



*Empowered lives.
Resilient nations.*

EXECUTIVE SUMMARY

HUMAN CAPITAL DYNAMICS and Industrial Transition in Cambodia



Discussion Paper No. 11

2014

© 2014, UNDP Cambodia
Human Capital Dynamics and Industrial Transition in Cambodia

DISCLAIMER:

The responsibility for opinions in this publication rests solely with the authors. The publication does not constitute an endorsement by the United Nations Development Programme or the institutions of the United Nations system.

Cover Photo:

Left: © UNDP Cambodia/Thomas Cristofolletti

Middle: © UNDP Cambodia/Chansok Lay

Right: © UNDP Cambodia/Thomas Cristofolletti

EXECUTIVE SUMMARY

HUMAN CAPITAL DYNAMICS
and **Industrial Transition**
in Cambodia

2014

FOREWORD

The Rectangular Strategy Phase III (2013-2018) reaffirms once again the commitment of the Royal Government of Cambodia in reducing poverty and ensuring sustainable, inclusive and equitable growth through diversifying the economic base and improving human capital and good governance.

Cambodia has made impressive achievements in its development with the economy growing (1993 to 2013) at an annual average of 7.7 percent, making it one of the fastest growing economies in ASEAN and Asia. This has contributed significantly to reducing poverty, which now stands below 20 percent compared to 47.8 percent in 2007, and brought the country to the edge of graduating to lower-middle-income country status.

Moreover, employment has grown at 4 percent per year between 1998 and 2008 although much of this growth has been in the rural areas and in the informal segments of the economy. Nevertheless, labour productivity, as measured by output per worker, has been one of the lowest in the region and grew only modestly in the late 2000s. In 2010, output per worker in Cambodia was less than US\$4,000 in constant purchasing power parity dollars; this was two-third that of Viet Nam and less than one-fifth of Malaysia's.

As Cambodia grows into a middle income country there is a recognized need by the Royal Government of Cambodia and development partners to diversify the base of the economy and to undertake higher value-added activities through increased productivity. In order to attain such an aspiration Cambodia requires strategic industrial and investment policy approaches, including human capital development policy, to enhance productivity of and returns to work in the existing economic activities – the agriculture, garment, tourism, and construction. This could be achieved by up-skilling and mobilizing the workforce, as a strategy for a broad-based industrial and technology-oriented economy, and by linking the formal education system and technical and vocational education training (TVET) to industrial policy.

To support the Royal Government of Cambodia in developing industrial policy, the United Nations Development Programme (UNDP) has responded by providing policy researches and advices. Working together with key government institutions and ministries, UNDP has published different discussion papers on background policy analyses and researches in areas that are pertinent to industrial competitiveness and human capital roadmap.

This Discussion Paper No. 11 authored by Professor Shandre M. Thangavelu, Associate Professor at the Institute for International Trade and the Regional Director (Southeast Asia) of Centre for International Economic Studies of the University of Adelaide, is the latest in a series aimed at enhancing the body of knowledge and stimulating further discussion in Cambodia using lessons learned from the emerging Asian economies. It examines the on-going policy efforts in industrial development and discusses structural changes, skilled labour force and economic trends of Cambodia. It also offers education and labour force growth scenarios drawing on experiences of South Korea and other ASEAN countries in the past and at present.

It is our hope that this discussion paper can benefit Cambodia in its endeavor to chart policy course towards achieving sustainable, inclusive, and equitable development for the future.

ACKNOWLEDGMENTS

This discussion paper was authored by Mr. Shandre M. Thangavelu, Associate Professor at the Institute for International Trade and the Regional Director (Southeast Asia) of Centre for International Economic Studies of the University of Adelaide. H.E. Hay Sovuthea of Supreme National Economic Council, H.E. Hong Choeun of National Employment Agency, Mr. Nith Bunlay of Ministry of Education, Youth and Sport, Mr. Roger Kuettel, and Mr. Runsinarith Phim of United Nations Development Programme office in Cambodia provided substantive inputs and valuable suggestions throughout the drafting process. The study was initiated by Linking Policy and Practice Project of UNDP Cambodia and coordinated by Ms. Dinravy Khorn, Policy and Research Coordinator of the UNDP Cambodia Office.

The study's design has greatly benefited from the views, concerns, and recommendations that relevant government stakeholders had expressed during the consultation meetings throughout 2013 and early 2014.

A special thanks is owed to H.E. Dr. Hang Chuon Naron, Minister of Education, Youth and Sport and the Supreme National Economic Council's research team led by H.E. Ros Seilava.

ACRONYMS AND ABBREVIATIONS

ADB	Asian Development Bank
ASEAN	Association of Southeast Asian Nations
CEF	Cambodia Economic Forum
CET	Continuing Education and Training
CMT	Cut, Make and Trim
CSES	Cambodia Socio-Economic Survey
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
GSP	Generalized System of Preferences
HDI	Human Development Index
HDR	Human Development Report
HEQCIP	Higher Education Quality and Capacity Improvement Project
HS	harmonized system
IHDI	Inequality-Adjusted Human Development Index
KDI	Korean Development Institute
MFN	Most Favored Nation
MNC	multinational corporation
MoEYS	Ministry of Education, Youth and Sport
MoLVT	Ministry of Labour and Vocational Training
NEA	National Employment Agency
NGO	non-governmental organization
ODA	Official Development Assistance
PPP	Public Private Partnerships
PSLE	Primary School Leaving Examination
R&D	Research and Development
RGC	Royal Government of Cambodia
SMEs	Small and Medium Enterprises
SNEC	Supreme National Economic Council
STEM	science, technology, engineering, mathematics
TVET	Technical and Vocational Education Training
UNDP	United Nations Development Programme
UNICEF	United Nations Children's Fund
WAP	working age population

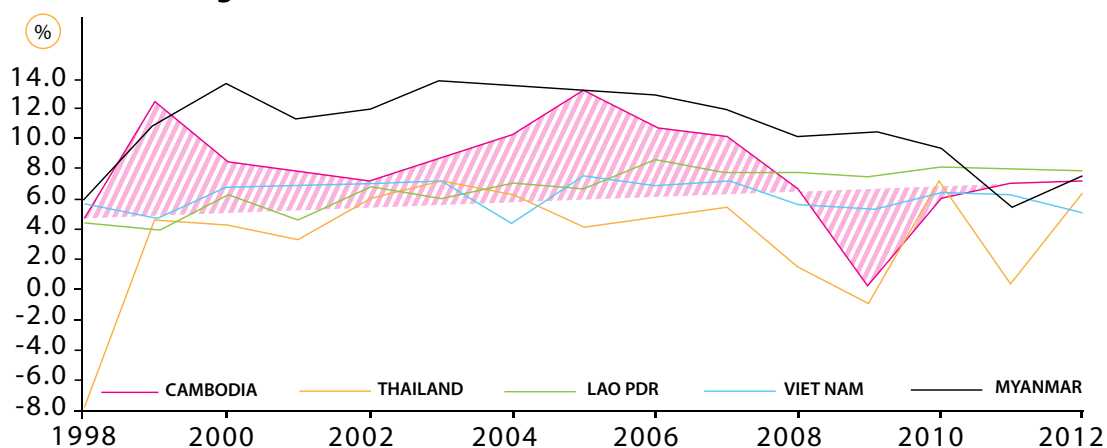


Photo: UNDP Cambodia/Nicolas Axelrod

EXECUTIVE SUMMARY

Cambodia has achieved impressive economic growth along with significant poverty reduction in the last two decades, starting from a very low base at the end of the peace restoration period in the nineties. This is reflected in an average annual real GDP growth rate of 8.2 percent during 1998-2012 and an astonishing reduction of the poverty rate from 47.8 percent in 2007 to 18.9 percent in 2012.¹ This remarkable progress has not only made Cambodia a candidate for graduation from Low Income Country (LIC) to Middle Income Country (MIC) status, but also enables - and requires - the Royal Government of Cambodia (RGC) to readjust some priorities in pursuing its social and economic strategic objectives, which are laid out in the Rectangular Strategy Phase III (RS III) and include sustainable, inclusive, equitable and resilient growth, employment creation and continued poverty reduction.

Real GDP growth rates of selected ASEAN countries (1998-2012)



This figure illustrates Cambodia's very high GDP growth rates compared to most of its neighbours, particularly before the global economic crisis. The strong effect of the crisis on the small and open Cambodian economy was followed by a quick recovery. By 2010 and 2011, Cambodia caught up with its neighbours and reached higher growth rates than the five original ASEAN member states (Indonesia, Malaysia, Philippines, Singapore and Thailand).

Source: ADB Statistical Database (2013)

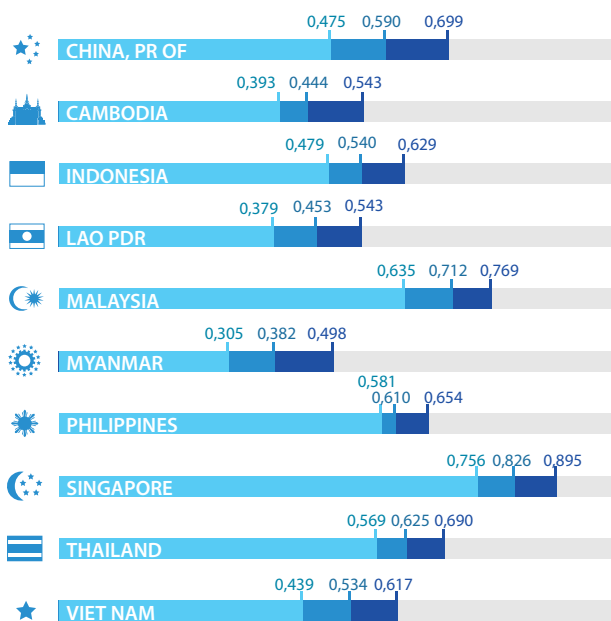
1 Ministry of Planning (2014), retrieved from <http://www.mop.gov.kh>.

Cambodia is at a critical point of its socio-economic and political development. Key success factors from the past; such as the young and low-cost labor force, benefits linked to the LDC status including ODA, preferred trade agreements, and rapid liberalizations combined with generous tax incentives to attract FDI at any costs are unlikely to sustain the catch-up process over the next decades and to ensure broad-based and sustainable growth. The fact that labour force participation rates already reached a very high level² and labour shortages seem to occur even for low skilled jobs³, tends to imply that Cambodia's quantitative growth-dynamics will reach an end at some point. Furthermore, Cambodia's small and open economy is still driven by a few sectors such as crops, garment, construction, and tourism, which only form a small industrial base for structural transformation, further industrialization and more value-added production. As evidenced during the 2008 global financial crisis, this lack of diversification and the considerable openness of the economy at an early stage of development also make the country vulnerable to external shocks. At the same time, the generally low human capital base⁴ and widespread inequalities in access to education and health services⁵ exclude a large share of Cambodians from decent jobs, undermine the competitiveness of Cambodia's labor force and its preparedness to grasp opportunities from ASEAN integration, and pose an obstacle to economic diversification and more value-added production.

Human development index

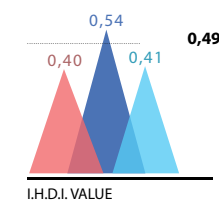
■ 1990 ■ 2000 ■ 2012

Measured by the Human Development Index (HDI) which captures health (assessed by life expectancy at birth), educational attainment and standard of living (measured by gross national income per capita), Cambodia's gains in human development between 2000 and 2012 are only exceeded by Myanmar and China.

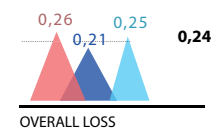


Inequality-adjusted human development index

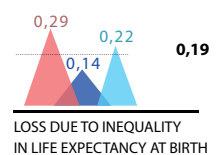
■ CAMBODIA ■ LAO PDR ■ EAST ASIA AND THE PACIFIC — 0,49 MEDIUM HDI



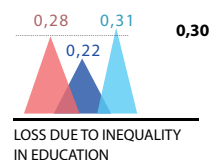
The inequality-adjusted Human Development index (iHDI) raises some concerns regarding the distribution of the gains from human development.



Cambodia's high overall loss of 26% in iHDI value due to inequality is unmatched in the region.



Broken down into the different components, it is obvious that most of the losses, which are far above the average losses in East Asia, stem from inequalities in health and education.



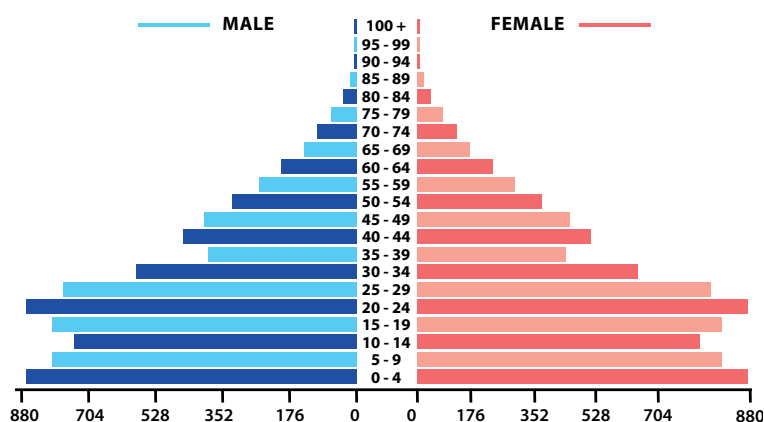
Source: ADB Statistical Database (2013)

2 Labour force participation rates in 2012 reached 89.1% for men and 79.7% for women (CSES 2012).
 3 Cheng Savuth and Heng Dyna (2013), Labour Market in Cambodia: Has Cambodia passed the Lewis turning point?
 4 See for example CSES 2012. 76% of the Cambodian labour force has not completed lower secondary education.
 5 See for example Cambodian HDR 2012. The loss for the inequality adjusted HDI in Cambodia is the highest in the region.

Human capital building is both a critical constraint AND a key driver for economic diversification and inclusive growth for the next stage of development for Cambodia. Cambodia's young population and its geographic location is in a "sweet spot" of the emerging Asian economies does offer great perspectives – but no guaranteed success - for the near future.

In order to fully capitalize on the potential of Cambodia's current one-time demographic dividend and the opportunities presented by regional integration, two of the main bottleneck: the narrow economic structure and the low human capital base, need to be actively addressed. Therefore, important economic, educational, and institutional reforms will be necessary, in particular, to avoid anticipated risks such as a "low-skill and low wage development trap" or a widening wage gap between skilled and unskilled labor.

Demographic structure of Cambodia, 2012



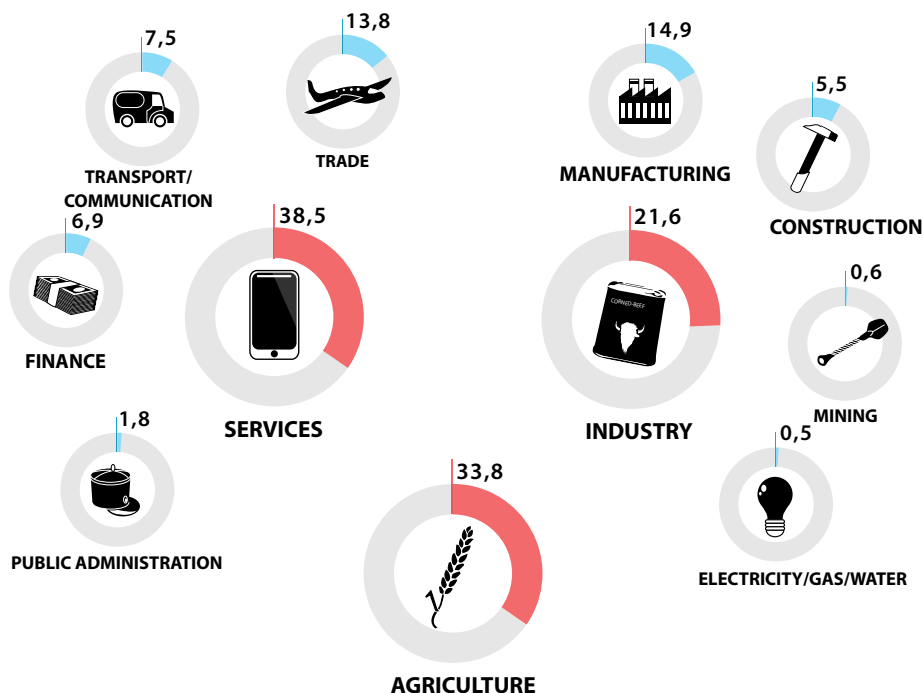
Source: Un Population Division (2012)

To generate productive jobs and for further reduction of poverty and vulnerability, Cambodia needs to embark on a faster pace of industrialization through diversification into higher value -added activities in terms of improving the productivity in existing industries and developing competitiveness in potential future industries.

Key indicators of Cambodia's economic structure - 2010

(as % of GDP, the difference to 100% corresponds to taxes and imputed bank charges)

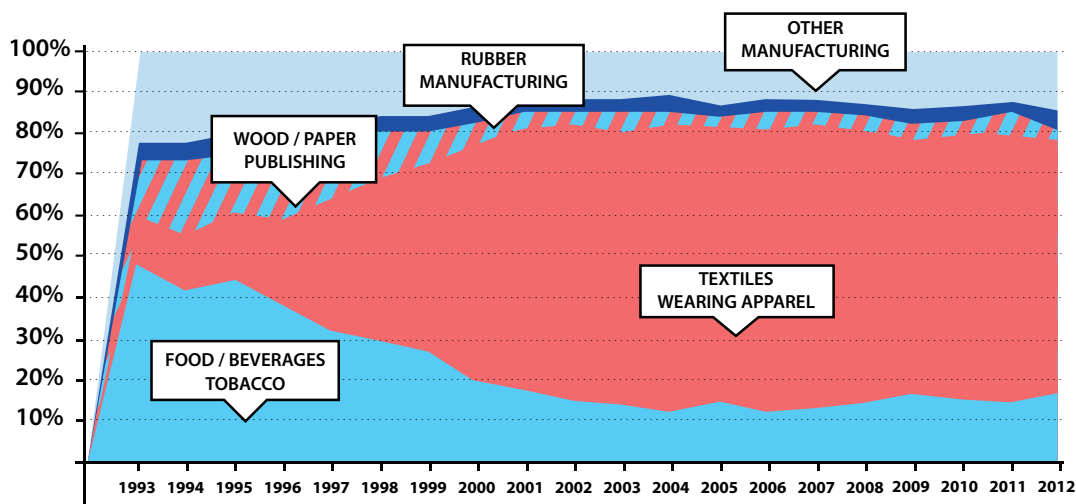
The Cambodian economy remains largely agricultural-based, but it is structurally shifting rapidly towards the manufacturing sector.



Source: ADB Statistical Database (2013)

Industrial policy, when well designed and executed, can stimulate this structural transformation necessary for sustainable growth.⁶ In fact, successful industrial policies must complement other markets and fundamentals in the economy, such as education and skills policies, R&D, labor market policies, openness and export strategies, institutions and infrastructure. The new Rectangular Strategy Phase III (RS III) and Cambodia Vision 2030 highlight the important role of economic diversification for the next step of Cambodia's transformation process towards MIC status, alongside with increasing productivity in the agriculture sector. The RS III also identifies the 'development of human resources' as one of four priority areas. In order to guide Cambodia's transformation process and to move the country to a higher level in the regional and global value chain, the Supreme National Economic Council (SNEC) is formulating a new Cambodian Industrial Development Policy (IDP). Case studies from other countries show that the success of the IDP policies and strategies will critically depend on the development and alignment of key human capital and skills for the next stage of industrial development and economic growth.

Cambodian manufacturing industries: garment is the key sector



It is not enough to simply observe strong growth in manufacturing; it is necessary to delve deeper by studying individual subsectors. Garment manufacturing alone constitutes more than half of the total manufacturing output, while agricultural processing industries and household goods manufacturing remain low-key.

Source: National Institute of Statistics, Cambodia

The objective of this study is to analyze the linkages between the education system, skills development and industrial policy. It analyzes and emphasizes the importance of comprehensive and coordinated education and skills policy reforms and the need for their close alignment with industrial policy for the next step of industrial development in Cambodia. In doing so, the study:

- (a) First analyzes important trends of the Cambodian economy and identifies key human capital challenges in the structural transformation process.
- (b) Aims to provide technical and policy insights on the alignment of education and skills development policies with industrial policy based on the experiences of other successful countries such as Korea, Malaysia, Thailand, and Vietnam.
- (c) Highlights a mapping of Cambodia's industrial structure and education policies as well as simple labor force forecasts.
- (d) Provides key policy recommendations based on these three analysis as specific technical input to the Cambodian Industrial Development Policy (IDP) drafted by SNEC and to stimulate policy discussions on the linkages between human capital and structural changes in the Cambodian economy in general.

⁶ Rodrik (2004): Industrial Policy for the Twenty-First Century.

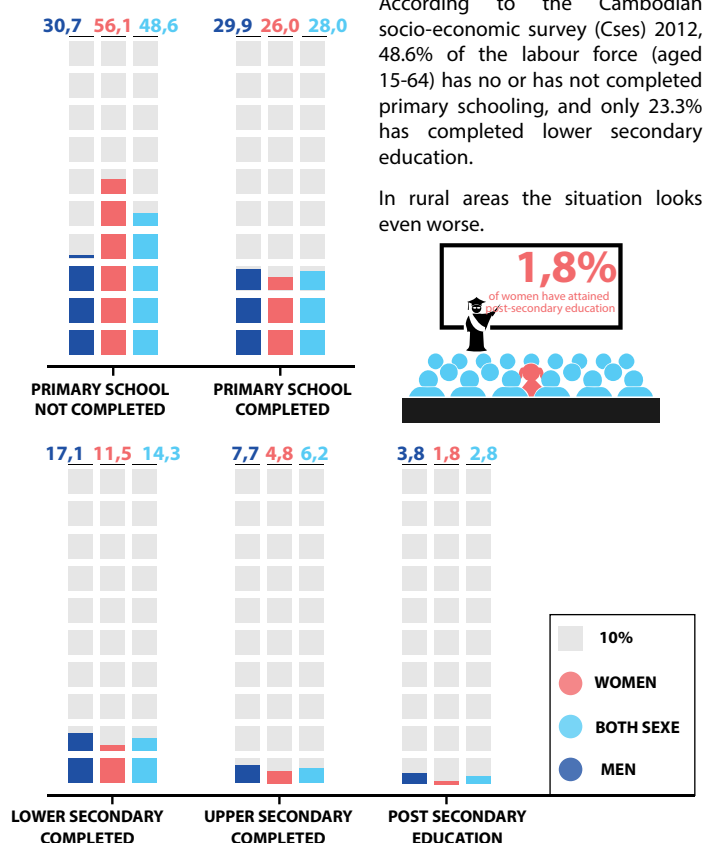
A particular feature worth noting about this study is its attempt to include critical demographics elements into its analysis. This distinct perspective emphasizes intergenerational effects as well as the urgency of the suggested reforms. Unlike most policies and studies that mainly target the education and skills level of the “flow” of new entrants into the labor market, this UNDP study also focuses on the existing and future “stock” of labor force. Looking at the whole labor force appears to be more relevant for assessing the overall competitiveness and capacity of the Cambodian labor force as a key determinant for investment decisions, technology absorption, and thus the potential speed of structural transformation and economic diversification, but also for the inclusiveness and sustainability of growth of the Cambodian economy.



Most alarming of our research findings is the expected persistence of a large share of severely under-educated people in the Cambodian work force for the next decades.

While currently 76% of the Cambodian workers have not completed lower secondary education⁷, the results of simple and rather indicative labor force growth projections⁸ in our study show a large time-lag of the impact of education reforms on the average education level of the workforce. Even under optimistic scenarios based on the assumption of successful upcoming education reforms and significant reductions in school drop-outs, the share of workers with an educational attainment at primary education level or lower will still remain at a comparably high level, most likely beyond two third of the labor force in 2025. This finding has critical implications for both the RGC’s above-mentioned economic growth and diversification agenda, as well as for the life prospects of the majority of Cambodian people.

Educational attainment of the labour force aged 15–64 (%), 2012



Source: Cambodia socio-economic survey 2012 (NIS, 2012)

⁷ CSES (2012), education completion rates for labour force aged 18 and above.

⁸ The labour force projections are based on population projections to 2050 as given by the Ministry of Planning and the potential labour force is obtained from the labour market participation rates as given by gender, age, and education from the Cambodian Socio-Economic Survey (CSES).

It is important to acknowledge that the competitiveness of the Cambodian labor force - and therefore also the opportunity of the country and its people to benefit from the ASEAN integration - is closely connected to the country's ability to reduce its large share of potentially excluded, under-educated, unskilled workers.

In order to improve and ensure their employability, comprehensive and coordinated interventions will be needed to simultaneously tackle the following challenges:

- (1) Improve the educational attainment of new labor market entrants by ensuring quality primary education for all and to significantly increase the share of people with quality secondary and higher education,
- (2) Increase the productivity of the existing undereducated and unskilled labor force through new continuous and progressive life-long learning paths,
- (3) Break the vicious cycle of systematic under-investment in education and skills building,
- (4) Reduce the large skill gaps and mismatches in the context of economic diversification by building the institutions to manage structural transformations, and to ensure the linkage between the education system and industrial policy goals, as well as pursuing an industrial policy that actively focuses on upgrading the skills of domestic workers.

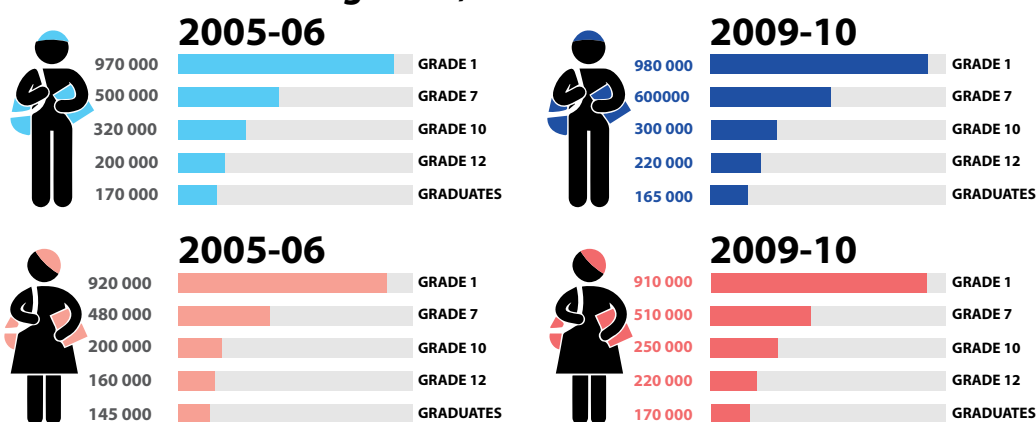
The following section further elaborates on the identified key challenges and lists specified recommendations for proposed actions.

Key human capital challenges and proposed actions:

Challenge 1: Low educational attainment of new labor market entrants

High dropout rates and the low quality of education are still major issues throughout the education system. The cohort survival rate of schooling⁹ already decreases significantly during primary education and even sharper at lower secondary level. This implicates that the youths have a greater incentive to work than to invest and complete their education. On one hand, this implies that the marginal return from the additional years of schooling is very small in terms of higher wages. On the other hand, this reflects the burden on youth at earlier ages to start supporting their families' income. This is largely a consequence of the destructive civil war, which destroyed a large share of the human capital and led to a lack of middle-aged population which could otherwise decrease the opportunity cost of their children's investment in education. Thus, for Cambodia it is crucial to ensure quality primary education for all and to significantly increase the share of people with secondary and higher education.

Cohort survival rates of students by grade and gender, 2005/06–2008/09



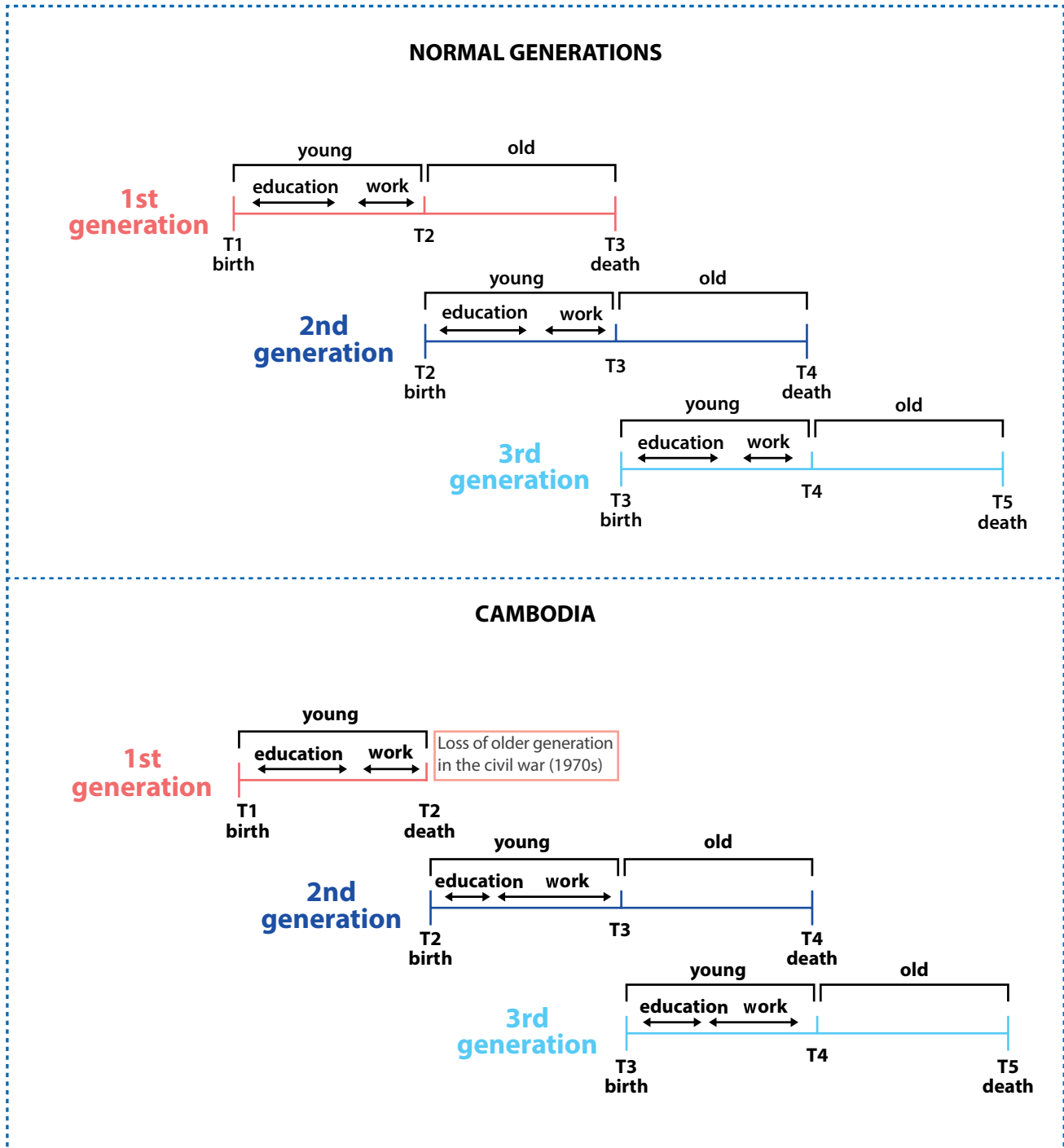
The rapid decline in the cohort survival rate of students as they move to higher grades clearly demonstrates the insufficient incentives for keeping young people in school to complete their education

Source: EMIS, Ministry of Education, Youth and Sport

⁹ The cohort survival rate of schooling reflects the retention capacity of the education system (low dropout incidences). It accounts for each cohort for each grade traced over the years in terms of attrition effects including youth leaving formal education and joining the workforce, and any household effects on schooling. The EMIS 2010/2011 reports a survival rate of 61% after primary education (for grade 1-6), and 36% after lower secondary education (grade 1-9). As a consequence, among the youth aged 15-24 who participated in the labour force in 2011, 69.2% completed only primary education (CSES 2011).

The persistently high dropout rates, particularly at primary school level, and early labour market entrances provide strong evidence that the opportunity cost of investing in education must be very high for the young population. The overlapping generations framework presented in the next figure attempts to model the intergenerational effects of the tragic loss of a huge number of people during the civil war and explains this high opportunity cost and resultant lack of investment in education as a direct consequence of the insufficient number of middle-aged working adults to support the cost of investment in better education for the young population.

Overlapping generations framework : Opportunity cost of education



Source: Author's illustration

Lapse of working time in a life between generations



1G



2G



3G

In the absence of an older generation, which would normally contribute significantly to household income thereby reducing the opportunity cost of investment in education



80%

nearly 80 % of the country's teachers were killed during the war.

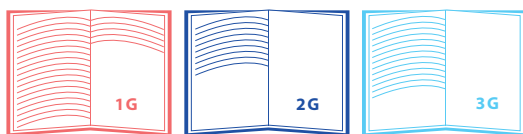
Observations:

- Insufficient middle/old-aged population in Cambodia to reduce the opportunity cost of education.
- Young population needs to work and invests less time in education (Surveys confirm that low household income is the main reason for high drop-outs)

Implications:

- Need to reduce the opportunity costs of education
- Utmost importance of progressive TVET and continuing education when workers are older

Educated child ratio for those three generations



1G

2G

3G



Before war
school frequentation stats were higher



After war
due to the lack of working parents, young generation had to work straight

Proposed Actions:

- There is an urgent need for the RGC to address the negative trade-off between working and schooling for the young population. It is critical to encourage the young to complete their primary school education. Primary education is very crucial for creating the basic foundation for human capital development for further investment in education or technical and vocational education and training (TVET). In fact, the returns for TVET are higher for workers with strong foundation in basic education (at least grade 7 and above education). A Conditional Cash Transfer (CCT) scheme strictly targeting upper primary or lower secondary students could be an effective measure to increase retention and completion of education at these critical levels.
- There is a need for standardization of primary and secondary school education in Cambodia. This will provide a basic and unifying foundation for developing strong human capital and will also allow the RGC to consolidate the resources to develop a strong curriculum. The standardization of the lower educational system could be in the form of national level exams such as Primary School Leaving Examination (PSLE) administered by the Ministry of Education in Singapore. Such an exam could improve the quality of education by increasing the incentives for teacher and aspirations of students. Clear and unified quality standards could also lead to higher returns to education.
- The quality of education critically depends on the quality of education providers and their incentives. Thus, existing pedagogy institutes could be transformed into a strong Faculty of Education to strengthen the training and certification of teachers, and the provision of a post-graduate degree in education. Also, a proper career path, appropriate compensation with wage progression and non-monetary benefits, like subsidized housing to serve as incentive for people to work in villages, would make the teaching job more attractive and strengthen the social status of teachers.
- There is an urgent need to have a flagship public university in Cambodia (e.g. "National University of Cambodia" or "King Sihanouk University"). Consolidating the fragmented current public universities into a larger one would create economies of scale and scope and allow the RGC to develop linkages and partnership with other leading global universities to attract investments and to develop local curricula and research. The government could focus on creating linkages with universities in Japan, Korea, Singapore, Australia, UK, Europe and US. In addition, access to university education should be broad based in terms of creating provincial-level universities, with first priority given to agricultural studies.

Challenge 2: Low productivity of the under-educated/ unskilled labor force and lack of continuous learning paths

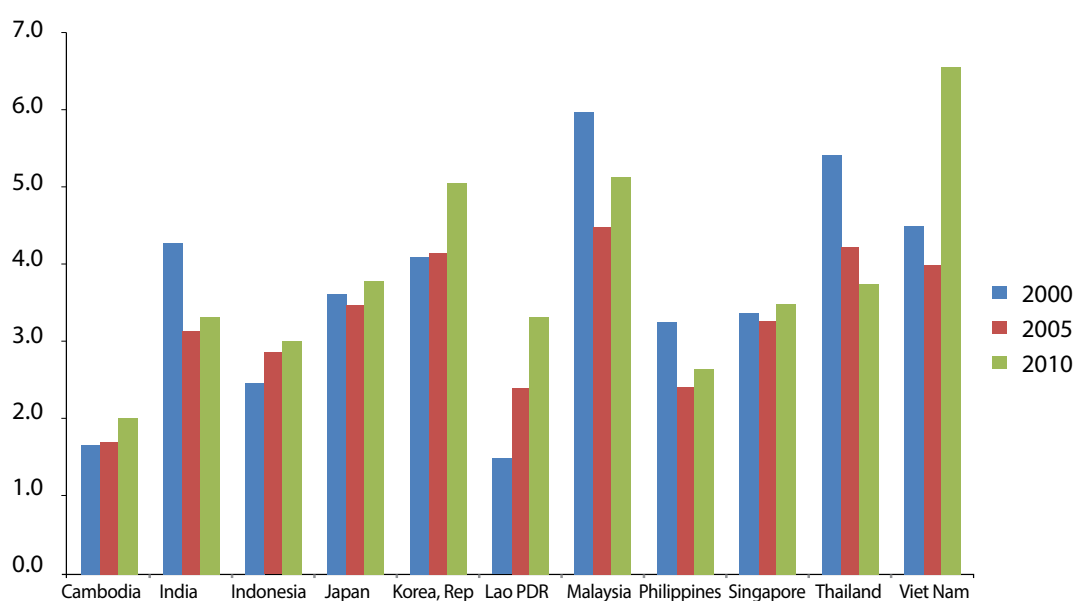
The average educational attainment of the existing labor force is at primary and lower levels of education. This is not sufficient to absorb, diffuse, and implement new innovations and technology and will have long-run implications on the competitiveness of the Cambodian economy. Additionally, the productivity of the labor force must also increase to ensure the employability and competitiveness of the work force in the context of a continuously disappearing comparative advantage from a labor surplus and thus a generally rising wage pressure. Hence, it is of utmost importance for workers to systematically increase their skill-sets at later stages of the life-cycle. However, the existing education and skills system does not adequately respond to these needs, in the absence of systematic, large scale training and continuous learning institutions, a disconnection between TVET and formal/informal education, and low returns on training.

Proposed Actions:

- a. Currently, the objectives of TVET training is based on two-track approach: (1) poverty reduction at household and (2) create employability skills for industrial development. This approach centers the TVET training for greater human capital accumulation and also address the opportunity cost of training at the household. Given the high dropouts at early stages of the education system and the low educational foundation of the Cambodian labor force, there is an urgent need to better integrate formal education, TVET and informal education and to improve the interlink between these systems. An opening up of these systems under an “Education for All” framework could allow every individual to acquire some skills from the formal education, as well as to continue upgrading his/her skills and move to a higher level of education in different ways, at different speeds and compatible with the need to work. In particular, a lower education level entry requirement for TVET (currently grade 9) and rearranging and scaling up of existing bridging programs could be considered to make TVET a more accessible and effective tool for skills upgrading for larger parts of the population.
- b. TVET should be progressive and accumulative throughout the career path of the workers. The certification of the various training programs at the national level is vital for the recognition of the training certificates and to signal to the private sector the competence of the workforce. Thus, proper quality assurance, accreditation and recognition systems need to be introduced. An endorsement by the private sector and businesses would increase the returns for training and further motivate workers to acquire more skills and training. A Public Private Partnership (PPP) framework could also play an important role in endorsing the formal and informal training framework that includes public and private educational institutes. Part-time studies should also be considered to ensure compatibility with work.
- c. In terms of institutions, the RGC, with private sector support, could set up TVET institutes, such as the Japanese-/German-/French Training Institutes in Singapore at the initial stages of development, which can create the crucial threshold to develop industry-based skills and a competent workforce that will be relevant to creating competitive industries. Also for the Vietnamese industries, the Korean/Japanese training institutes were important to develop key technical skills for the workforce.
- d. The RGC could consider scaling up the existing Regional Training Centers (RTCs), similar to experiences in Korea, Malaysia and Singapore, to have a broad-based training framework.
- e. The government should emphasize the importance of science and engineering Universities and the University of Agriculture, which will be crucial to increasing the technology diffusion and productivity of the agriculture sector.

Challenge 3: Vicious cycle of systematic under-investment in education and skills building

A lack of financial resources is prevalent in all corners of the education system and most visible in the low salaries of teachers and the insufficient infrastructure. Poverty and insufficient family income are the main reasons for early school dropouts and limited human capital accumulation of the young. Even though public expenditure on education has been increasing over the years in absolute terms, as a percentage to GDP it is stagnating at around 2 percent in Cambodia. This is significantly lower compared to the other emerging ASEAN economies such as Laos (3-4%) and Vietnam (6-7%). The share of public education expenditure on higher education to GDP is even only one tenth of the world's average. Similarly, funding for TVET and investments into skills by the private sector is lacking. Hence, to complement structural changes in the economy and increase human capital development, this vicious cycle of systematic under-investment in education and skills building needs to be broken, either through higher prioritization of education or innovative financing models, partnerships and readjustment of incentives.



Cambodia's public expenditure on education as a percentage of GDP in recent years has risen consistently. Yet it still compares unfavourably with that of other East Asian countries, in particular emerging ASEAN economies such as Lao PDR and Viet Nam. In order to develop a robust human capital base, complement economic structural change and productivity growth and compete successfully for high quality FDI with neighbouring countries, there will need to be large increases in public spending on education.

Source: WDI

Proposed Actions:

- To maintain competitiveness with other emerging ASEAN neighboring countries, public expenditure on education should be increased to around 4 percent of GDP, which would be comparable to the level of neighboring countries at a similar stage of development.
- The government needs to increase the funding for overall education and in particular for the post-secondary and higher education (Universities, Polytechnics and Institute of Vocational and Technical Training). For incidence, the share of higher education expenditure to GDP as the current share is only around 0.1 percent of GDP, which is equal to about one tenth of the world average of 1 percent.¹⁰

¹⁰ MoEYS (2013): HEQCIP Finance Policy.

- c. The government could create partnerships with the private sector through Public-Private Partnerships (PPP) to develop and fund public universities in Cambodia. The Samsung University in South Korea or the Pohang Institute of Science and Technology in Korea funded by POSTECT could serve as role model.
- d. Government should increase public funding for TVET and continuous education and training (CET). PPPs could play an important role in the provision of funding for TVET and CET and could help to internalize the returns to training for the private sector. In particular, PPPs could help set up a jointly-funded “Skills-Development Fund” for workers that could allow them to acquire skills throughout their working career.¹¹
- e. Since TVET training will have crucial social returns to the economy, the government should provide more public funding for TVET training and infrastructure. More integrated and better training facilities should be provided for TVET training. In addition, the quality of TVET lecturers and training providers should be improved with integrated and standardized accreditation system. In fact the quality and relevance of TVET training could be integrated with the private sector and business associations under the PPP scheme for TVET training. Currently, there is already several important initiatives by the Cambodian government for provide a National Standard & Accreditation System for TVET training.
- f. The government could integrate the TVET training schemes into a progressive and employable skills framework that emphasize quality of workers which is in line with demand for skills (higher paying jobs) by the private sector. In fact, the integrated TVET training could be focused on the building the skilled and professional workers with management and technical skills that will be relevant for Professional, Managers and Technicians to work at middle and upper management positions at multinational corporations.

¹¹ A levy tax in the form of Corporate Social Responsibility (CSR) can be considered to apply to private sector to mobilize financial resource for investing in human capital to upgrade productivity especially through vocational education/skills training.

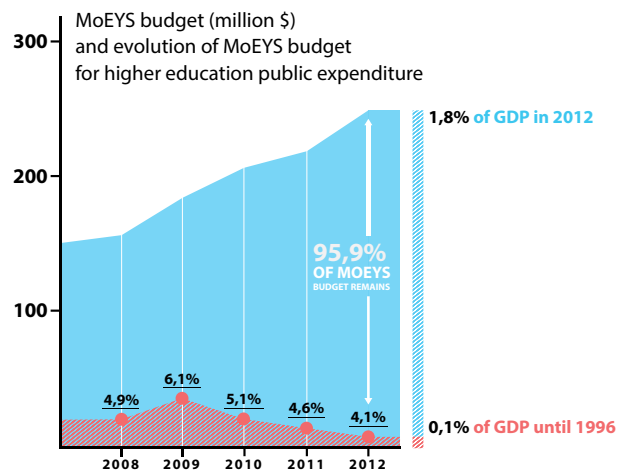
Challenge 4: Large skill gaps and mismatches in the context of economic diversification

Given the structural changes in the economy, there are growing skill gaps and mismatches in the labor market. The strict liberalization of the Cambodian economy led to a growing demand for semi-skilled and skilled workers in the economy from the MNCs, which is mostly met by foreign workers from the region due to the lack of local skilled workers. Further, the economy lacks key local industries that will allow policy makers to manage and leverage technology creation, systematic skills upgrading of local workers and local employment creation in the economy. Thus, there is an urgent need for the government to build effective institutions to manage structural transformations and to ensure the linkage between the education system and industrial policy goals, as well as to initiate an industrial policy that actively focuses on skills upgrading of domestic workers.

Proposed Actions:

- There is a need for a central government planning agency, such as the Economic Development Board in Singapore, to enhance inter-ministerial/institutional coordination by setting common prioritized goals and visions to coordinate and integrate the formal and informal educational system to meet the changing skills needs of the private sector.
- There is a strong need for an industrial policy that will align the industrial transition with skills development and productivity growth in the Cambodian economy. Upgrading of skills and the absorptive capacity could be effectively strengthened by requiring MNCs to hire a certain share of local workers for middle and upper management positions. The current industrial strategy of very liberal economic policies and pushing to higher end industries might create and intensify skill mismatches and shortages.
- Selective government-initiated industrial development to anchor the key industries in the domestic economy could support the coordination of industrial development with sufficient human capital. For example, “export promotion with import substitution strategies” were adopted by several ASEAN countries in industries that require heavy capital investments.
- To support transition towards industry and manufacturing, more technical skills, such as basic science, technology, engineering and mathematics (STEM), should be built at the early stages of education. A different technical pathway in secondary school could help build these skills in order to create a more skills-based workforce that meets the needs of the industry at the early stages of development. It could be built on the successful example of National Technical High Schools and Machinery Technical High Schools in Korea in the 1960s.
- Strengthening public higher education and more effective regulations of the large number of private universities are needed to boost science, engineering and technology majors. These subjects play a critical role in the country’s economic and industrial development, but have not

Public higher education expenditure, 2010–2012 (US\$)



Until 1996, higher education in Cambodia was entirely dependent on extremely low funding from the government of around 0.1% of GDP, equal to about one tenth of the world average of 1%.

In 2012, the share of public spending on higher education as a proportion of MoEYS total budget was only 4.1%.

Of the total higher education expenditure, a meagre 0.7% went on funding scholarships an extremely low percentage to realize the goal of equitable access to education.

Source: HEQCIP finance policy (MoEYS, 2013)

attracted much interest from the students who are mainly focused on social and business education¹². Since study in science and technology requires large investment in laboratories and technology-based research and development, private universities will be reluctant to invest in these areas in higher education. The role of government is important to internalize the social returns to higher education by investing in university infrastructure and technologies.

- f. The government needs to invest in “absorptive capacity” of the economy such as key infrastructure, science parks, ports, telecommunication infrastructure, airports, and roads that connect urban and rural sectors. The provision of infrastructure is an important component of an innovation system that supports the amalgamation of key local and foreign industries.

CONCLUSION

First, without strong interventions to increase the human capital of the Cambodian workforce, the study envisages a high possibility of a “low skill, low wage development trap” in the near future. The largely under-educated and unskilled Cambodian labor force will most likely be a handicap in the competition with neighboring countries for quality FDI, which will be required for diversifying into higher value-added activities and industries and for improving the skills of Cambodian workers. As a consequence, we might observe multinational corporations (MNCs) increasingly bypassing Cambodia and shifting to other emerging ASEAN countries. Such a scenario could undermine the prospect of industrialization in Cambodia as the low human capital is not able to support the competitiveness of the industries. In this case we could expect skilled domestic workers migrating to other ASEAN countries and Cambodia likely encountering the “Philippines human capital syndrome” with heavy reliance on remittances, lower growth, and possible social issues.

Second, even if Cambodia sustains a steady growth at current trends, the demand for skilled workers from MNCs and key industries will need to be met by foreign workers from the region. In this case we expect widening wage gaps between the skilled and unskilled (mostly domestic) workers. The large majority of Cambodians then will be excluded from the benefits of economic growth, as their low education, skills and productivity will not make them employable for decent jobs. Their low salaries will keep them highly vulnerable to falling back into poverty and will not allow them to break the vicious cycle of under-investment into the education of their children.

In order to avoid the negative scenarios mentioned above and to grasp the undoubtedly existing opportunities from Cambodia’s young population and its geographic location in the middle of emerging Asian economies, the two key bottlenecks, the narrow economic structure and the low human capital base, need to be actively and simultaneously addressed and economic, educational and institutional reforms will be necessary. This study tried to highlight some of the existing key human capital challenges on the way to a successful industrial transition of the Cambodian economy and, in particular, tried to emphasize the close connection between the competitiveness of the labor force, the opportunities of the country and its people to benefit from ASEAN integration and the country’s ability and efforts to reduce its large share of potentially excluded, under-educated, unskilled workers.

¹² EMIS (2010/2011). Available data for the bachelor program in the 2010-2011 academic year shows that 75.8% of total enrolments are concentrated in only four majors i.e., economics and business administration, languages and literature, information technology, and law.



*Empowered lives.
Resilient nations.*



United Nations Development Programme

Pasteur Street, Boeung Keng Kang
P. O. Box 877, Phnom Penh, Cambodia
Tel : (855) 23 216 167 or 214 371
Fax : (855) 23 216 257 or 721 042
E-mail : registry.kh@undp.org
www.kh.undp.org