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## CAMBODIAN HIGHER EDUCATION DIVERSITY: TOWARDS DIFFERENTIATION OR HOMOGENEITY?

### Introduction

Over the past decades, the global expansion of higher education institutions (HEIs), in terms of access and type of further education, has been unprecedented and represents a true revolution in postsecondary education (Altbach 2017). This massification of higher education results in ever more complex service provision and greater diversity among HEIs. More pressing in developing countries is the divergence in expectations of the quality, outputs and roles of HEIs. At present, HEIs exist in 19 of Cambodia's 25 provinces and Phnom Penh. Fifteen different government agencies supervise a total of 121 HEIs, making governance and quality control a daunting task. Education-job mismatch means that the skills graduates acquire in their study programs bear little relevance to the technical skills, knowledge and attitudes required by employers, enterprises and society at large in the 21st century (Khieng, Madhur and Chhem 2015). It is generally agreed that most HEIs in Cambodia focus on teaching, with scant attention paid to research, innovation



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and industrial engagement. In this regard, one can argue that all Cambodian HEIs, particularly universities, are the same type of institute: a teaching university.

Cambodian HEIs, both public and private, face tremendous challenges, including a lack of funding, poor quality teachers, weak administration, and increased intensity from regional and international integration of higher education and economies. In addition, the

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government has high expectations of how HEIs should contribute to national development; their roles are outlined in Industrial Development Policy 2015–25, Cambodia’s National Science and Technology Master Plan 2014–20, and Higher Education Roadmap 2030 and Beyond.

Despite rapid growth in the number of HEIs and sharp rise in enrolments, there is little evidence that these developments have laid the foundation for a diverse higher education system that fulfils the various (and sometimes differing) needs of students, employers, the economy and the country as a whole (Schubert, Bentley and Goedegebuure 2016), an issue that is prevalent across the Asia Pacific region. This has raised a serious question of whether the rapid expansion of Cambodian HEIs over the past two decades has resulted in a diverse system with homogenous (or similar) programs or a differentiated system in which a wide range of courses and qualifications have been provided, in response to the newly emerging and differing needs of students and society. From a policy perspective, this lack of a clearly categorised system of higher education has posed a big challenge for the government, particularly when it comes to providing support for research or quality improvement. Likewise, international partners seeking to engage and support local HEIs often have inadequate information about their orientation and quality.

This paper reviews the different types of Cambodian HEIs, arguing that the expansion of Cambodian higher education has experienced institution diversity without much differentiation, particularly at the program and course levels. It begins with a discussion of the importance of higher education diversity. Next, we discuss the legal framework and previous research on the mapping of higher education diversity and the classification of HEIs. We then discuss the most recent trends in diversity at HEIs. This is followed by a brief review of the gaps in previous approaches to higher education diversity, classification and typology in Cambodia. We conclude by raising some questions and proposing some directions for future research.

### **Why does higher education diversity matter?**

Amid the growth and expansion of higher

education worldwide, the benefits of diversified and differentiated systems of postsecondary education have been well documented (van der Wende 2008; van Vught and Huisman 2013; Varghese 2014). In the words of Goedegebuure et al. (2017, 8):

More diverse systems tend to perform better because they meet diverse student needs, are better equipped to stimulate social mobility through different access points and progress pathways, are better linked to labour markets that increasingly require different types of graduates and allow for more cost-effective delivery of both education and research through specialisation.

Similarly, from a governance and policy perspective, van der Wende (2008, 52) asserts that “diversity is as important as autonomy in order to achieve wider access and higher quality”. Evidence suggests that the benefits of higher education diversification can only be achieved when there is differentiation at both institutional and program levels. Hence, some commentators caution that diversity without differentiation or overdiversification, including mission drift and unproductive competition between private higher education providers, could lead to “subprime degrees” (Ford 2013) and “reputation race” (van der Wende 2008).

Adding to complexity in higher education is that the diversity and classification of HEIs have evolved, intentionally or not, to become the rankings used by governments to pit their HEIs against each other in “the global knowledge race” (Altbach 2012, 27). On a positive note, these rankings are used by students and their parents to select HEIs, by HEIs to benchmark performance, and by governments to allocate funding and other resources. Many developed countries and emerging economies have joined the ranking race to develop so-called world-class HEIs.

Position in global rankings, however, does not always bode well for universities with limited resources. This is because rankings indicators are biased towards the Anglo-American system and its context, and might not be useful for assessing HEIs in non-Western societies. Rankings or

classification in higher education can result in the unequal distribution of resources, with top-tier or world-class research universities receiving more funding than the rest. For instance, teaching is a core mission of HEIs, but most international rankings do not consider teaching performance as a metric. In many countries, this has resulted in mission drift as more institutions compete for research funding (van der Wende 2008). What principally matters are the subjects HEIs offer: sciences, engineering and medicine receive the most attention in the rankings, marginalising social sciences and humanities. The top 100 universities account for just 0.5 percent of over 18,000 HEIs worldwide, or 0.4 percent of global tertiary enrolment (Altbach and Hazelkorn 2017), meaning overemphasis on the rankings would ignore wider education needs. Overall, the debate about diversity in higher education is not whether it is a good thing, but rather what type and level of diversity a country should aim for: systemic, institutional or programmatic? It is critical to ask whether diversification has led to differentiation and meaningful human resource development that fits the societal development needs of that country (van der Wende 2008).

In sum, the main purpose of higher education diversification is to create alternatives to traditional universities, such as vocational and technical schools, polytechnics, short-cycle higher education institutions, and community colleges. These TVET institutes' mandates were to produce quality and skilled workers to meet national labour market demands (Chhem 1997; Phan 2015). Another purpose is to increase the options available to students and match higher education to students' ability, preferences and needs (Machado et al. 2008).

### **Cambodia's higher education development: Towards diversification or homogeneity?**

Cambodia Education Law defines HEIs as "centers for education and study, which provided the specialised education and training levels after general education (secondary education)" (RGC 2007, 16). The number of HEIs has grown from eight, mostly in Phnom Penh, in 1996 to 121 located in 19 provinces and the capital in 2018. Six in every 10 HEIs are private. The number

of enrolments has increased significantly in the last two decades from 13,464 students in 1996 (World Bank 2010) to over 217,840 in 2015-16 (MOEYS 2017), accounting for about 12 percent of the 18–23 age group. Even with this growth, Cambodia has the lowest tertiary enrolment rate in the ASEAN region and is still below the massification threshold of 15 percent defined by Martin Trow (2007).

Recent research indicates that many licensed universities do not meet the technical requirements for university status (Ford 2013, 15–16). A year after his appointment as education minister in 2013, Dr Hang Chuon Naron called for a partial moratorium on issuing licences for new HEIs, stating that the main role of a university should be to "train people who can [then] find jobs... Otherwise you cannot call them universities, you can call them factories to produce diplomas" (Brito 2015, 1). Many of the institutes in question are private, commercially oriented and focus on business majors, ignoring the much-needed skills in agriculture, science and technology. This misalignment between university orientation, education quality and socioeconomic development (Chet, Ford and Ahrens in press) has attracted significant attention and investment from the Ministry of Labour and Vocational Training, multilateral and bilateral development agencies, and the private sector. This process implies both vocationalisation of higher education and academicisation of TVET.

The recent spate of support and resources for Cambodian higher education development can arguably be described as diversification in postsecondary education. Theoretically, diversification has several connotations. It can mean "a drift towards vocational or employment-relevant courses, allowing for flexibility of study programmes" (Varghese 2014, 17). In national higher education, it refers to "the growing variety of its aims and operations" (Varghese 2014, 26). Another form of diversification is the expansion of HEI campuses to provincial centres in response to increasing demand from different groups of clientele and locations (Ford 2006).

Academic dialogues and comments on diversity fall short of providing empirical and systematic data; no studies that directly investigate higher



education diversity in Cambodia have been reported. Although some studies suggest diversification (Chhem 1997; Ford 2006), it is not clear whether this diversification contributes to differentiation, a concept which Altbach et al. (2017, 22) refer to as “a strategy and coordination with useful distinctions made between institutions based on their purpose”. According to an earlier study, “irrelevance and low diversification of curriculum and instruction” are major reasons for the existing skills mismatch (Phan 2015, 77). In this case, the narrow range of business studies programs offered by many HEIs suggests homogeneity (Ford 2013; ADB 2012).

All this raises the question of whether government efforts to develop higher education diversity has resulted in program and course differentiation that serves the needs of different groups of students or homogeneity across HEIs, despite the different types of institutions.

### **Cambodia’s diversity and classification of HEIs**

We start this section by discussing the legal definition of HEIs, followed by a critical review of the literature (Chhem 1997; Phan 2015; MOEYS 2017; Sam 2017) on the diversity, classification and typology of Cambodian HEIs.

#### ***Legal framework***

The 2007 Prakas on Conditions and Detail Criteria on the Establishment of Higher Educational Institutes classifies HEIs into three categories: academies, universities and colleges specialising in particular fields. The main role of the Royal Academy of Cambodia (RAC) is to conduct research and provide postgraduate degree programs. But, the lack of adequate resources may result in tension between its dual roles as a research centre and the duty to teach massive number of students. One report proposed a review of the RAC to clarify its function as an HEI and its future status (Innes-Brown 2006). Article 6 of the 2002 Sub-decree on Criteria for the Establishment of University states that the “Educational structure of a university is a combination of various colleges and departments to provide training program up from the level of Bachelor with a minimum duration of three (3) years or more than that”; Article 7 states that

“A university shall consist of 3 colleges” (arts, humanities and languages; mathematics and sciences; and social sciences) and at least two other colleges that offer certain specialisations (RGC 2002, 3). However, many of the existing HEIs do not meet these requirements.

#### ***Diversity studies***

Diversification of the postsecondary education system can be traced back to efforts in the 1960s to tackle universities’ output deficiencies (Chhem 1997, 49). Diversity was then synonymous with the establishment of professional educational institutions, the aims of which were to align education with labour market needs and to provide alternatives for students not accepted by the university system. Chhem’s (1997) attempt to propose a classification and typology for Cambodian higher education in the mid-1990s faced many difficulties due to its hybrid system that has adopted French, Russian and more recently American and Australian models – a legacy of the strong foreign influences in recent history. Yet, analyses have associated Cambodian higher education with an “elitist system” (Kerr 1979), “production milieu and an intellectual mould” and “a power university” (Jacques Drèze and Debelles 1968). In this regard, professional and technical orientation was prioritised over liberal arts education, perhaps due to the belief that “an education that does not prepare graduates for the workplace is doomed to fail, especially in a poor country with limited human resources” (Harbison and Myers 1964 cited in Chhem 1997, 87).

In the 2000s, another classification attempt was commissioned by the Australian Department of Education, Science and Training (Innes-Brown 2006). The report tentatively suggested three broadly defined tiers of HEIs, ranging from higher quality HEIs in tier 1, those with “variable quality and resources” in tier 2, and HEIs that “failed to mature as tertiary institutions” in tier 3. Some of the main criteria used were governance and financing, quality assurance, research output and influence, international orientation and language of instruction. However, the dimensions and justifications made in the classification are problematic because it is both “unfair and unrealistic”, the author acknowledged. Despite

its limitations, the report has played a significant role in the development of Cambodia's Education Country Profile, an initiative of the Department of Education of Australia. A review of the Country Profile in 2017 revealed that little has been updated to reflect the status of Cambodian higher education. Other Australian government agencies and higher education institutions appear to have relied mainly on the Education Country Profile to make decisions about the qualification standards of Cambodian HEIs and students and therefore the acceptance of students from Cambodia at Australian HEIs, and the placement of students from Australia at Cambodian HEIs.

Hardly any other reports specifically map higher education diversity in Cambodia. A few scholars (Phan 2015; Sam 2017; Chan et al. 2008) and policy documents (MOEYS 2017) discuss diversity topics indirectly and anecdotally. Sam's (2017) analysis of institutional governance classifies HEIs into three types: public administrative institute (PAI), private HEI and public HEI. PAIs are characterised by decentralised institutional governance, private HEIs by top-down (or starfish) governance, and public HEIs by centralised (or spider-web) governance.<sup>1</sup> Another research study in 2015, titled "Envisioning a Higher Education System for the 21st Century: Cambodia", proposed a two-tier system with only a few universities serving the elite and the majority of HEIs (polytechnics and TVET institutes) serving vocational and professional training needs (Phan 2015, 294). In 2017, a government-driven document (MOEYS 2017) on the Higher Education Roadmap 2030 and Beyond envisioned a tiered system of four ideal HEI types (Table 1). The ministry aims to have all HEIs classified based on this typology by 2025 and a "functional tier system implemented by 2030" (MOEYS 2017, 24). Despite their emphasis on the importance of a diversified higher education system, none of these reports delved into how institutions should be differentiated.

Table 1: Proposed four-tier hierarchy in higher education

(1) technical institute and community college
(2) specialised university
(3) comprehensive university
(4) research university

Source: MOEYS 2017

Efforts to highlight program diversity across HEIs include a Directory of Higher Education Institutions in Phnom Penh (Chan et al. 2008) and a larger national Institutional Guide (MOEYS 2016), both of which provide descriptive information about tertiary programs to help students choose which major and career path to pursue, with the hope of minimising skill mismatch by better responding to market needs.

### Conclusion and further research

Since these first attempts to study diversity or classify Cambodian HEIs, there have been remarkable changes in terms of new HEIs, quality improvement albeit uneven, and governance and financing. With such rapid and unregulated growth of higher education and the nascent research into its diversity, there is a strong argument for further analysis and investigation of this field. There are many important questions and issues that the literature cannot answer. Beyond the main question of how diversified the system is, another critical question is whether HEIs respond to students' aspirations for further education.

The findings and insights from diversity studies will be critical for many stakeholders in higher education: education leaders, teaching and professional staff, policymakers, industry groups, and international development partners. Eventually, HEI clientele will also benefit from in-depth analysis of higher education diversity, including program orientation. It will also bridge the knowledge gaps in theoretical understanding on how to manage higher education diversity (or homogeneity) in a developing country that is pro-growth and has liberal market policies, but remains largely dependent on international assistance. Perhaps the challenges facing diversification are best summed up by a recent analysis:

<sup>1</sup> This complex governance system where there are private HEIs and fee-paying programs within public HEIs is a challenge for establishing an ideal typology, which should be for one system and one country.

[Postsecondary education] is passing through a period of anarchy, being diversified by a wide range of purposes and clienteles and seemingly beyond the capacity of any government to manage these changes well. The way forward is to turn that anarchy into a coherent and integrated system of good quality postsecondary institutions but that will take enormous political will, budget and, most importantly, time. (Altbach, Reisberg and de Wit 2017, 13)

The following issues warrant further investigation through empirical research and debate.

- What does diversity in higher education mean? Why does it matter?
- What theoretical perspectives can we use to explain diversity in higher education? What factors affect diversity? How can diversity be measured?
- What are the international experiences of mapping higher education diversity?
- Does the higher education system respond to the specific education needs for industrialisation and Cambodia Vision 2030 towards realising a knowledge-based economy?

## References

- ADB (Asian Development Bank). 2012. *Regional Cooperation and Cross-Border Collaboration in Higher Education in Asia Ensuring That Everyone Wins*. Mandaluyong City: ADB. [adbdev.org/sites/default/files/publications/29931/file/regional-cooperation-higher-education-asia.pdf](http://adbdev.org/sites/default/files/publications/29931/file/regional-cooperation-higher-education-asia.pdf).
- Altbach, Philip G. 2012. "The Globalization of College and University Rankings." *Change: The Magazine of Higher Learning* 44 (1): 26–31. [doi.org/10.1080/00091383.2012.636001](https://doi.org/10.1080/00091383.2012.636001).
- Altbach, Philip G. 2017. "Postsecondary Systems, Massification, and the Research University." *International Higher Education* (91): 5–6.
- Altbach, Philip G., and Ellen Hazelkorn. 2017. "Pursuing Rankings in the Age of Massification: For Most—Forget About It." *International Higher Education* (89): 8–10. [doi.org/10.6017/ihe.2017.89.9834](https://doi.org/10.6017/ihe.2017.89.9834).
- Altbach, Philip G., Liz Reisberg and Hans de Wit, eds. 2017. *Responding to Massification: Differentiation in Postsecondary Education Worldwide*. Rotterdam: Sense Publishers.
- Brito, Maria Paula. 2015. "Ministry Set to Resume University Assessments." *The Cambodia Daily*, 8 May 2015. [www.cambodiadaily.com/archives/ministry-set-to-resume-university-assessments-83393/](http://www.cambodiadaily.com/archives/ministry-set-to-resume-university-assessments-83393/).
- Chan Rotha, Ou Sivhuoch, Sen Vicheth, Sok Say and Som Ratana. 2008. *Directory of Higher Education Institutions in Phnom Penh*. Phnom Penh: CAMProbe. [www.academia.edu/12068312/Directory\\_of\\_Higher\\_Education\\_Institutions\\_in\\_Phnom\\_Penh](http://www.academia.edu/12068312/Directory_of_Higher_Education_Institutions_in_Phnom_Penh).
- Chet Chealy, David Ford and Luise Ahrens. (In press). "Higher Education Reform. Building Best-Practice at the Royal University of Phnom Penh, From Year Zero Towards International Standards." In *Education in Cambodia*. Singapore: Springer.
- Chhem, Rethy Kieth. 1997. "University and Human Capital in ASEAN Perspectives: The Case of Cambodia." PhD diss., University of Montreal, Canada.
- Drèze, Jacques H., and Jean Debelle. 1968. *Conceptions de l'Université*. Citoyens Dossier Vol. 1. Paris: Éditions Universitaires.
- Ford, David. 2006. "Cambodian Higher Education – Growing Pains." *International Higher Education* (44): 9–10. [ejournals.bc.edu/ojs/index.php/ihe/article/download/7912/7063](http://ejournals.bc.edu/ojs/index.php/ihe/article/download/7912/7063).
- Ford, David. 2013. "Cambodia: Subprime Degrees?" *International Higher Education* (70): 15–16.
- Goedegebuure, Leo, Vin Massaro, Lynn Meek and Alan Pettigrew. 2017. *A Framework for Differentiation*. Melbourne Centre for the Study of Higher Education. [minerva-access.unimelb.edu.au/handle/11343/176333](http://minerva-access.unimelb.edu.au/handle/11343/176333).
- Innes-Brown, Malcolm. 2006. *Higher Education, Cambodia*. Canberra: Department of Education, Science and Training.

- Kerr, Clark. 1979. "Five Strategies for Education and Their Major Variants." *Comparative Education Review* 23 (2): 171–82. doi.org/10.1086/446033
- Khieng, Sothy, Srinivasa Madhur and Chhem Rethy, eds. 2015. *Cambodia Education 2015: Employment and Empowerment*. Phnom Penh: CDRI.
- Machado, Maria de Lourdes, José Brites Ferreira, Rui Santiago and James S. Taylor. 2008. "Reframing the Non-University Sector in Europe: Convergence or Diversity?" In *Non-University Higher Education in Europe*, edited by J. S. Taylor, Jose Brites Ferreira, Maria de Lourdes Machado and Rui Santiago, 245–60. New York: Springer.
- MOEYS (Ministry of Education, Youth and Sport). 2016. *Guide for Choosing Majors at Higher Education Institutions*. Phnom Penh: MOEYS.
- MOEYS. 2017. *Cambodia Higher Education Roadmap 2030 and Beyond*. Phnom Penh: MOEYS.
- Phan Sopheap. 2015. "Envisioning a Higher Education System for the 21st Century: Cambodia." PhD diss., University of British Columbia, Canada.
- RGC (Royal Government of Cambodia). 2002. *Sub-Decree on Criteria for the Establishment of University*. data.opendevelopmentmekong.net/dataset/sub-decree-on-the-criteria-to-establish-university/resource/6b0c57c9-8483-41ef-b553-a6527956bb25? inner\_span=True.
- RGC. 2007. *Royal Kram on Cambodia Education Law*. NS/RKM/1207/032. planipolis. iiep.unesco.org/upload/Cambodia/Cambodia\_Education\_Law.pdf.
- Sam Chanphirun. 2017. "Cambodian Higher Education in Transition: An Institutional Governance Perspective." *Journal of Enterprising Communities: People and Places in the Global Economy* 11 (3): 414–34. doi.org/10.1108/JEC-11-2015-0051.
- Schubert, Ruth, Peter James Bentley and L. C. J. Goedegebuure. 2016. *Profiling Institutional Diversity Across the Australian VET Sector: Briefing*. Melbourne: LH Martin Institute, University of Melbourne.
- Trow, Martin. 2007. "Reflections on the Transition from Elite to Mass to Universal Access: Forms and Phases of Higher Education in Modern Societies since WWII." In *International Handbook of Higher Education*, 243–80. Springer International Handbooks of Education. Springer, Dordrecht. link.springer.com/chapter/10.1007/978-1-4020-4012-2\_13.
- Varghese, N. V., ed. 2014. *The Diversification of Post-Secondary Education*. Paris: International Institute for Educational Planning. repositorio.minedu.gob.pe/handle/123456789/2452.
- van Vught, Frans A., and Jeroen Huisman. 2013. "Institutional Profiles: Some Strategic Tools." *Tuning Journal for Higher Education* 1 (1): 1–7.
- van der Wende, Marijk. 2008. "Rankings and Classifications in Higher Education: A European Perspective." In *Higher Education: Handbook of Theory and Research Vol. 23*, edited by John C. Smart, 49–71. Berlin: Springer. link.springer.com/ chapter /10.1007 /978-1-4020-6959-8\_2.
- World Bank. 2010. *Cambodia – Higher education quality and capacity improvement project*. Washington DC: World Bank



# Contextualising the Dual Vocational Education and Training System: A Review of Approaches and Challenges

## Introduction

Cambodia aspires to reach upper-middle income status by 2030 and high-income status by 2050. One of the strategies to achieve this is transforming and modernising the production base from low-skill labour-intensive to high-skill technology-intensive industry. The realisation of these goals will depend on having a well-educated and well-trained workforce. Studies have shown that, in addition to quality education at all levels, technical and vocational education and training (TVET) is indispensable to upgrade workforce skills and that a skilled workforce helps sustain economic growth even in times of crisis. A large majority of the Cambodian workforce is concentrated in low-skill sectors such as agriculture and garment production and the number and quality of skilled workers produced by TVET providers still fall short of demand. It is therefore imperative that Cambodia strengthens its TVET to ensure the availability of a highly skilled workforce to support industrial transformation.

The dual vocational education and training (VET) model provides paths for students to both learn theoretical knowledge at school and gain practical skills in the workplace. This system has been praised for its ability to produce quality skilled workers, maintain a high level of employment and sustain economic growth in Switzerland, Germany and Austria. It has been adopted widely in both developed and developing countries. The authors argue that learning from this proven model will help Cambodia improve its TVET.

This paper first reviews the literature to give a brief history of dual VET systems, describe the approaches used to transfer the dual VET system from Germany and Switzerland to other countries,

and identify the challenges experienced by recipient countries. It then discusses how Cambodia can extract lessons learned from international experiences to inform TVET policy transfer.

## The dual VET system

### *Definition and basic features*

TVET systems around the world can be classified into three basic models:

- the market model in the UK, US and Japan – the state leaves the responsibility for vocational training to enterprises;
- the scholastic model in France – the state plans, organises and controls vocational education;
- the mixed or dual VET model in Germany, Switzerland and Austria – the state defines regulations and the private sector develops training content and provides training places (Greinert 1999 cited in Grollman 2008).

Other TVET systems are just a variation or combination of these three models (Greinert 2004).

This paper deals with the dual VET system, defined as an institutional framework that ensures vocational education and training happens at two learning venues: the company or master providing on-the-job training as a form of apprenticeship, and the part-time vocational school where the apprentice receives theoretical instruction and takes such subjects as sciences, mathematics and social studies (Deissinger 1997). The two learning venues, though operating under different regulatory systems, work collectively to qualify apprentices for state-recognised occupations. There are about 230 such occupations in Switzerland and around 350 in Germany (Sloane 2014). Around two thirds of students in these countries opt for skills training in the dual VET system after completing the nine-year compulsory education rather than pursue a more academic upper secondary education. Dual VET takes 2 to 4 years depending on the

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Table 1: Basic features of the dual VET system

Key features	Description
Learning site and duration	3-4 days/week at the workplace and 1–2 days/week in vocational schools over 2, 3 or 4 years
Qualification strategies in the company	On-the-job training, job rotation, project method, training courses
Emphasis of curricula and teaching	Qualifications of a specific occupation both at the workplace and in vocational school
Allocation of costs	Companies bear the costs of workplace training; the state bears the costs of training at vocational school
Trainers	Supervisors and team leaders authorised as trainers and mentors; vocational teachers in vocational schools
Entry requirements	Full compulsory education (no leaving certificate required)

Source: Adapted from Pilz and Li 2014

occupation. Table 1 shows some basic features of the dual VET system.

### *A short history of the dual VET system*

The term “vocation” has positive connotations in Switzerland and Germany, and vocational education always means the simultaneous development of professional, personal and social competencies. The high status accorded to vocational education in these countries cannot be appreciated without an understanding of its historical roots. In medieval Europe, especially in the 13th and 14th centuries, the town guilds (associations of local merchants or artisans) had great power and influence in the local economy. They regulated the prices of goods and wages and supervised the training of apprentices in their town (Schmidt 1998). Following industrialisation and trade liberalisation in the 19th century, the prestige of the guilds, whose main interest was to provide services to the local community, started to wane (Gessler and Howe 2013). However, the role of the guilds did not disappear entirely in Germany and in 1881 trade regulation was amended to strengthen artisanship (Gessler and Howe 2013). The guilds were given the right to organise apprenticeship. Similarly, in 1884, Switzerland put apprentice training under government control, but the principle of practice-based training by master artisans remained the predominant means of skill training. Only from the 1930s did attendance at vocational school become compulsory for apprentices (SDC 2016). With the approval and support of guilds and later of business

chambers and associations, the apprenticeship system has operated smoothly until today.

The present skill training systems, known as the dual system in Germany and dual VET system in Switzerland, originated in the business sector and, for centuries, were based on the traditional relationship between master artisan and apprentice. It was not until the early 20th century that the state intervened to make attendance at vocational school an essential part of the system. Even today students have to acquire an apprentice contract with an enterprise before they can be admitted to vocational school.

### **Transferring the dual VET system**

#### *Global interest in dual VET*

Concern over reducing youth unemployment and issues related to skills gaps and shortages in many countries have led to the question of what type of training should be used to tackle such problems appropriately (Pilz 2017). The good economic performance and low levels of youth unemployment in countries with dual VET systems (Valiente and Scandurra 2017), the increased demand for technical and vocational skills in the labour market (Blossfeld and Stockmann 1998), and the fact that it is practical, relevant and of high quality (Hummelshien and Baur 2014) have provided good arguments for dual VET to be advocated as a global model. Many governments, in developed and developing countries alike, show great interest in adapting dual VET to suit their

national contexts. Since the 1950s, transferring the VET model has been a focus of German development aid policy (Mayer 2001). The German Agency of International Cooperation Services for Sustainable Development (GIZ) has supported VET cooperation in more than 80 countries (Hummelshien and Baur 2014). The Swiss Agency for Development and Cooperation (SDC) has also “expended great efforts in transferring the dual VET system to many developing countries” (Valiente and Scandurra 2017, 44). At the end of 2016, its vocational training portfolio comprised 54 projects in 35 countries worldwide (SDC 2017). Moreover, the dual VET system is also highly praised by multilateral agencies such as the International Labour Organization, the Organisation for Economic Co-operation and Development and the World Bank, calling it the “future-oriented” VET model (Hummelshien and Baur 2014, 280).

### *Approaches to VET transfer*

The dual VET system has been the centre of attention for VET transfer since the 1950s. Hummelsheim and Baur (2014) observe that since the 1970s, VET transfer has undergone three recognisable phases, each using a different approach. In the first phase, from the 1970s to the 1990s, driven by economic self-interest enshrined in human capital theory, the dual VET system (its structures and norms) was transferred without modification to developing countries, aiming to replace the local VET structure in order to make up for skilled labour shortages. In the second phase, from the mid 1990s to 2010, individual components of the dual VET system that were compatible with local socioeconomic conditions rather than whole structures and norms were the object of transfer. And in the third phase, from 2010 to the present, with the growing belief that neither the dual system nor its individual components can be transferred intact, a key aspect approach was used. Based on this approach, “key elements of the system, which together constitute the philosophy or the spirit of the dual VET system, must be adapted to the specific local conditions” (Hummelsheim and Baur 2014, 287).

Recent efforts also focus on reforming local institutions and governance structures to support the gradual implementation of dual VET system

elements in local contexts. Certain conditions are required for successful transfer of the dual VET system.

The engagement of employers in the provision of training, the level of development of the chambers of commerce, the institutional capacity to monitor and evaluate the quality of the training in the workplace, the prestige of vocational studies and ability to reach agreements between social partners are some of the requirements that have been identified for an effective implementation of dual forms of VET. (Valiente and Scandurra 2017, 44)

### *Challenges of adapting the dual VET system*

Although dual VET is seen as a viable and attractive option by both international organisations and recipient countries, efforts to transfer it into different contexts have not been very successful. Very few VET projects worked, leading some researchers to conclude that it is impossible to transfer VET systems from one country to another (Hummelshien and Baur 2014; Mayer 2001; Valiente and Scandurra 2017). For instance, Mayer (2001) observes that the dual VET system is embedded in the historical, societal and cultural context of Germany and is hardly transferable to another country. Gill and Dar (1996, 462) note that although the dual VET model can provide useful lessons, “it is unrealistic to expect that a system that has matured in a highly industrialised country with strong workers’ and employers’ unions and well-developed regulatory and administrative mechanisms to be readily adaptable to countries lacking these attributes”. The literature points to four major challenges facing the transnational transfer of the dual VET system.

*Cultural challenges.* VET is often stigmatised as a second-class option. Countries with a strong dual VET system place a high value on “vocation”, a life calling that comprises both theoretical and practical pursuits: having an occupation is more important than acquiring higher education. Most Asian countries, however, tend to value higher education over joining the job market at young age. VET is considered a second-chance education for less capable students and therefore

inferior to other higher education (Ratnata, 2013 cited in Hummelsheim and Baur 2014): skills training is only sought when all attempts to enter university fail. Another factor is the difference in training culture. Many countries do not have a strong tradition of private enterprises engaging in skills development; thus initial vocational education has always been the responsibility of the state. Dual VET requires long-term enterprise commitment to training, which is not common in many countries. For example, a longitudinal survey in the US found that apprenticeships for high school graduates lasted less than six months and that few large industries willingly offered such opportunity (Dougherty 1987). Lehmann (2000) identified a similar issue in Canada, where employers' low level of cooperation in the Registered Apprenticeship Program limited the availability of training in terms of occupation options. In the words of Wilson (2000, 1), "Germany's culture of in-firm training may be the most difficult-to-develop attribute of the Dual System in developed and developing nations alike".

*Institutional challenges.* VET provision requires interinstitutional collaboration and coordination, elements that are often lacking in developing countries. In Germany, Switzerland and Austria, the roles and responsibilities of the partners involved in the training are clearly defined. The federal government is responsible for the strategic management and development of VET, the state government implements and supervises VET, and enterprises and their associations develop training contents and provide apprenticeship places. This broad partnership is grounded in a highly organised private sector. The private enterprises are organised into chambers or professional associations, each representing a particular branch of the economy (e.g. Chamber of Industry and Commerce, Chamber of Crafts, Chamber of Agriculture). The state sets guidelines and delegates regulatory competence to these self-governing bodies, which play a crucial role in organising, administering and evaluating VET in their area of responsibility (Sloane 2014). In developing countries, where informal economic activities are dominant, business associations are not well organised and industrial relations between employers, trade unions and government counterparts are not well institutionalised. The

prevailing institutional environment is therefore not readily conducive to VET.

*Technical challenges.* Lack of experience in training and knowledge of pedagogy prevents enterprises in developing countries from actively participating in VET. VET requires both technical knowledge of a particular trade and pedagogical skills to transfer that knowledge to others. Professional associations in countries with dual VET are often led by master artisans who have solid experience in their field and in training and mentoring junior colleagues. They have a high level of technical knowledge and skills and are able to engage in pedagogy, from designing training courses to monitoring and evaluating learner progress.

*Infrastructural challenges.* Lack of physical resources that are of industry standard limits the adoption and delivery of quality VET, particularly in developing countries. A nationally representative survey of about 500 enterprises in 2009 in Malaysia found that lack of facilities and qualified instructors were the main reasons for their unwillingness to adopt dual VET (Md Deros, Zohdi and Mohamad 2012). Similar challenges of insufficient equipment and facilities were also reported in case studies of dual VET transfer and training reform in China and India (Wilson 2000; Zhiquan and Han 2009).

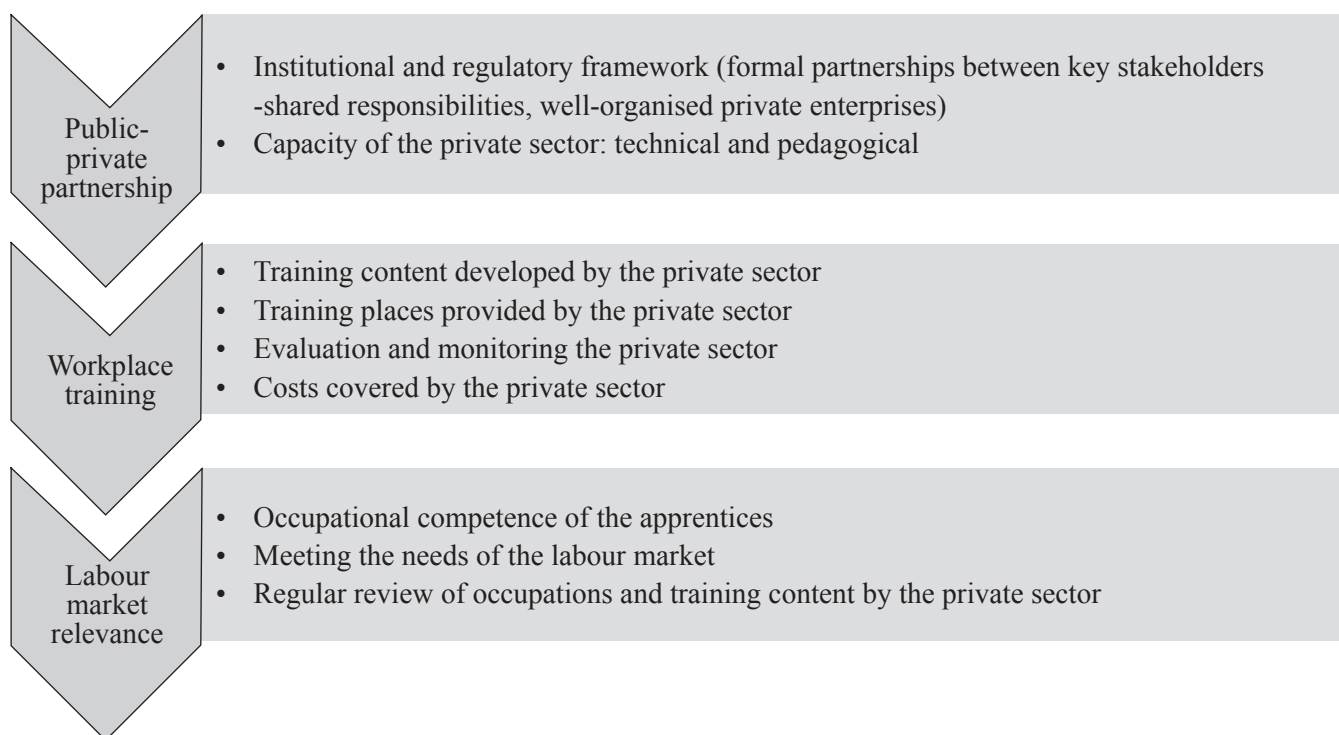
## Conclusion and implications for Cambodia

This paper has highlighted three overarching principles of dual VET: enterprises' engagement, workplace training, and labour market orientation (Figure 1). The main purpose of the dual VET system is to provide young people with quality and relevant occupational skills – the skills that meet labour market needs, boost workforce productivity and secure national competitiveness.

The principal means used by Switzerland and Germany to achieve this labour market relevance is by training their workforce in real work environments, where students spend the majority of their time as apprentices. Employers and their associations are actively involved in the training. They develop training content, provide training venues and fund in-enterprise training costs, while working closely with vocational schools, the public sector and other social partners. The partnerships between these stakeholders are



Figure 1: Key principles of the dual VET system



Source: Authors' synthesis

well defined and governed by a clear regulatory framework.

In countries where education and training have always been a responsibility of the state and regulatory framework for public-private partnerships (PPPs) does not exist, encouraging private sector engagement in the development and delivery of skills training is perhaps one of the biggest challenges. As a result, those countries have adopted a school-based strategy where students engage in job-related learning such as through laboratory work and workshops at school and internship programs (from 2 weeks to 6 months) at enterprises. As such, the government plays a leading role and invests a lot to ensure work-related practices and build strong partnerships between TVET schools and business and industry, as in China, Singapore and South Korea.

Although contextual differences make it impossible to transfer the dual VET system, either in its entirety or component by component, it can serve as a useful model. Cambodia can look into the three key principles of the dual VET system and consider integrating them into current practices of vocational training. Partial solutions geared to the country's specific conditions and priorities have been advocated as the most promising means for

dual VET transfer. Cambodia's sustained strong economic growth and persistent skills shortage serve as important motives for employers to engage in TVET. However, adopting the three principles will require collective and solid effort. To address the four main challenges identified, the following recommendations are proposed:

- **Overcome the stigma in TVET and improve its attractiveness by:**
  - *Elevating the status of TVET qualifications:* To change perceptions and attitudes towards vocational education, TVET needs branding. The government must promote TVET to young students, raise awareness of TVET opportunities and enhance its attractiveness among students, their families and the general public. TVET branding must go beyond monetary returns to develop a return-on-experience mindset, including commitment to a profession, self-fulfilment from a satisfying and rewarding career, and contributing to society.
  - *Incentivising vocational education:* Students who finish the nine-year basic education would find a vocational career path more attractive if they could choose qualification and training

tracks in the areas that are of high demand in the labour market and if they were provided scholarship assistance.

- *Making a good business case for enterprise-based training*: Private enterprises will always balance the costs and benefits of training. To ensure the private sector views training as an investment, workplace training programs must last long enough for firms to gain from trainees' productivity. In occupational categories where productivity effects of training are not realised until after the training period, government subsidies should be provided to offset the firm's training costs.
- **Create the conditions for successful interinstitutional collaboration and coordination by:**
  - *Developing a sound PPP framework for TVET*: The main stakeholders of Cambodia's TVET system are government ministries, enterprises, TVET providers, and NGOs and development partners dedicated to improving education. A multi-stakeholder partnership framework needs to be developed and each stakeholder's roles and responsibilities in operating, managing and funding TVET must be clearly mapped out.
  - *Organising the private sector*: SMEs in Cambodia are in the early stages of development and either lack capacity or are not yet interested in training. Existing employers' associations, created mainly for interest representation and lobbying, lack technical and training capabilities. It is now essential that SMEs be organised into associations based on economic sector. Importantly, such associations must be technically competent in their field and in labour force training.
- *Strengthening regulatory framework to encourage private sector engagement*: An important motivation for enterprises to participate in training is the possibility to select and recruit learners. But the high probability of talent poaching and job hopping in Cambodia discourages firms from investing in TVET. This necessitates the formulation of law and policy to prevent employee poaching and to secure training costs against employees who leave.
- **Integrate pedagogical knowledge and industry expertise by:**
  - *Forging links between TVET providers and enterprises*: To bridge the gap between technical and pedagogical skills in schools and industry experience and expertise, expertise exchange must be promoted so that vocational school teachers can benefit from periodic refresher training from industry experts and industry trainers can have access to pedagogical knowledge.
- **Develop industry-standard training facilities and equipment by:**
  - *Encouraging enterprises to invest in training resources*: Firms should be provided full exemption or tax relief for certain supplies, materials and equipment that are used for training.
  - *Pooling training resources*: Business associations should work together to give all students and trainees the opportunity to access vocational training.

## References

- Blossfeld, Hans-Peter and Reinhard Stockmann. 1998. "Guest Editors' Introduction: The German Dual System in Comparative Perspective." *International Journal of Sociology* 28 (4): 3–28. doi.org/10.1080/15579336.1998.11770184.
- Deissinger, Thomas. 1997. "The German Dual System - a Model for Europe?" *Education + Training* 39 (8): 297–302. doi.org/10.1108/00400919710190090.
- Dougherty, Christopher. 1987. "The German Dual System: A Heretical View." *European Journal of Education* 22 (2): 195–99.
- Gessler, Michael, and Falk Howe. 2013. "The German Dual Vocational Training System – The Origin of the Current Architecture." www.researchgate.net/profile/Michael\_Gessler/publication/274898245\_The\_German\_dual\_vocational\_training\_system\_-\_the\_origin\_of\_the\_current\_architecture/links/552c382b0cf29b22c9c443e2/The-German-

- dual-vocational-training-system-the-origin-of-the-current-architecture.pdf.
- Gill, Indermit, and Amit Dar. 1996. Germany's Dual System: Lessons for Low and Middle-Income Countries." Constraints and Innovations in Reform of VET. Washington, DC: World Bank.
- Greiner, Wolf-Dietrich. 2004. "European Vocational Training 'Systems' – Some Thoughts on the Theoretical Context of Their Historical Development." *European Journal of Vocational Training* 32: 18–25.
- Grollmann, Philipp. 2008. "Comparative Research on Technical and Vocational Educational and Training – Methodological Consideration." In *Handbook of Technical and Vocational Education and Training Research*, edited by Felix Rauner and Rupert Maclean, 253–59. Springer. DOI 10.1007/978-1-4020-8347-1.
- Hummelsheim, Stefan, and Michaela Baur. 2014. "The German Dual System of Initial Vocational Education and Training and Its Potential for Transfer to Asia." *Prospects* 44 (2): 279–96. doi.org/10.1007/s11125-014-9311-4.
- Lehmann, Wolfgang. 2000. "Is Germany's Dual System Still a Model for Canadian Youth Apprenticeship Initiatives?" *Canadian Public Policy* 26 (2): 225–40. doi.org/10.2307/3552557.
- Mayer, Christine. 2001. "Transfer of Concepts and Practices of Vocational Education and Training from the Center to the Peripheries: The Case of Germany." *Journal of Education and Work* 14 (2): 189–208. doi.org/doi.org/10.1080/13639080120056655.
- Md Deros, Baba., Suzana Mohammed Zohdi and Darliana Mohamad. 2012. "A National Survey on Dual Training System Implementation in Malaysian Industry." *Procedia - Social and Behavioral Sciences* 60: 484–88. doi.org/10.1016/j.sbspro.2012.09.411.
- Pilz, Matthias, ed. 2017. *Vocational Education and Training in Times of Economic Crisis*. Vol. 24. Technical and Vocational Education and Training: Issues, Concerns and Prospects. Cham: Springer International Publishing. doi.org/10.1007/978-3-319-47856-2.
- Pilz, Matthias, and Junmin Li. 2014. "Tracing Teutonic Footprints in VET around the World?" *European Journal of Training and Development* 38 (8): 745–63. doi.org/10.1108/EJTD-10-2013-0110.
- Schmidt, Klaus. 1998. "Comparative Study of Two Delivery Mechanisms of Dual Vocational Training in Germany: Implications for Vocational Training in the United States." *Journal of Industrial Teacher Education* 35 (3): 24–43.
- SDC (Swiss Agency for Development and Cooperation). 2016. "Vocational Skills Development: Key to Employment and Income." www.shareweb.ch/site/EI/Do cuments/VSD/About/SDC%20-%20VSD%20Brochure%20-%202016.pdf.
- SDC. 2017. "The SDC Portfolio in Vocational Skills Development (VSD) – Key Figures." Bern: SDC.
- Sloane, Peter F. E. 2014. "Professional Education Between School and Practice Settings: The German Dual System as an Example." In *International Handbook of Research in Professional and Practice-based Learning*, edited by Stephen Billett, Christian Harteis and Hans Gruber, 397–425. Springer International Handbooks of Education Series. Dordrecht: Springer. doi.org/10.1007/978-94-017-8902-8.
- Valiente, Oscar, and Rosario Scandurra. 2017. "Challenges to the Implementation of Dual Apprenticeships in OECD Countries: A Literature Review." In *Vocational Education and Training in Times of Economic Crisis: Lessons from Around the World*, edited by Matthias Pilz, 41–57. Springer. doi.org/10.1007/978-3-319-47856-2.
- Wilson, David N. 2000. "The German 'Dual System' of Occupational Training: A Much-Replicated but Oft-Failed Transfer." eric.ed.gov/?id=ED450264.
- Zhiqun, Zhao, and Xu Han. 2009. "Implementing Dual Vocational Education in China: A Case of Transnational Innovation Transfer through a German-Chinese Research and Development Project." In *Handbook of Technical and Vocational Education and Training Research*, edited by Felix Rauner and Rupert Maclean, 656–60. Dordrecht: Springer. doi.org/10.1007/978-1-4020-8347-1.



## Economy Watch—External Environment

This section presents economic indicators of major world economies and economies in South-East Asia during the third quarter of 2017.

In this quarter, Indonesia's real GDP rose by 5.1 percent from a year earlier, while fixed investment and public spending also rose significantly.

GDP in Malaysia increased by 6.2 percent year on year, the highest growth since the third quarter of 2014, while manufacturing and services expanded.

Singaporean growth was 5.2 percent year on year, the highest increase since the first quarter of 2014. This high growth was driven by electronics, biomedical manufacturing and precision engineering.

Thailand's economy expanded by 4.3 percent over the year, compared to the previous quarter's 3.7 percent. This growth was driven by exports and agriculture. The expansion of global trade raised demand for Thailand's key industrial products, especially electronics and electrical equipment.

Vietnam's growth was 7.5 percent year on year, 1.2 percentage points higher than in the previous quarter. The driving forces of the growth were services and manufacturing. Agriculture, forestry and fisheries recovered from sluggish growth in the first quarter, while extractive industry shrank.

China's economy expanded by 6.8 percent from a year earlier, only 0.1 percentage point lower than the previous quarter, as the government made efforts to calm the real estate market and reduce debt risk.

The economy of China's Hong Kong SAR grew 3.8 percent year on year, while exports increased by 5.5 percent year on year in this quarter.

South Korea's annual growth was 3.6 percent, 0.9 percentage points higher than the previous quarter. Private consumption, government expenditure and fixed investment performed well, while exports also expanded, by 5.0 percent year on year.

GDP in Taiwan expanded by 3.1 percent over the year, 1 percentage point higher than in the previous quarter, driven by strong exports and household consumption.

The eurozone's real growth was 2.5 percent for the year, compared to 2.1 in the previous quarter.

Japan's economy expanded by 1.7 percent, driven by robust exports.

Growth in the United States was 2.3 percent year on year, compared to 2.1 in the previous quarter. It was powered by private sector spending on capital and inventories.

### World inflation and exchange rates

Inflation in Cambodia was 2.5 percent, in Indonesia 3.8 percent, in Malaysia 3.7 percent, Singapore 0.5 percent, Thailand 0.5 percent and Vietnam 2.8 percent. Inflation in China was 1.6 percent, in Hong Kong 1.8 percent, in South Korea 2.3 percent and in Taiwan 0.8 percent. Inflation in the eurozone was 1.4 percent, in Japan 1.1 percent and in the United States 1.9 percent.

In this quarter, the USD-KHR exchange rate was KHR4087.8/USD. The Thai baht appreciated by 2.7 percent from the preceding quarter to THB33.4/USD, and the Vietnamese dong depreciated by 0.1 percent to VND22,732.8/USD. The Chinese yuan appreciated by 2.8 percent to CYN6.7/USD, and the Japanese yen by 0.1 percent from the previous quarter to JPY110.9/USD.

### Commodity prices in world markets

Prices of most agricultural commodities in world markets dropped in this quarter, except palm oil and soybeans. The price of maize decreased by 6.0 percent to USD148.1/tonne, rubber by 1.0 percent to USD1551.7/tonne, rice by 4.5 percent to USD411.7/tonne. The price of palm oil increased by 1.4 percent to USD706.3/tonne and soybeans by 2.5 percent to USD395.3/tonne. The price of all energy fuels increased; crude oil rose by 10.3 percent to USD52.8/barrel, gasoline by 10.3 percent to US cents 44.4/litre and diesel by 16.0 percent to US cents 45.2/litre.

Table 1: Real GDP growth of selected trading partners, 2011–17 (percentage increase over previous year)

	2011	2012	2013	2014	2015	2016				2017		
						Q1	Q2	Q3	Q4	Q1	Q2	Q3
Selected ASEAN countries												
Cambodia	7.1	7.3	7.4	7.1	-	-	-	-	-	-	-	-
Indonesia	6.5	6.3	5.8	5.2	4.8	4.9	5.2	5.0	4.9	5.0	5.2	5.1
Malaysia	4.9	5.4	4.6	6.0	4.9	4.2	4.0	4.3	4.5	5.6	5.8	6.2
Singapore	4.7	1.3	3.8	3.0	2.0	1.8	2.1	1.1	2.9	2.7	2.9	5.2
Thailand	0.0	6.7	2.8	1.6	2.8	3.2	3.5	3.2	3.0	3.3	3.7	4.3
Vietnam	6.2	5.2	5.4	5.9	6.6	5.5	3.5	6.4	6.7	5.1	6.2	7.5
Selected other Asian countries												
China	9.3	7.7	7.7	7.3	7.0	6.7	6.7	6.7	6.8	6.9	6.9	6.8
Hong Kong	4.9	2.9	3.0	2.3	2.3	0.8	1.7	1.3	3.1	4.3		3.6
South Korea	3.6	2.1	2.8	3.4	2.6	2.7	3.2	2.3	2.3	2.8	2.7	3.6
Taiwan	4.2	1.2	2.2	3.5	0.6	-0.8	0.7	2.0	2.9	2.6	2.1	3.1
Selected industrial countries												
Euro-12	1.6	-0.5	0.1	0.7	1.3	1.5	1.6	1.7	1.7	1.7	2.1	2.5
Japan	-0.8	1.7	1.7	0.6	0.3	0.2	0.8	1.1	1.6	1.6	2.0	1.7
United States	1.8	2.1	1.8	2.4	2.3	2.1	1.2	1.3	1.9	2.1	2.1	2.3

Sources: International Monetary Fund, *Economist* and countries' statistics officesTable 2: Inflation rate of selected trading partners, 2011–17  
(percentage price increase over previous year–period averages)

	2011	2012	2013	2014	2015	2016				2017		
						Q1	Q2	Q3	Q4	Q1	Q2	Q3
Selected ASEAN countries												
Cambodia	5.5	3.0	3.0	3.9	1.2	2.4	3.1	3.0	3.6	4.2	2.7	2.5
Indonesia	5.4	4.3	7.0	6.4	6.4	4.3	3.5	3.0	3.3	3.6	4.1	3.8
Malaysia	3.2	1.7	2.1	3.2	2.1	3.4	1.9	1.4	1.7	4.3	4.0	3.7
Singapore	5.2	4.6	2.3	1.0	-0.5	-0.8	-0.9	-1.5	0.0	0.7	0.8	0.5
Thailand	3.8	3.0	2.2	1.9	-0.9	-0.5	0.3	0.3	0.7	1.1	0.2	0.5
Vietnam	18.6	9.3	6.6	4.8	0.6	1.3	2.2	2.8	4.4	5.0	0.8	2.8
Selected other Asian countries												
China	5.4	2.7	2.6	2.0	1.4	2.1	2.1	1.7	2.2	1.4	1.4	1.6
Hong Kong	5.3	4.1	4.0	4.4	3.1	2.9	2.6	3.1	1.2	1.0	2.4	1.8
South Korea	4.4	2.1	1.1	1.3	0.7	0.2	0.9	0.8	1.3	2.0	2.0	2.3
Taiwan	1.4	1.9	0.8	1.5	0.6	1.7	1.3	0.7	1.8	0.8	0.6	0.8
Selected industrial countries												
Euro-12	2.7	2.5	1.4	0.4	0.0	0.1	0.2	0.3	0.7	1.8	1.2	1.4
Japan	0.1	-0.03	0.4	2.8	0.9	0.2	-0.4	-0.5	0.3	0.2	0.3	1.1
United States	3.2	2.1	1.5	1.6	0.0	1.1	0.7	1.1	1.9	2.5	1.9	1.9

Sources: International Monetary Fund, *Economist* and National Institute of Statistics

Table 3: Exchange rates against US dollar of selected trading partners, 2011–17 (period averages)

	2011	2012	2013	2014	2015	2016				2017		
						Q1	Q2	Q3	Q4	Q1	Q2	Q3
Selected ASEAN countries												
Cambodia (riel)	4063.6	4037.8	4027.2	4037.6	4060.4	4022.4	4056.3	4094.1	4041.9	4015.8	4048.2	4087.8
Indonesia (rupiah)	8748.0	9363.0	10419.2	11850.2	13394.8	13627.3	13324.1	13136.6	13265.3	13344.7	13312.8	13327.0
Malaysia (ringgit)	3.1	3.1	3.1	3.3	3.9	4.2	4.0	4.0	4.3	4.4	4.3	4.3
Singapore (S\$)	1.3	1.2	1.3	1.3	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
Thailand (baht)	30.5	31.1	30.7	32.5	34.2	35.6	35.3	34.8	35.4	35.1	34.3	33.4
Vietnam (dong)	20574.3	20856.9	20990.3	21138.2	21917.7	22929.4	22314.5	22292.2	22493.7	22429.1	22704.3	22732.8
Selected other Asian countries												
China (yuan)	6.5	6.3	6.1	6.2	6.3	6.5	6.5	6.7	6.8	6.9	6.9	6.7
Hong Kong (HK\$)	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8
South Korea (won)	1108.6	1126.6	1095.0	1053.6	1131.9	1200.8	1163.4	1120.9	1159.0	1152.4	1129.9	1132.8
Taiwan (NT\$)	29.4	29.6	29.7	30.3	31.8	33.1	32.4	31.7	31.8	31.1	30.3	30.3
Selected industrial countries												
Euro-12 (euro)	0.7	0.8	0.8	0.8	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
Japan (yen)	79.9	79.8	97.6	105.9	121.0	115.3	107.9	102.4	109.5	113.7	111.1	110.9

Sources: International Monetary Fund, *Economist* and National Bank of Cambodia

Table 4: Selected commodity prices on world market, 2011–17 (period averages)

	2011	2012	2013	2014	2015	2016				2017		
						Q1	Q2	Q3	Q4	Q1	Q2	Q3
Maize (US No. 2)–USA(USD/tonne)	291.7	298.4	259.4	192.9	169.8	160.0	171.1	153.5	152.2	160.6	157.7	148.1
Palm oil–north-west Europe (USD/tonne)	1125.4	999.3	856.9	821.4	622.7	586.9	647.8	714.7	753.0	773.0	696.3	706.3
Rubber SMR 5 USD/tonne)	4630.6	3200.7	2575.3	1755.6	1392.7	1190.0	1408.1	1349.4	1716.9	2147.7	1568.1	1551.7
Rice (Thai 100% B)–Bangkok (USD/tonne)	558.5	594.8	533.8	434.9	395.5	385.3	465.0	430.3	376.0	537.0	431.0	411.7
Soybeans (US No.1)–USA (USD/tonne)	540.7	591.4	538.4	491.8	390.4	328.0	418.7	416.7	411.7	419.1	385.7	395.3
Crude oil–OPEC spot (USD/barrel)	106.2	109.5	105.9	96.2	49.6	31.2	44.7	43.3	47.9	52.0	47.9	52.8
Gasoline–US Gulf Coast (cents/litre)	71.9	74.6	71.2	65.6	41.0	27.9	37.5	36.8	38.5	41.0	40.3	44.4
Diesel (low sulphur No.2)–US Gulf Coast (cents/litre)	75.7	80.7	78.4	71.5	41.7	27.2	35.6	36.3	40.2	41.4	39.0	45.2

Sources: Food and Agriculture Organisation and US Energy Information Administration

## Economy Watch—Domestic Performance

### Main economic activities

Total fixed asset investment approvals in the third quarter continued to increase, to USD3005.4 m from USD1652.6 m in the previous quarter. Year on year, they grew by 214.5 percent. Compared to the previous quarter, investments in all sectors expanded considerably, except for agriculture. There was no agricultural investment in this quarter, after USD54.9 m in the previous quarter. Total industrial investment approvals were USD486.6 m, 83.1 percent higher than in the previous quarter. Investments in garments were USD78.9 m, 258.4 percent higher than in the previous quarter. Investment approvals in services expanded to USD2518.8 m from USD1332.0 m in the previous quarter. Hotel and tourism investment was USD2518.8 m, compared to USD237.2 m in the previous quarter.

The third quarter is the low tourist season, but total international tourist arrivals expanded year on year by 22.7 percent, to 1,250,082 persons. Compared to the same quarter last year, arrivals by air increased by 29.2 percent to 777,745 persons, whereas arrivals by land and water dropped by 13.4 percent to 472,337 persons.

In this quarter, total exports were USD3098.3 m, an increase of 17.9 percent from the previous quarter. Year on year, they rose 110.0 percent. Garment exports expanded by 22.2 percent to USD2290.3 m from the previous quarter and rose 110.5 percent year on year. Garment exports to the US, EU and Japan increased, but those to ASEAN decreased.

Agricultural exports expanded by 21.6 percent to USD175.4 m from the previous quarter, and increased by 148.5 percent from the same quarter last year. Compared to the previous quarter, exports of rice, rubber and fish increased while those of wood decreased.

Total imports dropped by 27.2 percent from a quarter earlier, but were 42.6 percent higher than the previous year, to USD4303.3 m. Imports of gasoline were valued at USD58.3 m, diesel fuel USD113.3 m, construction materials USD89.6 m and other imports USD4042.2 m.

### Public finance

In this quarter, the government budget had a deficit of KHR550.1 bn. Total government revenue in the quarter was KHR3870.8 bn, 5.2 percent less than a quarter earlier, but 13.7 percent higher than in the same quarter last year. Current revenue was KHR3839.2 bn, 5.5 percent less than in the last quarter. Tax revenue was KHR3318.4 bn, 7.3 percent less than in the previous quarter, while non-tax revenue was KHR520.9 bn, 7.7 percent more than the preceding quarter.

Total expenditure was KHR4420.9 bn, 17.9 percent more than a quarter earlier, but 2.0 percent less than the same quarter last year. Capital expenditure was KHR1202.1 bn, 24.2 percent more than the previous quarter. Current expenditure was KHR3218.7 bn, 15.7 percent more than a quarter earlier.

### Inflation and foreign exchange rates

The rise in the overall consumer price index (CPI) in the third quarter of 2017 was 2.5 percent, compared to 2.7 percent in the previous quarter. The prices of food and non-alcoholic beverages increased by 2.7 percent, 0.4 percentage points less than in the previous quarter. That of transport rose 3.8 percent year on year.

Compared to the previous quarter, the riel depreciated by 1.0 percent against the dollar to KHR4089.5, by 3.4 percent against the Thai baht to KRM122.8 per baht and by 0.9 percent against the Vietnamese dong to KHR18.1 per 100 dong.

The price of gold rose 2.1 percent to USD154.1/chi. The price of diesel fuel increased 1.8 percent to KHR3369.0/litre. Likewise, the gasoline price rose by 2.7 percent from the previous quarter, to KHR3722.0/litre.

### Poverty situation

This section describes the situation of vulnerable workers and garment workers based on a survey of 360 vulnerable workers and 120 garment workers in November 2017. The average real daily earnings of most vulnerable workers increased year on year, but those of cyclo drivers, small vegetable sellers, scavengers and rice-field workers decreased.

Since they started their occupations, 65.0 percent of the vulnerable workers reported that their families



were better off, 26.8 percent said they remained the same, and 8.1 percent said they were worse.

Garment workers' daily wages increased by 8.7 percent from a year earlier, to KHR14,275. On average, they were around 29 years old. Their average level of education was fifth grade. They had worked in the factory for about four years. They worked 54.9 hours per week and saved 49.1 percent of their wages. Eighty-eight percent of them sent savings to their families, which could partially support them. About 35.8 percent did not want to change their jobs, 38.3 percent did, and 25.8 percent were not sure. Fifty-five percent were optimistic about the future of their factory, 20.0 percent said that it would not be so good, 8.3 percent said that it would be the same, and the rest did not know.

Ricefield workers' earnings decreased to KHR8132 per day, a 1.2 percent decrease year on year. Sixty-five percent of those interviewed were the main income earners for their families. Their income had decreased compared to the previous quarter, 55.0 percent said. Fifty-seven and a half percent stated that their income during November could partially support their families, while 42.5 percent said that it could not. Fifty-five percent were in debt, and the average interest rate on their borrowing was 2.2 percent per month.

Earnings of small vegetable vendors decreased to KHR16,015 per day, 8.4 percent lower year on year. The majority of them came from Kandal, Svay Rieng, Prey Veng, Kompong Speu and Takeo. Twenty-five percent had no agricultural land, 2.5 percent had less than 1 hectare, 42.5 percent had between 0.5 and below 1 hectares, and another 30.0 percent had land between 1 and less than 2 hectares. All of the respondents were the main income earners in their families. Twenty-seven and a half percent indicated that they were in debt.

Scavengers' earnings decreased by 5.7 percent from a year earlier, to KHR10,703 per day. Compared to the previous three months, the number of scavengers rose, but the source of rubbish and its price dropped, the majority of them said. Ninety seven and a half percent of the scavengers interviewed were the family breadwinners. On average, scavengers needed to work 11.7 hours per day and 27.7 days per month. On average, they spent on food (66.0 percent of their total spending), rent (19.2 percent), health care (1.4 percent) and other expenses (13.3 percent).

Daily earnings of unskilled construction workers increased by 6.2 percent from a year earlier, to KHR20,371 per day. Compared to the previous three months, the number of unskilled construction workers expanded, amid an increase in construction activities, the majority of the workers said. Ninety percent of these workers migrated alone to Phnom Penh or Siem Reap for work; 10 percent migrated with family. They worked 9.4 hours per day on average. They spent 78.7 percent of their total spending on food, 12.2 percent on rent, 0.2 percent on health, and 8.9 percent on other things. Their income could only partially support their families, 95 percent of them said.

Compared to the same month last year, porters' earnings rose by 7.7 percent to KHR14,549 per day. Seventy percent of these workers migrated alone to Phnom Penh or Siem Reap for work; 30.0 percent migrated with family. Their income was spent on food (75.8 percent of the total), rent (14.1 percent), health care (0.9 percent) and other expenses (9.0 percent). Since they started as porters, their families were better off, 67.5 percent reported, while 30.0 percent said that their families' livelihoods remained the same, and 2.5 percent said their families were worse off.

The daily earnings of waiters/waitresses increased by 2.2 percent compared to the same month last year, to KHR8190 per day. On average they have worked as waiters/waitresses for 4.5 years. They worked on average 11.0 hours per day and 30 days per month. They spent 82.4 percent of their total spending on food, 3.4 percent on health care and 14.1 percent on other spending.

Table 1: Private investment projects approved, 2011–2017\*

	2011	2012	2013	2014	2015	2016				2017		
						Q1	Q2	Q3	Q4	Q1	Q2	Q3
	Fixed Assets (USD m)											
Agriculture	725.0	531.6	930.5	56.5	169.8	27.6	0.0	7.4	82.1	8.0	54.9	-
Industry	2860.1	829.3	3257.0	1002.5	1014.7	252.4	597.0	266.1	320.8	115.6	265.7	486.6
<i>. Garments</i>	393.9	497.0	324.1	393.5	225.2	70.8	239.9	51.1	19.0	54.0	22.0	78.88
Services	3425.4	916.6	140.7	622.6	2734.4	643.6	234.1	681.9	104.6	7.8	1332.0	2518.8
<i>. Hotels and tourism</i>	2850.9	691.5	106.0	446.9	98.6	611.1	19.8	679.8	56.3	3.6	237.2	2518.8
Total	7010.4	2278.0	4328.0	1583.9	3918.9	923.7	831.2	955.5	507.4	131.4	1652.6	3005.4
	Percentage change from previous quarter											
Total	-	-	-	-		80.5	-10.0	15.0	-46.9	-74.1	1158.0	81.9
	Percentage change from previous year											
Total	209.0	-67.5	90.1	63.4	147.4	-67.9	226.4	242.0	-0.8	-85.8	98.8	214.5

\* Including expansion project approvals. Source: Cambodian Investment Board

Table 2: Value of construction project approvals in Phnom Penh, 2009–15

	2009	2010	2011	2012	2013	2014				2015		
						Q1	Q2	Q3	Q4	Q1	Q2	Q3
						USD m						
Villas, houses and flats	213.9	220.1	405.1	547.3	658.9	133.6	84.0	33.1	20.4	122.3	-	637.6
Other	187.8	217.8	199.9	463.6	859.6	190.0	141.7	105.6	11.7	49.8	-	252.6
Total	441.2	489.8	605.0	1010.9	1518.5	323.6	225.7	138.7	32.1	172.0	-	897.4
	Percentage change from previous quarter											
Total	-	-	-	-	-	34.3	-30.2	-38.5	-77.8	437.3	-	-
	Percentage change from previous year											
Total	-60.5	11.0	23.5	67.1	28.1	8.0	-9.2	-64.2	-86.7	-46.8	-	-

Source: Department of Cadastre and Geography of Phnom Penh municipality

Table 3: Foreign visitor arrivals, 2011–2017

	2011	2012	2013	2014	2015	2016				2017		
						Q1	Q2	Q3	Q4	Q1	Q2	Q3
						Thousands						
By air	1480.4	1722.1	2017.7	2273.5	2476.0	785.0	593.5	602.2	797.4	921.4	684.3	777.7
By land or water	1401.4	1862.2	2192.5	2229.3	2299.2	557.4	522.7	545.3	705.9	581.5	475.5	472.3
Total	2881.8	3584.3	4210.2	4502.8	4775.2	1342.5	1116.2	1147.5	1503.3	1502.9	1159.8	1250.1
	Percentage change from previous quarter											
Total	-	-	-	-	-	-0.6	-16.9	2.8	47.6	-0.03	-22.8	7.3
	Percentage change from previous year											
Total	20.1	24.4	17.5	7.0	6.1	-2.4	12.3	9.8	5.2	11.9	3.9	22.7

Source: Ministry of Tourism

Table 4: Exports and imports, 2011–2017\*

	2011	2012	2013	2014	2015	2016				2017		
						Q1	Q2	Q3	Q4	Q1	Q2	Q3
						USD m						
Total exports	4929.5	6106.4	6982.4	8106.0	9256.4	2388.3	2383.4	2817.7	2454.0	2290.7	2626.9	3098.3
Of which: Garments	4259.6	5015.4	5386.1	5960.5	6827.0	1759.4	1717.8	2072.5	1758.2	1856.3	1874.1	2290.3
<i>. To US</i>	2055.3	2143.3	2075.2	1963.6	2009.4	423.1	440.4	554.5	413.5	452.3	426.0	570.8
<i>. To EU</i>	1322.2	1716.9	1969.6	2403.7	2903.9	789.6	776.6	733.4	629.2	583.0	693.3	787.9
<i>. To ASEAN</i>	17.6	39.4	60.2	83.3	103.4	25.6	25.7	21.4	25.7	24.2	29.0	24.2
<i>. To Japan</i>	147.0	188.6	278.7	383.1	524.2	176.0	122.5	216	141.0	196.2	136.7	204.8
<i>. To rest of the world</i>	717.5	927.2	1002.9	1126.8	1286.3	345.2	352.7	547.1	548.9	600.6	589.2	702.7
Agriculture	362.1	376.7	554.5	624.4	548.8	137.5	98.9	118.1	179.5	201.0	144.2	175.4
<i>. Rubber</i>	197.6	176.6	175.2	153.9	165.4	30.7	26.8	48.3	59.6	66.1	65.2	71.7
<i>. Wood</i>	48.8	36.8	73.6	132.0	46.3	4.9	12.4	11.6	18.3	11.7	28.9	24.6
<i>. Fish</i>	3.1	2.0	1.2	0.8	0.5	0.2	0.1	0.2	0.2	0.2	0.1	0.1
<i>. Rice</i>	106.6	146.4	262.3	248.5	315.3	91.4	56.1	53.4	99.9	83.1	35.0	66.5
<i>. Others</i>	6.0	14.9	42.4	89.1	21.3	10.3	3.6	4.6	1.6	39.9	15.0	12.4
Others	307.9	714.4	1088.2	1520.1	1880.2	491.3	566.6	627.1	516.2	233.4	608.6	632.6
Total imports	6375.9	8593.3	8639.4	10,295.4	11494.5	2784.7	6136.6	3017.0	3080.8	3173.5	5914.4	4303.3
Of which:												
<i>. Gasoline</i>	294.4	308.0	306.4	334.7	377.3	95.4	99.2	93.3	97.1	75.1	57.5	58.3
<i>. Diesel</i>	447.0	559.5	569.1	602.3	607.8	163.1	194.6	173.7	178.0	146.4	111.1	113.3
<i>. Construction materials</i>	48.1	66.1	80.8	117.6	164.4	50.8	62.1	83.1	57.4	55.6	90.3	89.6
Others	5586.4	7659.1	7682.6	9240.7	10345.1	2475.0	5780.8	2667.0	2748.4	2896.4	5655.5	4042.2
Trade balance	-1446.4	-1341.6	-1610.9	-2184.3	-2238.1	-390.7	-3753.3	-199.4	-626.8	882.8	-3287.6	-1205.0
	Percentage change from previous quarter											
Total garment exports	-	-	-	-	-	4.7	-2.4	20.6	-15.2	5.6	1.0	22.2
Total exports	-	-	-	-	-	3.4	-0.2	18.2	-12.9	-6.7	14.7	17.9
Total imports	-	-	-	-	-	-5.8	120.8	-50.8	2.1	3.0	86.4	-27.2
	Percentage change from previous year											
Total garment exports	32.1	17.7	7.4	10.7	14.5	13.6	7.2	3.9	4.6	5.5	9.1	10.5
Total exports	14.3	16.1	-	-	14.2	10.1	9.2	8.6	6.3	-4.1	10.2	10.0
Total imports	15.4	19.7	21.4	19.2	11.7	5.0	2.5	110.1	3.8	14.2	-3.6	42.6

\* Import data include tax-exempt imports. Sources: Department of Trade Preference Systems, MOC and Customs and Excise Department, MEF (web site)

Table 5: National budget operations on cash basis, 2011–17 (billion riels)

	2011	2012	2013	2014	2015	2016				2017		
						Q1	Q2	Q3	Q4	Q1	Q2	Q3
Total revenue	6251.4	7691.9	8255.2	10,543.4	11879.9	3533.1	3849.7	3413.7	3405.0	4261.9	4093.6	3870.8
Current revenue	6179.3	7443.8	8233.2	10,359.4	11759.0	3514.7	3836.3	3375.9	3361.7	3261.9	4071.5	3839.2
Tax revenue	5277.5	6334.8	7198.1	8995.2	10502.4	3255.5	3368.1	2850.5	2722.4	3905.8	3580.5	3318.4
Domestic tax	4071.6	5002.8	5728.1	7226.5	8591.7	2715.3	2854.5	2378.5	2237.4	2450.0	3107.5	2844.0
Taxes on international trade	1205.9	1331.7	1470.0	1822.7	1910.7	540.1	513.6	472.0	485.0	455.8	473.1	474.4
Non-tax revenue	901.8	1118.2	1035.2	1310.3	1256.6	259.3	468.2	525.4	639.4	356.2	490.9	520.9
Property income	63.8	143.0	84.0	88.5	77.3	8.1	26.1	43.2	38.5	17.4	35.8	39.1
Sale of goods and services	588.7	667.4	750.3	871.2	1047.1	198.5	315.3	294.9	439.5	272.1	360.3	347.3
Other non-tax revenue	249.3	298.8	200.8	350.5	132.2	52.7	126.8	187.3	161.3	66.6	94.8	134.7
Capital revenue	72.1	247.9	73.4	184.0	121.0	18.3	13.4	38.4	43.3	0.0	22.1	31.5
Total expenditure	9032.4	9660.9	12,535.7	13,306.5	13,849.5	2364.3	3405.3	3460.8	4509.2	3090.9	3878.4	4420.9
Capital expenditure	3546.9	3628.3	5567.5	5590.7	5290.3	620.9	1091.1	811.3	1225.6	859.0	1096.0	1202.1
Current expenditure	5341.2	6188.4	6968.3	7715.8	8544.6	1743.4	2314.2	2649.1	3283.6	2231.9	2782.4	3218.7
Wages	2170.6	2486.6	2997.3	3755.5	4271.9	1133.1	1418.3	1403.6	1426.7	1567.6	1515.7	1739.3
Subsidies and social assistance	1518.8	1586.8	1563.0	1627.0	1742.9	259.1	439.7	447.5	628.7	312.9	635.2	617.0
Other current expenditure	1651.8	2115.1	2408.0	2333.4	2529.8	351.2	456.2	798.1	1228.2	664.3	1266.7	1479.5
Overall balance	-1271.4	-1969.0	-4280.6	-2763.1	-1969.6	1168.8	444.4	-47.0	-1104.2	1171.1	215.2	-550.1
Foreign financing	-2781.0	2457.8	4326.2	3972.1	3729.4	266.4	775.6	141.0	661.9	598.5	960.8	640.6
Domestic financing	2379.2	-332.9	824.4	-1428.7	-2034.9	-1631.4	-488.5	37.5	342.7	-352.8	-339.1	88.8

Source: MEF web site

Table 6: Consumer price index, exchange rates and gold prices (period averages), 2009–17

	2011	2012	2013	2014	2015	2016				2017		
						Q1	Q2	Q3	Q4	Q1	Q2	Q3
						Consumer price index (percentage change from previous year)						
Phnom Penh - All Items	5.4	2.3	3.0	3.9	1.2	2.5	3.0	3.0	3.9	4.2	2.7	2.5
- Food & non-alcoholic bev.	6.5	2.5	3.9	4.9	4.0	4.7	6.2	5.5	6.0	6.0	3.1	2.7
- Transportation	6.9	3.3	-0.6	-1.0	-9.2	-6.5	-9.9	-7.9	-3.4	4.1	4.3	3.8
	Exchange rates, gold and oil prices (Phnom Penh market rates)											
Riels per US dollar	4063.6	4039.2	4036.2	4060.4	4060.4	4022.4	4056.3	4094.1	4041.9	4015.8	4048.2	4089.5
Riels per Thai baht	133.2	130.0	124.9	119.4	119.4	113.4	115.7	118.1	114.9	114.9	118.8	122.8
Riels per 100 Vietnamese dong	19.7	19.4	19.1	18.7	18.7	18.1	18.3	18.5	18.1	17.8	17.9	18.1
Gold (US dollars per chi)	184.5	200.9	175.9	152.3	140.6	151.2	151.2	157.1	148.3	145.5	150.9	154.1
Diesel (riels/litre)	4761.2	4941.2	4852.1	4934.1	3771.3	2903.8	2932.8	3050.2	3129.3	3391.6	3310.4	3369.0
Gasoline (riels/litre)	5044.5	5312.7	5083.3	5155.7	3951.7	3310.6	3318.2	3281.4	3437.1	3697.0	3625.2	3722.0

Sources: NIS, NBC and CDRI

Table 7: Monetary survey, 2011–17 (end of period)

	Table 7: Monetary Survey, 2011-17 (end of period)											
	2011	2012	2013	2014	2015	2016				2017		
						Q1	Q2	Q3	Q4	Q1	Q2	Q3
	Billion riels											
Net foreign assets	17893.9	18154.5	21260.1	26699.7	26665.5	29247.8	30138.5	32188.4	32814.5	36490.5	40285.4	43301.5
Net domestic assets	5760.8	10437.4	11508.3	15859.8	22157.6	21643.0	24399.1	24939.2	25802.3	24057.0	24985.6	26440.4
Net claims on government	-2123.1	-2486.4	-2794.9	-4359.1	-6428.8	-7621.2	-7977.4	-7916.6	-8148.5	-9818.9	-10128.0	-10347.7
Credit to private sector	17552.8	23536.6	27608.8	36244.6	46,071	47627.0	52528.6	54551.1	56458.8	57385.9	61189.9	63492.6
Total liquidity	23654.7	28591.9	32768.4	42559.5	48823.1	50890.9	54537.6	57127.5	57616.8	60547.4	65271.0	69741.9
Money	3956.2	4045.7	4878.2	6308.4	6741.4	6717.8	6872.0	7460.9	7273.0	7524.7	8186.1	8925.0
Quasi-money	17893.9	18154.5	21260.1	26699.7	42081.7	44173.1	47665.6	49666.6	53022.7	53022.7	57084.8	60816.9
	Percentage change from previous year											
Total liquidity	17.8	20.9	14.6	29.9	14.7	16.5	18.2	21.7	18.0	19.0	19.7	22.1
Money	16.9	2.3	20.6	29.3	6.9	1.4	9.2	18.7	7.9	12.2	19.1	19.6
Quasi-money	17.9	44.6	13.6	30.0	16.1	19.2	19.6	22.1	19.6	20.0	19.8	22.5

Source: National Bank of Cambodia

Table 8: Real average daily earnings of vulnerable workers (base November 2000)

	Daily earnings (riels)						Percentage change from previous year		
	2012	2013	2014	2015	2016		2017		
							Feb	May	Nov
Cyclo drivers	10303	10438	10774	12405	11516		11092	10916	10804
Porters	12143	13247	13580	15631	14318		15171	14625	15423
Small vegetable sellers	10771	11366	14751	15867	17177		18411	13980	19655
Scavengers	8680	9819	9173	12344	10297		11478	12428	11754
Waitresses*	6111	6697	7789	8436	7989		7905	8141	8135
Rice-field workers	6151	6599	7514	8745	8088		8332	7049	8708
Garment workers	8932	10161	11178	-	13688		14889	12910	14299
Motorcycle taxi drivers	12930	13450	13386	14455	14509		14770	13888	14370
Unskilled construction workers	11078	13184	13336	15349	17365		16664	14796	17533
Skilled construction workers	13743	15442	17420	18624	-		21716	21924	23014

\* Waitresses' earnings do not include meals and accommodation provided by shop owners. Surveys on the revenue of waitresses, rice-field workers, garment workers, motorcycle taxi drivers and construction workers began in February 2000. Source: CDRI  
November 2015 data are not available.

## *Continued from page 24* **CDRI UPDATE**

Institute to discuss the effects of the maritime segment of China's Belt and Road Initiative on security dynamics in the Asia Pacific. CDRI's executive director was a panellist.

22–23 November, Singapore

**2017 Asia Think Tank Summit on Think Tanks, Public Policy and Governance.** The event was jointly hosted by the Asia Competitiveness Institute at the Lee Kuan Yew School of Public Policy, National University of Singapore, the Think Tanks and Civil Societies Program, Lauder Institute, University of Pennsylvania, and the Asian Development Bank Institute. The aim of the Summit was to brainstorm how think tanks can adapt to new developments in the economic order to develop inclusive and sustainable research-based solutions to pressing issues, contribute to healthy public discourse, and provide policy alternatives to decision makers. CDRI's executive director was a discussant in the Breakout Session "Fighting against Climate Change".

29 November, Phnom Penh

**Representatives of Hainan Federation of Social Science Association visit CDRI.** The purpose of the visit was to explore opportunities for collaborative research with CDRI.

1 December, Phnom Penh

**CDRI receives courtesy visit from Carin Salerno, Country Director of the Swiss Agency for Development and Cooperation (SDC).** During her visit, Carin Salerno was briefed about CDRI's policy research activities in general and SDC-funded research on technical and vocational education and training in particular.

5 December, Siem Reap

**CDRI Management Retreat.** Participants in the retreat discussed CDRI's Research Strategy 2018. Strategic Plan 2016–21 was subsequently updated.

6–8 December, Siem Reap

**CDRI Annual Staff Retreat.** The staff who attended this year's retreat in Siem Reap said that it was one of the best ever. The retreat will long be remembered as a fun and enjoyable time. Staff came

back feeling refreshed and proud to be a member of the CDRI family. Its success is directly attributable to the commitment, hard work and passion of the organising committee.

## **RESEARCH**

### **Agriculture**

The team is implementing five projects. The pilot voicemail messaging to farmers for the project *Testing Innovative Mechanisms for Agricultural Extension in Cambodia*, funded by the International Food Policy Research Institute (IFPRI), went smoothly and ended in mid-December. To evaluate the impact of this voice message service, an endline survey is scheduled for next year. For the *Final Evaluation of the Arbitration Council (ACF) Foundation Project*, a commissioned work, the team is addressing comments received from the ACF. Fieldwork was completed for *Scaling Up Home Gardens for Food and Nutrition Security in Cambodia*, a collaborative research project with the Overseas Development Institute, funded under Phase 2 of the International Development Research Centre's Canadian International Food Security Research Fund. The team is now drafting the final report. The Sida-funded project *On-farm Food Safety in Horticulture in Cambodia: The Case of Vegetable Farming* is going well, with the concept note completed and preliminary fieldwork underway. The team presented the key findings of *Rice Policy Analysis*, a study funded under the Lower Mekong Public Policy Initiative (LMPPI), at the 2017 Lower Mekong Policy Forum on Energy, Agriculture and Natural Resources organised by LMPPI in Da Nang, Vietnam. The findings have been documented in a CDRI working paper and a policy brief and should be released in early 2018.

### **Economics**

The study *Vocational Training and Labour Market Transitions: A Randomised Experiment among Cambodian Young Adults* was successfully completed. Nearing completion is the project on *Cambodia's Industrial Development Policy and One Belt One Road – The Development of Sihanoukville Province as a Multipurpose Special Economic Zone and Utilisation of OBOR Initiative*, which receives



funding from the Cambodia 21st Century Maritime Silk Road Research Center. Also coming to the final stage is *Improving Job Prospects for the Young: Labour Markets, Skill Development and Private Sector Development in the Greater Mekong*, a three-year program under the Greater Mekong Subregion Research Network (GMS-Net), a regional research consortium supported by Canada's International Development Resource Centre. The team is preparing the book for publication and organising a book launch workshop, to be held in May 2018.

Also making good progress are three other projects. The first is *Mapping Cambodia's Participation in Electric and Electronic Global Value Chains (GVCs)*, a research study under the Sida-funded five-year program on *Industrial Development, Human Capital and SME Development in Cambodia*. The team has completed the survey questionnaire and is now getting ready to conduct a survey of electronics firms. The second is the project on *Inequality and Fiscal Accountability in Cambodia*, which receives funding from Oxfam. The team has completed the draft report and is preparing to present the preliminary findings at the Consultation workshop, to be held in February. The third is *Poverty Dynamics: Cambodia Country Case Study*, supported by the Overseas Development Institute. The team is preparing interview guides for stakeholder interviews and the fieldwork survey.

The unit received a grant from Zurich University of Teacher Education to work in partnership with Paññāsāstra University of Cambodia to implement a research project on the *Contribution of Vocational Skills Development to Inclusive Industrial Growth and Transformation: An Analysis of Critical Factors in Six Countries*.

## Education

The second annual meeting of the steering committee for the research program on *Higher Education Policy Research and Influencing* in Cambodia was held in October. The committee acknowledged the good results of CDRI's research and policy recommendations but felt that better understanding of the problems in policy implementation is required. To address this issue, it was suggested that CDRI widen its policy dialogue to engage key government stakeholders, particularly the Ministry of Economy and Finance.

In October, a senior CDRI researcher led a delegation of senior representatives from the Ministry of Labour and Vocational Training, Young Entrepreneurs Association of Cambodia and Chea Sim University of Kamchaymear to visit Korea and meet Korean educational, research and industry partners. The aim was to experience how Korean government, TVET research institutes, TVET providers, and the industry interact and collaborate in TVET provision. This is the first of a series of international exposure visits which form part of the Research and Policy Dialogue on TVET, thanks to support from the Swiss Agency for Development and Cooperation.

We received a high volume of abstract and proposal submissions for the CESA (Comparative Education Society of Asia) Conference in Siem Reap on 10–12 May 2018. The theme of the conference is Education and Social Progress: Insights from Comparative Perspectives. Further information and the registration form for this important event can be found at [www.cdri.org.kh/cesa](http://www.cdri.org.kh/cesa). A Writers Workshop, run by CESA in collaboration with the Asia-Pacific Journal of Education, and with support from the BAICE journal *Compare*, is to be held in conjunction with the conference. This workshop offers a unique opportunity to receive individual support in writing and submitting a research article to an international, peer-reviewed journal. Early career academics can seek more information and apply for a place at the Writers Workshop by contacting [cesa.secretariat@gmail.com](mailto:cesa.secretariat@gmail.com).

## Environment

Planned activities for the project *Empowering Women on Climate Resilience in Cambodia*, funded by UNDEF, were accomplished. They included the conduct of a knowledge, attitudes and practice (KAP) survey on climate change, the design of two training courses, and the delivery of a Train the Trainer training course and four rounds of training on climate change. The KAP survey was done to assess the level of target beneficiaries' adaptive capacity and to establish baseline data for measuring specific indicators in the results framework. Both training curriculums were developed by two experts on climate change adaption from the Cambodia Climate Change Alliance and the National Committee for Sub-National Democratic Development. The three-

day Train the Trainer course was delivered to 20 female leaders from Battambang, Preah Vihear, Prey Veng and Kampot provinces. Then the training course on climate change adaptation was rolled out to 80 female community leaders (20 in each province).

The study on *Climate Change Adaptation and Disaster Risk Reduction*, under the Sida-funded research program, focuses on climate change responses and best practices. Data collection in Battambang, Prey Veng, Kampot, Kampong Thom and Kampong Chhnang provinces was completed, and the data entered, checked and transferred to a statistical program. The project is now at the data analysis and report writing stage. We expect to complete this project and publish the results in a CDRI working paper in the first quarter of 2018. The unit was commissioned by the University of Chicago to collect data in Kampong Cham, Prey Veng, Takeo, Kampong Speu and Kandal provinces for the project *Human Response to Environmental Change in the Lower Mekong River Basin*. The team organised 11 focus group discussions and 18 in-depth interviews with local authorities, members of provincial committees for disaster management, and line officers in the departments of water resources and meteorology, agriculture, forestry and fisheries, and rural development. The draft report was completed for the study *Gender and Resettlement: The Case of Lower Sesan 2*, a collaborative study with the Governance Unit under the project *Good Mekong Water Governance*. The results will be published in a CDRI working paper in March 2018.

### Governance

The team organised several workshops with village chiefs in preparation for data collection for the project *Cambodian Youth Participation in Development and Politics*. Survey implementation has progressed well and so far we have collected data in Kampot, Steung Streng, Kampong Cham and Svay Rieng. The team also participated in the 2017 Forum on Water, Food and Energy organised by CGIAR Research Program on Water, Land and Ecosystems (WLE Greater Mekong) in Yangon, Myanmar, from 25 to 27 October 2017. We organised a panel session titled “Rivers, Dams and People:

A Case of the Lower Sesan 2 Dam in Cambodia”. The Sekong, Sesan and Srepok (3S) rivers – all Mekong River tributaries – provide livelihoods for many people, particularly ethnic minorities, and shape their culture and society. These rivers are also viewed as a source of hydropower. One recently completed dam is the Lower Sesan 2 on the Sesan River. The panel presentations and discussions shared recent research work focusing on how the dam and its reservoir have affected the lives and livelihoods of local people.

### Health

The Health Unit is working in partnership with the University of Health Sciences (UHS) to implement the project *Strengthening Medical Professionalism through Improving Knowledge and Attitudes on Medical Ethics at the University of Health Sciences*. The final research proposal including research protocol, questionnaires for the medical student survey and key informant interviews, and consent forms were validated and approved by the National Ethical Committee for Health Research. Five enumerators were recruited and familiarised with the survey questionnaire, which was then pre-tested and finalised. Data collection is now underway and is expected to be finished by mid-January 2018.

## CDRI Update

### MAJOR EVENTS

From October to December 2017, senior researchers, the acting director of research and the executive director represented CDRI at the following meetings and events:

17 October, Phnom Penh

**CDRI hosts a delegation from the Technical Cooperation Council of the Philippines.** The delegation was led by the Ambassador of the Republic of the Philippines to Cambodia, HE Christopher B. Montero. The purpose of the visit was to explore opportunities to collaborate in policy research projects and build policy-relevant research capacity.

24 October, Phnom Penh

**CDRI receives Zuo Wenxing, Political Counsellor of the Chinese Embassy in Cambodia.** Zuo Wenxing was briefed by the executive director about CDRI-China collaborative research projects and activities under the Lancang-Mekong Cooperation and China's Belt and Road Initiative.

26 October, Phnom Penh

**CDRI welcomes representatives of the Swedish Embassy in Cambodia.** The Embassy's Head of Development Cooperation, Samuel Hurtig, and First Secretary – Education and Research, Magnus Saemundsson, paid CDRI a courtesy call. During

their visit, senior researchers and the executive director briefed them on the policy research programs being implemented under the CDRI-Sida resource partnership.

30 October, Phnom Penh

**China's Belt and Road Initiative in Cambodia.** The Cambodia 21st Century Maritime Silk Road Research Center in partnership with CDRI organised its second symposium on the theme "Promoting Cooperation: Cambodia and the Region under the Belt and Road Initiative" at the Intercontinental Hotel. The four subthemes covered regional security, implications for trade and financial integration, regional environmental governance, and people-to-people integration.

31 October, Kep

**Policy drafting retreat.** CDRI and the National Science and Technology Council are working together to draft the document for a new national science, technology and innovation policy.

13–14 November, Manila, the Philippines

**Security in China's Maritime Silk Road.** CDRI's executive director participated in a two-day workshop titled "The 21st Century Maritime Silk Road: Considering Security Implications". The event was organised by Friedrich-Ebert-Stiftung and the Stockholm International Peace Research

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