



Diversification of the Cambodian Economy: The Roles of Higher Education and Technical and Vocational Education and Training¹



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INTRODUCTION

Cambodia has rapid economic growth and is gearing to more industrialisation. The average annual growth rate has been over 8 percent since 2000 (World Bank 2012). The economy is forecast to grow about 7.0 percent annually over the next five years (Huot 2013). Garments, tourism, construction and agriculture have been the key propellants of economic growth. Industry's proportion of GDP increased from 22.4 percent in 2008 to 26.4 percent (of which garments and textiles accounted for 12 percent) in 2010 and that of services grew from 38.8 percent to 40.6 percent (of which hotels and restaurants contributed 4.4 percent) in the same years (NIS 2008; Hing et al. 2012). Agriculture's share of GDP dropped from 38.8 percent in 2008 to 33 percent in 2010. Industry employed 8.5 percent of the labour force in 2008 and 12 percent in 2010, and services' shares were 19.2 percent and 20 percent respectively. Agriculture's share of the labour force shrank from 73.2 percent to 68 percent in the same period. As a consequence of economic growth, the poverty rate fell from 22.89 percent in 2009 to 21.1 percent in 2010 and 19.8 percent in 2011 (MoP 2013).

The objective of this policy brief is to discuss the provision and relevance of higher education (HE) and technical and vocational education and training (TVET) to economic development in Cambodia. A specific focus is the changing economic structure and hence changing demand for human resources, and how HE and TVET have responded to the demand. Policy implications will be drawn for bridging demand and supply.

WHAT DOES THE ECONOMY DEMAND?

There is an increasing demand for workers in industry and services, particularly for skilled and technical workers. In 2008-10, about 87 percent of employees required by investments approved by the Council for the Development of Cambodia were skilled and unskilled manual workers (CDC 2011, cited in Heng 2013).

Only the services sector needed a small number of staff in accounting, management, law and economics. As a result, HE institutions over-produce graduates needed by the job market. It was projected that in 2012 the labour market would demand about 16,000 graduates, but HE institutions produced around 29,000; the figures will be 22,000 versus 70,000 in 2014 (HRINC 2010, cited in D'Amico 2012) (Figure 1). Only around 10 percent of 2008 university graduates found jobs in that year (CAMFEBA 2008). The labour market substantially demands vocational and technical skills.

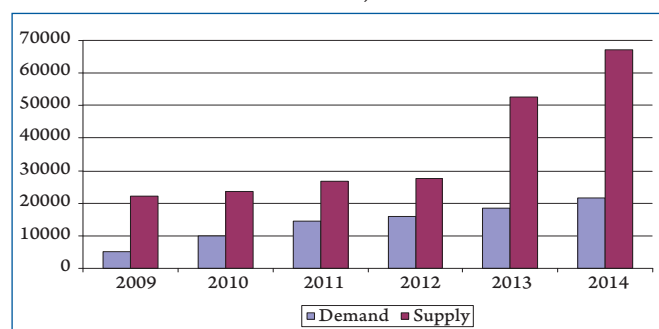
Tertiary student enrolment in science and engineering, manufacturing and construction, health and welfare and agriculture is low, compared to many other south-east Asian countries (Table 1). The labour force with TVET qualifications is also quite low, compared to the region. This is asymmetric with the demand for specialties and skills in these areas. Moreover, even though agriculture's contribution to GDP is crucial and the labour force it employs accounts for about 70 percent of the total labour force, the enrolment in agricultural study at university level is very low at less than 4 percent of the total tertiary enrolment (Mak 2012).

Skills mismatch also results in insufficient applications for the positions to be filled. According to the National Employment Agency, in 2010-12 there were 35,976 jobs available, but only 6860 applicants (19.06 percent) (NEA 2012, cited in Heng 2013). In the same period, there was an increase in the time it took to fill a vacancy for a skilled worker from 4.2 to 11.7 weeks. In the late 2000s, a survey of employers' needs and young people's skills found that 76 percent of youth did not have the skills sought by employers (World Bank 2009; Chan 2008).

There is a growing concern not only about inappropriate skills, but also about the low quality of education. Despite the higher enrolment in management and business administration, there is a substantial shortage of local people to fill positions in

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Figure 1. Demand for and Supply of Higher Education Graduates in Cambodia, 2009-14



Source: HRINC (2010) cited in D'Amico (2012)

management, middle management and supervisory and professional roles (HR Inc. Cambodia & Garment Industry Productivity Centre 2008). In construction, Cambodians serve only as manual labourers and low-skilled workers; most of the highly skilled workers and engineers are foreign nationals. In garments, particularly in production departments, all of the two highest levels are occupied by expatriates, and 50 percent of employees at the top four levels are expatriates (Un 2012).

WHAT DOES HIGHER EDUCATION SUPPLY?

The Cambodian education system did not initially prioritise higher education. Since the early 1990s, Cambodia has spent an average of only 2 percent of its education expenditure on higher education. In the late 1990s, privatisation began in response to an increase in the number of high school graduates. Since then, the number of public and private HE institutions has increased rapidly, from 18 in 1997 to 97 in 2011 (Mak 2012). Enrolment increased from about 10,000 in the early 1990s to more than 220,000 in 2011.

HE institutions fail to provide relevant and quality programmes for the labour market and economy. This inability is attributable to various factors in addition to insufficient financial support. First, there is a lack of coherent policy. A recent draft Higher Education Vision 2030 “more responsive to the socio-economic development contexts and the market needs” is in the process of being enacted (Mak 2012: 31).

Second, the focus of higher education is chiefly an expansion of coverage and quantity, putting less emphasis on improving quality and relevance to the labour market. A quantitative target was set in the education plan 2005-09 to increase enrolment from 25,000 in 2004-05 to 90,000 by 2010, which reached more than 200,000 in 2011. Only recently has the government stressed the quality and relevance of higher education; it is contributing 50 percent of funding for a Higher Education Quality and Capacity Improvement Project with the World Bank (Mak 2012). This project intends to refine governing, instruction and research capabilities of HE institutions, both public and private. A joint “Technical Working Group on Higher Education”, engaging development partners and the private sector, has been formed.

Third, commercialisation has tended to focus most private HE institutions on profit making and the short-term earning capacity resulting from courses rather than on contributing to national development in the long term (O'Brien 2004). They operate on a small scale with limited capital and survive solely on students' fees. This forces them to lure students rather than to do research and offer skills required by the economy. Moreover, the bulk of their revenue is spent on administration, leaving them unable to diversify their programmes, especially in expensive science subjects.

Finally, poor entrance standards favouring financial capacity over academic capability provide easy access to students able to afford it. This easy access attracts high school graduates to higher education rather than TVET. After receiving instruction of poor quality, students are likely to graduate unemployed or underemployed.

WHAT DOES TVET SUPPLY?

The government's policy on TVET since the 1990s has consistently aimed to reduce poverty through provision of basic skills to the rural poor and to support individual development by providing skills. Cambodia gives priority to TVET over higher education, as reflected in higher public spending per student on technical and vocational education, amounting to 80 percent of the total unit cost compared to an estimated 67 percent in higher education (Un 2012). This priority has been reinforced since the mid-2000s through the establishment of the Ministry of Labour

Table 1. Tertiary Student Enrolment in Science-Related Disciplines and Labour Force with TVET Qualifications in Selected ASEAN Countries

	Cambodia	Vietnam	Indonesia	Malaysia	Singapore
Percent of tertiary student enrolment in science and engineering, manufacturing and construction, health and welfare and agriculture	26.64	19.87 (excluding enrolment in science)	32.87	45.31	53.15
Percent of labour force with TVET qualifications	1.1	20	9.39	11.91	12.48

Source: Un (2012)

and Vocational Training (MoLVT) in 2005. Since then, increased attention to this ministry is reflected in the increase of government spending for MoLVT, from USD750,000 in 2006 to USD13 million in 2012 (Un 2012). The private sector also invests substantially in TVET, although the exact figure is not readily available.

The TVET system now consists of 39 polytechnics and institutes and 25 provincial training centres offering a wide range of programmes, diplomas, bachelor, master's and doctoral degrees. Two recent projects to expand TVET are "Piloting the Post-Harvest Technology and Skills Bridging Programme for Rural Poor" and "Strengthening Technical and Vocational Education and Training Project" supported by the ADB and Japan Fund for Poverty Reduction.

Although the government prioritises TVET and student enrolments have increased, especially in recent years, from 27,894 in 2005 to 168,630 in 2009 (ILO & NIS 2010), this increase has been slower than that in higher education. Cambodia faces several constraints on expanding TVET. First, there is a shortage of funding for expensive machinery and equipment for training workshops. Second, TVET is fragmented in efforts and resources, run by more than 10 different ministries with limited financial and human capabilities. Third, lack of capital, difficult access to credit and incomplete market information discourage private providers of TVET from expanding and diversifying their coverage (Knight & MacLeon 2004). Fourth, most public and private TVET institutes are concentrated in urban areas and therefore do not cater to the majority of the population in rural areas. Fifth, the government is unable to develop supportive policies and mechanisms to strike a balance between TVET and academia. For instance, in two provinces where special economic zones are located, the government has established a university in each rather than strengthened TVET. Analysis in 2001 of 11 public HE institutions that were part of the Priority Action Programme revealed that 27 percent of them provided vocational and technical courses, but received only 9 percent of the funding (Un 2012). The government plans to have at least one upper secondary school, rather than a TVET centre, in every district.

CONCLUSION AND POLICY IMPLICATIONS

Cambodia's current labour market and economic structure are characterised by a rapidly growing urban economy, but it is still small, with low-tech industry and an expanding services sector, and conditioned by the underdeveloped rural and largely agrarian economy. The economic foundation is still narrow, reflected in the high proportion of the population working in agriculture, industry based heavily on garments and construction, and services relying on tourism and, recently, banking.

While the economy is now starting to diversify its base and moving towards more manufacturing, it needs more employees with technical skills and scientific specialties (such as engineers, technicians and skilled agriculturalists). However, HE institutions produce more graduates (notably in social science fields) than demanded by the job market, and many of them possess either wrong or poor quality skills and knowledge. While there has been more demand for vocational and technical workers, TVET entities are unable to provide sufficient graduates with the required skills.

The diversification of the sources of economic growth calls for a better balance between higher education and TVET while both should emphasize science and engineering subjects. HE needs to bolster research and development in addition to physical sciences. TVET institutes need to provide more graduates with relevant and quality expertise in hard science fields. A policy of incentives for post-basic education graduates to go to TVET and high school graduates to choose science disciplines is needed promptly. Access to higher education should be expanded but must ensure quality and relevance through the selection process, strengthening policy on science, regulation and coordination and building research capacity. Asian industrialisation experience signifies refinement of public universities and TVET institutes to consolidate focus and resources for human capital development.

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About DRF

The Development Research Forum (DRF) of Cambodia was established following the All-Partners Forum organised by the International Development Research Centre (IDRC) in September 2007.

The DRF vision is of a high capacity, professional and vibrant Cambodian development research community. Its goal is to support and strengthen the capacity of the Cambodian development research community.

The DRF partnership involves the Cambodia Development Resource Institute (CDRI), Cambodian Economic Association (CEA), Learning Institute (LI), National Institute of Public Health (NIPH), Royal University of Agriculture (RUA), Royal University of Phnom Penh (RUPP), Supreme National Economic Council (SNEC) and the International Development Research Institute (IDRC).

In DRF Phase II 2012-15, with financial support from IDRC, the partners intend to work together to build research culture and capacity and to share research knowledge through workshops, policy roundtables and symposiums as well as training and online discussion (www.drfcambodia.net) on six research themes: growth and inclusiveness, governance of natural resources, social policy – education, social policy – health, agricultural development, and Cambodia and its region.

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