Korea, collaboration in education and training programmes is a principal element for learners' successful school-to-work transition. For instance, popular apprenticeship programmes through a school-industry linkage allow students to learn practical skills in the workplace while participating in theoretical training at school. Such collaboration benefits schools, students, and companies, ensuring learners are well equipped with the skills, knowledge and competencies necessary for industry (Veung and Ven 2021b, 44). In the German dual system model, the industry and employers play a prominent role in collaboration with training providers to develop workforce skills. In the case of Cambodia, the government has put more efforts to address skills challenges by promoting public-private partnerships and enhancing collaboration between the private sector and training institutions nationwide (RGC 2017). However, in many developing countries like Cambodia, collaboration between training providers and employers is still an issue that needs further improvement in the extent of private sector involvement in the TVET sector (Veung and Ven 2021b). According to Sam and Dahles (2017), despite their diverging contributions to the education and training sector, the collaboration amongst stakeholders remains limited, hindering the sector's advancement. In the same vein, other research studies (e.g., Song and Chea 2021; Lenssen and Trzmiel 2020) pointed out the same phenomenon that would call for more efforts from diverse stakeholders in building and strengthening the collaboration in the Cambodian skills development sector.

There is consensus in research and policy discourse that there is a need to implement and further strengthen collaboration between training providers and firms in the developing world as it helps enhance skills provision quality and relevance to the labour market (Bagale 2018; Siddiky and Uh 2020; Badenhorst and Radile 2018). The private sector has a key role in making graduates' skills and knowledge relevant to industry- or company-specific skills and tasks (Bagale 2018). According to Raihan (2014), collaboration can be done in five key areas: (1) curriculum and learning material development, (2) instructor training, (3) practical workplace training, (4) facility and equipment improvement in schools, and (5) employment opportunities. For instance, training providers can collaborate with companies on practical workplace training through internship and apprenticeship programmes, probably leading to job placement after the completion of the programmes. As in the discussed innovation models above, both higher education and companies can work on research and development aspects that lead to innovative ideas or products for the industry and society (Carayannis, Barth, and Campbell 2012).

The collaboration process often entails certain steps or levels of intensity, ranging from basic to advanced, or from fully fragmented to fully connected: consultation, participation, cooperation, and collaboration (UNESCO IIEP 2019; Keast, Brown, and Mandell 2007; Selden, Sowa, and Sandfort 2006; O'leary and Vij 2012). The intensity of collaboration is the amount of energy that partners or collaborators must invest in relationships, which are short-term, informal, and often limited to information exchange (Ansell 2019, 28). Furthermore, collaboration requires a high level of trust and often involves a more time-consuming process, implying greater potential loss of autonomy and greater risk regarding investment in a shared goal (Ansell 2019). Ansell (2019, 28) defined cooperation, coordination, and collaboration differently in terms of their intensity. Cooperation is a low-intensity form of

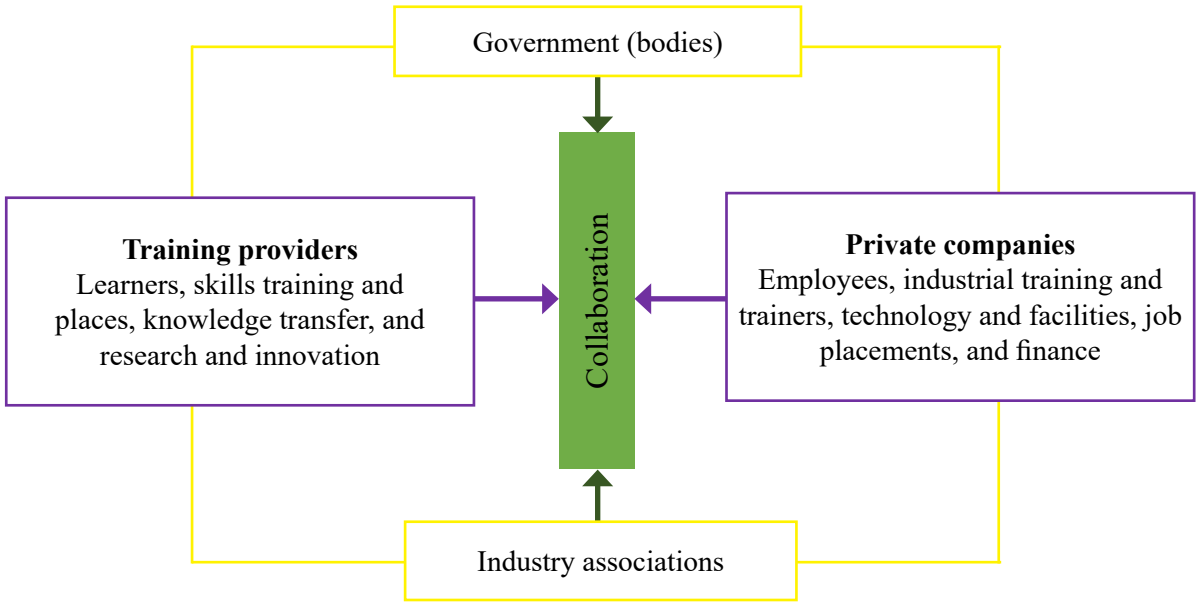
relationship in which the parties maintain complete autonomy. Fundamentally, it involves getting along with other parties, and it provides the basis for coordination. Coordination, in contrast, requires more time and energy in a somewhat more formalised process than cooperation, entailing more exposure to risks, and remaining instrumental and task-focused. Importantly, although coordination entails a mutual alignment of agendas or goals, it does not need the development of 'shared goals' or require a significant loss of autonomy. At the highest level of relational intensity, collaboration requires a still more significant investment in relationships to produce shared agendas or goals, while often exposing them to a greater loss of autonomy and higher risks.

In this study, rather than aiming to define collaboration in a more specific sense, it is crucially important to examine the prevalence of all forms, benefits, and degrees of collaboration at the training providers-company level in the Cambodian TVET sector. In addition to the forms and level of intensity of relationships between organisations, other factors in the collaborative process must be considered. These include: the degree of formalisation involved, the presence of co-decision-making process, the kinds of goals emphasised, the amount of resources shared, and the participation of other primary actors involved. Building on the established categorisation of collaboration from UNESCO IIEP (2019); O'leary and Vij (2012); Keast, Brown, and Mandell (2007); Selden, Sowa, and Sandfort (2006); and Ansell (2019), this study specially looks at inter-organisational relationships to examine collaborations between training providers and companies.

2.3. Conceptual framework

The study adopted the framework shown in Figure 1 below to examine the forms, benefits, and degrees of collaboration between training providers and companies. This model also includes two other essential actors, namely the government bodies and industry associations, as they usually play a role in between training providers and employers. As shown in Figure 1, training providers and companies are at the heart of the collaboration process. Training providers play important roles in, for example, skills provision, skills and knowledge transfer, and research and development, leading to innovation. On the other hand, companies have human resources, industrial training and trainers, technology, employment, and finance. Thus, both training providers and companies can work on these common aspects through collaboration, benefiting the parties involved. Furthermore, they need to interact with government bodies and industry associations that encourage and support the collaboration between training providers and companies. In this process, the government bodies also work with (key) industry associations to pave the way for collaboration between training providers and companies at different levels of consultation, participation, and coordination in the development and implementation of public supportive policies and mechanisms. With a supportive environment, genuine collaborative relationships can be built between training providers and companies. External and internal environmental factors can give rise to challenges and issues that collaborators in their personal interactions with one another.

Figure 1: Conceptual framework of the study on the collaborations in TVET



Source: Author's framework based on the literature review (e.g., Keast, Brown, and Mandell 2007; Selden, Sowa, and Sandfort 2006; O'leary and Vij 2012; Siddiky and Uh 2020)

3. Methodology

3.1. Methods

The study adopted a qualitative research approach using qualitative semi-structured interviews to explore different forms and degrees of collaboration and interaction between key stakeholders in the TVET sector in Cambodia. The qualitative research was used to facilitate an in-depth understanding of the perspectives of companies, training providers, government bodies, and other relevant stakeholders through their perceptions, practice, and experiences (Dawson 2007; Lunenburg and Irby 2008; Yin 2018; Creswell 2009). Case study interviews with companies and key informant interviews (KIIs) allowed the researcher to explore the challenges in forming and sustaining collaborations while investigating public supportive policies and initiatives available for collaborations in the Cambodian TVET sector.

3.2. Data collection

Semi-structured interview data from the r4d programme's "Skills for Industry" project[1] in both phases 1 and 2, conducted in Cambodia, were utilised. The case study interviews with firms allowed the author to understand the subjective views of manufacturing employers regarding collaborations with training providers. Thirty-six in-person interviews were conducted across 18 firms between October and December 2019. The KIIs were conducted physically and virtually between March and July 2022, with representatives from nine Cambodian government bodies, 20 training providers, four industry associations, and three labour unions. Participants were carefully selected based on their relevant expertise and the sector in the labour market. This process was key to gaining insights through qualitative

1 This project is a part of a bigger research project led by the Zürich University of Teacher Education and conducted in Bangladesh, Cambodia, Ethiopia, Laos, South Africa and Vietnam, to identify and better understand the critical factors that help or hinder the contribution of vocational skills development to inclusive industrial growth and transformation in low- and middle-income countries. In Cambodia, this project focuses on three main sectors – garment, electrical and electronic assembly, and food processing.

inquiry. To enhance this process, some training providers were chosen based on the information from the company survey and case study interviews of the project. They were believed to be ''thoughtful, informative, articulate, and experienced'' in the area of research topic on collaborations in TVET (Gay, Mills, and Airasian 2009, 135).

3.3. Data analysis

A qualitative content analysis was adopted as the analytical approach for the transcribed interview data (Mayring 2004; 2014; Gläser and Laudel 2019; Gläser-Zikuda, Hagenauer, and Stephan 2020). The author read the interview transcripts line by line to look for parts discussing collaboration and other forms and features of partnerships, relationships, and industry linkages. Then, the author formulated initial codes for themes. All relevant data and information were systematically collated into the content analysis matrix. Afterwards, the author reviewed the exported compiled qualitative data to refine patterns and themes further to seek connections between and amongst them.

4. Overview of TVET and collaborations in the Cambodian context

Two ministries currently oversee the Cambodian education and training system. The Ministry of Education, Youth and Sport (MoEYS) is responsible for general, non-formal, and higher education. The Ministry of Labour and Vocational Training (MoLVT) is responsible for TVET. Some overlap between these two ministries' roles is further complicated by the involvement of other line ministries, each responsible for their specialised training institutions. This not only complicates administrative procedures and management work even harder but also poses challenges to maintain the quality of education and training (Un and Sok 2018).

According to the Cambodia Qualifications Framework (CQF), there are eight levels of TVET qualification, starting from the vocational certificate (Level 1) to the doctoral degree of technology/business education (Level 8) (National Training Board 2012). The first four levels of qualification (vocational certificate and technical and vocational certificates 1, 2, and 3) are equivalent to secondary education, while the last four levels are regarded as post-secondary TVET. Students who completed grade 9 may enrol in upper secondary education (grade 10) or TVET Level 2. After completing Levels 2, 3 and 4 within three academic years, students can pursue a higher diploma programme (Level 5). Students who have completed grade 12 may enrol in post-secondary TVET programmes (Levels 4 and/or 5) or universities (See more in Appendix 3).

There are 37 public TVET institutions under the MoLVT in Cambodia (Pich 2022), whereas, as of August 2022, Cambodia has 130 HEIs, 82 of which are private (MoEYS 2022). TVET is usually perceived as low status or a second option among high schoolers (RGC 2017). Noticeably, enrollments in TVET programmes are often relatively low compared to those in higher education. For instance, according to MoLVT (2020), there were 84,840 TVET students in 2018–19, ranging from short courses to postgraduate programmes. In contrast, 222,879 students were enrolled in higher education in 2018–19 (MoEYS 2020). Also, TVET is less attractive because of the given issues of low quality and lack of relevance to the labour market (RGC 2015; 2017). Furthermore, the majority of public postsecondary training institutions only provide a very small number of study subjects, giving students fewer choices and contributing to the scarcity of trained workers (Veung and Ven 2021b).

Public TVET's most common subjects include civil engineering, electrical engineering, electronics, mechanics, mechatronics, information technology, business management,

accounting and finance, and marketing. These courses are offered at several levels, including TVET certificate, higher diploma, and bachelor's degree programmes. In contrast, short-term training courses, which last between one week and four months, are more varied than long-term TVET programmes. These cover a variety of subjects, including beginner-level courses in basic agriculture, basic electrical engineering and wiring installation, electronic repair, basic computer skills, basic food processing, masonry and construction, animal feeding, and sewing (MoLVT 2020). However, they do not adequately train learners to become specialised technicians or skilled labour in the long run, which thereby may restrict their employment and career options (Veung and Ven 2021b).

According to SEA-VET.NET (n.d.), the Cambodian government has recently injected a large budget into the TVET sector. For instance, the budget for TVET has increased from USD8.33 million of the total government budget in 2013 to USD12.82 million in 2017. However, such an amount is still relatively small compared with TVET's extensive needs for a significant investment in training facilities, equipment, and tools for theoretical and practical training. Recently, the MoLVT has aimed to accomplish its five-year master plan for 2021-2025, to improve TVET with a massive investment of about USD500 million (Chheng 2020). With the ambitious strategies set in the plan, TVET seeks to develop and upgrade its educational infrastructure, equipped with necessary tools and materials, to strengthen the capacity of management and relevant civil employees, to employ competent technical trainers, and to increase the quantity and quality of skilled workers in Cambodia. However, this plan will require more funding sources from the government and relevant development partners.

Intending to address the skills development challenges in TVET, the Cambodian government has consistently invested effort and resources to promote public-private partnerships (PPP) across different industries or industry linkages in the TVET sector. As stated in the TVET Policy 2017-2025, promoting PPP and mobilising resources from relevant stakeholders to support skills development can help close the skills gap and bridge the mismatch between the supply and demand sides (RGC 2017). Such partnerships are expected to improve TVET's relevance, quality, and sustainability (MoLVT 2019a; 2019b; 2023). Due to the lack of TVET information and limited collaborations between training providers and companies, four Sector Skills Councils (SSCs) in construction, electricity, manufacturing, food processing, and mechanics were established in 2018 with the participation of private sector representatives in priority sectors (ADB 2019). SSCs are expected to perform the following tasks: 1) advising the government and training providers on market trends and industry-specific skill requirements, 2) participating in the design of training programmes, including soft skills, and 3) helping training providers to improve their connections with the industries. Furthermore, eight skills assessment centres were also established (Pich 2022).

Recently, with the encouragement from the MoLVT, training providers must build more relationships with companies and other relevant stakeholders in their skills provision. However, the magnitude of such relationships still remains an area requiring further research to understand such phenomena in TVET. In line with the Industrial Development Policy 2015-2025, the new Law on Investment in 2021 encourages industrial diversification with a conducive business environment for private sector investment, while it also incentivises the private sector to invest in human capital development through companies' external and/or in-house training programmes (RGC 2021). To support skills development aligned with the TVET Policy 2017-2025 and Industrial Development Policy 2015-2025, the Skills Development Fund (SDF) scheme was initiated to finance various demand-driven skills training programmes in priority sectors (such as manufacturing, electronics, construction,

information and communication technology (ICT), and tourism and hospitality. These programmes are typically developed through the framework of PPP (ADB 2018; 2019).

With the forthcoming TVET law draft, in alignment with the recent Law on Investment, alongside other development initiatives, the Cambodian government strongly encourages the private sector to actively engage in different forms of the country's human resource development across the country. As in the Cambodia Skills Development Roadmap 2023-2035, one of its strategic pillars is to make TVET industry-relevant. This entails increasing the role, duties, and participation of the private sector in developing Cambodia's workforce skills, with a focus on development by strengthening and expanding the linkage between training providers and companies (MoLVT 2023). Furthermore, the current TVET Strategic Action Plan 2019-2023 and other recent development efforts also firmly promote PPP between training providers and employers in the labour market (MoLVT 2019a).

Besides such efforts and the resources raised, based on previous research and policy discourse, both public and private training providers need to further build or deepen collaborations with manufacturers and employers at local, regional, and global levels. This is to ensure that learning outcomes or graduates of training programmes can fulfil or match the needs of employers and manufacturers in the labour market (NEA 2018; Veung and Ven 2021b; 2021a). Thus, it is crucially important to explore various forms and features of collaboration in the Cambodian TVET sector and to see how that collaboration is formed and how stakeholders interact in the collaborative process. To date, not many studies have focused on collaboration in the Cambodian TVET sector.

5. Results

This section presents the study's findings, built upon the insight from the respondents in the Cambodian TVET sector. The findings primarily cover different aspects of collaboration and collaborative efforts between training providers and private companies. At the same time, the results also show how other relevant actors, like the government bodies and industry associations, may interact with training providers and companies in the collaboration process. However, the study mainly focuses on the relationships between training providers and companies.

5.1. Forms of collaborations in TVET

The following describes different forms of collaboration between training providers and private companies. The nature of these collaborations varies from one training provider to another. Some training providers collaborate more with multiple private companies, while others have more limited collaboration. The following collaborative forms help training providers to align skills provision with industrial skills needs.

5.1.1. Involvement in curriculum development

Most training providers pointed out that they usually involve the private sector in developing their training programmes. They gather information on skills needs and requirements from private companies to inform the curriculum design process. For instance, training providers invite companies to give feedback on skills provision. Some training providers also receive feedback and comments on their curriculum through their students and employers who host student internship. Furthermore, the extensive approval process for curriculum changes could make training programmes less agile in adapting to rapidly evolving industrial needs as pointed

out by the respondent from TP02. Overall, this reflects that most training providers do not have standardisation in involving the private sector in their curriculum development.

> Our approach is no other than requesting firms within our network to help us. If the firm told us what they needed and that the school did not have sufficient resources to answer those needs effectively, we would humbly request them to either train our trainers or provide us with training equipment and facilities to run the programme ourselves afterward. Recently we have been updated our curriculum by including i-Cloud programme and automation etc. (TP06)[2]

> We normally review the curriculum two times per year, and if there's nothing new or little to adjust, they [the university] don't proceed with the revision. Because there are a lot of inspection processes that need to get approval from the university councils, boards, and the ministry, this inspection/approval process takes a lot of time. For the case of the new technologies or products that highly influence our training programme, they [the university] will host/proceed with our 2-year curriculum review in order to upgrade the training programme to align with the latest technologies or skills. (TP02)

In some cases, training providers have a committee for curriculum design and update which consists of their staff members. There are also representatives from various institutions, for example, universities/training providers and private companies that comment on curriculum development. For example, the case of TP15 has a committee with members from 40 universities that help review the school's curricula. This training provider has a rigorous process of curriculum development or revision.

> Mainly, it was between us lecturers in the department. There were also some meetings with lecturers from other departments. Then we managed to produce a draft and organise a workshop. We invited lecturers from many establishments, as well as relevant intuitions to gather inputs and improve our work and ensure whether the school programmes match the societal demand. We conducted one or two workshops to gather inputs from outsiders. (TP17)

> We have a committee that comprises of almost 40 other major universities. They looked into curriculums from each department. They form a specialised team for each department and specialisation. There is time when we propose for meetings since surveys and suggestions require specific skills and whether we should modify our curriculums. If the technical team from each department proposes to modify the curriculums, it will be included in the report which will be discussed among the board of consortium. (TP15)

As discussed above, the involvement of the private sector in TVET can be achieved through meetings and workshops. Usually, training providers invite representatives from private companies to participate in meetings or workshops to consult on training content during curriculum development. In exchanging ideas with the private sector, training providers can update or develop their curriculum to respond to labour market demand. As the respondent from TP19 reported below, the sector skills council (SSC) usually has quarterly meetings with its members exchanging information on curriculum development.

2 This is an interviewee ID for this study. We conducted interviews with training providers, government bodies, industry association, and labour unions. Therefore, interviewee codes starting with TP, GB, IA, and LU refer to training providers, government bodies, industry association, and labour unions, respectively. For example, "TP06" means a respondent from a training provider (TVET institution), while "GB22" is a respondent from a government body.

> You may (or may not) have heard that our school has received a right as a member… the sector skills council in electrical engineering, so there is involvement or participation from the private sector, relevant stakeholders, or other public institutions, so every three months, we have a meeting on, for example, revising some part of the curriculum. (TP19)

> Just like you asked me earlier about the process of curriculum design, we first start with the stakeholder consultation. So, they have an influence on us, and it's not good if we cannot produce enough human resources for them. (TP16)

A few company representatives reported that their companies assigned mid- or high-level staff to participate in meetings/workshops arranged by TVET institutions or ministries. Many other interviewed companies did not mention participation in workshops or meetings with training providers.

> Yes, I have. Normally, when the company receives any invitation from school or the ministry, they would inform us in the production to and assign someone from the mid- or high-level employees to join. (CE4771 pro)[3]

> Yes, our employees used to get involved. I am quite busy at work so that I have never been involved with them. (CGBC830 hr)

5.1.2. Offering internships and apprenticeships

As part of their graduation requirements, students must conduct internships related to their study major at a particular company or worksite. They are sometimes required to write a thesis or report. These internships occur during year 2 of a higher diploma course, year 4 of a business bachelor's programme, and year 5 of an engineering bachelor's programme. Students must find internship opportunities by themselves or through instructors' and/or schools' networks.

> Our technician students are required to complete two internships conducted on an annual basis. The first internship must be at least 5 weeks. The purpose of this internship is for students to understand the nature of the work and practice relevant skills they learn for a whole year. We also want them to absorb new ideas on the current skills so that they know the importance of such skills and how to prioritise learning them. The second internship is for about 3 months and must be completed in the second year. This internship is more specific. (TP15)

> In the 4th semester, we facilitate to have them do internship at an enterprise of their preference for three months, and if without this internship, they would not be eligible for their final exam. During their internship programme, students are also requested to record and write a report of what they learn, how they resolve the problems, and how knowledge they obtain will help improve the operation of the enterprise. To ensure that students fulfil their obligation, the instructors would question them over the report they write, this is to ensure that students have indeed fulfilled the requirement. (TP18)

Internships also form part of the practical learning that training providers try to provide to enhance the student experience of the world of work and to gain hands-on skills and knowledge. Many training providers like TP10 and TP18 regarded student internships as part of the collaboration process, while students also gained the opportunity to learn from the workplace. Based on the interviews with company respondents, some companies also

3 This is an interviewee ID for this study. We conducted one interview with a representative from a human resource department (hr) and another with a person from production (pro) within one company. Moreover, our company codes starting with CE, CF, and CG refer to E&E, garment, and food processing, respectively. For example, "CE4771 pro" means a respondent from a production department from an E&E company, while "CGBC830 hr" is a human resources respondent from a garment company.

reported accepting students for internships, which was consistent with the statement by a respondent from a government body (GB22).

> Secondly, we also go to the construction site where we inspect the water and electrical system in the building. We also inspect generators when we go to the factory… We have an internship in the second semester. (TP10)

> We have been proactively involved with stakeholders, particularly enterprises, where we would coordinate for an internship opportunity for our students, either it is for 1 or 3 months. Such partnership with the private sector is inevitable. (TP18)

> For a formal training programme, we can raise NPIA (National Polytechnic Institute of Angkor) as an example. NPIA collaborates with garages in Siem Reap, which allows 15 of their students to do internship/work for ten months. This would prepare the students to be ready to work and apply for the job in their field. For other training programmes, we can raise ITI (Industrial Technical Institute) as an example: they bring 12 of their students to training in control board installment and power distribution. (GB22)

Unlike TVET in many German-speaking countries, apprenticeship is rarely heard of or utilised in the Cambodian TVET context. Some companies may have internship programmes but no apprenticeships for students. Particularly, the respondent from CF10395 stated that his company could observe student interns' performance. If the interns performed better, they could be hired after their internship completion. Sadly, based on the interviews with company representatives, there were apparently no apprenticeships, and training providers did not mention the occurrence of apprenticeships. As the lack of apprenticeships is noticeable in the Cambodian TVET, incorporating this apprenticeship system into the current TVET may benefit both training providers and companies, but this apprenticeship collaboration would need more efforts from both parties.

5.1.3. Hosting workplace visits and study tours

Training providers also conducted study visits to different workplaces. Such study visits allowed students and instructors to see and/or gain real-life and hands-on experience on a particular topic at the workplace. Usually, such activities were for a short duration. The number of study visits could be varied from one training provider to another depending on the number of private companies with which they had collaboration.

> We work closely since our students conduct internships and study visits at their companies every year. Over the last two years we did not send students to them and the companies themselves may not receive our students. (TP07)

> I would like to clarify that we have some programmes for students to do internships or study visits in factories or firms. We also have our students doing internships in Hyundai in recent years. But our electricity engineering doesn't have an internship programme. We have only a study visit programme. (TP20)

5.1.4. Provision of industrial skills training for collaborating partners

Some companies come to training providers and offer students and instructors training on various topics. Topics include introducing or promoting new product types and technologies developed by companies, as well as technical training. According to the respondent from TP02, some companies came to do their marketing activities like product and/or service advertising with students and instructors.

> …they usually contact us every year to come and train the students, on a voluntary basis, to know how to calculate and choose the right water pump motor and other motors. But they intend to promote and make the students aware of their companies' products, so they can guarantee that the students will surely choose their products once they graduate and start working. (TP02)

> Another way [of collaboration with companies] is we invite them to be part of our event to showcase our and their potential. (TP12)

Another respondent from TP15 reported that his institution obtained technical training from firms for several years. He added that the school also provided technicians or trainers for private companies to train employees. Such industrial training programmes were much needed in the labour market.

> They provide us with the skill provision based on our MOU [Memorandum of Understanding]. Denso Company has been training us for the past 6 years in the industry… It also includes contracts on some occasions which stated that the school allocated its technicians to fulfil the work in that industry, which is training. That's because companies and factories need capacity. Those were K-Cement [company], Total [petrol company] and ISI Steel [company]. They requested that our professors to train their technicians and explain them about steel and oil. (TP15)

A few company representatives indicated that their companies were involved in skills training programmes offered by some training providers (for example, TP04, TP15 and TP20). Some representatives from government bodies also indicated that private companies could gain access to work-based skills training programmes partially funded by the Skills Development Fund (SDF), with costs co-shared by training providers and companies. These training programmes benefitted both training providers and employers.

> I think there are some programmes. Since we are the member of the GMAC, the GMAC provides us with some free training related to sewing technical skills. (CGF21EF hr)

> For example, the technicians need to go and train outside to improve their skills at, say TP20. We work with TP20… Yes, it is also for the engineers. We send them to TP15. (CE4771 hr)

> In principle, we do not provide whole funding to any training programme. Schools and companies need to share the training costs. I believe that this mechanism is more efficient and sustainable. We can call it public-private partnership (PPP)… I would like to emphasise that SDF is for co-funding between a company and a school. If the company needs upskilling their employees, they can work with a school to develop a curriculum for any specific training programme, and how much fund they need more from SDF. The SDF will check before approval. (GB26)

5.1.5. Joint research and development

Research and development activities represents a crucial area of collaboration between TVET institutions and the private sector. The private sector needs to contribute to and benefit from research and development when collaborating with training providers on this aspect. As one training provider (TP15) pointed out, cooperation should not be limited to skills training programmes but more to research and development projects involving training providers and private companies.

> They want to expand the cooperation. We also want that and we are looking into it. We also have projects, development projects, not training ones. (TP15)

> We just signed memorandums on cooperation with the private sector, in which all six institutes: our school, Cham Ka Dong, Battambang, Techno, and STI of Ministry of Industry, Science, Technology and Innovation to cooperate with the private sector in research on the challenges of the private sector in improving the quality of packaging. (TP17)

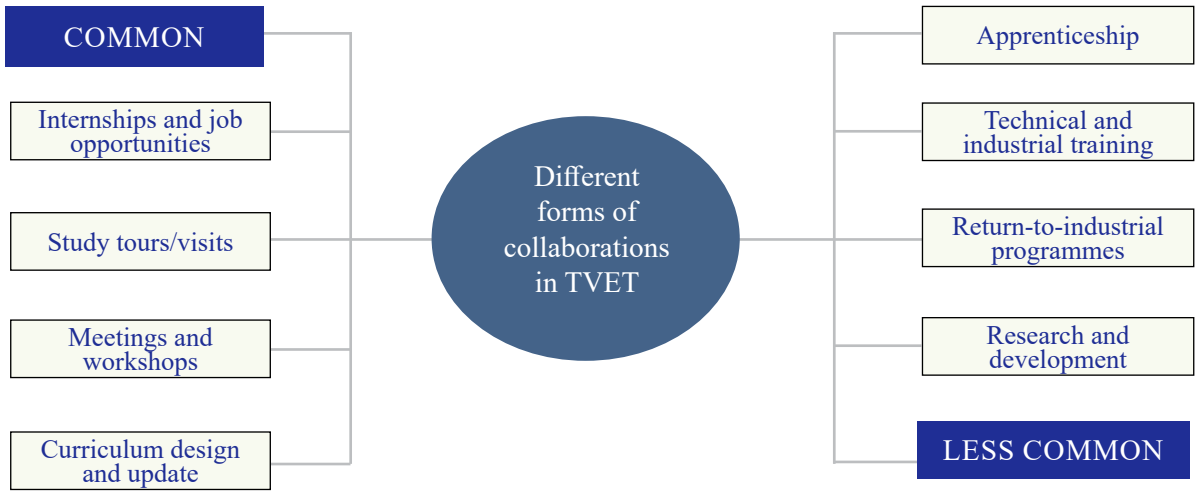
A few other training providers allowed their students to conduct research projects as part of their study requirements. Students' small projects could link their theoretical learning.

> We only have the students to build achievements (small projects) such as an innovating light system in a circular form and it is led and facilitated by the instructor to accomplish the project. But there is no competition or prize. Unlike a big university, they have a research department in which there is a budget. (TP09)

Although several training providers reported they have a research unit, such a unit just gathers information from students and/or employers about internships and employment as part of industry liaison units. This reflects that most training providers do not have a research and development lab or unit for advanced research projects.

> Generally speaking, first, what we do annually with our research unit in our university, is that they have the responsibility of taking care of students' thesis writing and contacting the students after their graduation. This means they have to do the survey annually. (TP02)

Figure 2: A summary of forms of collaborations between training providers and companies



Source: Author

As shown in Figure 2 above, training providers usually collaborate with companies. Still, they are commonly limited to information on internships and employment, study visits, consultative meetings and workshops, and participation in curriculum design. There are forms of collaboration that training providers do not commonly have with firms. They include the provision of and/or participation in (advanced) technical and industrial training, apprenticeship, return-to-industry programmes, and joint research and development activities. Thus, training providers need to strengthen further and expand these less-common forms of collaboration.

5.2. Benefits of collaborations with the private sector

Collaborations between training providers and the private sector yield collaborators with a number of explicit and implicit benefits, as indicated by the respondents in the study. Training providers and companies may gain (but are not limited to) the following benefits through collaborations.

5.2.1. Enhanced curriculum development and relevance

As discussed above, all training providers reported involving the private sector and other relevant stakeholders in their curriculum development and update. This involvement was said to help training providers tailor their skills training programmes to meet industrial skills needs. Some training provider interviewees reported that they consult the private sector about their training programmes. They also asked other relevant stakeholders to review or comment on their curriculum design so that they could have a curriculum responsive to labour market demand.

> Industries/companies have helped us a lot. First, we can invite them to be involved in designing and developing the curriculum. Second, in terms of labour, we also need to rely on them. Third, skills that need to be trained also depend on those of the private sector. (TP11)

> For example, when a representative from the private sector, an enterprise, told us about new digital equipment that is in high demand by the firm, the committee then looks into detail and the possibility of including it in our curriculum. If we decide to do so, we then look for available resources, say if any of our trainers are unable to deliver the courses, we can look for outsourcing etc. (TP18)

Information on industrial skills needs and requirements is of great importance to help inform training providers to design and develop skills training programmes relevant and responsive to the needs of private companies and the industry. In practice, some training providers involved the private sector in the curriculum development process through consultative meetings/ workshops or employer surveys on skills needs.

> They support us a lot in terms of our internship request, surveys on the curriculum, evaluation on graduates who are working at their companies and so on. (TP14)

> For industry, we always send our students to have a study visit in industries, for example, beer factories. We also collaborate with various industries so that we can send our students to see the real workplace, and what the real workplace is doing. Our trainers always lead students to visit those industries so that our curriculum can be developed somewhat exactly to match the need of the industries, but we don't mean that we go to every factory. (TP05)

As all training providers expressed in the interviews, meeting industrial skills needs and requirements required the private sector's substantial involvement in the curriculum design and development stage. In the process of curriculum development, as most training providers reported, representatives from the private sector were invited for their feedback, comments, and suggestions on curricula. Usually, the representatives from the private sector may include schools' former graduates and those working for the companies with which training providers work closely. The comments and suggestions could be used to reflect the relevance and responsiveness of their skills training programmes, and especially training content, to the labour market demand.

> When we want to know how we educate our students, we discuss it with our partners who are employers. Sometimes, our students also get trained when our teachers lead them to the real workplace, and they know and tell us which parts are good and bad, and we revise accordingly. Just like going to a tailor, it is tailor-made for us. So, they tell us what ability students should have. So, we are shaping our students to be what the employers want and according to the government's guidelines as well. Students will have a lot of opportunities, with not many obstacles. (TP01)

> The main feature of the training curriculum here is that we focus on the job market. That means we currently develop a curriculum based on observation of the job market. We often observe and track what are the skills needed in the market in order to be able to put them in the curriculum so that students' skills can match with the job market. (TP11)

Like the respondents from training providers, the representatives from government bodies agreed that collaborations with the private sector benefited TVET institutions. GB21 respondent, for example, reported how the private sector's involvement has a strong influence on skills provision. It means that without high engagement with the private sector, the quality of skills training programmes would be less relevant and would not meet the labour market requirements. When the relevance of training programmes was enhanced through the influence of, or feedback from, the private sector, it is to the companies' advantage, with tailored and skills-specific training programmes with reduced costs in worker training and development.

> There's no success without the involvement of the stakeholders from industrial sectors. Therefore, there are a lot of influencing factors on the teaching, because we need documents to teach, and for now, we have the industry advisory council and sector skills councils in five different sectors. All of them support teaching and training from developing the policies, curriculum, and the system, which requires participation from those stakeholders. That is why there is a huge influence, and we must try our best to get their support in any kind of support, as much as possible. Because we are responsible for developing human resources for them, great development of human resources would ensure the development of their companies' successes. (GB21)

Whether the engagement of the private sector can fully bridge the void between training providers and companies is another question. The magnitude or degree of such involvement was often perceived as limited in TVET. According to some representatives from government bodies, the current skills provision system could not fully meet the labour market demand. More effort from the government, the private sector, and training providers was required to work closely with one another on this matter.

> To what we can observe, currently we still cannot meet the demands of labour of 2nd [electrical and electronic] and 3rd [food processing] industries to factories or companies in terms of both quality and quantity. (GB26)

> Companies in the private sector should collaborate and support us to understand our struggles, not only just giving us complaints and pointing out issues without any involvement with us. And some of the private sector's representatives bring personal issues into the discussion, which is irrelevant and not beneficial to the TVET sector. (GB22)

5.2.2. Knowledge and skills transfer

Collaborations between training providers and the private sector allow knowledge and skills to flow from TVET to the industry and vice versa. Such knowledge and skills transfer from training providers to companies, or vice versa, may benefit both training providers and companies, enriching both sides. For example, some training providers received industrial

training from firms while in return the training providers provided the firms with the skills and knowledge they lacked. According to the respondent from TP15, the training of trainers (ToT) was beneficial not only to training providers and companies but also students. Thus, such a modality should be deeply integrated into the TVET for the benefit of future generations of students and instructors.

> They didn't just train one generation and move on to the next. They have the objective to train our professors, which is the ToT [training of trainers]. They want our professors to understand it and follow up with Denso and our students can work on it. (TP15)

Collaborative activities like study visits and internships for instructors (Return-To-Industry programme) can make instructors' existing knowledge, skills, and competency levels more relevant to industrial skills requirements, thereby adding value for TVET students, instructors, and institutions. The respondent from TP19 commented on the vital role of instructors' returning to industry to gain new knowledge and skills. These collaborative activities benefited companies as their workers could learn from instructors' theoretical and practical knowledge and skills.

> For the teachers in the high diploma programme, I think they used to visit companies. For example, one of Asian Development Bank's projects allows our teachers to return to industry, through the "return-to-industry" programme. We have sent many of our technical teachers to learn from industry. (TP19)

5.2.3. Direct access to the labour market

In some cases, students can gain job opportunities when they conduct their internships at a particular workplace. For example, according to the human resource respondent from food processing company CF10395, students from TP15 and other well-recognised TVET institutions could be hired after they complete an internship as employers could observe students and trust the quality of skills training providers. When collaborating closely with companies, training providers can also receive job information or opportunities from companies directly and disseminate it to instructors and students. Well-known training providers who have good collaboration with particular firms may be prioritised for the job recruitment of graduates. Thus, increasing collaboration in this area would also provide learners with more and direct access to the job market, while learners could learn practical knowledge and skills from companies. With close collaboration with training providers, companies could build a feedback loop and recruitment pipeline accessing a skilled workforce with industry-tailored skills and knowledge.

> When interns do their internship, I can observe them. After their internship is finished, I can ask them to work for us. (CF10395 hr)

> Staff from private companies also come to our school and announce job information requesting students to apply for jobs at their companies. The problem was in previous years that our students didn't know how to write their cover letters or CVs, so we prepare our students how to write a cover letter and CV. (TP19)

5.2.4. Training facilities, equipment, and materials

Training facilities, equipment, tools, and materials are important for both theoretical and practical training. When training providers build good relationships with various companies, they may probably receive training equipment, tools, and materials that may otherwise be financially out of reach. These resources can be acquired through either direct financial support or in-kind donations from the companies. Such funded or donated facilities and equipment are

much appreciated as most training providers find it hard to buy or use public funding for such training stuff. However, the availability of such resources is still generally limited, or too little, for many training providers, while only a few training providers with big private companies can receive more.

> We have MOUs with companies that we process raw materials for. But since we lack the equipment, we could also raise a proposal to request for new equipment to process their products. They gave us that opportunity and we think that's a very good form of collaboration. Not only did they support our students, but also our equipment. That's what we want. (TP08)

In some cases, training providers have access to advanced workplace facilities/technologies, while most do not have such training facilities and equipment at school. Thus, private companies may allow students and instructors from training providers to benefit from their workplace facilities and equipment when collaborating. The following quotes show what they received from collaborating with firms.

> In the past, we had Mitsubishi company donate four sets of PLCs to our university for the students to study. They also provide us with training skills for our students for around two weeks during that time. (TP02)

> That is a particular lab exclusively for Ford cars. We also have another different lab for other equipment such as computers financed by a Chinese firm. We have a lab that EC and Takasaki jointly financed for the cooling system. (TP06)

Most representatives from government bodies held similar views on collaborations with firms that would bring in new and advanced facilities and technologies for students and instructors to learn and practice at school. The following quote highlights the importance of collaborative efforts between training providers and companies.

> When companies need students for their workplace, they will contact them; plus, they provide any necessary materials for teaching. As we can see in the example of Ford that provides cars for students to study… And this Ford company also signed MOUs with a lot of schools in provinces such as Pursat and Siem Reap. (GB23)

5.2.5. Financial incentives

Funding is an essential factor that strongly influences skills provision in Cambodian TVET. However, most training providers reported they lacked funds to operate their skills training programmes adequately. Through compelling collaborations with private companies, training providers can further mobilise or receive financial resources to conduct research and development activities or specific training courses. Specifically, training providers may use funding from the private sector to invest in advanced facilities, equipment, and tools for industry-specific training to match industrial requirements.

> For some programmes, we receive funding from private companies. Whereas for other programmes, we receive funds from the government. Hence, we have no choice but to coordinate and go through the set procedures. Even if the private companies agree to provide us with funds, we still need to go through the procedure and get necessary approval from the Ministry. (TP13)

Most training providers mentioned a lack of funding for their training facilities, equipment, tools, and materials. However, they had the primary government funding source alongside partial tuition fees and some financing from development partners. Despite these sources, a

recurring theme is the inadequate financing for training facilities, equipment, and materials. As expressed below, most training providers sought funding from the private sector, especially firms, to support training, research, and development.

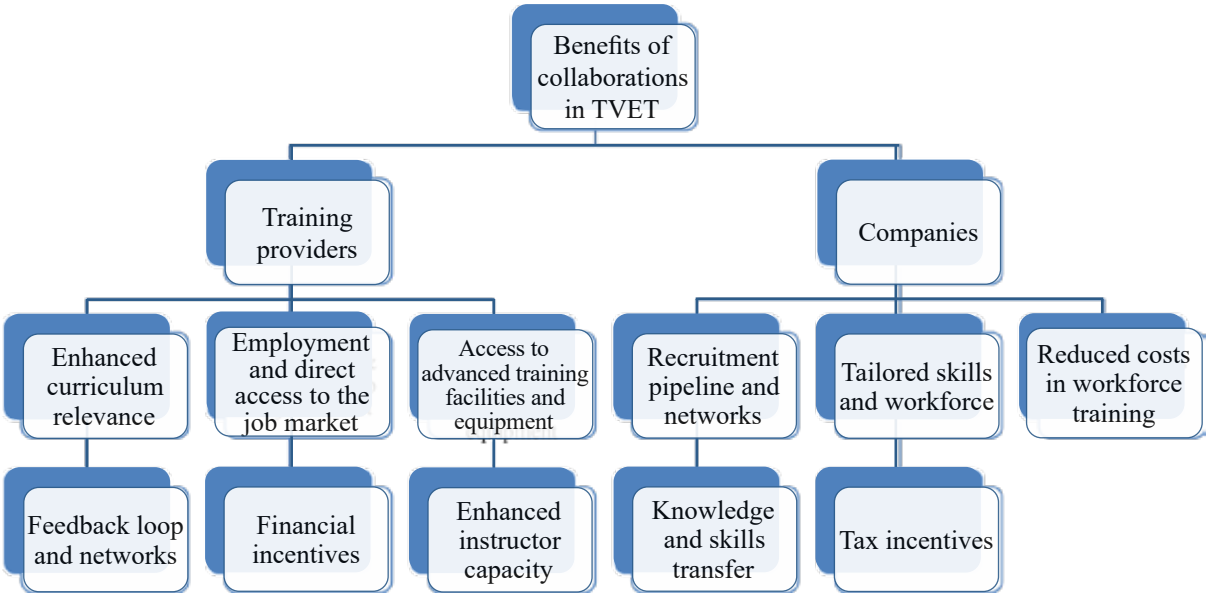
> This is to show the level of equipment used by SMEs versus those used by big companies. At least students can know more about the equipment despite the fact that they're at the SME level. It needs a lot of funding, but we haven't found someone to support us yet. I think we are getting there. (TP16)

> Like what I raised earlier, our issue is that the training providers have limited funding compared to the industry. They are not able to equip modern technologies, nor could they be ahead of the industry in terms of technology. (TP14)

Funding from the private sector to support training was generally hard to access for most TVET institutions as pre-employment TVET programmes were usually not prioritised highly by many companies in the labour market. It could be that companies preferred skills or industry-specific training programmes meeting their skills needs. Improving the quality and relevance of TVET programmes should be the key to building trust and thereby opening up new avenues for collaboration between training providers and employers. Private sector companies would benefit from the recent Law on Investment emphasising the role of private companies in workforce skills development. Companies could receive tax incentives from their worker skills training and development, which would encourage companies to collaborate closely with training providers.

Figure 3 below summarises the benefits training providers and companies might obtain from their collaborations. Figure 3 indicates that training providers received more benefits. Firms seemed to invest more if they participated in collaborative activities. Such fewer benefits for firms may prevent them from participating in close collaboration with training providers. Moreover, although written in policy documents, incentives and especially tax incentives for firms may be lost in the implementation. However, benefits for companies might be that the skills and knowledge of TVET graduates would be tailored and suitable for industrial skills needs if the private sector's engagement is built and strengthened.

Figure 3: A summary of benefits of collaborations between training providers and companies



Source: Author

5.3. Degree of collaborations in TVET

The following explains different features of collaborative activities as some collaboration activities are more on a concrete base, while some other forms are less concrete, limiting effective collaboration between training providers and the private sector.

Regarding student internships, students are required to conduct their internships at particular workplaces. Usually, they independently find internship opportunities themselves, while training providers largely confine their role to issuing requisites usually only helping them with official documents when requested. Furthermore, generally there are no special arrangements or treatments between training providers and employers. There is no guarantee of hosting or accepting many students for internships and/or job placements from employers. There are a few training providers claiming that their students or graduates were in high demand by their counterpart partner companies. Overall, student internships appear (to be) common. However, the content of student internship programmes is not well structured for the sake of students' workplace learning or not strongly enforced by both firms and training providers.

> It (internship) accounts for one semester. In C1 or associate's degree, or C2 and C3, the internship takes place in the second semester. We give score for internships. We do not allow them to take exams if they do not complete their internship. (TP10)

> It depends on the company needs. If companies visit our school to announce their internship programmes or if they need or allow our students to do internships, our students will have internship opportunities at the private companies. (TP19)

> Students from year 3 to year 4 have many opportunities to practice in factories and companies. They need to intern around 2 to 3 months before the final exam. After completion of practising in a laboratory and workshop in school they need to practice in factories and companies directly. (TP20)

The interviews with companies revealed that a few companies (e.g., CFE45EE and CF10395 below) accepted a small number of students as interns. Companies seem to take more students from prestigious training providers or their networking with TVET institutions or instructors. It may depend on companies when they would need interns as well. Thus, most companies do not have or set up regular internship programmes with particular schools. It could simply mean they accept interns ad hoc while students must conduct internships for their study credits or requirements. Training providers often come in between companies hosting the students and the students looking for internships after they already obtain confirmation or agreement from employers to accept them as interns. Internships may not result from school-industry collaborations directly. Internship opportunities may be seen as very sporadic as it depends on companies.

> Recently, we have interns from IU (International University). It is related to food technology and chemical engineering. For technical engineering, we had interns from TP19 and Takeo Training school. Other schools are TP03 and TP20. (CFE45EE hr)

> The company generally has interns [in the workplace]. When interns do their internship, I can observe them. After their internship is finished, I can ask them to work for us. (CF10395 hr)

Training providers have engaged with the private sector through different channels, including consultative meetings/workshops, surveys on skills, and employers hosting student internships. However, these collaborations are not concrete while implemented seemingly on an ad hoc basis. Some companies may not have enough resources or commitment to collaborate

with training providers. Furthermore, while training providers seek private sector input for curriculum development, these consultations are not regularised and the feedback is not consistently integrated.

> Our collaboration happens from time to time, without any clear commitment in the form of consortium. Sometimes, we approach them when we need their cooperation and request for their support. This type of collaboration really depends on the commitment of the private sector because we don't have any official form of collaboration. That's not effective. To be effective, the private sector needs to be international or multinational companies like Coca-Cola that have a system which encourages the employees to involve with the industry. (TP14)

> There are some companies that align with both the skills and subjects. However, the reason why I didn't fully agree with this question [whether skills provision meets industrial skills needs], even though it's aligned, our curriculum could not be updated/adjusted annually, or even when there is a new introduction of the latest technology or the new products. (TP02)

Companies usually seek feedback on their internship programmes, specifically the performance and quality of the interns they host. According to an industry association (IA31), companies want to assess and improve their internship programmes, but there appears to be a disconnect between training providers and employers regarding feedback or comments on student internships.

> Honestly, this is one of the challenges I try to solve, but I couldn't find a better solution on how to keep track of the result from the workplace. When we send the trainees back to their companies, do we have a chance to know whether they can perform well or not? Most likely, no. That's why they keep doing the same thing or think it's the right thing to do; they don't know if this was the right thing to do. That's why we always say let's find a better result when the trainees go to work in the real workplace, but, honestly, we don't know how to track them. At least they should try to get the employers who let them work in their places and interview them [employees] to verify whether the training content is good enough or matches with what they need. Then, we know what we can change the content of the training. (IA31)

> Their [companies] influence is very huge. We cannot invite them because we don't have the budget to cover them. Related to budget, if we invite them here, we have to cover for them. (TP09)

According to the representative from TP09 above, involvement with the private sector is limited as they could not invite private companies to participate in their curriculum design. Most training providers claimed to have invited representatives from the private sector to join in or exchange ideas for curriculum development or update. Based on the company respondents, their involvement with training providers was small-scale in terms of participating in meetings, workshops, or internships. Most company representatives reported that they have rarely or never participated in workshops or curriculum development, as expressed below.

> The Company has never participated in that and the company has not been informed or received the invitation. (CEB043 hr)

However, some training providers reported having a sector skills council consisting of representatives from the private sector and relevant stakeholders. It was only advantageous to the training providers with such a skills council, while many other TVET institutions do not. Moreover, even the training providers with a skills council still have limitations as one sector skills council belongs to only one field of study, for example, electrical engineering

or construction. Thus, the scope of work is relatively limited while many other training programmes are still left behind with less involvement with the private sector. According to the respondent from industry association IA32, training providers and people from the private sector should meet and reflect on the skills training programmes.

> As you may know, nowadays, the industrial labour market is developing very quickly, so we cannot stand still, we need to develop or update our programme depending on industrial needs. Therefore, to revise our programme we need to gather inputs from the private sector as well as the members of the sector skills council in the electrical engineering field to revise or update the programme to meet the changing demand and context of development. (TP19)

> …because S4C [the Skills for Competitiveness project] is really working on that [aspect] to ensure that the training providers and the technicians from the industry must sit together at least one time per 3 months to reflect on vocational training outcomes and outputs. (IA32)

In other words, most training providers rely on instructors' connections and networks with companies or former graduates to build relationships before formalising their collaborations through written documents or agreements, as indicated by training providers TP07 and TP11. As the industry association respondent from IA31 also pointed out, instructors work directly with companies on employment and internship aspects rather than at the institutional level.

> None of them have registered MOUs with us even CP (company) and Betagro (company) but we work closely since our students conduct internship and study visits. (TP07)

> We do have some collaboration but not a lot…. But some of the lecturers have connections with private companies. They could use that connection and allow our students to do an internship there. We have MOUs with food processing enterprises or private companies… Some companies have quick responses, while others are slower. (TP08)

> …For example, in some TVET programmes, teachers directly talk to the private companies, but the company is just a company because they're big and need many people… (IA31)

The industry associations' perspective also aligns with the findings discussed above. They viewed that the collaborations between training providers and employers are limited, firstly, with skills training programmes, and secondly, the number of companies and business sectors. Training providers work closely with a few (large) firms in a few economic sectors. Thus, they called for broader engagement across various industry sectors. Another respondent from IA32 illustrated that there is no close collaboration as graduates can obtain jobs themselves.

> I don't think it's matured yet. They do have some collaboration and partnership, but it's very limited… But those companies are not very influential enough; of course, we can learn from them. I was in charge of the labour committee last year; there are some good programmes that the TVET schools are using, but they are still talking with a very limited number of business organisations, not in general. (IA31)

> From my experience, I can say when it comes to close (collaboration), it's very limited. Because they're not close, most graduates get jobs by themselves… (IA32)

In line with the views of industry associations above, the respondent from the government body of GB26 acknowledged that collaborations between training providers and companies are mostly informal, without MOUs. However, he expressed positively that there is a trend that private companies start to change their perception or attitude to work with training providers. Such perception supports the view from one training provider TP18 who reported that the

collaborations with the private sector have improved due to the encouragement or enforcement from the government in persuading the private sector to work with training providers. Most representatives from government bodies agreed that collaborations exist, but the implementation is still limited.

> In general, most of them do not have MOUs. The reason is that they did not have close collaboration in the past. However, after SDF became available, they started to change their mindset and moved closer together. Without MOUs, it is difficult to collaborate. In some cases, when MOUs are not clearly written, then the implementation is also not effective. Hence, it requires commitment to implement MOUs. (GB26)

> I choose option 2, as I somewhat agree with the statement [the institution collaborates closely with the private sector]. We do collaborate with private institutions, but we still don't fully agree on this… However, the engagement is still limited. To further clarify this point, there would be no success if there's no engagement from other external institutions. (GB21)

> Currently, the partnership between TVET schools and the private sector is much improved if compared to the old days. Back then, some firms even ignored us when we requested an internship for our students, they did not want to waste their time. Now, the situation is turning the other way round, standard firms came and offered students internship opportunities, some even had allowance for students during the internship. (TP18)

Even when training providers formalise or institutionalise arrangements like official MOUs with private companies, such official agreements are not implemented effectively or regularly, according to training provider TP08 and government body GB26 above. Moreover, it is always challenging to reach a formal arrangement or agreement on specific topics or aspects of collaboration. Most companies do not value collaborations with training providers, as reported by training provider TP09.

> It is not effective. I feel like that the private sector has not yet thought of society as its priority. They only think of their profit as their top priority. If the school sends skilful labour for them, they are happy to take it. But if the school invites them to share their opinion, they don't have time as they think it is a waste of time. They don't care about public service. (TP09)

> We often collaborate with the private sector which oftentimes can lead to signing an MOU with one another to exchange students. Second, we sign the MOU with them to gain knowledge on the demand of labour on certain skills level, and the number of workers they need in order to train and teach students. (TP11)

> We invite them sometimes to provide guest lectures but they [guest lectures] are not regularly conducted. (TP14)

Some training providers have many companies with whom they can collaborate in different aspects. In contrast, other training providers, especially those in provinces, have fewer companies to collaborate with, as explained by the respondent from training provider TP11. Thus, they still have collaborations with fewer companies. Institutional profiles and reputations of provincial training providers may determine collaborations as companies look into highly relevant and quality skills programmes.

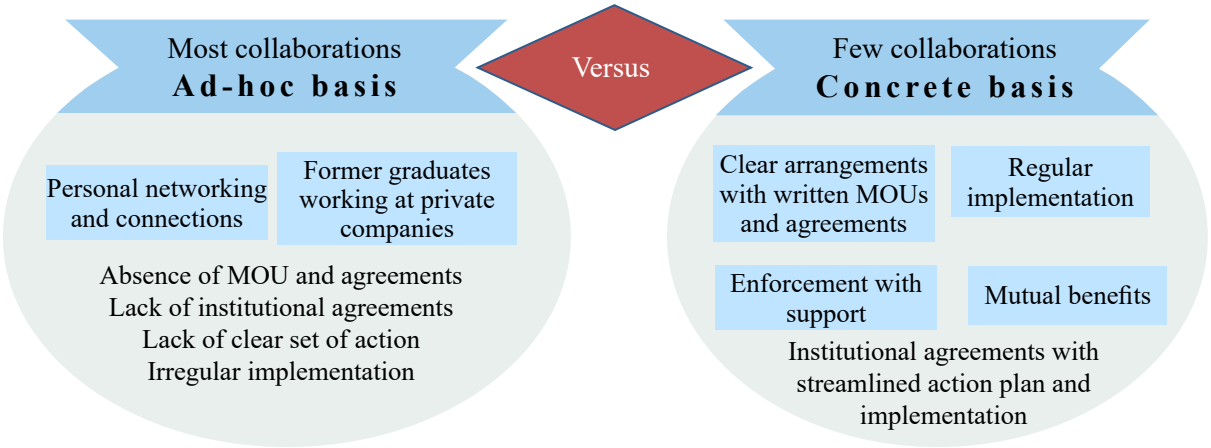
> Actually, it is hard to find companies to collaborate with in Battambang but we have one organisation to support us, that is the People in Need organisation. What we collaborate on is electrical engineering in Battambang. But until now we have not had any MOUs, we just have a relationship with each other. (TP11)

Noticeably, collaborations in research and development activities were least reported by most training providers. Also, no respondents from companies mentioned research and development or funding for research and development activities between training providers and employers. According to the respondent from TP15, his training facilities and equipment are higher or comparable to industry standards. Many other TVET institutions do not have such facilities and equipment for research and development, as pointed out by the representative from training provider TP10. Thus, overall collaborations in such areas are scarce or shallow at large.

> It's because we don't have any budget for conducting research. If we have such a budget or package for this research, we can try and do research. Moreover, our instructors are also busy teaching... For example, we have to teach a full week, so we don't have time to conduct research. Second, our instructors have limited capacity, so we want to have short or long-term capacity building programmes for our instructors. (TP10)

> We have a lot of human resources. Secondly, we have high potential in installing research equipment... We are almost on par compared to the equipment used by the industry. There are some aspects in which we are even better than them… (TP15)

Figure 4: Degree of collaborations between training providers and companies



Source: Author

Figure 4 above offers a nuanced overview of the types and features of collaborations that most training providers maintain with private companies. The graph distinguishes between collaborations founded on more formalised, documented agreements and those built on informal relationships or ad-hoc arrangements. The Figure illustrates close collaborations with various industrial employers through official (or written) documents like MOUs, as a few training providers stated (e.g., TP20, TP19 and TP18). Many other providers (e.g., TP17, TP11, TP10, TP09, and TP08) form collaborative activities based on informal and personal networking and communication with companies for student internships, job placements, and input for curriculum development and update. Collaborations with firms without suitable institutional arrangements or institutionalisation of their collaborative practice is likely to make their collaborative efforts less sustainable in the long run. Although some training providers claimed to have formal or institutionalised arrangements with private companies, implementing such collaborative activities is still small-scale and limited to low-cost activities like internships, job announcements, and study visits. Furthermore, some training providers reported signing MOUs with firms, but the implementation is still challenging or ineffective. Therefore, sustaining such a collaboration is in question.

5.4. Challenges in collaboration

As indicated, most training providers face challenges and problems forming and strengthening their employer collaborations. Depending on different factors, some training providers might face more challenges than others.

5.4.1. Lack of funding and resources

Training providers often reported a lack of funding and resources when they wanted to build or further expand their collaborative activities with the private sector. Some training providers raised this problem as one of the main reasons they have limited collaborative activities with private companies. As they explained, collaborations with the private sector on training-related activities mean significant expenditure that they do not have.

> Funding also affects stakeholder involvement in curriculum development/update. The key persons who are in charge of curriculum development/revision are from the school, and the school does not have any budget to involve the private sector… We need funds to support us, we need it for incentives for our workers, and sometimes for the partners as well. The incentive can be in the form of covering travelling and related costs which encourages them to put full efforts into the collaboration. (TP09)

Furthermore, some training providers found it hard to finance their training facilities and equipment to meet industry standards of large firms' production technology. They already faced budget constraints; thus, the lack of funding can limit their training capacity and sometimes hinder their collaborative efforts.

> We want our school to have a centre to pilot plans. They can be at the SME level and use modern equipment. This is to show the level of equipment used by SMEs versus those used by big companies. At least, students can know more about the equipment despite the fact that they're at the SME level. It needs a lot of funding but we haven't found someone to support us yet. (TP16)

5.4.2. Limited capacity of TVET institutions and instructors

As often reported by training providers and sometimes by employers, training providers lack contemporary training facilities, tools, and human resources to meet the expectations of industrial firms. Some training providers confessed that their capacity in training programmes and human and technical resources is limited and cannot meet the high expectations of most firms in the industry, as expressed by the respondent from training provider TP16. Based on the respondent from the government body (GB24), the level and magnitude of collaborations with companies may also depend on some institutional factors. For example, TVET institutions that value collaborations would fare better in collaborating with private companies.

> They (the company) may need a quality food analyst, but we cannot offer them such an analysis. Therefore, they need to look elsewhere or abroad. After some years we still don't have this capability so they give up on us, maybe they will cooperate with foreigners instead. (TP16)

> For implementation, this work is not yet automatic, which means that schools with a community or management team that take care of schools would have to collaborate with other companies to get the technicians to work and teach their students. However, for those schools that don't have that kind of connection they train their students in the main textbooks, and they don't know much about the demand from the job market, and the students might not know what kind of job they want after their graduation. (GB24)

Not many training providers can conduct full-scale research and development activities due to budget constraints and institutional research capacity, as the respondent from TP01 raised below. The limited capacity in research and development could also mean that training providers were below industrial standards in terms of knowledge and skills transfers or innovative activities. Thus, the private sector could not expect much from the collaboration with local training providers in research and development projects, thus hindering companies from investing in research collaborations at large.

> A laboratory is vital and needs technology to support it. Therefore, we need to support professors in conducting more research and to upgrade… We need professors to work on that. We have an agricultural lab in Battambang which has had hundreds of dollars invested in it. However, the limited capacity of our professors meant that the lab was not frequently used. This is a bad experience. That is why we need to upgrade our professors via workshops; otherwise, we cannot extract the full potential. Another challenge is technology. We need to catch up with the global progress. (TP01)

Moreover, TVET instructors may lack teaching experience, skills, and knowledge of modern industrial and production technology, making their teaching less relevant to the skills required. According to training provider TP01, it is also hard to attract qualified industrial experts to be TVET instructors.

> Experts in this engineering field prefer freelance jobs, which makes it difficult for us to recruit instructors for our programme. (TP01)

> Some fresh graduates wish to become lecturers as soon as possible. The instructors have the capacity, yet their experience in teaching needs to be improved. Before starting to teach officially they should work as a teacher assistant for the first few years of their career. (TP02)

5.4.3. Lack of trust in the relevance and quality of TVET

A lack of trust in the relevance and quality of TVET programmes may prevent private companies from fully engaging involvement in collaborations with training providers in addition to existing challenges of institutional and instructor capacity in technical training. Furthermore, the need for industry or skills-specific training programmes is always in high demand from the private sector. Employers expressed that they face difficulty in recruiting a competent and qualified workforce for mid- and high-level positions, therefore relying heavily on in-house skills training and internal promotion as shown in the following quotes from a few human resource respondents of electronic companies. On the contrary, one respondent from industry association IA30 asserted that his association members prioritise the critical role of on-the-job training that allows new entrants and existing workers to integrate smoothly into the firms. However, he added that firms also need more structured training for employees. This approach, which incorporates both non-formal and formal skills training, is necessary for employees and firms' growth in the long run, while such structured training may keep workers more productive and motivated, and reducing turnover rates.

> For skilled operators, since each factory requires different skillsets, we cannot find any outside operators with the skills required for our factory production… We did not recruit but internally promoted the supervisor, while the engineer was recruited from outside. We did not recruit any team leaders from outside. (CE1BD4F hr)

> We have never asked them about their certificate since we only recruited general employees, then we would promote them to be a leader. Like what you have seen with the wire production here, all the machinery is imported, and our Cambodian employees do not have the technique required for wire production, that is the reason why we need to train them at work according to their capability. (CE518AD hr)

> Many of our members still believe that they do OJT better, but it's not structured enough. So, you need to do OJT, because people need to familiarise themselves with the internal system, but you also need a very structured training, you need to have one certain expectation [from the training], once you've completed the training. And not so many variants [skills improvements] in term of skills, and your OJT is not structured, which means you learn 25%, you learn 50%, or 70% is not so good. But, it's very difficult to get foreigners to invest to train locals; it's so difficult. And, it's also extremely difficult to get investors who don't know how long the investment horizon is. It's very hard to convince them to invest in training, which is a very long-term investment. (IA30)

Training providers also acknowledged that the current skills provision system is still limited in terms of quality and relevance. Thus, companies may opt for foreign experts or outsourcing for their production requirements instead of collaboration or are less likely to involve themselves with local training providers, as pointed out by the respondent from TP19. It is also consistent with the view of one respondent from IA32 that the quality and relevance of skills provision are low, making employers distrust graduates' skills and qualifications from formal training.

> For example, we have many local Cambodian engineers or technicians, but the question arises when we build condominiums or big projects whether we still need foreign engineers or experts from China, Singapore, US, or UK. It means that our skills system is still limited, so our industry is a domestic industry that needs foreign expertise. To clarify this point further, if our skills training is not responsive to the industry our industrial development will be slow. Thus, people in the industry may not know what to do but force themselves to use foreign expertise or outsourcing that is more competent and skilled to fulfil this skills gap. (TP19)

> First, it's the way it is delivered, I mean the content and then also we have to see the quality of the delivery of the training programme. Because there may be some providers that do the training for the sake of training, regardless of the output. I've observed that. I've been a training facilitator quite a few times and I've focused more on the outcomes and the quality. Because we will just waste our money, our time, and our resources when we're conducting the training that is so-so. We have to really make sure that the training that we provide, the learning and development that we provide, will really result in something that is positive, which enhances the skills and ultimately helps the companies' productivity in terms of their production. (IA32)

Some respondents from training providers complained that some companies are hard to understand as these companies do not see the significance of collaborative efforts in skills training. This mistrust would hinder the alignment of skills training from meeting with actual industrial skills needs, especially when students cannot learn or experience workplace technology or production work. It could be that TVET programmes are not responsive to the industrial skills needs of a particular sector, for example, the garment and textile sector, as the respondent from IA30 pointed out. According to one labour unionist from LU35 below, collaboration comes with trust between collaborators, while building that trust is time-consuming and challenging. Furthermore, the government may be the central actor who could facilitate and enforce the collaboration between training providers and companies.

> For other national level companies, they seem to not understand the significance of these activities, so they don't often support us. (TP14)

> Like what I've mentioned, some industrial factories/companies do not allow us to go site-visit within their area. It's hard for us to understand their companies, and especially we couldn't study their production chain. If we're only able to study theories without having a collaboration with the industrial institutions, it's somehow not very useful. (TP02)

> In the garment industry? The TVET is not doing a lot for the garment industry, but TVET is doing a lot for other industries... (IA30)

> Building trust takes a lot, so the private sector or companies should discuss this with the government first. (LU35)

5.4.4. Limited integration of collaboration into an action plan and implementation

Training providers have their institutional setup of an industrial liaison unit (ILU) to perform and oversee collaborations tasks with the private sector. Though in reality, ILU activities tend to focus narrowly on tasks like collecting and disseminating information on student internships, job announcements, and study visits.

> In general, we have the industrial liaison unit that helps find job opportunities or internships for students. Staff from private companies also come to our school and announce job information requesting students to apply for jobs at their companies. (TP19)

> We can confirm because the International Relation and Cooperation Office conduct a survey every 3 months after students graduate to collect data [from the graduates]. We collect information about our student employment situation and get feedback from employers. After that, we conduct semester and annual surveys to update our students' situation. (TP20)

Usually, the number of staff members working in ILUs is limited, and they are also juggling to teaching responsibilities as their main job. When they come to work for ILUs, they face challenges in arranging time for teaching and performing collaboration tasks. The work of collaborations in ILUs is not streamlined or prioritised sufficiently by training providers and instructors. This leads to low commitment and inadequate focus to establish diverse and impactful collaborative activities with significant magnitude in implementation. ILUs may have annual action plans with success indicators, but implementing such plans is also challenging because financing collaborative activities with private companies is small for most training providers across the country. As ILUs may not function well or fully, the interaction with the private sector would not be fruitful in the long run.

> Each institute lacks instructors. Nowadays, our instructors teach students and also work as office staff. It's a lot of work. We need to do this; otherwise, we don't have anyone to work in the offices. (TP10)

> Up until now, we have not had any system or team to follow up one another. We just have one office that is for interacting with the market called ILU for some people to work on but now there are not many activities in place. We just have this office to track, yet with no activities yet. (TP11)

5.4.5. Limited enforcement of legal frameworks and policies in supporting collaborations

According to the representatives from training providers and government bodies, legal frameworks and national skills development strategies or initiatives (e.g., TVET Policy 2017-25, Law on Investment, and Skills Development Fund) promote collaborations between training providers and the private sector. However, when it comes to the actual implementation of those initiatives, there are challenges facing training providers. At the same time, they can only regard the policies or regulations as a direction, reference, or roadmap.

> The government is the one who creates the laws, that is why they [companies] are afraid of it [not interested in collaborating training providers]. Back then they [companies] were not afraid of us [not interested in working with training providers] but since they [companies] are scared of the upper level [the Ministry of Labour and Vocational Training]; then they [companies] start to involve with us [training providers]. This is an important point. Therefore, the government is very influential in the training programmes. TP09

Some training providers reported strong encouragement from government bodies, but there are significant obstacles to full-scale implementation of collaboration with the private sector and relevant stakeholders in the TVET sector. Training providers lack financial support and clear actionable guidance with enforcement and facilitation from government bodies. According to the respondents from the following training providers TP09 and TP19, government bodies play an essential role in facilitating and/or enforcing the private sector to collaborate with training providers, as most employers lack interest in collaborating directly with local TVET schools.

> However, it would be more effective if such a mechanism is governed by the state level, for example, by having a regulation to further strengthen collaboration between two entities. (TP18)

> Regarding the government regulation and guidance, for example, sometimes in the past, when we wanted to invite companies to participate in our seminars, it was a bit difficult. If the ministry sent invitation letters to them, they were more likely to participate in those workshops/seminars. (TP19)

> For our TVET schools, they have their collaboration partners, including well-known companies in Cambodia. However, some companies still never participate or support, yet they complain a lot. (GB22)

One representative from the labour union LU35 confirms what some training provider representatives are saying by stressing the crucial role of government bodies in facilitating and enforcing the collaborations between training providers and the private sector. Another labour unionist from LU34 also observed that the connection between training providers and employers is relatively low in Phnom Penh compared to some provinces like Svay Rieng, where several special economic zones are located. It is somewhat contradictory to the fact that training providers in Phnom Penh have more companies to collaborate with. However, he emphasised that the training providers and departments under the MoLVT have to collaborate more with factories. This perception is in line with the respondent from the government body of GB25.

> I agree with this statement, but it doesn't make sense for the private sector to directly contact training providers. Building trust takes a lot, so the private sector or companies should discuss this with the government first. After that, the government can talk with the workers' representatives about the demand in the job market. I don't like how the private sector directly communicates with training providers because this is what we call a direct influence. (LU35)

> Based on my observation, I didn't see much connection between the private sector and training providers in Phnom Penh, yet there are connections in provinces such as Svay Rieng, as an example. The Department of Vocational Training or the deans from the training institutes under MOVLT must collaborate to host a human resource development conference and find human resources for the factories. (LU34)

> It's their obligation to collaborate; however, it's not like that entirely in practice. It could be factors related to both providers and companies. Some providers complain that companies do not help. Yet, there are providers who have collaborated extensively with companies. So, it could be related to the capacity of the coordinators… (GB25)

5.4.6. Lack of mutual benefits of collaborations between training providers and companies

While employers often lack trust in the quality of TVET programmes, they may not explicitly see the benefits of collaborating with training providers. Companies are profit-oriented organisations, so when they come to partake in any collaboration, they need to consider the return on their investment. A lack of mutual benefits may deter employers from collaborating with training providers. As reported above, although official agreements or MOUs may outline mutual benefits, most training providers still lack the capacity and/or resources to fully implement collaborative activities and ensure mutual benefits as written in official agreements or MOUs. Noticeably, training providers seem to benefit more from the collaborations than companies do, while sometimes companies rely more on their in-house skills training than the TVET system.

> For one aspect, if we think of mutual benefits, I think we can help each other. Personally, the agreement is just a piece of paper, and I don't give much value to a MOU and other agreements… But a good relationship results from a deep understanding between the school and companies, and thus are a necessary thing. (TP07)

> We have the training, and internship with them. But in terms of study curriculum, we cannot involve them because we are not able to invite them. Usually, the private sector only cares about profit and not much training… Generally, there will be nothing without money. On the other hand, if we want to invite employers to be part of the council, then it is not okay. If we invite them and then provide them money for petroleum fees or whatever, they will feel encouraged and satisfied; thus, the work will be improved. Therefore, everything revolves around money. People tend to not be happy if they do not see the money. (TP09)

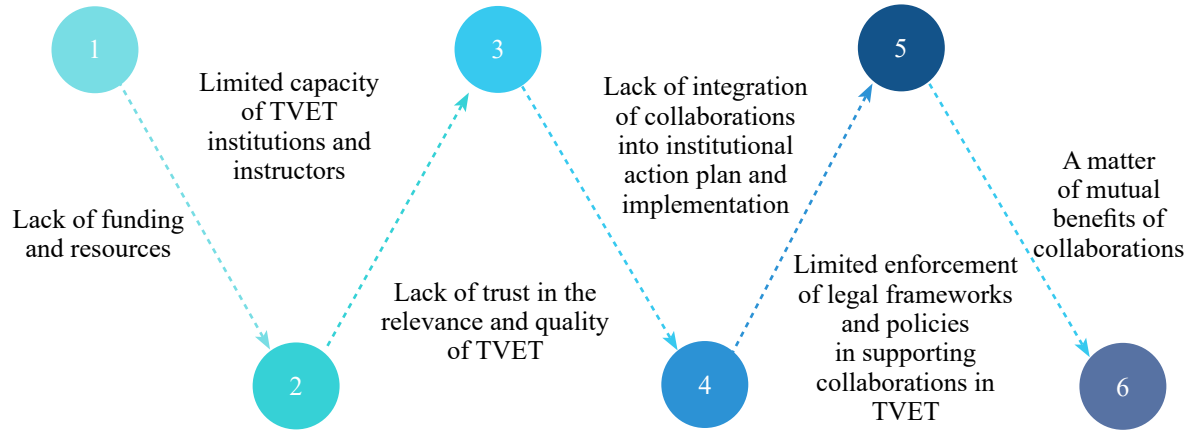
It could be that, based on the perspective of IA32, employers expect tangible benefits when they invest in or collaborate with training providers on skills training. Thus, building trust and ensuring mutual benefits are crucially important for training providers and employers to sustain collaborative efforts. The respondent from GB25 seemingly complained that some companies are sometimes hard to collaborate with as they do not know or value collaborations with training providers. Thus, the benefits of collaborative activities between training providers and private companies should be explicitly written or given to encourage firms to work closely with training providers.

> Again, skills provision is not the whole thing, but there are also factors that would tell us whether the skillsets that we provide have good quality because we will see the result in the company performance when we send these trainees or those graduates from the training programme; that is the measure. These are the outputs that we need to see after the training, like in one-month time, or more than this period. You can't see the result yet; you will see after they go back to their company and how they contribute their skills to the development of the system, and at the same time, the productivity of the company. (IA32)

> I still think that it may not be true [that government bodies and training providers are not working hard to collaborate with companies] since some companies are also hard to work with despite our efforts in explaining them the benefits of cooperation. For example, the new Investment Law has some parts which mention the tax exemption in case of training collaboration. (GB25)

Figure 5 below summarises different challenges and problems training providers encounter when they intend to start and improve their collaborative activities with the private sector. Such challenges prevent training providers from building and further strengthening their collaborations with the private sector and employers, thus leading to poor industry linkages.

Figure 5: Challenges and problems in collaborations between training providers and companies



Source: Author

6. Discussion

The findings from the study reveal that training providers collaborate with the private sector in different forms, including student internships, job announcements, participation in curriculum development/update, consultative meetings/workshops, and study visits/tours. However, the provision of more (advanced) industrial skills training, apprenticeship, internships for instructors, and engagement in research and development activities were less reported by most training providers. All the collaboration forms are highly valued by all training providers. Based on the findings from the interviews with firms, fewer forms of collaboration with training providers were reported, including internships, participation in meetings/workshops, and training.

In line with previous studies that stress the importance of collaborations between organisations or stakeholders in achieving their common or shared goals (e.g., Gray 1989; Bagale 2018; Siddiky and Uh 2020; Raihan 2014), training providers perceive these collaborative activities to be a valuable input for making their skills provision relevant and responsive to industrial skills needs. The findings also point out the efforts to promote public-private partnerships in TVET so that skills provision is relevant and responsive to the needs of industry. Collaborations allow students and instructors to experience workplace technologies or production processes. In addition, skills and knowledge transfer between training providers and firms through (advanced) industrial skills training or sharing is highly beneficial. Importantly, training providers may receive training facilities, equipment, tools, and materials through collaborations with firms. Sometimes, collaborations with the private sector may benefit training providers in

terms of funding sources for training or research and development activities. Therefore, such collaborative activities between training providers and the private sector are crucial for both parties (Raihan 2014; Siddiky and Uh 2020; Bagale 2018). Based on the national TVET Policy 2017-2025 and Skills Development Roadmap 2023-2035, the decisive engagement from various stakeholders to support skills development can help close the skills gap and bridge the skills mismatch between the supply and demand sides.

The findings indicate that most collaborative activities are implemented on an ad-hoc basis. In other words, the collaborations are typically sporadic, inconsistent, and often operated on a small scale without formal structures or arrangement. This may not lead to sustainable inter-organisational relationships between training providers and employers. According to Ansell (2019), such collaborations may be deemed low-intensity inter-organisational relationships in which both parties maintain full autonomy or separation. Often, collaborations can move from the basic to advanced levels or from the fully fragmented to fully connected status, or vice versa (UNESCO IIEP 2019; Keast, Brown, and Mandell 2007; Selden, Sowa, and Sandfort 2006; O'leary and Vij 2012).

The lack of close collaborations with firms, based on most respondents, results from several critical challenges. They include limited capacity of TVET institutions and instructors; lack of trust in the relevance and quality of TVET programmes; little integration of collaborations into institutional plans and implementation; limited enforcement of legal frameworks and policies in supporting collaborations; and lack of mutual benefits of collaborations between training providers and the private sector. Such challenges prevent training providers from collaborating closely with private companies, while a lack of clear understanding of collaboration benefits, including both explicit and/or implicit forms, harms the sustainability of collaborative efforts between training providers and employers. According to Keast, Brown, and Mandell (2007), to sustain collaborations there is a need to identify the degree of formalisation involved, the presence of co-decision-making, the kinds of goals emphasised, the amount of resources shared, and other primary actors involved in the collaboration process.

7. Conclusion and implications

7.1. Conclusion

Collaborations between TVET institutions and the private sector have been vigorously promoted, as emphasised in the national TVET Policy 2017-2025, Skills Development Roadmap 2023-2035, and other public policies. Such efforts to develop workforce skills have given new impetus for linking skills provision to industrial skills needs through collaborations between key stakeholders in the Cambodian TVET sector. It is now a suitable pathway to bridge the gap between skills provision and labour market demand. At the same time, close collaborations can also mobilise scarce resources and bind the responsibilities of all key stakeholders in TVET.

In this study, most training providers have collaborations in different forms with the private sector. The collaborations include student internships, job announcement dissemination, participation in curriculum development, consultative meetings/workshops, workplace visits/tours, provision of industrial skills training, and engagement in research and development activities. Such collaborative activities benefit both training providers and employers explicitly and implicitly. The benefits include enhanced curriculum development and relevance; knowledge and skills transfer; employment and networks; access to training facilities and equipment; and financial incentives.

However, most training providers' collaborative activities are commonly executed less regularly and on an ad hoc basis, making collaboration efforts less effective and sustainable. The degree and magnitude of collaboration are due to several key factors. These factors are a lack of funding sources and resources; limited capacity of institutions and instructors; a lack of trust in the relevance and quality of TVET programmes; limited integration of collaborations into action plans and implementation; a lack of enforcement of legal frameworks and policies in supporting collaboration; and a lack of mutual benefits of collaborations between parties. Such challenges prevent training providers from collaborating with private companies closely and effectively.

7.2. Implications for skills provision

Based on the findings of the analysis of the perspectives on the forms, benefits, degree, and challenges in collaborations between training providers and the private sector in the Cambodian TVET sector, the study proposes the following recommendations. These are intended to guide training providers, policymakers, practitioners, and relevant stakeholders for consideration when building and implementing effective collaborations with one another.

- Ensure mutual benefits between collaborators or stakeholders: All stakeholders or collaborators, especially training providers and companies, need to come together and discuss their concerns, needs, and expectations honestly and comprehensively when collaborating with one another. They must identify explicit and implicit advantages so all parties are on the same page and can commit to official or agreed collaboration documents. The degree of formalisation involved, the presence of co-decision-making, the kinds of goals emphasised, the amount of resources shared, and other primary actors involved in the collaborative process should also be defined explicitly in formal agreements.

- Strengthen institutional and instructor capacity: Importantly, training providers need to urgently improve their training capacities and resources, including technical and human resources, at the institutional level so that training outcomes are relevant and responsive to industrial skill needs. Instructors should build their capacity through different professional development programmes, industrial skills training, or practical skills transfer programmes at partner companies. TVET institutions' capacity to develop and envisage skills that are required by the labour market also needs further improvements in TVET with the technical and financial support from the government and relevant stakeholders.

- Enforce supportive frameworks and policies for collaborations: It is essential to develop and enforce legal frameworks, policies, or guidelines with clear directions and full support for cooperation at the institutional level. Thus, the government and industry associations play an important role in facilitating, coordinating, and/or encouraging the private sector and employers to actively participate in collaborations with training providers while also clearly identifying incentives or benefits, including tax/levy exemptions or special conditions, for those who voluntarily collaborate with training providers. There should be a monitoring and evaluating system that helps inform and track the progress and development of collaborations between training providers and employers at the national level.

- Streamline collaboration activities through full integration and implementation: Training providers need to institutionalise and integrate collaborations fully into their plans and implementation. Collaborations with the private sector can be built and enhanced by the institutionalised setup of an ILU with a clear direction, action plan, and sufficient resources. Moreover, when developing an action plan, ILUs need to discuss and consult with all relevant

stakeholders, including instructors and employers, who are involved in the collaborative process. This ensures that ILUs operate consistently and effectively, which is essential for fostering collaborations with the private sector.

8. Limitations of the study

The study mainly relied on the data of the qualitative semi-interviews conducted with 18 firms and 36 stakeholders, including training providers, government bodies, industry associations, and labour unions. The 36 interviews with 18 surveyed firms were conducted face-to-face in late 2019 before the COVID-19 pandemic. Some interviews with TVET stakeholders were conducted online through Zoom meetings during the pandemic, causing a lack of complete observation and in-depth understanding of the whole interviews in some cases.

Moreover, the phase-1 interviews with the firms were not originally designed to capture collaborations and activities that the firms have with training providers. Despite this limitation, the interview guides allowed the researcher to capture general perceptions and perspectives of the private companies in their involvement with training providers while also providing insight into the quality and relevance of TVET programmes. Another possible shortcoming was that the phase-2 interviews with training providers as well as representatives from government bodies and industry were focused on just a few training programmes and industrial sectors. Therefore, the study could not capture the whole picture of skills provision and the labour market.

The study may exhibit a potential bias that there were more training providers and government bodies, as they were more heavily represented in the dataset than the private sector. The vivid critique of the private sector by these players could bring some bias to the analysis. Finally, although the study triangulated different sources of information and data from different types of respondents, future studies would benefit from the inclusion of the viewpoints of firms actively collaborating with training providers, the beneficiaries of collaborations, and other relevant stakeholders in TVET.

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Appendices

Appendix 1: List of firms participating in phase-1b interviews

No.	Firm ID	Sector	Location	Size	Sales	Year established	Nationality of ownership	Export product share (%)
1	CE4771	E&E	Phnom Penh	Lge	Growth	2011	Japanese	>66
2	CEB043	E&E	Phnom Penh	Med	Growth	2014	Japanese	>66
3	CE5913F	E&E	Banteay Meanchey	Lge	Growth	2012	Japanese	>66
4	CE518AD	E&E	Svay Rieng	Med	Growth	2016	Chinese	>66
5	CE1BD4F	E&E	Phnom Penh	Med	Growth	2012	Japanese	>66
6	CE166E20	E&E	Banteay Meanchey	Med	Decline	2017	Japanese	>66
7	CF3	FP	Phnom Penh	Med	Growth	2014	Chinese	0
8	CF248C	FP	Phnom Penh	Sml	Growth	2016	Japanese	>66
9	CFC0BB6	FP	Phnom Penh	Med	Growth	2015	North American	0
10	CFE45EE	FP	Phnom Penh	Lge	Growth	2002	Cambodian	<33
11	CF10395	FP	Phnom Penh	Lge	Growth	2009	North American	>66
12	CF125571	FP	Phnom Penh	Lge	Growth	2001	Cambodian	33–66
13	CGBC830	G	Phnom Penh	Lge	Growth	2016	Chinese	>66
14	CG1099F	G	Sihanoukville	Lge	Growth	2013	Chinese	>66
15	CGBBEBC	G	Phnom Penh	Lge	Growth	2012	Chinese	>66
16	CGSZYY	G	Sihanoukville	Med	Decline	2015	Chinese	>66
17	CG16903	G	Phnom Penh	Lge	Decline	1997	Chinese	>66
18	CGF21EF	G	Kandal	Lge	Decline	2010	Chinese	>66

Note: E&E = electrical and electronic; FP = food processing; G = garment.
Source: Author

Appendix 2: List of organisations participating in phase-2 interviews

No.	Interview ID	Function	Sector	Location
1	TP01	Training provider	Private	Phnom Penh
2	TP02	Training provider	Private	Phnom Penh
3	TP03	Training provider	Private	Phnom Penh
4	TP04	Training provider	Private	Phnom Penh
5	TP05	Training provider	Public	Phnom Penh
6	TP06	Training provider	Public	Phnom Penh
7	TP07	Training provider	Public	Kampong Speu
8	TP08	Training provider	Public	Battambang
9	TP09	Training provider	Public	Battambang
10	TP10	Training provider	Public	Battambang
11	TP11	Training provider	Public	Battambang
12	TP12	Training provider	Public	Svay Rieng
13	TP13	Training provider	Public	Preah Sihanouk
14	TP14	Training provider	Public	Phnom Penh
15	TP15	Training provider	Public	Phnom Penh
16	TP16	Training provider	Public	Phnom Penh
17	TP17	Training provider	Public	Phnom Penh
18	TP18	Training provider	Public	Phnom Penh
19	TP19	Training provider	Public	Phnom Penh
20	TP20	Training provider	Public	Phnom Penh
21	GB21	Ministry	Government body	Phnom Penh
22	GB22	Ministry	Government body	Phnom Penh
23	GB23	Ministry	Government body	Phnom Penh
24	GB24	Ministry	Government body	Phnom Penh
25	GB25	Ministry	Government body	Phnom Penh
26	GB26	Ministry	Government body	Phnom Penh
27	GB27	Ministry	Government body	Phnom Penh
28	GB28	Ministry	Government body	Phnom Penh
29	GB29	Council	Government body	Phnom Penh
30	IA30	Industry association	Garment industry	Phnom Penh
31	IA31	Industry association	General	Phnom Penh
32	IA32	Industry association	General	Phnom Penh
33	IA33	Industry association	Food industry	Phnom Penh
34	LU34	Labour union	Garment industry	Phnom Penh
35	LU35	Labour union	Food industry	Phnom Penh
36	LU36	Labour union	Garment industry	Phnom Penh

Note: TP=training provider, GB=government body, IA=industry association, LU=labour union
Source: Author

Appendix 3: Cambodia's national education and training system

<table>
<tr><td rowspan="2">Age</td><td rowspan="2">Grade</td><td>Stream</td><td>General education</td><td>TVET</td><td>Higher education</td><td>Non-formal education</td></tr>
<tr><td>Governance</td><td>Ministry of Education, Youth and Sport</td><td>Ministry of Labour and Vocational Training</td><td>Ministry of Education, Youth and Sport; other relevant Ministries</td><td>Ministry of Education, Youth and Sport; other relevant Ministries</td></tr>
<tr><td>26</td><td rowspan="8"></td><td rowspan="3">CGF Level 8</td><td rowspan="3"></td><td rowspan="3">Doctoral degree</td><td rowspan="3">Doctoral degree</td><td rowspan="15"></td></tr>
<tr><td>25</td></tr>
<tr><td>24</td></tr>
<tr><td>23</td><td rowspan="2">CGF Level 7</td><td rowspan="2"></td><td rowspan="2">Master's degree (technology/business)</td><td rowspan="2">Master's degree</td></tr>
<tr><td>22</td></tr>
<tr><td>21</td><td rowspan="2">CGF Level 6</td><td rowspan="2"></td><td rowspan="2">Bachelor's degree (technology/business)</td><td rowspan="2">Bachelor's degree</td></tr>
<tr><td>20</td></tr>
<tr><td>19</td><td rowspan="2">CGF Level 5</td><td rowspan="2"></td><td rowspan="2">Higher diploma (technology/business)</td><td rowspan="2">Associate degree</td></tr>
<tr><td>18</td></tr>
<tr><td>17</td><td>Grade 12</td><td>CGF Level 4</td><td rowspan="3">Upper Secondary Education</td><td>TVET certificate 3</td><td rowspan="13"></td></tr>
<tr><td>16</td><td>Grade 11</td><td>CGF Level 3</td><td>TVET certificate 2</td></tr>
<tr><td>15</td><td>Grade 10</td><td>CGF Level 2</td><td>TVET certificate 1</td></tr>
<tr><td>14</td><td>Grade 9</td><td rowspan="3">CGF Level 1</td><td rowspan="3">Lower Secondary Education</td><td rowspan="3">Vocational certificates</td></tr>
<tr><td>13</td><td>Grade 8</td></tr>
<tr><td>12</td><td>Grade 7</td></tr>
<tr><td>11</td><td>Grade 6</td><td colspan="3" rowspan="6"></td></tr>
<tr><td>10</td><td>Grade 5</td></tr>
<tr><td>9</td><td>Grade 4</td></tr>
<tr><td>8</td><td>Grade 3</td></tr>
<tr><td>7</td><td>Grade 2</td></tr>
<tr><td>6</td><td>Grade 1</td></tr>
<tr><td>5</td><td>High step</td><td colspan="2" rowspan="3"></td><td rowspan="3" colspan="3"></td></tr>
<tr><td>4</td><td>Medium step</td></tr>
<tr><td>3</td><td>Low step</td></tr>
</table>

Note: CQF = Cambodian Qualifications Framework.
Source: Adapted from SEAMEO (2017, 37); ADB (2016, 3)

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