Human Capital Implications Of Future Economic Growth In Cambodia:

Elements of a Suggested Roadmap

UNDP Cambodia

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ACRONYMS AND ABBREVIATIONS

ADB	Asian Development Bank
ASEAN	Association of Southeast Asian Nations
CAS	Country Assistance Strategy
CSES	Cambodia Socio-Economic Survey
DGTVET	Directorate General of Technical and Vocational Education and Training
ESDP II	Education Sector Development Programme
EU	European Union
FDI	Foreign direct investment
GDP	Gross domestic product
HEIs	Higher education institutions
ICT	Information and communications technology
IFC	International Financial Corporation
ILO	International Labour Organization
MDGs	Millennium Development Goals
MEF	Ministry of Economy and Finance
MIME	Ministry of Industry, Mines and Energy
MoEYS	Ministry of Education, Youth and Sport
MoLVT	Ministry of Labour and Vocational Training
MoP	Ministry of Planning
NEA	National Employment Agency
NIS	National Institute of Statistics
NSDP	National Strategic Development Plan
NTB	National Training Board
OECD	Organisation for Economic Co-operation and Development
PNPM	National Programme for Community Empowerment (Indonesia)
PPPs	public-private partnerships
PTBs	Provincial Training Boards
PTCs	Provincial Training Centres
RGC	Royal Government of Cambodia
SME	Small- and medium-sized enterprises
SNEC	Supreme National Economic Council
SWAp	Sector-wide approach
TVET	Technical and vocational education and training
UNDAF	United Nations Development Assistance Framework
UOC	Open University of Catalonia (Spain)
USAID	United States Agency for International Development
WTO	World Trade Organization

FOREWORD

"Successful diversification requires commitment and investments in both human capital and infrastructure."

The global economic downturn gave everyone pause for thought, not least those countries with economies that relied largely on European and American markets for their exports. The resulting calls for economic diversification have provided an opportunity for countries to reconsider their industrialisation policies and to look at longer term means of sustaining their economic growth. Successful diversification requires commitment and investments in both human capital and infrastructure.

Cambodia's economy grew at an astounding pace through the 1990s. Narrowly concentrated on exports, however, the country was left vulnerable to external shocks. As a result, it became very clear that in the future, resilient growth would be more important than rapid growth.

The Royal Government of Cambodia (RGC) has taken advantage of this opportunity to look more closely at the country's economy and its vulnerabilities, and to plan for a revived, more diverse, and more resilient economic future.

At the Fourth Cambodia Economic Forum in February 2011, H.E. Prime Minister Hun Sen highlighted the need for Cambodia to modernise its economy by promoting industrial development to achieve sustainable growth and take it to a higher stage of development. The industrial development policy presented at the Forum is designed to capture more valued added in the existing core sectors (agriculture, garments and tourism); upgrade emerging industries with growth potential (furniture and handicrafts, construction materials, household appliances, extractive industries); and to identify areas of latent comparative advantage in software development, chemical industry, renewable energy, and creative industries.

A comprehensive and coordinated industrial development strategy for Cambodia's future will need to include a human capital development strategy to prepare the labour force for the opportunities that will come with growth. The roadmap outlined in this report highlights the need for diversification and resilience, and the steps that will make this a reality.

At present, there exists a significant gap between market demand and the skills available, and existing educational institutions and curricula are often unresponsive to market demands and the needs of the private sector. The process of building up high quality human capital will take time, but with systematic and coordinated efforts from all relevant institutions and Government Ministries, today's youth can be prepared for tomorrow's challenges.

Strategically located at the heart of South-East Asia, Cambodia possesses a youthful workforce that has the potential to drive the country's transition from a least developed country to a middle-income country. And with 300,000 individuals expected to enter the labour force each year, human capital development, at all levels, represents a vital investment in the country's future.

There are immediate steps that can be taken, but as this report outlines, there are also short-, medium- and long-term steps that can be integrated along the path to human capital development that will work together to create a more diverse and resilient economy to benefit all of the people of Cambodia.

Reaffirming the importance of a human capital development policy for Cambodia, the Prime Minister, in his Keynote address at the Fourth Cambodia Economic Forum, stated that "The Royal Government will pay special attention to…strengthening and increasing the efficiency of vocational and skill training, which are needed to improve the competitiveness of Cambodia."

UNDP is working to support the Royal Government and other development partners in preparing for the next phase of Cambodia's human development, and sustainable and inclusive economic growth. UNDP's work in the area of human capital is geared toward responding to the needs of the private sector and supporting the RGC as it works to expand and improve the country's human capital, providing opportunities for the more than 65 percent of the population that is under 30 years of age.

Setting out on this path, and aspiring to reach middle-income country status by 2020, the Royal Government can build a stronger, more equitable and more prosperous future for all of its citizens.

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EXECUTIVE SUMMARY

"The output shock following the recent global economic crisis revealed a number of key structural weaknesses in the Cambodian economy."

Cambodia: Human Capital Development for a Future Diversified Economy

Cambodian Human Capital in Light of the Recent Global Economic Crisis

1. Cambodia is in the midst of recovering from its most severe economic shock in two decades. This shock is made more severe because it was unexpected. It is difficult to over stress the social impact of this shock, coming as it did after a decade of 10 percent growth, one of the highest anywhere in the world.

2. The output shock following the recent global economic crisis revealed a number of key structural weaknesses in the Cambodian economy. Its growth was concentrated in a few foreign direct investment (FDI)-dependent industries such as garments, tourism and construction. Most of this is also concentrated in a few urban centres, especially the capital, Phnom Penh. Its domestic private sector remains a collection of tiny family enterprises within the informal economy. High economic growth in the recent past triggered a structural transformation in the composition of the gross domestic product (GDP). However, Cambodia remains a largely agrarian economy. The agricultural sector is characterised by subsistence farming with rice being the principal crop.

3. Rapid economic growth in a few concentrated areas and sectors and the rapid expansion of the urban labour market that accompanied it has served to conceal underlying structural problems in education and skill formation. While Cambodian primary education enrolment ratios showed a sharp increase from 1997 onwards, from just over 50 percent of the relevant student age to over 81 percent a decade later, this drops sharply in later stages of the educational cycle. In 2007, only 24 percent of Cambodian children completed lower secondary school, 15.6 percent upper secondary school and just 2.7 percent completed tertiary education. This is a cause for worry. Comparative ratios in neighbouring countries within the Association of Southeast Asian Nations (ASEAN) such as Indonesia, the Philippines and Thailand are substantially higher despite a doubling of secondary school enrolment ratios in Cambodia over the 1997-2007 decade. Cambodia is especially far behind its regional neighbours in tertiary education. In 2007 the enrolment ratio in this sector was just 5 percent, compared to 12 percent in Lao PDR, 17 percent in Indonesia, and 28 percent in Philippines.

4. Rapid growth of GDP during the decade prior to the recent global economic crisis, combined with a demographic structure in which some 60 percent of the population are below 24 years of age, has generated high levels of internal migration on the one hand and the highest rates of projected labour force within ASEAN on the other. This serves to complicate the skill development problem even further. Migrant populations are more difficult to identify and redirect into formal secondary school programmes. In addition, a fast growing labour force also puts stress on an already poor school infrastructure. This is not taking into account the impact on poverty of the recent economic crisis which encourages the short-term

economic premium on sending children to work instead of the long-term benefits of finishing school.

5. Sharp inter-regional differences in school attendance and quality only complicate this overall picture of weak human capital development in Cambodia. While primary school enrolment is relatively uniform across regions in Cambodia, the picture is quite different when it comes to secondary and tertiary education. In the case of lower secondary education alone this can vary from low performing regions such as Rattanakiri to the highest, Phnom Penh, at a ratio of one to ten. Equity and access dimensions of skill development even at this rudimentary level are thus likely to be of major importance to policy-making in the future.

6. On a political note, the Royal Government of Cambodia (RGC) has responded to these policy challenges by designing a comprehensive development strategy, the Rectangular Strategy for Growth, Employment, Equity and Efficiency in Cambodia, which focuses not only on economic growth, but also on social stability and welfare, on governance and anti-corruption as well as on economic diversification. This strategy provides most of the key building blocks for future sustained recovery, particularly because it seeks to integrate economic policies with human development ones.

7. In the immediate context of the recent global economic crisis, however, Cambodia continues to face a number of critical policy challenges. First, finding ways to mitigate the impacts of the output and trade shocks on the poor. Second, putting laid-off workers in its principal industries – such as garments, tourism and construction – back to work. Third, promoting new sources of future growth so as to partially insulate the Cambodian economy from international financial and economic shocks in a globalised economy. Fourth, ensuring that future growth is broad-based so as to reduce income inequality across regions and households.

8. An important challenge facing policy-making is to work out how to link the short-term priorities of employment generation and poverty alleviation with the longer term task of economic diversification, building a robust human capital base and strengthening government capacity to face future challenges of financial regulation, climate change mitigation and combating economic inequality, problems now being faced by almost every country in the ASEAN plus region.

Economic Diversification and the Human Capital Development Roadmap

9. The government's approach to human capital development in the context of the recent economic shock was, in addition to maintaining macroeconomic stability, to restore the employability of its laid-off workers as well as to seek to restore FDI flows to Cambodia, which were badly damaged during the global credit squeeze. It has also acted to improve labour market information through the creation of a National Employment Agency, promote vocational training through a National Training Board (NTB), close the skill mismatch between skilled labour supply and demand through structured consultation and joint reviews with the private sector,

as well as engaging in a search for an appropriate and market friendly future industrial diversification policy.

10. These are all important initiatives although they still lack the critical minimum mass to make a significant dent in the employment picture. Nevertheless, they reflect a partial approach to what is an economy-wide problem: the creation of a human capital base commensurate with the government's economic diversification strategy on the one hand and its social welfare priorities on the other. In fact, the structural problems facing the education and skill development sector today are partly the result of not being able to address them during years of record growth. As Cambodia goes forward towards a more diversified, sustained economic growth in the future, it is time to design and implement a new, comprehensive Human Capital Development Roadmap.

11. The urgency of creating such a Roadmap is also rooted in recent thinking on economic diversification strategies themselves. The reform of the education and skill sectors being undertaken by most developed and dynamic developing countries, especially within Asia, along skill and product lines, suggests a growing acceptance of the view that future growth and productivity will be driven by 'knowledge products' including the capacity of countries to emulate frontier technologies. Only a comprehensive approach to future human capital development captured in a Human Capital Development Roadmap will allow Cambodia to integrate short-term measures of employment promotion with the longer term priorities of economic diversification and the building of state capacity to deliver such a diversification programme on the ground.

12. Putting all of the above requirements of preparing the foundation of a national policy for tapping into the global knowledge economy, and transforming these into a roadmap for human capital development implies keeping the following main principles centre stage:
    - Ensuring nationally defined minimum quality, access and participation rates in basic and secondary education in order to provide a sure foundation for vocational and on-the-job training as well as for institutions of higher learning. This means addressing the root causes of school drop-outs, inter-regional disparities in secondary school access and quality, and the curricula relevant to entry into the world of work. This is a major challenge for the Cambodian education system, but even this by itself will not be enough to ensure the success of industrial diversification policies without adopting a long-term knowledge economy paradigm.
    - Adopting a life cycle approach to human capital development whereby opportunities for new learning are made available at all segments of the life cycle.
    - Assessing human capital requirements not only of business, but also of research and development (R&D), innovation networks and business parks, and of capacity building requirements of government agencies.
    - A careful integration and ordering of long-term education and training targets and quality benchmarks with short-term, informal education and

"...a Human Capital Development Roadmap will allow Cambodia to integrate short-term measures of employment promotion with the longer term priorities of economic diversification..."

work retooling, without expecting short-term skill mismatches to be settled through mainstream education programmes.

- Balancing the contributions of mass expansion of secondary and higher education with the need to build specialised elite institutions able to tap into international research and technology for the knowledge economy.
- Producing a long-term financing plan for public expenditure on human capital in a knowledge economy framework, taking into account the possibility for public-private financing of education and training programmes already prevalent in many Asian economies.
- Development of an institutional mechanism for coordinating and joint programming of the Human Capital Development Roadmap taking into account the four pillars of the knowledge economy, perhaps with the participation of non-governmental agencies (e.g. a National Knowledge Agency or a Productivity Commission).

Human Capital and State Capacity Building

13. Since short-term job creation and poverty alleviation priorities have dominated education and training policy following the global economic crisis, little attention has been given to human capital development problems within the government sector itself.

14. However, as Cambodia continues to consolidate its democratic system, promote social welfare, deal with a number of global problems ranging from financial regulation to climate change, and move further towards economic integration with ASEAN, the human capital dimensions of government and associated bodies will become increasingly critical. It is therefore key that the proposed Human Capital Development Roadmap not only be linked to the Economic Diversification Programme, but also to ensure that the State has the right set of skills in sufficient quantity to implement such programmes.

15. Another key recommendation of the present report is that raising the quality of growth by promoting equitable access to education and skill development opportunities is an integral element of a future Human Capital Development Roadmap. In the context of an economy diversified to enable it to absorb new products and new types of knowledge-linked FDI, wide access to innovation and knowledge is part of the process of raising productivity levels. Equity therefore will continue not only to have social relevance, but also economic and productivity related relevance.

Investing in Human Capital in Cambodia

16. This Report reviews the sectoral data and skill gaps, and human capital priorities in major industries ranging from garments and tourism to mining and information technology. While data on employment and skill gaps is still rudimentary, it does point to the need for concrete action in a range of areas. An overall set of actions is illustrated in the policy matrix attached to this summary.

17. At the same time, current data does not allow us to provide a micro level set of recommendations on how to improve skill mismatches, how to provide incentives for vocational training as an alternative to tertiary education institutions, how to attract skilled teachers to training institutions and so on. Plugging the information gap in the employment and skills area is an immediate priority.

18. It is also critical to understand more fully the concern with the 'shortage of soft skills', often cited by Cambodian employers. Moreover, a number of economy-wide initiatives are possible to address many of them (e.g. punctuality, politeness, and work attitudes) through national distance learning techniques that have been used in educational campaigns in many developing countries, such as Mexico.

19. The most important aspect of future policy on human capital development is to adapt mechanisms to integrate long-term and short-term priorities. Given that investment in human capital is an activity with a long gestation period, one of the key contributions of the Human Capital Development Roadmap is to create a long-term and sequenced framework within which crisis response concerns can be addressed. The suggested Policy Development Matrix in the annex provides some building blocks indicating how a country might proceed.

"...one of the key contributions of the Human Capital Development Roadmap is to create a long-term and sequenced framework..."

Human Capital in Cambodia: Reasons for Optimism

20. The construction of a Human Capital Development Roadmap in line with Cambodia's economic diversification, state capacity building and social welfare plans requires painstaking work. However, it is the only way to prevent the build-up of future structural bottlenecks such as those encountered in the decade from 1998-2008. However, given Cambodia's enormous economic development achievements in the past two decades, this is clearly achievable.

21. It is to Cambodia's enormous credit that despite a history of internecine conflict, loss of human capital, political instability and social conflict, events which might have pushed other countries into a prolonged state of institutional decay and economic ruin, it has managed to consolidate a new political system of electoral democracy, to usher in a period of record growth and to sharply raise its human development performance.

22. Moreover, Cambodia has not only recovered from social conflict and loss of human capital, it has also undertaken wholesale institutional transformation, established completely new sources of growth and employment (such as bringing enormous numbers of female workers into the labour force), decisively moved away from central planning to an open market economic system, reached out to international and inter-regional organisations and agencies (such as ASEAN), and initiated a formal and organised system of regular dialogue with the private sector. It has also had to battle with the fallout from two massive economic shocks, the first in the form of the Asian Economic Crisis in its own neighbourhood, and the second on a global scale triggered by the US mortgage crisis. In response, Cambodia has not only resisted protectionism, but has also increased its engagement with the private sector, and has invited aid organisations to work with it on many complex

areas of economic policy, from aid effectiveness to international competitiveness, investment climate, labour markets and human capital needs.

23. While future growth is unlikely to be a repeat of the past for reasons examined closely in the World Bank's country growth diagnostic report (2009c) and mentioned in the present paper, the prospects are not as dreary as might appear from a dry recitation of global economic data, competitiveness surveys or the quality of FDI and the footloose nature of the international garments industry. The economic diversification programme within a knowledge economy productivity framework is one part of the policy agenda. The construction of a Human Capital Development Roadmap, beginning with a long-term view and integrating short-term labour market and skill shortage concerns, is the other essential part. One way to address this is to provide policy makers with a comprehensive Human Capital Development Roadmap at the next meeting of the Cambodia Economic Forum, using the best global analytical techniques and country experiences possible.

Policy Recommendations

Immediate interventions	***Crisis response and recovery*** • Poverty alleviation • Increase social safety nets and ensure safety nets have adequate funding • Dealing with internal migration • Promoting private sector development and cooperation ***Addressing unemployment*** • Targeting rural and poor individuals and communities most affected by economic crisis • Investments in infrastructure that are employment intensive and encourage local development • Improve labour market information ***Stopping school drop-outs*** • Increase in subsidies for continuing education • Strengthen and expand the Scholarship for Poor Programme (lower secondary scholarships and pilot of primary scholarships) • Increase minimum school-leaving age ***Establish system able to pool data and information on relevant education and industry statistics*** • Create information system of education and industry statistics • Create system able to analyse and process information collected from information database for appropriate policy formulation
Short-term interventions	***Filling the skills gap*** • Improve conventional training to increase soft and hard skills • Identify and expand training for key areas that are in need of increased skill provision • Ensure adequate financial backing for new training and skill building programmes
Short- to long-term interventions	***Improve vocational training*** • Increase flexibility and modularisation of training • Increase systems of quality assurance in TVET • Improve quality of TVET facilities and equipment • Opening up of pathways between TVET and higher education • Expansion of private and NGO TVET providers
Long-term interventions	***Reform higher education*** • Reorganisation of management, governance, and financing of higher education institutions • Increased and sustained funding for higher education ***Governmental institutional reform*** • Government focus shifting to more cooperative engagement in the higher education system • Increasing government and private sector cooperation ***Life-long learning*** • Creation of life-long learning vision for Cambodia • Increased focus on individual returns generated from learning throughout one's lifetime • Increasing coordination and decreasing incompatibilities in educational qualification standards

For more information on policy recommendations, see Annexes.

I. HUMAN CAPITAL AND ECONOMIC GROWTH

1.1 Introduction

"There is little doubt that the recent global financial crisis has dealt a remarkably severe economic blow to Cambodia's pace of economic development."

There is little doubt that the recent global financial crisis has dealt a remarkably severe economic blow to Cambodia's pace of economic development. One key reason for this is the high dependence of the Cambodian economy over the last decade on three economic activities: tourism, garments and construction. Another is the very fact that the suddenness and the severity of the global financial crisis were more deeply felt by an economy, such as Cambodia, growing at a staggering 10 percent per annum during the 10 years preceding the recent crisis. To go from average 10 percent growth to an absolute output fall is reminiscent of the scale of shock experienced by the former USSR in the early 1990s or Indonesia in 1998-99. In both cases the subsequent recovery took longer than had been anticipated at the outset of the crisis. It also revealed critical institutional and governance shortcomings which are still being corrected.

The recent economic shock could not have come at a worse time. The last decade saw, for the first time in over a quarter of a century, a return to political normality and economic advancement long forgotten amidst the turbulence of political and social violence and the stagnation of low productivity agriculture. While some of the double digit growth over the last decade could be ascribed to low base levels, and a one-off peace dividend, this was a small part of the overall story. A determined attempt to move from a planned to a market economy and from stifling political strife to an electoral democracy is also a necessary part of the picture. Economic indicators such as ratios of FDI to GDP or numbers employed in the rapidly expanding garment industry or the real estate boom in Phnom Penh hide the much more interesting story of social resilience, political acumen and institutional transformation which lie at the heart of Cambodia's spectacular growth record over the decade from 1998 to 2008.

As Cambodian policy makers strive to navigate the Cambodian economy and society out of yet another severe economic downturn and accompanying social stress, they are faced with an historically unprecedented set of development circumstances in which future Cambodian economic recovery needs to be centred. First, the severity of the recent global economic crisis in the developed countries of North America and Europe have begun to spell a future shift of economic centre of gravity towards the large economies of Asia, notably India and China, and perhaps Indonesia. Second, recovery from the Asian Financial Crisis of 1997-98 has also led to a changing pattern of trade within the ASEAN region and between ASEAN and other neighbouring Asian economies. This has been followed by much greater regional trade integration as spelled out by a series of bilateral and regional free trade agreements. Third, globalisation continues to reduce costs of transport and communication, change supply chains and networks and continually expand financial and cross border labour flows.

The broad implication of these developments in the international and regional economies in Asia is that the world does not stand still while one country or region recovers from a deep economic or financial crisis. Crises are themselves periods of economic and political adjustment with industries moving from one location to another, investors fleeing to safe havens and government expenditure moving

"...patterns of past growth may not be a good guide to the nature of future recovery."

from investment to social welfare and subsidies. Severe economic shocks therefore obviously raise the question of the extent to which economic recovery will replicate the growth patterns and competitive advantage of past periods of high growth or whether recovery will take place against a very different set of technological, price and trade related variables in the international market. To put the point simply, in guiding recovery from a major output crash, patterns of past growth may not be a good guide to the nature of future recovery.

1.2 Human capital, knowledge economy and economic growth: The shifting paradigm

1.2.1 The rise of human capital

It is precisely in this context of future drivers of growth in a global economy that the question of human capital formation has increasingly become paramount. Of course open markets, export orientation and the sharp rise in literacy levels have frequently been considered as the major underlying explanations for the Asian Economic Miracle. In that sense, human capital both in terms of basic skills as well as labour discipline (the 'Asian Values' element) has been a rather traditional feature of government policy in the newly emerging economies of East Asia. The issue has not been without controversy as the debate surrounding the sources and sustainability of economic growth in the Asian Miracle countries illustrates.

In a sense, the contributing factors which account for the growth performance of East Asian countries still remain a matter of dispute with the pendulum swinging between those who see economic growth in the region still being driven by factor accumulation (largely capital and labour) and those who see total factor productivity becoming increasingly more important as the speed of inter-sectoral shifts of labour from agriculture to industry and services declines and real wages rise. The impact of capital accumulation is also seen to be unsustainable in many Asian economies partly because domestic savings and investment rates are already reaching peak levels and because FDI is concentrated more in some countries than in others.

Despite the continuing fascination with growth accounting and differing views of the importance of productivity over factor accumulation in explaining high growth in East Asian economies, the broad view is that investment in human capital, particularly in early stages of growth, is an important factor in economic diversification and in attracting FDI to the region (World Bank 1993 and ADB 1997). Much of the attention in the context of East Asian economies has been on the rapid rise in primary education enrolment rates and the associated rise in literacy rates as well as the fact that there is increasingly little difference in male and female literacy rates.

The overall result was to successfully transfer large pools of rural labour to new labour intensive industries such as textiles, garments, shoes, and later electronics assembly in emerging East Asian cities. This broad picture was supported by estimated rates of return on investment in primary education. Early estimates showed that these were much higher than for investment in secondary or tertiary education, itself seen as evidence that East Asian economies were not only export oriented and human capital

enhancing, but that they were making efficient public investments in the right form of education and training.

The Asian economic crisis marked a watershed in development thinking. It not only showed the dangers of unfettered globalisation: sudden capital flights, regional contagion, currency collapse and sharp inflationary spikes, which threatened to undo several decades of rapid economic growth and per capita incomes. It also showed that economic recovery might involve economy-wide economic and institutional reforms. When the 2008 Global Economic Crisis emerged, it became apparent that financial shock and economic recession were not only the preserve of developing countries integrated into the global economy, but of developed industrial countries as well.

The recent global economic crisis has illustrated what many had suspected since the early stages of globalisation in the mid 1990s: dramatic falls in the cost of transport and communication technologies, the creation of a global capital market with enormous blocks of institutional investors looking for new investment opportunities, and the changing supply chains that freer movement of capital and skilled labour created had led to fundamental shifts in the underlying determinants of growth in this new, more competitive international arena.

Indeed, while the crisis-affected countries of East Asia were trying to revive historically familiar record rates of economic growth, manage the social costs of the economic shock through social safety nets and poverty alleviation measures, reform their financial systems to prevent future meltdowns and maintain the integrity of government budgets by improved debt management and reform of budgetary systems, thinking on the determinants of future economic competitiveness and growth had already begun to shift. A flavour of the new thinking on global economic growth is given by the following excerpt from the report of the Task Force on Higher Education and Society (2000):

> The world economy is changing as knowledge supplants physical capital as a source of present and future wealth. Technology is driving much of this process, with information technology, biotechnology, and other innovations leading to remarkable changes in the way we live and work.
>
> As knowledge becomes more important so does higher education. Countries need to educate more of their young people to a higher standard – a degree is now a basic qualification for many skilled jobs. The quality of knowledge generated within higher education institutions and its availability to the wider economy, is becoming increasingly critical to national competitiveness.[1]

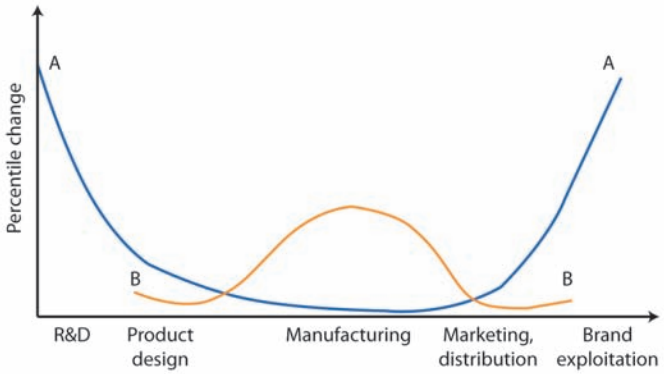
Seven years later, just when the East Asian economies were on the threshold of a sustained economic recovery from the financial shock of the late 1990s, the new development thinking had begun to take hold in major international institutions and with policy makers in most developed and many developing countries. World Bank (2007a), "Building Knowledge Economies, Advanced Strategies for Development", set out to show how knowledge had shaped the growth paths of many developing economies. The much quoted examples of Korea and Ghana showed the dramatic

growth divergence (beginning with almost identical levels of real per capita GDP), between 1960 and 2005 which could be triggered through the economy-wide accumulation of knowledge.[2]

The period since the mid-1990s when global currency and commodity markets expanded sharply was also a period of structural change in international trade. At the heart of this structural shift lay the sharp increase in global trade in high technology manufactures, mostly in new commodities which were the by-products of new technological innovations in the global economy. The changing structure of trade and production was illustrated in the sharp increase in the weight of the service sector in overall GDP, especially in high income countries. It was also mirrored in the rise of the percentage of the population with tertiary level education across the developed world. The combined result was that in advanced economies some 70 percent of the labour force is employed in services; a dramatic shift in countries which not very long ago were seen to be the industrial heartland of the global economy. Empirical research shows that by the mid-2000s the employment effects of this structural shift in favour of knowledge sector products was emerging. Thus, in the case of the US economy from1995-2005, while jobs in high and medium tech manufacturing declined by 15.7 percent, they rose by 27.2 percent in knowledge-based services. Similar results were shown for the European Union (EU) 15, with a fall of 2.4 percent in the manufacturing category and a rise of 30 percent in knowledge-based services.[3]

An important consequence of this changing international division of labour was that developing countries, even those with a successful history of high GDP growth and export promotion, risked being trapped in the low manufacturing segment of the product value chain (see figure 1.1).

Figure 1.1 Typical division of labour in global production networks



AA: Typical value-added curve for technological leaders in control of global production
BB: Typical value-added curve for low-wage participants in foreign-controlled global production networks

Source: World Bank 2007a, p. 19.

This was paradoxical since it was the successful low wage, low technology manufacturing countries of East and South-East Asia which most risked being caught in the low technology/low value added trap. FDI, which brought early high investment and growth, attracted investment in the first instance with ample supplies of low

wage labour, would also heighten the danger of being trapped in the low value-added activities while much of the profits from R&D, product design, marketing, and brand exploitation were captured by developed country firms specialising in these knowledge products.

Of course, the rapid spread of the knowledge economy did not always tell a gloomy tale. Developing countries did not necessarily have to go through a painful and highly capital intensive phase of development to score record rates of economic growth. Services, and the knowledge economy, allowed developing countries to leapfrog traditional development trajectories, as in the case of the Indian IT industry. This also obviated the need for major investments in physical infrastructure capital compared to manufacturing or mining sectors since transfer of data, information, and provision of financial and other such services incurred relatively less cost than commodity production and trade.

"The prime mover in the knowledge economy story was not only the skill or innovation systems, but also the process of international integration and globalisation."

1.2.2 Globalisation, knowledge economy and the scope for industrial policy

But the new paradigm for the knowledge economy as the most important source of future economic growth was not all about investment and business needs for new skills. The prime mover in the knowledge economy story was not only the skill or innovation systems, but also the process of international integration and globalisation. The problem which lay at the heart of policy for engineering future economic growth in specific countries was that the global economy was itself generating new and sudden economic shocks based on the volatility of international capital markets.

Hence, the global economy, while bringing new markets and technologies, also brought added instability and risks. Policy makers at the national level increasingly had to design economic recovery strategies which would take into account the rapidly changing nature of the global economy. Economic policy was therefore not just a matter of fiscal austerity, lower budget deficits or exchange rate corrections; it was just as much a matter of anticipating the impact of new trading arrangements and new products governing international markets while recovery was taking place.

In this context, an important and controversial question facing developing country governments was the scope and design of an industrial promotion/diversification policy in the country's overall development strategy. This issue is a popular theme in Cambodia today. This is partly because of the concentration of past economic growth in just a few industries such as garments or construction. It is also partly due to the realisation that the nature of FDI matters and that not all forms of FDI are equally 'fixed'. Garments are much more footloose than automobiles, for example. Cambodia faces a number of critical problems in its industrial composition and investment: very large number of small or tiny enterprises, low levels of technology and low value added products, few economy-wide linkages, industrial unrest and rising unemployment, skill mismatches, and so on. Industrial diversification is the preferred strategy, but the method of diversification is still under debate.

The most obvious route to diversification is to diversify product ranges and allied industries. Producing better designed and a larger variety of garments, moving from

"...the advent of the knowledge economy on the global stage...[has] increased the attraction of industrial policy."

rice production to rice milling and processing, or from food crops to cash crops, widening the destinations and the variety of tourism. The assumption is that this kind of diversification is in line with Cambodia's comparative advantage in the sense that it uses Cambodia's abundant factors: a cheap, plentiful and young labour force, productive land, and stable governance structures committed to promoting exports and attracting FDI.

Industrial policy however remains a highly controversial area of economic policy. Much of the controversy is linked to wider issues of the role of the state in economic development. Many of the objections to industrial policy relate to the dangers of resource allocation inefficiency of 'picking winners' and the protection that was offered to infant industries which often became centres of corruption and red tape.

In recent years, however, opinion with respect to the role of the state in economic management as well as the part it can play in industrial diversification has begun to change. The spectacular collapse of renowned investment banks and financial institutions in a web of corruption and mismanagement showed that corruption is not only a public sector problem in developing economies but is endemic in all kinds of political regimes at virtually all levels of economic development (Mishra 2009). The recent global economic crisis has shown in a dramatic way the extent to which the state has had to intervene to recapitalise banks, to restructure and regulate financial instruments and to downsize management fees and bonuses.

In any case, the advent of the knowledge economy on the global stage and the possibilities of leapfrogging the standard trajectory of development from agriculture to industry to services on the one hand and the dangers of being trapped in a low level manufacturing trap on the other have increased the attraction of industrial policy. What is more, the examples of Korea, Taiwan, Malaysia, China, and now India, all show that an active industrial policy has produced development dividends in Asia.

Of course this does not imply that there is a standard off-the-shelf recipe of industrial diversification which can be applied to Cambodia, but it does illustrate the major shift in development thinking linked to the pressures of globalisation and the advent of a knowledge economy which will set the stage within which Cambodian economic policy has to operate. Some indication of how far international opinion and South-East Asian practice have changed is provided by the conclusion reached by Cimoli, Dosi and Stiglitz (2009) (bold added):

> Countries differ – possibly even more so than in the past – in their capabilities of absorption of production technologies and product design capabilities developed in 'frontier' countries. If anything has changed, it is that under multiple forms of localised increasing returns, greater degrees of international integration fostered by globalisation – when left to themselves – may well lead to the phenomena of increasing national and international differentiation with self reinforcement and lock-into particular production activities, specialisation patterns, and technological capabilities (or lack of them). ***Globalisation by itself is no recipe for some sort of natural catch-up in technological capabilities and for easy convergence of incomes.*** On the contrary, more interdependent

economies are likely to require more and more sophisticated measures of policy intervention by weaker countries (bold added).

These conclusions are not yet part of the mainstream of international financial institutions' approach to international trade and competitiveness policy,[4] but they are part of the new cutting edge development research and are attracting the attention of policy makers in developing Asia who are faced with economic collapses, growing inequality and rapid structural changes in the composition of output. In addition, state assistance to infant industries, long-term build up of technological adaptation capacity, and learning from FDI and imported machinery are important components of the success stories of Korea, Taiwan and the Asian Tigers.

The attraction of an industrial policy aimed at diversification on the one hand and raising labour productivity and real wages on the other to Cambodia, whose leading industries are caught in a sudden nose dive, is obvious. At a time when orthodox economic opinion is also moving towards redefining concepts and categories, the Cambodian search for an appropriate industrial policy backed by a human capital strategy designed to expand technological absorption capability is a clear indication of the dynamism of government thinking on the alternative paths to a sustained recovery.

1.2.3 Education, human capital and economic growth

All this brings us back to the question of the relationship between human capital and economic growth. It is clear from the above that the simple approach to linking human capital, measured by mean years of schooling or some such indicator, to growth of productivity and to GDP growth, while useful as a general argument for granting policy and public expenditure priority to education, is inadequate for development strategy formulation purposes. It is also widely recognised now that the emphasis on basic education as providing the highest rate of return on investment in education has also been overtaken by knowledge-related developments in the global economy. While rates of return to education at different levels are useful for macro comparisons and scenario building,[5] the rate of return on investment and the increases in total factor productivity and economic growth that might be triggered by it all need to be adapted in light of the new paradigm of building the knowledge economy.

1.3 Elements of the knowledge economy Human Capital Development Roadmap

Another implication of the knowledge economy perspective is the need to rethink the parameters and guiding principles of human capital development policy at the country level. First, while higher education is at a premium in the knowledge economy framework, it is one of several interlinked main components: education, innovation systems, information infrastructure and governance (or institutional regime). This implies that human capital development strategy should span not only education (particularly higher education and training segments), but also the institutional framework and incentives promoting innovation networks, information technology and governance/policy regimes. It is the network of institutions and interlocking incentives

that provides the key to raising national absorptive capacity for emulating frontier technologies and processes. An important part of the Human Capital Development Roadmap is to assess the education and training needs not only of industry, but also of innovation networks, information infrastructure and government. Exclusive focus on business related training needs may enhance employability in the short run but will not *ipso facto* be effective in increasing economic diversification and international competitiveness of the country as a whole.

Second, servicing the human capital needs of a knowledge economy-oriented strategy is a long-term process. The gestation period between reform of the education system and establishing quality training programmes for business and government can span a decade or more. Estimation of rates of return from public investment in education and training in such a context is subject to much subjective judgement and arbitrary choice of measurement indicators. Given problems of data and quality specification, the best that can be done in field situations is to focus on the broad direction of the volume and quality of education and training services provided rather than a standard cost-benefit approach to education and training investment.

Third, in the context of continuous evolution in the structure of GDP, a deliberate industrial diversification programme by the government or the inevitable time lag between education and training and achieving the right mix of human capital competence, skill mismatch will be a fact of economic life. The policy question is to decide when the level of mismatch reaches beyond some acceptable level and policy changes must be made. In fast changing global production networks and the relative international mobility of different industries, deciding when a skill mismatch is a policy problem as distinct from a frictional disjunction between supply and demand for a specific type of labour.

Fourth, building a future knowledge economy also requires a different perspective on education and training as a whole. On one hand it requires a lifelong approach to training, as workers are retrained to tap into changing global and national technologies and production processes. On the other, given that a considerable part of promoting national innovation and emulation is based on the operation of imported machinery and management networks, increasingly formal training has to be supplemented by much learning-by-doing as the design and sophistication of new imported machinery and services evolves. The growing use of information technology also opens up the question of the forms of training and education provided through distance learning and training upgrade programmes.

Fifth, a long-term life-cycle approach to human capital development implies a long-term financial commitment to such programmes. In fast growing economies, this has not always been difficult since even a constant fraction of public expenditure over time implies rising expenditure on education and training. However, during economic downturns and recessions financing for such activities must be protected, something only possible under a policy of setting aside a share of windfalls and other forms of fiscal surplus in high growth periods as a contingency for low growth ones.

Sixth, a considerable part of the success of the knowledge explosion over the last 15 years and more is the widening as well as deepening of knowledge networks. The former

has allowed unprecedented participation of individuals and institutions in all walks of life to contribute to the overall stock of international knowledge. The secret of the knowledge revolution is not the construction of a few elite and specialised institutions for research and innovation. It is its ability to promote mass participation in knowledge sharing and problem solving that is the driving force of the current global economy. Seen in this context, national knowledge promotion and human capital development policy also needs to strike a balance between establishing high profile specialised institutions and widening the knowledge network of what has rather unattractively been called 'massification'. The balance between depth and breadth of the education and training networks and institutions is part of building the knowledge economy and not merely a question of 'equity' or social mobility and social fairness.

"...It is its ability to promote mass participation in knowledge promotion and human capital development that is the driving force of the current global economy."

Putting all the above requirements for creating a national policy to tap into the global knowledge economy into a roadmap for human capital development implies keeping the following main principles centre stage:

- Ensuring nationally defined minimum quality, access and participation rates in basic and secondary education so as to provide a sure foundation for vocational and on-the-job training as well as for institutions of higher learning
- Adopting a life-cycle approach to human capital development
- Assessing human capital requirements not only of business, but also of R&D, innovation networks and business parks, and of capacity building requirements of government agencies
- A careful integration and ordering of long-term education and training targets and quality benchmarks with short-term, informal education and work retooling, without expecting short-term skill mismatches to be settled through mainstream education programmes
- Balancing the knowledge economy contributions of the mass expansion of secondary and higher education with the need to build specialised elite institutions able to tap into international research and technology
- Producing a long-term financing plan for public expenditure on human capital in a knowledge economy framework, taking into account the possibility for public-private financing of education and training programmes
- An institutional mechanism for coordinating and joint programming of the Human Capital Development Roadmap taking into account the four pillars of the knowledge economy

1.4 Human capital, economic diversification and economic recovery in Cambodia

The unanticipated severity of the global economic crisis and its massive impact on the Cambodian economy has generated a remarkable amount of analyses, technical papers, policy documents and economic predictions in the course of the last two years. Despite the richness and variety of such documents, there is as yet no discernible Human Capital Development Roadmap for Cambodia which covers even a significant part of the knowledge economy agenda outlined above.

The Growth Diagnostic Study produced by the World Bank rightly emphasises the life-cycle approach to education and learning, as well as underscoring the importance of

"...the RGC's Rectangular Strategy Phase II contains virtually all the elements necessary for the construction of a Human Capital Development Roadmap."

continued economic integration into ASEAN and associated economic trading and investment arrangements. A range of International Labour Organization (ILO) studies, together with the recent World Bank skills report, have focused on youth employment and industry requirements for vocational training, while many studies have focused on the investment climate issues and Cambodia's relative position in international competitiveness rankings. But these are at best partial, often short-term responses to the broader issue of industrial diversification.

The government's approach to human capital development in the context of the recent economic shock has been, in addition to maintaining macroeconomic stability, to restore the employability of its laid-off workers and seek to restore FDI flows to Cambodia. It has also acted to improve labour market information through the creation of a National Employment Agency, promoting vocational training through a National Training Board (NTB), closing the skill mismatch between skilled labour supply and demand through structured consultation and joint reviews with the private sector and to engage in a search for appropriate and market friendly policies for a future industrial diversification policy.

These are all important initiatives in the short-term context of an economic downturn. If they are to amount to more than temporary economic shock relief or reduce frictional unemployment brought about by poor labour market information they need to be underpinned by a carefully thought-out Human Capital Development Roadmap in conjunction with an industrial diversification strategy.

In fact, the RGC's Rectangular Strategy Phase II contains virtually all the elements necessary for the construction of a Human Capital Development Roadmap aimed at taking Cambodia into the global and regional knowledge economy. It rightly contains policies for industrial growth, employment and social safety nets, and key aspects of governance and public administration reforms. If innovation networks and R&D policy is added, we have a broad set of components for an overall human capital strategy appropriate to building the foundations of a knowledge economy.

In the context of an economic shock it is often difficult to persuade policy makers to focus on what might seem to be long–term programmes of human capital investment. However, in the Cambodian context priority to human capital development also has short-term imperatives.

Almost all developed and many developing economies, especially within Asia, have already been in the throes of major reform of their human capital base and training and education systems for much of the last decade. Industrial diversification into new global products cannot be effectively carried out without a rapid upgrading of Cambodia's own human capital resources. The wide range of economic agreements signed within ASEAN and between ASEAN and other economies of Asia Pacific (as well as the EU), are rapidly changing the trade and investment terrain into which Cambodia's new, more diversified industrial economy will have to operate. Given this situation, long-term and short-term crisis responses cannot be so easily separated out.

1.5 Organisation of chapters within this report

One of the key aims of this report on human capital in Cambodia is to provide insights and basic building blocks for such a future Human Capital Development Roadmap. Chapter 2 provides an overall picture of the state of human capital in Cambodia today. Chapter 3 focuses on sector specific training and skill base issues. Chapter 4 looks at the human capital essentials of the non-business sector. Chapter 5 provides an outline of a possible human capital strategy for Cambodia. Chapter 6 concludes and draws some key policy conclusions and preliminary policy recommendations.

II. HUMAN CAPITAL IN CAMBODIA TODAY

"...trying to determine the human capital stock of a country...is not as simple as just looking at how many people are in school or how many people have graduated."

This chapter will attempt to take stock of the levels, quality, and impact of human capital in Cambodia today. It will examine the overall characteristics and key features of human capital development in the country, in order to set the stage for the analysis in the following chapters. In doing so, it will examine factors such as demography, migration, school attendance, quality and levels of training, employment trends, mismatch between education and labour demand, regional variations, government policy, and challenges faced in Cambodia.

In trying to determine the human capital stock of a country, it is not as simple as just looking at how many people are in school or how many people have graduated. While this shows part of the picture, there are many gaps. If x amount of people graduated, how many did not? What did those people that graduated do with their education? Was their education useful? Will they continue their education? And how will that education, in the end, affect both their career path and the growth of the country's economy?

These questions demonstrate the need to examine varied and sometimes disparate ideas and variables before being able to come up with a truly complete picture. The preferred indicator for evaluators is often the average years of education in the population. However, there are major concerns with using only this. For example:

- Differences in education quality between countries and even between regions or schools within a country mean that a year of school for one pupil may not mean the same level of education as another pupil;
- It assumes that all educational years may be treated the same, but the types and amount of returns from a year in primary school versus a year in a Ph.D. programme, are very different;
- It does not address whether or not the education being provided is geared towards the needs of either the student or the economy;
- It does not show the effects of changes in relative versus absolute levels of education in the country;
- It does not address issues of actual time in school (i.e. losses due to repetition);
- There is no evaluation of continuing education or informal education for adults already in the workforce;
- It does not examine how higher levels of education in youth versus adults (or, in some cases, *vice versa*) will affect the human capital levels in the population;
- It does not address issues of educational inequality (i.e. a small portion of the population has a very high level of schooling while the rest of the population is illiterate);
- It does not examine the changing incentives for schooling and the effect this is having on the overall levels of education.

This is why, in this study, we are looking at a wide range of indicators that will all have an impact on short- and long-term levels of human capital. The aims of the sections are as follows:

- The demography section shows the pressures of the changing Cambodian population on the requirements of the education system and the growing workforce that will have to be trained.
- The section on migration shows how movements of people are changing the demand for education, which will need to be addressed in the future.
- The section on school attendance, repetition, and drop-out rates gives an empirical analysis of the levels of education being attained today by the younger Cambodian population.
- Quality and levels of education show the overall human capital stock in terms of years of education in Cambodia, and the estimated usefulness of this stock.
- Employment trends show where there is a growing need for education and where shifts in the Cambodian economy are both reflecting changes in the education system and putting pressure on it for the future.
- The section on the mismatch between education and employment shows how and where the education system is not properly training its students for the workforce.
- The section on universities and TVET attempts to give an overview of what the realities of these sectors are in Cambodia today.
- Regional variations show how Cambodia ranks compared to other countries in Asia and ASEAN.
- Finally, the challenges section illustrates those areas that are presenting problems for the realisation of a stronger and larger human capital stock in Cambodia.

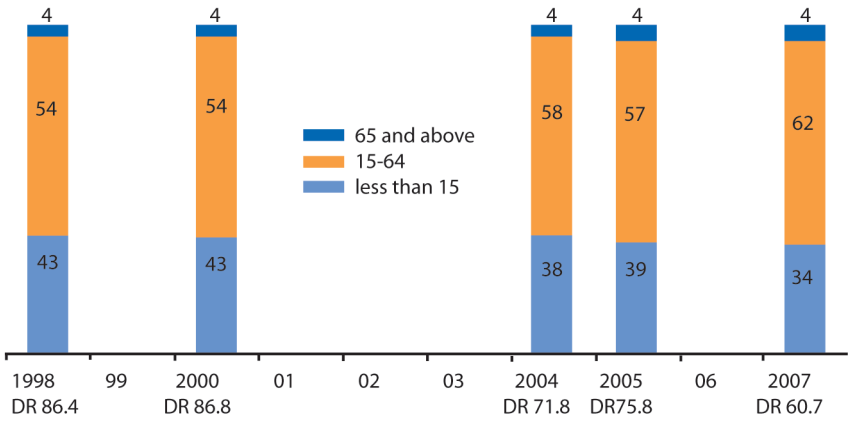
2.1 Demography

Cambodia's demography is largely driven by its history over the last four decades. The civil war and the following Khmer Rouge regime left millions dead and seriously affected the demographic makeup of the country. With the end of the Khmer Rouge regime, and with the more stable peace which emerged in the 1990s, the country experienced two baby booms; one in the 1980s and another in the early 1990s. These baby booms have given rise to what is considered a 'youth bulge' in Cambodia's population structure. As these young adults come of age and enter the labour force, combined with a large drop in the fertility rates since 2000, Cambodia is seeing a rapid decline in the dependency ratio. Just in the two years between 2005 and 2007, the ratio dropped 0.5 percent, and the 2005 rate was a 0.4 percent drop from 2000 (Figure 2.1).

This youth bulge, as stated, is leading to a dramatic expansion of the Cambodian labour force. The population pyramid from 1998 to 2008 shows this youth bulge slowly aging and reaching working age (Figure 2.2), and these figures are expected to continue to follow this trend, as well as create a second youth bulge in the coming decade.

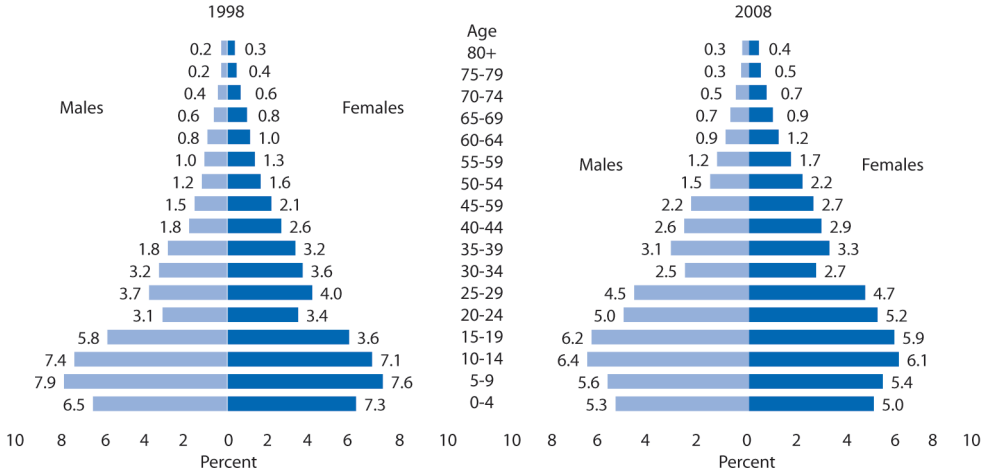
The implications for the education system are profound. Such a large bulge can exacerbate problems of underdevelopment and unemployment if the correct policies are not undertaken. In 2008 almost 60 percent of the population was under 24-years-old. This makes it one of the most youthful countries in the ASEAN region, and the country with the second highest projected labour force growth from 2007 to 2015 with 22 percent, after Lao PDR with 25 percent (Figure 2.3).

Figure 2.1 Dependency ratio of Cambodia (selected years), percentage of total population



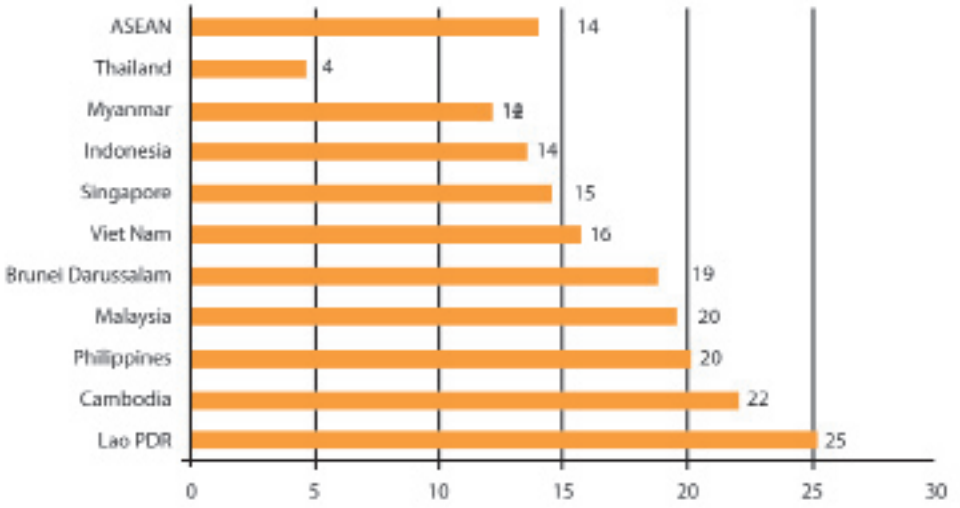
Source: World Bank 2009b, p. 29.

Figure 2.2 Population pyramids of Cambodia



Source: MoP, p. 6.

Figure 2.3 Projected labour force growth in Cambodia 2007-2015 (%)



Source: ILO 2008

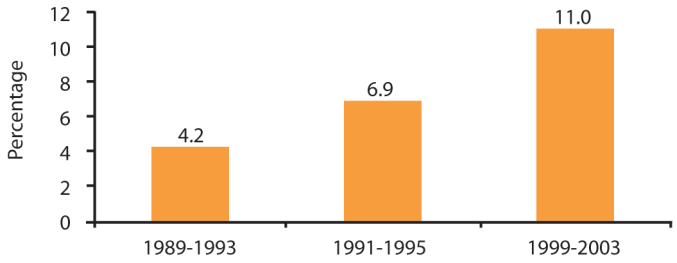
In order to continue the remarkable growth the Cambodian economy has seen over the past 10 years, the government will have to ensure that it creates a well-educated, skilled workforce. Rapid expansion of a skilled, capable workforce can attract FDI and promote further growth; if the labour market is filled with unskilled workers, the economy will largely be unable to capitalise on these benefits. Additionally, if a large population joins the workforce without adequate skills and training, they will be unable to maintain their employability, creating large numbers of poor and unskilled workers who will continue to be dependent on the government throughout their economic lives (World Bank 2010c).

Of course, fostering the creation of a pool of skilled workers is very difficult to achieve with limited financial resources, creating a need for the government to develop a comprehensive education plan which takes into account other development factors, enabling them to avoid the typical poverty trap, which would be sure to scuttle any effective education plan.

2.2 Migration

Although the population of Cambodia is still largely rural and many Cambodians have not left their home village, the country has seen increasing amounts of internal migration in the last decade (Figure 2.4).

Figure 2.4 Percentage of people moving during three time periods, 1980-1993, 1991-1995 and 1999-2003



Source: Morris 2007, p. 77.

According to the Cambodia Socio-Economic Survey (CSES) 2004, there were 4.5 million migrants, up from 3.6 million in the 1998 survey, and 96 percent of the migration was internal (ILO 2007).

It is equally striking how high the migration levels for youth are, especially for those from both sexes in their 20s. In 2004, 17.2 percent of 20- to 24-year-olds migrated (19.5 percent males, 15.0 percent females), and 17.8 percent of 25- to 29-year-olds migrated (22.9 percent males, 13.0 percent females). Although youth are more mobile than the older generation, this could still mean much higher levels of migration in the future (Table 2.1).

Given these growing levels of migration, especially among youth, it is becoming increasingly important to gain a better understanding of the impact of these movements on skill development and employment. When moving from rural to

urban, or undertaking seasonal migration, this is often in search of work, but given the low levels of education throughout Cambodia (especially in more rural areas), this is leading to large numbers of low paid, unskilled workers migrating (often to cities) for work. The failure to utilise these individuals in more productive employment is a loss of potential, and could increase the potential for social unrest that these large numbers of dissatisfied workers can lead to. Thus, this migration and mobility is a driving need for increasing skill portability, and the focus in the future needs to be not only on hard skills, but increasingly also on soft skills that can be applied to various industries or sectors, as the demand for labour changes.

"Attendance of primary school in Cambodia has increased significantly over the last two decades and is currently very high, but drops off significantly after the primary years"

Table 2.1 Age-specific five year migration rates by rural-urban residence and sex, 2004

Age group	Cambodia			Urban			Rural		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
15-19	8.2	7.2	9.2	17.3	14.7	19.7	6.5	5.8	7.1
20-24	17.2	19.5	15.0	28.2	27.9	28.5	14.8	17.8	12.1
25-29	17.8	22.9	13.0	31.6	36.4	27.3	15.1	20.4	10.2
30-34	11.7	14.2	9.5	22.4	25.3	19.6	9.6	12.0	7.5
35-39	8.9	10.9	7.1	16.9	20.0	14.1	7.4	9.1	5.9
All ages	8.3	9.1	7.6	16.4	16.6	16.2	6.9	7.8	6.0

Source: Morris 2007, p. 80.

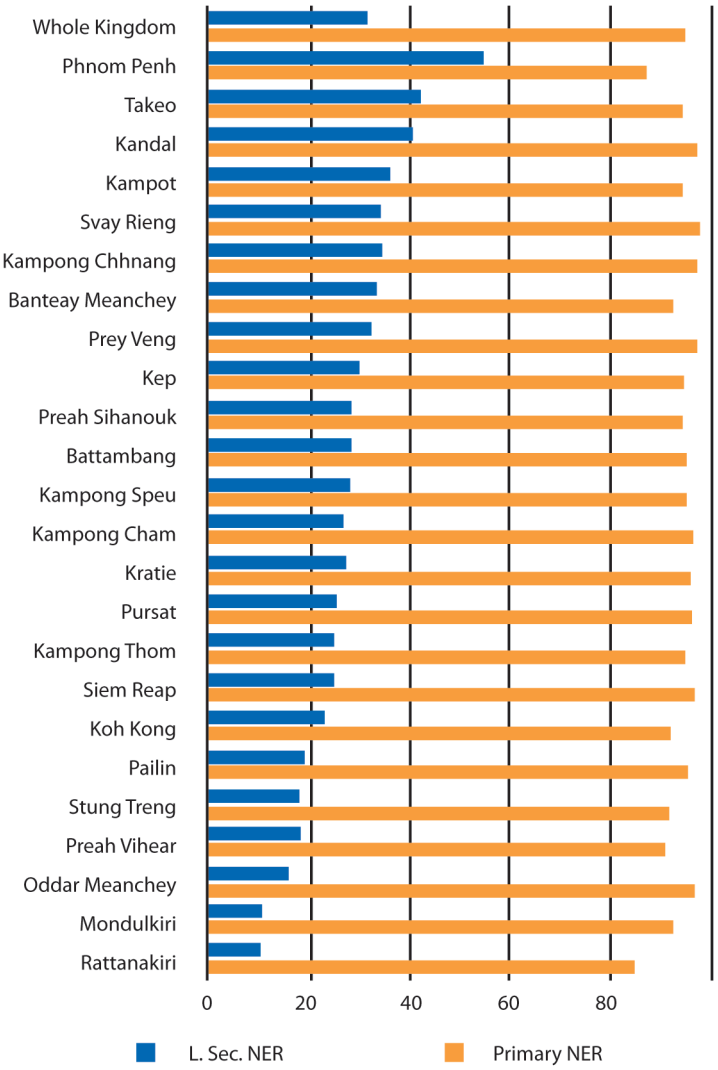
2.3 School attendance, repetition, and drop-out rates

Attendance of primary school in Cambodia has increased significantly over the last two decades and is currently very high, but drops off significantly after the primary years. Figures from 2009-2010 suggest that enrolment for the whole country in primary school is over 90 percent, and while this varies some from region to region, all are above 80 percent and most are above 90 percent. Once children graduate to the lower secondary level (grades 7-9), however, enrolment drops off sharply. For the country as a whole the figure is slightly above 30 percent, with Phnom Penh topping the list with 55 percent, while some regions are as low as 10 percent (Figure 2.5).

This trend continues throughout the education hierarchy. As Table 2.2 shows, the enrolment rates for upper secondary are a mere 13 percent. Among young people aged 15, more than a quarter have stopped attending school, and among 19-year-olds, two-thirds are out of school. Additionally, the majority of people have only completed between 5 and 7 years of schooling; by 11 years the number has dropped off significantly (Figure 2.6).

In addition to these low education rates and high drop-out rates, attention should be paid to the repetition rates in the country. The number of students repeating grades 1 through 6 can be seen in Figure 2.7. While these figures are not exorbitantly high, they should still be noted. Of more concern is that these rates have actually been increasing over the last decade, a dangerous trend for the future. Although this repetition is attributable to various factors (discussed further in the Challenges section), it will be an important area for the Government to tackle if it wants to improve its citizen's levels of education.

Figure 2.5 Primary and lower secondary net enrolment ratio by province 2009-10



Source: MoP 2010, p. 17.

Table 2.2 Net enrolment/attendance rates in primary, lower secondary, and upper secondary school by geographical domain and sex, percent (2007)

Cambodia	Women	Men	Total
Net enrolment/attendance rates in primary school by geographical domain and sex, 2007 (percent)	82	81	82
Net enrolment/attendance rates in lower secondary school by geographical domain and sex, 2007 (percent)	30	27	29
Net enrolment/attendance rates in upper secondary school by geographical domain and sex, 2007 (percent)	13	14	13

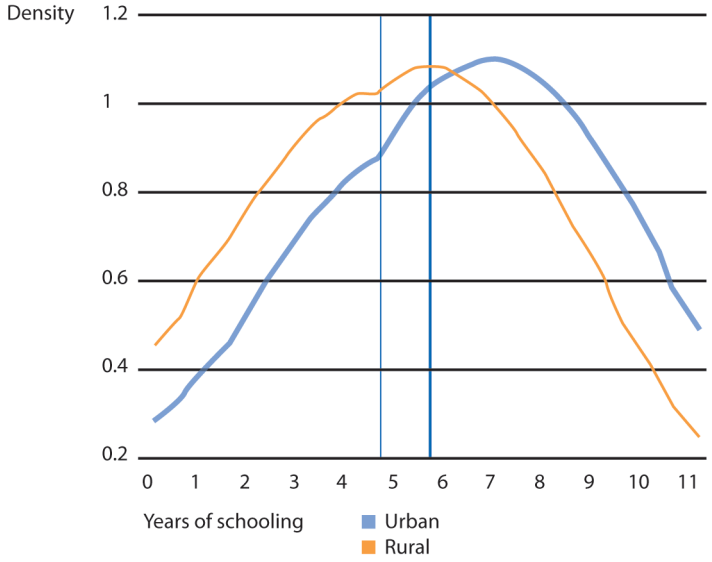
Source: NIS 2009, p.12.

Thus, despite significant progress, the attendance levels in Cambodia beyond the primary level are quite poor. It is worth noting why this is the case. Despite the attention Cambodia has given to education in the past, and despite extremely high levels of growth that might have been expected to enable the country to increase levels of education, this growth is actually one of the contributing factors to a lack of education beyond the primary level for much of the workforce. Sudden high rates of

growth meant that there was ample opportunity for employment; combining this with a youthful population that was increasingly mobile, meaning they were able to move to urban areas where more jobs were available, meant that there was less incentive to continue with one's education since one was able to gain employment without high levels of education. Contributing to this was the fact that the pull factors, the factories and industries that were doing much of the employing, did not require high levels of education, again limiting incentives to continue school learning. Finally, due to the short-term education vision of the Cambodian Government, few efforts were made to curb this trend, and the education policy focused much more on the short-term concerns of increasing primary education. Thus, the Government is now faced with high and sustained drop-out rates, despite high levels of primary education. This creates a situation where school drop-outs fail to gain the basic education levels upon which future learning needs to evolve, thus preventing these individuals from improving their economic situation and both contributing to and gaining from growth to a greater extent.

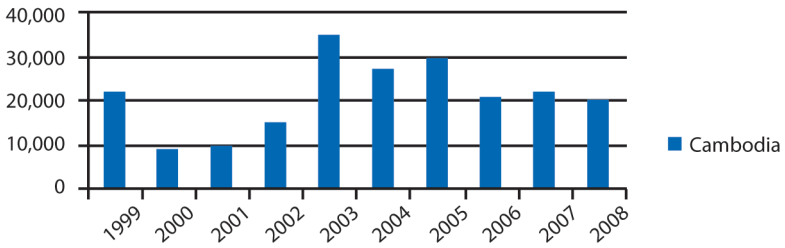
"...school drop-outs fail to gain the basic education levels upon which future learning needs to evolve."

Figure 2.6 Youth out-of-school status and education (2007)



Source: World Bank 2010c, p. 42.

Figure 2.7 Repeaters in secondary school (all grades total)



Source: UNESCO Institute for Statistics online database

"The big picture of education in Cambodia is improving for the new generation..."

Box 2.1 Stopping school drop-outs through cash transfers

School retention is a matter that has always been given much attention, considering that the ability of a country to attract and retain students is a significant concern for the robustness of a country's education system. In Indonesia, school retention is partially addressed by a project called the National Programme for Community Empowerment (PNPM), a major initiative that is occupying the centre stage in poverty reduction policies and practices in Indonesia. This initiative has already absorbed large amounts of donor and Government attention and funding in recent years.

PNPM Mandiri, for example, works on basic education providing block grants to 4,000 schools across the country to improve the quality of the teaching-learning process, using school-based management approaches. Aims include improving poor child enrolment, improving retention and learning outcomes for the nine years of basic education, and supporting decentralised school management and community participation.

Conditional Cash Transfers, promoting school retention and school attendance, were initially popular in many Latin American countries during the 1990s and have since started to spread to Asian countries like Indonesia and the Philippines. These programmes consist of transfers in cash to poor families with children under the condition that they send their children to school and pay regular visits to health centres.*

Strategies for cash transfers to the poor are not new. They have been used as effective ways to tackle poverty. By linking these transfers with, for instance, school attendance, improvements in human capital development can be made, allowing for both short- and long-term poverty alleviation. However, there are areas in the cash transfer scheme which require special attention. These include: targeting, in order to identify 'deserving' beneficiaries; efficient administrative procedures; a realistic assessment of institutional capacities; capability and preparedness in rolling out such a mechanism (strong monitoring, evaluation and accountability agencies); and long-term fiscal sustainability. Thus, while these are a potentially useful tool in decreasing school drop-outs and increasing social services, governments must be careful in their implementation and learn from the experiences of countries like Indonesia.

**The promulgation of these programmes in Asia is causing some uneasiness among large segments of civil society. Two of the most common arguments used against CCTs are: 1. people do not want 'charity' hand outs, but decent work; and 2. conditions are not applicable when education and health services lack either quantity or quality, or both.*

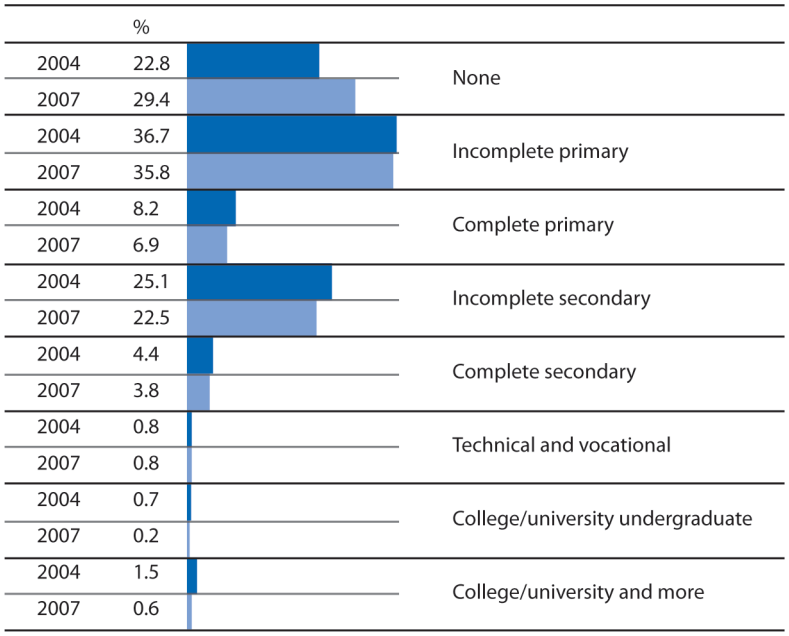
2.4 Quality and levels of education and training

The big picture of the level of education in Cambodia is improving for the new generation, although the lack of education of much of the older generation continues to paint a grim picture of the overall level. The trend has been an increase in education, although the 2007 CSES showed an increase in the percentage of the adult population (over 18) who had no schooling at all over the percentage in 2004, and an attendant drop in the levels of the overall adult population for educational attainment from primary to tertiary (Figure 2.8).

Despite this, the trend over the last decade or so has been to increase the level of education attained by the population. There has been a steady increase in the enrolment ratio over the last decade, indicating that the younger population is able to get at least some level of education. In primary, lower secondary and upper secondary,

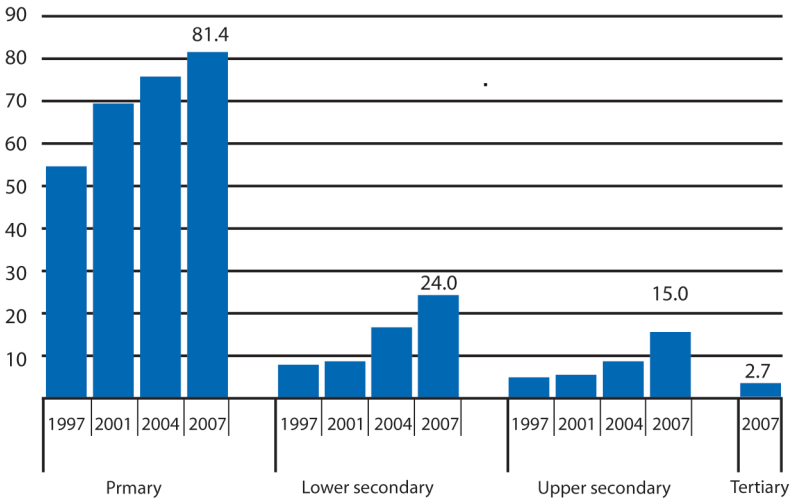
there has been a constant increase from 1997 until 2007; data is unavailable before 2007 for Tertiary (Figure 2.9). Creating an educational base is the key for improving the skills of the workforce going forward, and as such these trends are promising for the future.

Figure 2.8 Educational attainment of the adult population (18 and older), 2004 and 2007



Source: World Bank 2010c, p. 43.

Figure 2.9 Net enrolment ratio (%)



Source: World Bank 2009b, p. 38.

Additionally, these increases in education seem to be having a positive impact on productivity. GDP growth from 2001 to 2008 can largely be attributed to this increase in productivity. Over these seven years, real GDP per capita has increased 59 percent; 98 percent of this can be attributed to productivity gains. While about half of these gains are due to a move by workers into more productive sectors, the other half is

"...the country's labour force has undergone major changes in the last decade."

attributed to productivity growth within sectors (Figure 2.10). Education can play a key role in this growth, and efforts should focus on this in the future.

Figure 2.10 Decomposition of GDP growth, 2001-2008

	%
Growth in GDP per capita	58.9
Contribution of employment generation	-6.3
Contribution of growth in labour force	8.3
Contribution of productivity growth	98.0
Growth in output per worker	54.3
Contribution of employment shifts	47.4
Contribution of productivity growth	52.6

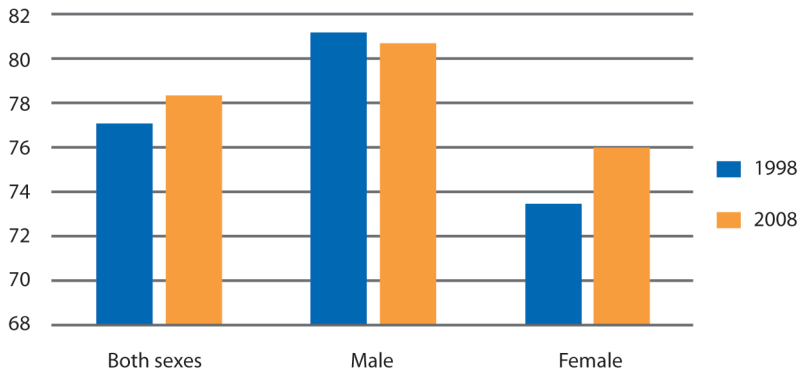
Source: World Bank 2010c, p. 37.

2.5 Employment trends

In order to better understand the impact that human capital development is having on the growth of the Cambodian economy, it is important to look at employment trends and the effect that higher levels of education are having on the employability of the labour force.

First of all, it is important to note that the country's labour force has undergone major changes in the last decade. For example, there have been substantial changes in the labour force employment-to-population ratio. In 1998, the total labour force participation was 77 percent, with 81.2 percent male and 73.5 percent female. By 2008, that had changed to 78.3 percent total, with 80.8 percent male and 76.0 percent female. As male labour force participation rates often decline when male youths increase their school attendance or stay in school longer, it is interesting to note that the percentage of men working only declined by 0.4 percent during the 10 year time span. On the other hand, the increase in the employed female population by 3 percentage points may be attributed to various factors, such as increased job opportunities for women, increased social acceptance of female employment, or an increased willingness of firms to hire female workers. However, as much of this employment is in the garments sector (see Chapter 3), it does not necessarily point to higher education levels among women (Figure 2.11 and Table 2.3).

Figure 2.11 Labour force participation rate, for workers aged 15 and older (%)



Source: ILO 2010b, p. 19.

A second important trend has been the increased level of education in the workforce. Given the government's investment in increasing primary education, this is the expected outcome. From the 1998 figure of 32.9 percent, the percentage of people of both sexes over 15 in the workforce who were illiterate declined by 8.6 percent to 24.3 percent. The drop among females was even larger, from 43.7 percent to 30.9 percent over the same time period. The overall number of workers who had completed primary level education jumped from 17.2 percent to 23.0 percent (and among 15-24-year-olds, the jump was from 20.0 percent to 31.8 percent).

Again, this reflects the commitment that has been made to increasing primary education among the population. However, the challenges that are faced by the population in terms of achieving higher levels of education than primary are also obvious. From 1998 to 2008, the percentage of the population that had completed secondary education dropped from 2.4 percent to 1.5 percent, although completion of lower secondary rose from 7.2 to 13.7 percent (Table 2.4).

Knowing that these levels of education have increased, can one see any identifiable effect this is having on the makeup of the economy? While there are obviously many factors that lead to a change in the makeup of a country's economy, there are noticeable changes taking place. First of all, in terms of skill shift there has been a shift in sector involvement in employment. The proportion of the population in the primary sectors (agriculture, fishing, and extractive industries) has declined over the past decade, while the proportions in secondary (manufacturing) and tertiary (services and sales) have increased. In 1998, employment in the primary, secondary, and tertiary sectors were 77.0, 4.2, and 18.3 percent respectively for both sexes 15 and over, while in 2008 the figures were 72.1, 8.6, and 19.3, respectively (Table 2.5). This means that employment sources are slowly diversifying and workers are developing more than the basic skills needed for the primary sector.

Second, this shift can also be seen in the investment dispersion from 2006 to 2008. While in 2006 agriculture had 20 investment projects and 35.7 percent of labour demand, in 2008 it only had 5 projects and 2.8 percent of labour demand. In contrast, industry had 61 projects and 57.1 percent and services had 17 projects and 7.2 percent in 2006, while in 2008 they had 66 projects and 57.4 percent, and 27 projects and 39.8 percent, respectively (Table 2.6).

Third, it can be seen that there has been a decrease in vulnerable employment. Vulnerable employment can be defined as unpaid family workers and own-account workers. While the proportion is still very high, and while the absolute number increased from 1998, by 2008 the proportional figure had declined from 86.8 percent to 82.5 percent, and there was a larger drop for females, from 93.1 to 85.9 percent (Figure 2.12).

Table 2.3 Labour force and labour force participation rate (%)

Age group	1998	2000	2001	2008
Both sexes	**5,038,382**	**5,278,956**	**6,007,406**	**6,955,640**
15-24	1,268,671	1,649,728	2,085,526	1,796,785
25-34	1,489,631	1,220,233	1,291,148	1,759,531
35-44	1,080,119	1,128,499	1,196,778	1,476,944
45-54	651,613	782,125	851,614	1,048,172
55-64	364,127	371,270	422,115	562,728
65+	184,221	127,101	160,225	311,480
Male	**2,443,580**	**2,529,755**	**2,878,362**	**3,396,449**
15-24	572,862	751,707	983,914	858,191
25-34	769,547	602,908	647,397	897,833
35-44	516,781	551,771	565,881	740,697
45-54	301,151	350,470	371,657	483,132
55-64	180,297	195,479	210,971	259,140
65+	102,942	77,420	98,542	157,456
Female	**2,594,802**	**2,749,201**	**3,129,044**	**3,559,191**
15-24	695,809	898,021	1,101,612	938,594
25-34	720,084	617,325	643,751	861,698
35-44	563,338	576,728	630,897	736,247
45-54	350,462	431,655	479,957	565,040
55-64	183,830	175,791	211,144	303,588
65+	81,279	49,681	61,683	154,024
		Labour force to population (%)		
Both sexes	**77.0**	**78.4**	**83.3**	**78.3**
15-24	60.7	67.7	76.7	60.1
25-34	89.1	90.5	93.6	91.3
35-44	90.5	92.9	94.5	93.3
45-54	89.5	90.6	93.1	91.6
55-64	78.8	77.3	80.6	84.1
65+	46.6	32.6	39.0	54.5
Male	**81.2**	**80.8**	**85.1**	**80.8**
15-24	56.3	63.3	73.6	57.1
25-34	96.5	96.9	97.3	95.4
35-44	98.4	97.8	98.8	98.4
45-54	97.9	96.6	98.0	97.6
55-64	91.6	86.7	88.7	92.9
65+	62.6	46.0	52.1	68.4
Female	**73.5**	**76.3**	**81.6**	**76.0**
15-24	64.9	71.8	79.7	63.2
25-34	82.4	85.0	90.2	87.4
35-44	84.3	88.7	91.0	88.7
45-54	83.3	86.3	89.6	87.0
55-64	69.3	68.9	73.9	77.9
65+	35.2	22.4	27.8	45.2

Source: ILO 2010b, p. 67.

Table 2.4 Employment by completed educational level and sex

	1998			2008		
	15+	15-24	25+	15+	15-24	25+
Both sexes	**4,773,488**	**1,114,189**	**3,659,299**	**6,841,272**	**1,736,962**	**5,104,310**
Illiterate	1,572,554	327,833	1,244,721	1,662,308	306,298	1,356,010
No class completed	51,946	6,973	44,973	133,984	28,869	105,115
Primary not completed	1,842,486	478,600	1,363,886	2,359,867	577,267	1,782,600
Primary completed	820,636	223,286	597,350	1,570,424	552,197	1,018,227
Lower secondary	344,767	59,327	285,440	936,296	242,463	693,833
Secondary/diploma	115,337	15,949	99,388	99,822	18,190	81,632
Beyond secondary	19,239	1,470	17,769	74,000	11,127	62,873
Other	3,236	205	3,031	4,162	450	3,712
Not reported	3,287	546	2,741	409	101	308
Male	**2,330,301**	**502,134**	**1,828,167**	**3,345,926**	**828,975**	**2,516,951**
Illiterate	506,046	121,841	384,205	580,503	129,799	450,704
No class completed	29,352	3,491	25,861	60,585	14,125	46,460
Primary not completed	920,636	211,624	709,012	1,098,498	271,227	827,271
Primary completed	533,801	117,681	416,120	881,102	264,014	617,088
Lower secondary	234,948	35,642	199,306	600,436	134,125	466,311
Secondary/diploma	85,611	10,332	75,279	67,691	9,433	58,258
Beyond secondary	15,117	1,015	14,102	53,856	5,877	47,979
Other	2,653	171	2,482	2,986	304	2,682
Not reported	2,137	337	1,800	269	71	198
Female	**2,443,187**	**612,055**	**1,831,132**	**3,495,346**	**907,987**	**2,587,359**
Illiterate	1,066,508	205,992	860,516	1,081,805	176,499	905,306
No class completed	22,594	3,482	19,112	73,399	14,744	58,655
Primary not completed	921,850	266,976	654,874	1,261,369	306,040	955,329
Primary completed	286,835	105,605	181,230	689,322	288,183	401,139
Lower secondary	109,819	23,685	86,134	335,860	108,338	227,522
Secondary/diploma	29,726	5,617	24,109	32,131	8,757	23,374
Beyond secondary	4,122	455	3,667	20,144	5,250	14,894
Other	583	34	549	1,176	146	1,030
Not reported	1,150	209	941	140	30	110

"...labour productivity has increased for almost all industries over the last decade."

Table 2.4 Employment by completed educational level and sex (continued)

	1998			2008		
	15+	15-24	25+	15+	15-24	25+
	Percentage					
Both sexes	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Illiterate	32.9	29.4	34.0	24.3	17.6	26.6
No class completed	1.1	0.6	1.2	2.0	1.7	2.1
Primary not completed	38.6	43.0	37.3	34.5	33.2	34.9
Primary completed	17.2	20.0	16.3	23.0	31.8	19.9
Lower secondary	7.2	5.3	7.8	13.7	14.0	13.6
Secondary/diploma	2.4	1.4	2.7	1.5	1.0	1.6
Beyond secondary	0.4	0.1	0.5	1.1	0.6	1.2
Other	0.1	0.0	0.1	0.1	0.0	0.1
Not reported	0.1	0.0	0.1	0.0	0.0	0.0
Male	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Illiterate	21.7	24.3	21.0	17.3	15.7	17.9
No class completed	1.3	0.7	1.4	1.8	1.7	1.8
Primary not completed	39.5	42.1	38.8	32.8	32.7	32.9
Primary completed	22.9	23.4	22.8	26.3	31.8	24.5
Lower secondary	10.1	7.1	10.9	17.9	16.2	18.5
Secondary/diploma	3.7	2.1	4.1	2.0	1.1	2.3
Beyond secondary	0.6	0.2	0.8	1.6	0.7	1.9
Other	0.1	0.0	0.1	0.1	0.0	0.1
Not reported	0.1	0.1	0.1	0.0	0.0	0.0
Female	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Illiterate	43.7	33.7	47.0	30.9	19.4	35.0
No class completed	0.9	0.6	1.0	2.1	1.6	2.3
Primary not completed	37.7	43.6	35.8	36.1	33.7	36.9
Primary completed	11.7	17.3	9.9	19.7	31.7	15.5
Lower secondary	4.5	3.9	4.7	9.6	11.9	8.8
Secondary/diploma	1.2	0.9	1.3	0.9	1.0	0.9
Beyond secondary	0.2	0.1	0.2	0.6	0.6	0.6
Other	0.0	0.0	0.0	0.0	0.0	0.0
Not reported	0.0	0.0	0.1	0.0	0.0	0.0

Source: ILO 2010b, p. 67.

Fourth, it can be seen that labour productivity has increased for almost all industries over the last decade. This increase in labour productivity, as defined by the value added per person employed, was most impressive for mining and quarrying, with an annual growth of 19.4 percent (according to the change in the riel value of output), followed by finance and other services, with 8.6 percent, and transport and communications, with 5.8 percent. The only sector to see a decline in productivity was electricity, gas and water, with -3.9 percent average annual growth (Table 2.7). However, it is important to note that despite this rise in productivity, the overall employee output level is low compared to other ASEAN countries (Figure 2.13). If Cambodia is to remain competitive with ASEAN countries, especially in the aftermath of the global economic crisis, it will have to further improve its worker productivity.

Table 2.5 Employment by sector, age and sex

	1998			2008		
	15+	15-24	25+	15+	15-24	25+
Both sexes	**4,773,488**	**1,114,189**	**3,659,299**	**6,841,272**	**1,736,962**	**5,104,310**
Primary sector	77.0	79.1	76.4	72.1	68.6	73.3
Secondary sector	4.2	6.5	3.5	8.6	15.5	6.2
Tertiary sector	18.3	13.7	19.7	19.3	15.9	20.5
Not reported	0.4	0.7	0.4	0.0	0.0	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0
Male	**2,330,301**	**502,134**	**1,828,167**	**3,345,926**	**828,975**	**2,516,951**
Primary sector	71.1	75.7	69.8	69.2	70.6	68.7
Secondary sector	5.0	6.2	4.7	8.1	11.9	6.9
Tertiary sector	23.4	17.2	25.1	22.7	17.5	24.4
Not reported	0.5	0.8	0.4	0.0	0.0	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0
Female	**2,443,187**	**612,055**	**1,831,132**	**3,495,346**	**907,987**	**2,587,359**
Primary sector	82.7	81.9	82.9	75.0	66.9	77.8
Secondary sector	3.5	6.8	2.4	9.0	18.7	5.6
Tertiary sector	13.5	10.8	14.3	16.0	14.4	16.6
Not reported	0.4	0.5	0.4	0.0	0.0	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0

Source: ILO 2010b, p. 23.

Table 2.6 Labour demand through investment projects, by sectors, 2008

Sector	Labour	%	No. of projects
2008			
Agriculture	4,729	2.8	5
Industry	98,583	57.4	66
Services	68,398	39.8	27
Total	171,710	100.0	98
2007			
Agriculture	2,198	3.7	3
Industry	52,761	89.0	36
Services	4,355	7.3	8
Total	59,314	100.0	47
2006			
Agriculture	68,367	35.7	20
Industry	109,344	57.1	61
Services	13,851	7.2	17
Total	191,562	100.0	98

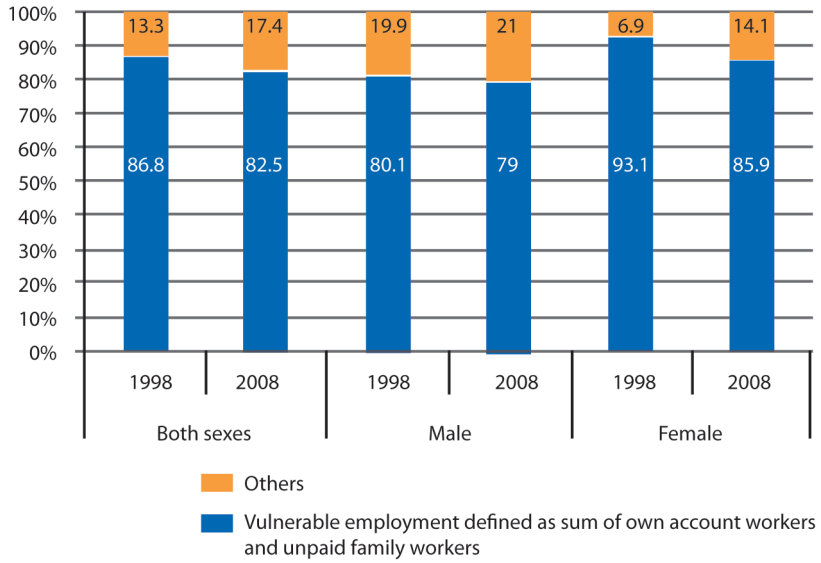
Source: ILO 2010b, p. 30.

Table 2.7 Labour productivity, by industry (value added per person employed, in constant 2000 value)

Sector	1998		2008		Average annual growth (%)	
	(thousand riel)	US$	(thousand riel)	(US$)	riel	US$
Total	**2,380**	**631**	**4190**	**1030**	**5.7%**	**4.9%**
Agriculture, forestry and fisheries	1,294	343	1,537	378	1.7%	1.0%
Mining and quarrying	3,637	964	25,341	6,229	19.4%	18.7%
Manufacturing	9,735	2,580	13,339	3,279	3.1%	2.4%
Electricity, gas and water	15,849	4,200	10,695	2,629	-3.9%	-4.7%
Construction	9,337	2,474	13,553	3,332	3.7%	3.0%
Trade	4,156	1,101	4,598	1,130	1.0%	0.3%
Hotels and restaurants	24,378	6,460	22,068	5,425	-1.0%	-1.7%
Transport and communications	6,042	1,601	10,824	2,661	5.8%	5.1%
Finance and other services	4,292	1,137	10,096	2,482	8.6%	7.8%

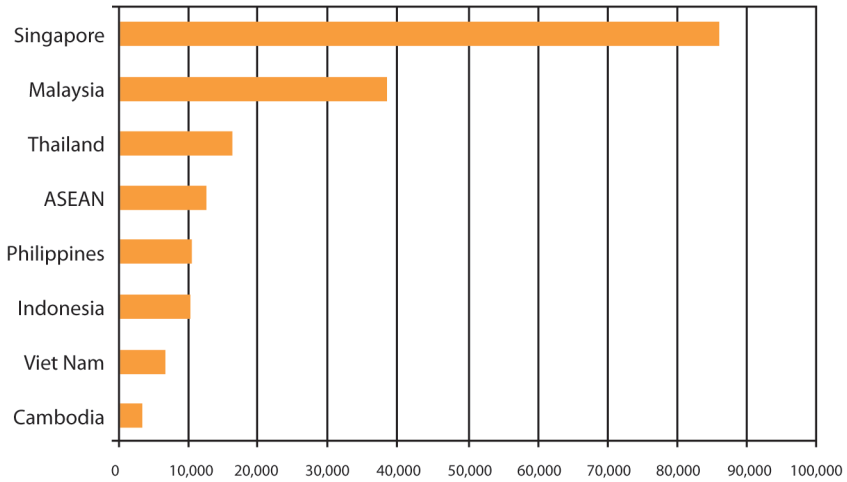
Source: ILO 2010b, p. 31.

Figure 2.12 Proportion of vulnerable employment within all employment



Source: ILO 2010b, p. 25.

Figure 2.13 Output per worker, by selected ASEAN countries, 2008 (constant 2009 US$)



Source: ILO 2010b, p. 31.

2.6 Mismatch between education and employment

"One of the most important aspects of education is that it creates a workforce which is skilled and able to create returns on that education..."

One of the most important aspects of education is that it creates a workforce which is skilled and able to create returns on that education for them and for the overall economy when they enter their careers. Thus, the educational system must be attuned to the needs and necessities of the economy, and work towards preparing students for their economic lives. One of the major problems in Cambodia is that there do not seem to be strong returns on education and/or training for the population in terms of employment and work advancement. In Cambodia, the listed unemployment rate is actually quite low (in 2007, 0.9 percent according to the strict definition – unemployed and actively looking for work – and 3.82 percent by the relaxed definition – unemployed and available for work but not actively looking) (SNEC 2009). However, this is because many are forced to find some kind of employment rather than having no income at all, given the lack of unemployment aid schemes. The problem, however, is that often the quality and pay of these jobs are low or inadequate given one's qualifications. Whether the cause or effect of this is low education levels is a chicken and egg problem – the important factor, however, is that the low returns on education are limiting the incentives to attain higher than the most basic levels of education.

The nature of the Cambodian economy is not helping this trend. A large proportion of the workforce works in informal economic activities, either self-employed or working as an unpaid family worker (Table 2.8).

Table 2.8 Employment status of population aged 10+ years, 2004 and 2007 (percent)

	2004			2007		
	Total	Male	Female	Total	Male	Female
Employee	20	23.3	16.6	23.3	26.9	19.5
Employer	0.1	0.1	0.1	0.1	0.1	0.03
Own account worker	34.4	39.7	28.8	35.8	43.1	28.2
Unpaid family worker	43.3	34.8	52	40.7	29.8	52.3

Source: SNEC 2009, p. 12.

Formal sector employment, despite growth, remains small, with paid employees accounting for only 23.3 percent of the overall workforce. Another detracting factor is the lack of average wage increases based on increased schooling. While of course it must be taken into account that the average income in Cambodia is quite small, the increase in wage per month for several more years of schooling provides little incentive to continue with an education. In 2007, the average wage for someone who had completed primary school was US$58.14/month; for someone who had completed lower secondary school, it was US$61.35/month. For an extra three years of schooling, one can expect only a US$3.21 increase per month. The difference between lower secondary and upper secondary is even smaller – an increase of only US$0.82 to US$62.17, for an extra 3 years of schooling. While the increases for a vocational/technical or a university degree are considerably larger, there is a large disincentive to reach this level of schooling (Table 2.9).

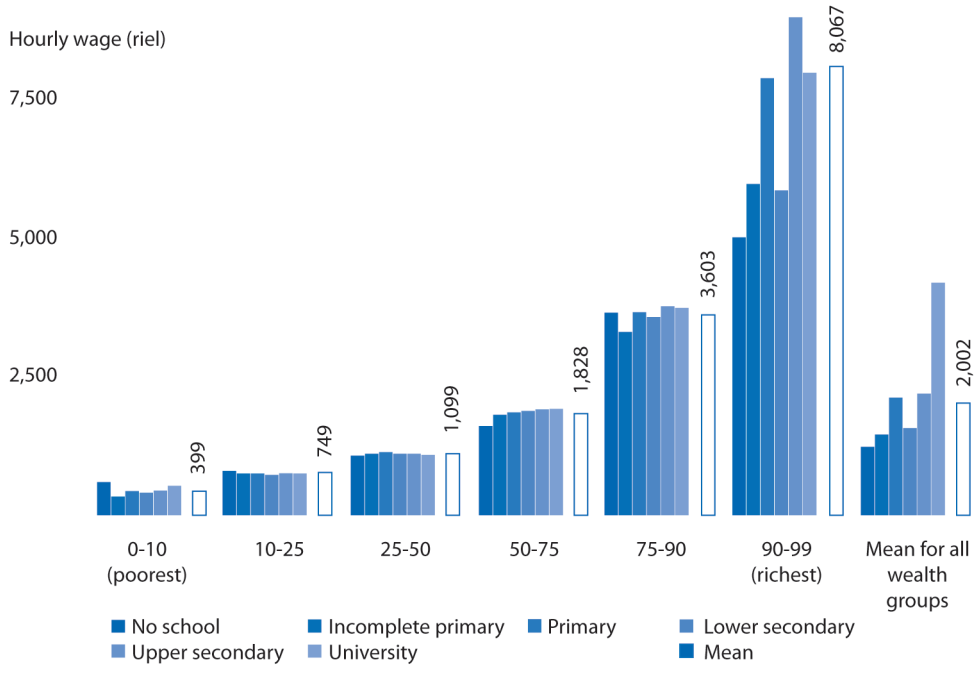
Table 2.9 Average earning by education level for youth (US$/month)

Education levels	Male	Female	Both sexes
None	-	-	37.5
Primary school	56.23	59.82	58.14
Lower secondary school	61.70	61.03	61.35
Upper secondary school	59.19	65.79	62.17
Technical/vocational	149.71	75.60	95.02
College/university undergraduate	135.53	103.02	115.55
Bachelor's degree	150.78	129.59	141.74

Source: NIS 2007

And as Figure 2.14 shows, increase in education does not seem to have a significant impact on income when organised based on wealth band – it is only significant for the top 10 percent of the wealthiest individuals in Cambodia. Up to the 75 percentile, and to some extent in the 75-90 percentile, there is essentially no appreciable increase in hourly wage. It is also significant that while wages have increased steadily over the last decade due to the country's impressive economic growth, this increase has been uneven. The top 10 percent of the population in terms of wealth distribution have seen a 90 percent increase in their earnings, while the bottom 10 percent have only had a 40 percent increase (World Bank 2009a).

Figure 2.14 Education makes little difference to earnings, except for the richest group



Source: World Bank 2009b, p. 31.

2.7 Universities and technical and vocational education and training in Cambodia

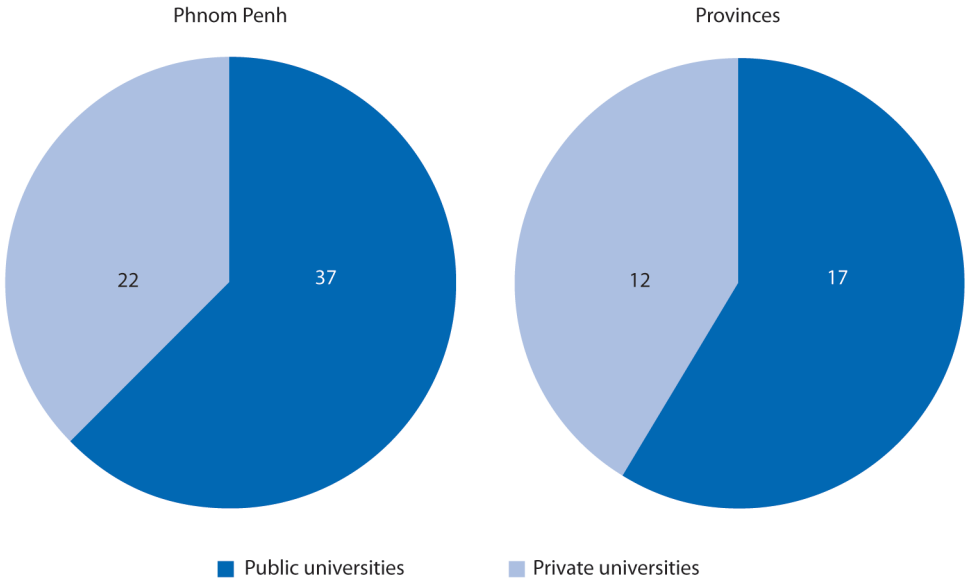
"...the majority of higher education institutes are in Phnom Penh, although there is a growth of other institutions...in various other provinces."

The state of the higher education system in Cambodia, consisting of both university education and vocational and technical training, is characterised by very disparate organisation mechanisms, poor quality output, and low enrolment. These three factors are greatly inhibiting the development of higher education and more capable human capital in the country, and should be a major concentration point when undertaking reforms.

To begin with, we can look at the state of the university system in Cambodia. A total of eleven ministries and agencies provide higher education services, and thus have access to the public education budgets of Cambodia. Two of the most important ministries regarding higher education are the Ministry of Education, Youth and Sport (MoEYS) and the Ministry of Labour and Vocational Training (MoLVT), and while the Cambodian Education Law states that MoEYS is responsible for general, higher and vocational education, it does not provide any explanation for the role of MoLVT, which has resulted in a high level of competition, and difficulties in developing strong cooperation links between these Ministries. Understandably, this makes coordination of the higher education system very difficult for the government, something that will be examined in greater detail in Chapter 4.

It should also be noted that the majority of higher education institutions are in Phnom Penh, although there is a growth of other institutions, mainly private, in various other provinces (Figure 2.15).

Figure 2.15 Location of universities in Cambodia



Source: MoEYS data.

As for the areas of study that are popular among Cambodian university students, the most common areas of study are foreign languages (14.5 percent average from 2006 to 2009), management (13.1 percent), accounting (10.4 percent), and computer science

(7.9 percent) (Table 2.10). However, it should be noted that in most cases, students graduating from university with degrees in management, accounting, and business administration were found to be lacking in the essential skills and practical experience required for employment in the field for which they were supposed to be qualified. This points to the huge technical problems these universities face in terms of creating learning institutions which make an education worthwhile and which are geared towards the needs of the market. We can also see from Table 2.10 that the absolute enrolment numbers are very low. These demand issues will be addressed in part later on in this chapter. Overcoming some of these issues and ensuring that students are retained throughout the education cycle will be absolutely essential to improving the level of human capital in Cambodia.

Turning now to technical and vocational education and training (TVET), we see that many of the same coordination, quality, and participation problems exist. Currently, TVET is controlled by the NTB. It has direct responsibility for advancing the status of TVET and turning it into a demand-driven system which is responsive to the needs of the economy. As for the focus of TVET, the Directorate General has in the past focused on the competency-based approach to skills training, attempting to ensure that the knowledge, skills, and attitudes that individuals will require to carry out particular jobs are obtained.

Table 2.10 Total enrolments by study discipline in public and private higher education institutions

Study discipline	2006-2007	%	2007-2008	%	2008-2009	%	Three-year average (%) 2007-2009
Mathematics, chemistry, physics, biology	1,679	1.8%	2,562	2.3%	3,073	2.2%	2.1%
Foundation year	2,038	2.2%	4,707	4.3%	4,561	3.3%	3.3%
Computer science	8,149	8.8%	8,769	8.0%	9,523	6.9%	7.9%
Sociology, humanities, arts	5,172	5.6%	6,968	6.3%	8,685	6.3%	6.1%
Tourism	3,361	3.6%	3,190	2.9%	2,999	2.2%	2.9%
Foreign languages	15,200	16.5%	15,797	14.3%	17,370	12.7%	14.5%
Law	4,554	4.9%	5,718	5.2%	7,484	5.5%	5.2%
Health sciences	5,341	5.8%	5,411	4.9%	7,817	5.7%	5.5%
Agriculture and rural development	3,745	4.1%	3,713	3.4%	5,288	3.9%	3.8%
Engineering and mechanical	2,870	3.1%	3,349	3.0%	4,719	3.4%	3.2%
Sub-total (1)	**52,109**	**58%**	**60,184**	**55%**	**71,519**	**52%**	**54%**
Business management							
• Business	7,265	7.9%	7,669	7.0%	10,846	7.9%	7.6%
• Marketing	842	0.9%	1,329	1.2%	1,610	1.2%	1.1%
• Management	13,445	14.6%	13,657	12.4%	16,768	12.2%	13.1%
• Banking and finance	1,122	1.2%	1,575	1.4%	3,541	2.6%	1.7%
• Economics	5,653	6.1%	6,262	5.7%	8,729	6.4%	6.1%
• Accounting	8,163	8.8%	12,161	11.0%	15,482	11.3%	10.4%
• Finance	3,741	4.1%	7,253	6.6%	8,758	6.4%	5.7%
Sub-total (2)	**40,231**	**44%**	**49,906**	**45%**	**65,734**	**48%**	**46%**
Grand total (1) + (2)	**92,340**	**100%**	**110,090**	**100%**	**137,253**	**100%**	**100%**

Source: HR, Inc. 2010

Despite this focus and the sector's coordination under the NTB, this area of education still faces various issues in terms of coordination of funding and institutions offering services. Out of 316 TVET institutions in Cambodia over the 2008-2009 school year, there were 38 MoLVT-run public institutions, 21 public institutions run by other ministries, 181 private TVET institutions, and 76 NGO-run TVET institutions. Historically, TVET has also received funding from a number of sources, and while this has been condensed in recent years through greater funding by international donor agencies, there is little or no coordination between the different donors in order to streamline the process (there will be more on this in Chapter 5).

"...Cambodia needs to ensure that as it grows it is not falling behind its neighbours and missing out on growth opportunities in the future."

As we can see from Table 2.11, TVET in Cambodia also faces similar problems to university education in terms of low enrolment levels. While the numbers have grown over the last half-decade, for a population of over 14 million people, these numbers are incredibly low and will definitely need to be increased if any reform of the TVET system is have a measurable effect.

Table 2.11 Enrolment figures for higher education and TVET in Cambodia

Level of training	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010
Bachelor's degree (4 years)	1,041	1,126	1,158	1,408	1,330	1,981
Associate degree (2 years)	1,237	2,201	2,172	3,151	2,959	3,308
Vocational training certificate 1,2,3 (from grades 10-12)	594	503	1,562	1,524	1,214	746
Vocational training certificate (less than 1 year/informal)	10,692	17,722	64,970	67,178	117,240	66,695
Training at private institutes and NGOs	14,330	26,434	18,505	40,387	45,887	47,447

Source: data from MoLVT

2.8 Regional variations

It is important to look at Cambodia in reference to other countries in the region, especially considering that they have similar economic growth backgrounds, and in many areas, such as tourism and garments, are competing against each other to attract investors. Because of this Cambodia needs to ensure that as it grows it is not falling behind its neighbours and missing out on growth opportunities in the future.

Compared to other ASEAN nations, Cambodia is at the bottom of the list. When comparing enrolment in primary education, Cambodia is doing quite well; however, moving on to secondary and tertiary education, Cambodia is last in both categories. In terms of secondary level gross enrolment ratios, Cambodia is only 4 points behind Lao PDR; but 57 points behind Brunei and 43 behind the Philippines and Thailand, which rank first, second and third. Its performance at the tertiary level is even worse (Table 2.12).

Table 2.12 Gross enrolment ratio in primary, secondary and tertiary education (comparison among ASEAN countries)

	Primary		Secondary		Tertiary	
Country	**2000**	**2007**	**2000**	**2007**	**2000**	**2007**
Cambodia	102%	119%	18%	40%	2%	5%
Indonesia	109%	117%	55%	73%	14%	17%
Philippines	112%	109%	77%	83%	30%	28%
Malaysia	97%	98%	65%	69%	26%	30%
Singapore	N/A	N/A	N/A	N/A	N/A	N/A
Myanmar	N/A	N/A	N/A	N/A	N/A	N/A
Brunei	111%	106%	85%	97%	13%	15%
Thailand	106%	104%	67%	83%	35%	48%
Lao PDR	109%	118%	35%	44%	3%	12%
Viet Nam	106%	N/A	65%	N/A	9%	N/A

Source: UNESCO Institute for Statistics online database

The returns on education are lower in Cambodia than many other parts of ASEAN as well. In terms of returns on primary education, Cambodia performs similarly to the Philippines but worse than Indonesia and Thailand. However, it is significant that in the other three countries, most individuals continue on to higher levels of education, meaning that returns are expected to be higher, while in Cambodia, a large portion of the population will not go on to more schooling. Returns on secondary education are again similar to the Philippines, but much further behind Indonesia and Thailand. When looking at tertiary education, the picture is even more grim, with Cambodia falling far behind all of the other three (Figure 2.16). Thus, other countries seem to be more successful in realising an employment market which rewards individuals for increasing their schooling, while Cambodia has not. This will have implications for the number of students who choose to continue their education in the future, which will in turn have effects on the skill level and productivity of the work force, which has effects on the level of growth for the country.

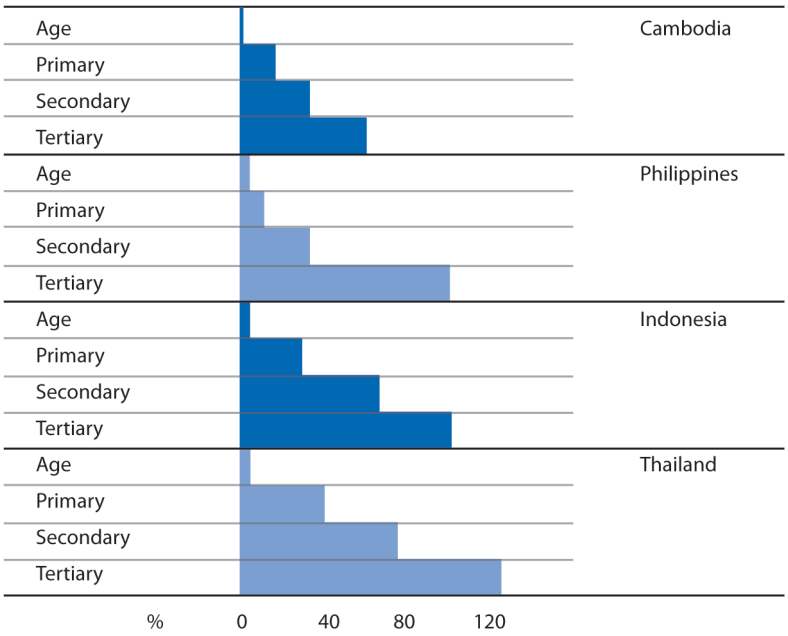
2.9 Current and future challenges

The realities of the Cambodian educational system and labour/employment market create considerable constraints on the growth and development of the Cambodian education system, and thus the human capital levels in Cambodia. While some of these challenges and constraints have been alluded to above, they will be explored in greater detail here.

The major problems that the country's education system faces can be broken into two areas: demand side problems (the unwillingness or inability of Cambodian citizens to attend school) and supply side problems (the inability or inefficiencies caused by the Cambodian government and education system in delivering educational resources). Since supply side constraints will be focused on in greater detail in Chapter 4, here we will focus only on the demand-side constraints.

"...demand side constraints pose a serious hurdle over which development of human capital and the education sector must jump."

Figure 2.16 Returns to age and education in East Asia, 2004



Source: World Bank 2010c, p. 45.

These demand-side constraints pose a serious hurdle over which development of human capital and the education sector must jump. Many of the concerns of the Cambodian population are summed up in Table 2.13, which lists the reasons for not attending school among people aged 5-24. Ranking in the top are 'Don't want to' (23 percent), 'Must contribute to household chores' (16 percent), and 'Must contribute to household income' (15 percent). As might be expected, these are indicative of some of the major constraints on the demand side.

Table 2.13 Reason for not attending school among persons 5-17 years of age who are not attending school by sex, 2007 (percent)

Reason	Men	Women	Total
Don't want to	21	26	23
Did not do well in school	6	8	7
No suitable school available/school is too far	9	7	8
No teacher/supplies	1	1	1
High cost of schooling/no money	0	0	0
Must contribute to household income	16	15	15
Must help with household chores	18	13	16
Due to disability	6	3	5
Other	25	27	26
Total	100	100	100

Source: NIS 2009, p. 14.

The highest response, 'Don't want to,' can in part be attributed to the employment availability and return on education rates available to graduates of increasingly higher levels of education. It was discussed above that wage rates do not significantly increase based on higher levels of education, as well as the fact that there are not large

returns on education when compared to other countries of the region. This is certainly factored into an individual's calculations as to the economic soundness of continuing their education.

Compounding this are some of the realities of the workforce in Cambodia. First of all, there is a very low level of formal work in Cambodia – only about one in five workers is a paid employee. And these jobs often do not pay enough – 27 percent of professionals, one-fourth of legislators, officials and managers, and a large number of civil servants have more than one job (ILO 2007). Many Cambodians are self-employed or family employed (see Figure 2.15), which means they are not as concerned with 'skilling-up' in order to attain career advancement. This also means (in the case of family employment) that it is often not the person most skilled for the job, but rather the person that is related to the business owner, that gets the job, again reducing the incentive to increase training and education. Seasonal and migrant workers also have less incentive to join a training programme or increase their education because of the transitory nature of their work. There is also little incentive because of the perceived returns that education provides. For example, in the garment industry, which is one of the major work providers for women in Cambodia, there is little incentive to increase training because there is little or no room for career advancement or promotion to higher, managerial positions. And finally, incentives decrease because of the low base level from which training may begin. When an individual has dropped out of school at a very low education level, they may not have the literacy or basic skills necessary to participate successfully in a training programme.

Regarding the 'Must help with household chores' and 'Must contribute to household income' responses, this is indicative of the poverty constraints that reduce participation in education programmes. Often, families are too poor to send their children to school. Or the children must stay at home and do chores or look after younger siblings, while both parents work. Also, as children get slightly older, they must give up their schooling to help contribute to the family income as well. Thus, the opportunity cost of gaining a higher education is too great, and the future returns are not high enough to justify the investment. The government must look for ways to overcome these poverty constraints and convince Cambodians that sending their children to school and keeping them there is an economically wise decision (see Box 2.1 on cash transfers for education).

These challenges are considerable roadblocks to attaining higher levels of education in Cambodia. Both from the supply and the demand sides, these issues must be addressed before Cambodia is able to grow its stock of human capital.

III. INDUSTRIAL DIVERSIFICATION AND HUMAN CAPITAL DEFICITS

3.1 Background

"Most of the knowledge acquired in schools by professionals and non-professionals does not match the demands of industry and the work place."

The majority of workers, at almost all levels, lack appropriate knowledge and skills to work effectively in a rapidly changing, complex and volatile environment. Most of the knowledge acquired in schools by professionals and non-professionals does not match the demands of industry and the work place. Responding to the human capital deficit in Cambodia therefore is essential. One must look to the reasons this shortage has developed in order to shape a strong strategy to overcome it.

This chapter of the report will look at the concept of the human capital deficit in the macroeconomic context of Cambodia, by reviewing industrial diversification and evaluating sector-by-sector the human capital deficits and knowledge gaps in the major Cambodian industries.

3.1.1 Human capital deficit

Primary resources or cheap and unskilled labour are no longer sufficient for Cambodia, particularly for a long-term vision where strong local capabilities, institutions and industries are needed. In Cambodia, as in other countries, advancing competitiveness means identifying the determinants of global competitiveness against the backdrop of Cambodia's current human capital deficits.

There is a growing conviction that the dependence that Cambodia has developed on a few high performing sectors such as garments, construction and tourism is no longer sustainable and the country needs to broaden its sources of growth through increased competitiveness and diversification into new products and markets. Changing determinants of global competitiveness are increasingly shaping the future with ideas that have strong policy implications for Cambodia. These changes need to be understood with the increasing demand for new skills to manage technical change, and strong reforms are needed to re-structure education and training.

While labour regulations are not a problem for most firms, skills are one of the biggest concerns. According to a 2009 International Finance Corporation (IFC)/World Bank report (World Bank 2009c), despite the fact that there has been a general increase in the level of education over the past 10 years, the levels are still very low, and the demand for skills will continue to increase. The short-term approach of firms in Cambodia has been to rapidly respond through quickly increasing the provision of training to their employees; yet the effectiveness of such an approach, which relies on internal training, is perhaps low and leads to market failure in providing the relevant training for employees in the private sector (World Bank 2009c).

Furthermore, labour remains in excessive supply and wages remain low, producing a labour market rationale that holds many features of a low income country, despite labour being a key asset and not a major constraint to economic growth. According

"Formal employers in construction, garments and hospitality affirm that, at all qualification levels, good soft skills are more difficult to find than technical skills."

to the World Bank and IFC, the current human capital deficits that are becoming more pressing include:

1. Level of skills is poor and poorly adapted to new demands from the private sector and the markets for skills have many market failures.
2. Pay practices are not sufficiently supportive of productivity improvements.
3. In the garment sector, poor industrial relations have become a major detriment to productivity and morale.

3.2 Addressing the skills gap

Skills are an important determinant of economic performance, given that they raise an individual's productivity. Specifically, it is becoming crucial to address gaps in soft skills in Cambodia, including commitment, communication, creativity, decision-making, problem solving, self motivation and teamwork. The World Bank (2006) defined soft skills as thinking skills, both critical and creative, and behavioural skills, including perseverance, self discipline and teamwork. Most of the recent literature on human capital emphasises the importance of such skills, both in the process of human capital development and a determinant of schooling and employment outcomes. Some of the above soft skills (i.e. punctuality or teamwork) can be learned on the job. But other skills are best learned in institutional settings, such as schools and training centres. Employers identify soft skills in Cambodia as the most important skills lacking in most employees (CAMFEBA 2008), in particular among out of school youth, with 89 percent of employers' stating that they have difficulties working with out of school youth because of behavioural issues.

Furthermore, soft skills are complemented by hard skills, technical abilities which tend to be specific to a certain task or activity. Examples of hard and technical skills include machine operation and computer literacy. Lack of soft skills is a major challenge, but poor technical skills that do not match employers' needs also represent an obstacle to productivity growth.

Formal employers in construction, garments and hospitality affirm that, at all qualification levels, good soft skills are more difficult to find than technical skills. For unskilled workers, 52 percent of employers identify work attitude as the top skill that is lacking, followed by a foreign language, with technical skills coming in third (World Bank 2010a).

Definitions of unskilled, semi-skilled and skilled workers can be summarised:

- **Unskilled:** an unskilled employee is one who does operations that involve the performance of simple duties, which require the exercise of little of no independent judgment or previous experience, although familiarity with the occupational environment is necessary.
- **Semi-skilled:** A semi-skilled worker is one who does work generally of a defined routine nature wherein the major requirement is not so much judgment, but for the proper discharge of duties assigned to him, or where important decisions are made by others. The work is thus limited to the performance of routine operations of limited scope.

- **Skilled:** A skilled employee is one who is capable of working efficiently, exercising considerable independent judgement and discharging duties with responsibility. The worker must possess a thorough and comprehensive knowledge of the trade, craft or industry in which he is employed.

"Formal and informal vocational training programmes do not always address the needs of the labour market."

3.2.1 Training for employment

3.2.1.1 Vocational training

Included in the National Strategic Development Plan (NSDP) 2006-2010, MoLVT created the first 5-Year Development Plan 2006-2010, approved by the NTB. The strategy includes four strategic objectives: employment creation; ensuring better working conditions; promoting enforcement of the law on social security; and developing capacity building on technical and vocational skills.

TVET is offered by most public institutions. The formal system is managed by MoLVT, and provides those completing a three-year programme of upper secondary education the opportunity to take part in a two-year programme to obtain a diploma, a four-year Bachelor's, or a Master's degree in technology and/or business. According to MoLVT, the number of technical vocational education and training graduates increased from 88,367 in 2007 to 113,648 in 2008 (ILO 2010b).

3.2.1.2 Formal training

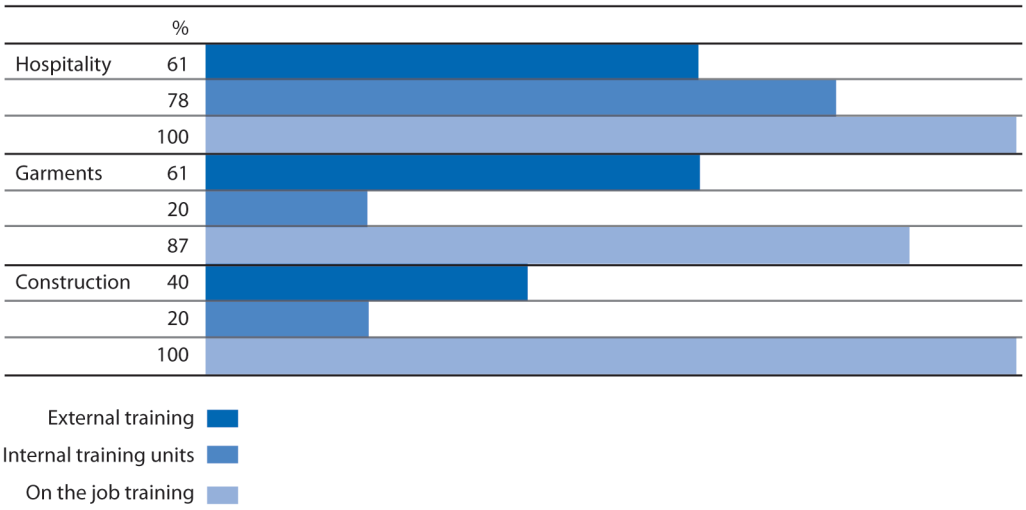
A fair number of firms, from 40 to 60 percent of the total, rely in addition to on-the-job training and externally provided training. Some firms, particularly in the hospitality sector, where most providers continuously need to deal with international customers, have also set up internal training units to upgrade services.

The variety of training provided by employers reflects the need to cover a variety of basic skill gaps present in many individuals. Furthermore, high turnover impacts firms' incentives to invest in workers. In 2007, 17 percent of workers in all sectors were new employees and 11 percent left the company by the end of the year (World Bank 2008). A high worker turnover may affect firms' incentives to invest in training their workforce, and justifies the need to improve the quality of training within the general education system.

3.2.2 Skill gaps

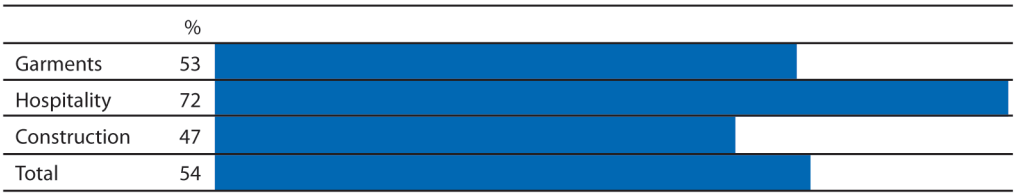
Formal and informal vocational training programmes do not always address the needs of the labour market. Cambodia's workforce must have skills that are aligned with its transforming economy and that can support the country's continued economic growth. Fifty-four percent of employers surveyed claim that there is a mismatch between the skills offered by vocational training institutions and the requirements of their firms (World Bank 2010c).

Figure 3.1 Methods of training needed in Cambodia to upgrade workers



Source: World Bank 2010c, p. 64.

Figure 3.2 Skills mismatch between employers demands and training, according to employers (2009)



Source: World Bank 2010c, p. 96.

3.3 Overview of the workforce in Cambodia

During the past decade, Cambodia has sustained economic growth by moving from agriculture to the industrial sector. However, the shift did not take into account the soft skills required for a different working sector. This requires both general and technical education, concentrated at all levels, but especially in keeping children in school and enhancing employability and productivity of the majority of the labour force through increased skill levels.

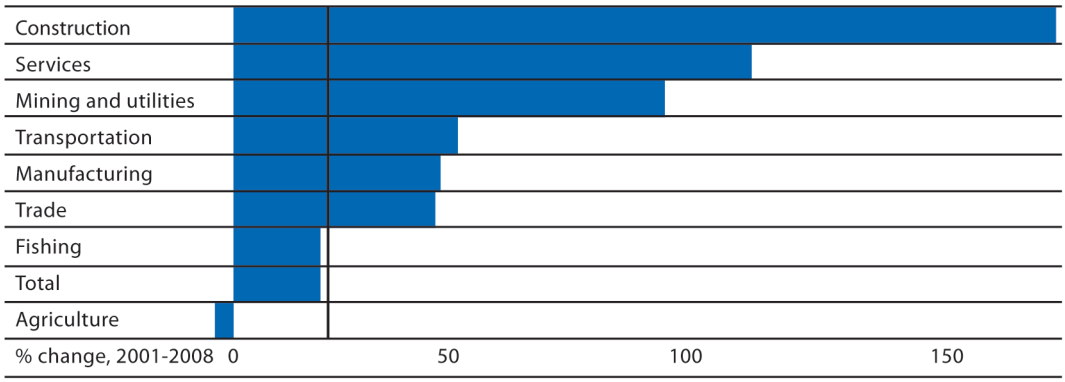
3.3.1 Economic growth of the country and the requirements of the workforce

Cambodia, which was characterised by strong economic growth over the past 10 years, has seen increasing pressure to create jobs and keep up the rapid economic expansion of the country.

As one can see from figure 3.3, the country, which until 10 years ago was predominantly a self-employed, peasant, agriculture-oriented economy, started diversifying its economy and jobs outside agriculture only recently. New challenges increasingly focus on how Cambodia can engage more effectively in international trade and use the trade framework as an opportunity to diversity its economy. All these factors combined created the necessary conditions which have helped to increase production in a variety of sectors in Cambodia. Expansion is clearly visible in services – tourism, garments, and a boom in properties – and as a result of expanded FDI, more factories have appeared, expanding the construction sector, but creating conditions for growing inequalities across the society – largely a result of the unskilled characteristics of the workforce.

"Cambodia's human capital problem is focused on the work-related skills of the workforce, which often do not respond to the specific needs of employers..."

Figure 3.3 Employment generation[6] across sectors, 2001-2008



Source: World Bank 2010c, p. 35.

3.3.2 What is the current mismatch between the skills available and the skills required for the country?

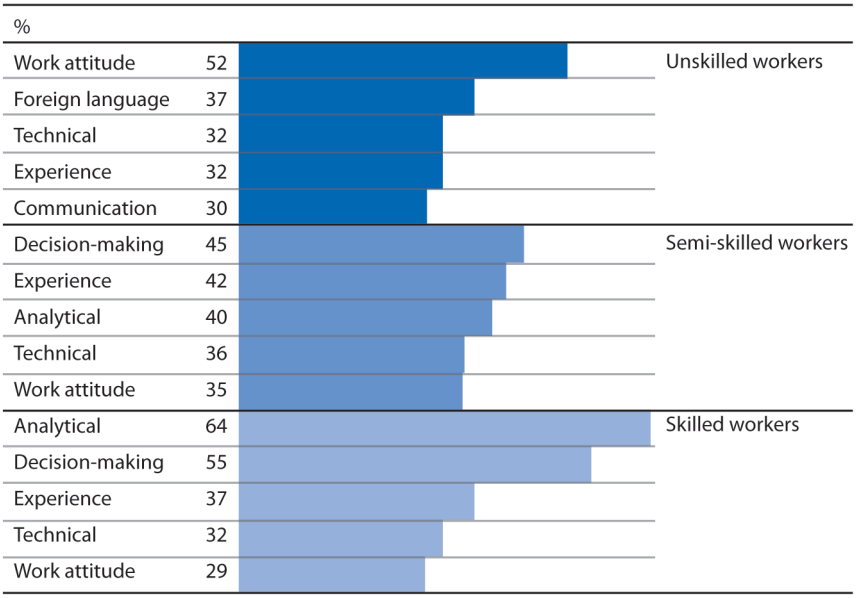
Cambodia's human capital problem is focused on the work-related skills of the workforce, which often do not respond to the specific needs of employers, particularly in the new sectors. With the high level of unskilled youth in the workforce, and their lack of soft skills, according to a survey of employers (CAMFEBA 2008), most employers reported having difficulties with out-of-school youth as a result of poor workplace attitudes.

Production technologies and IT remain adapted to a poorly skilled workforce, and production technologies remain adapted to a labour market where only 7 percent of participants have completed secondary school. This is happening in parallel to a diversification of the economy and expansion in garments, manufacturing, services, construction and tourism.

Three of the highest growth sectors in Cambodia (garments, hospitality and construction) also report significant skill gaps among new graduates. In these three sectors, only 20 percent affirm that vocational training graduates are equipped with the necessary skills to perform their jobs. Yet important variations by sector show how severe the skills gap is. The garment and construction sectors require low skilled

and unskilled workers, which makes it easier for rural people to move into them, and demand less from workers who have dropped out of the education system.

Figure 3.4 Skills employers find lacking in most employees in Cambodia



Source: World Bank 2010c, p. 54.

3.3.2.1 Human capital deficits in the garment sector

Cambodia is highly reliant on this sector as it accounts for approximately 16 percent of GDP. The sector has experienced incredible growth rates: 28 percent growth per year and garment exports increasing from almost zero in 1994 to US$2.8 billion in 2007 (World Bank 2009b), accounting for 75 percent of exports in 2002 and 65 percent in 2008.

The boom in the garment sector also led to an expansion in employment, with 30,000 jobs created in 2005-2006 and total employment of 350,000 by 2008. In this sector 80-85 percent of all workers are women, predominantly migrants from the outer provinces – and most of the time they are the only income earners. On average these workers have 2-3 years experience within the sector with the majority only having completed primary education. They face a working week of between 48 to 60 hours, and the average monthly income is between US$70 and 100.

The high dependence on this sector is discernible from the fact that it alone accounted for 50 percent of all industrial output and 69 percent of all manufacturing within the country in 2005. This dangerous reliance makes the country vulnerable to competition from other countries and international shocks. Lack of competitiveness is exacerbated by sector-relevant difficulties such as lower productivity, and the unreliable supply and high cost of electricity. For example, Viet Nam could easily overtake the country, given that it has lower electricity cost and its total manufacturing cost is about 20 percent lower than that of Cambodia.

The impact of the international economic crisis in Cambodia was quite severe with exports falling more than 50 percent from about US$250 million to 100 million in January 2009. Furthermore, most of the garment factories in Cambodia are foreign owned and with the financial crisis affecting foreign markets, FDI in the sector decreased by 15 percent. This resulted in workers being asked to work fewer hours, with a loss of US$4-5 million in wages per month. Between 2008 and 2009, 18 percent of the total workforce in this sector was laid off or suspended as a result of the economic crisis.

"...increasing productivity means promoting skills and training."

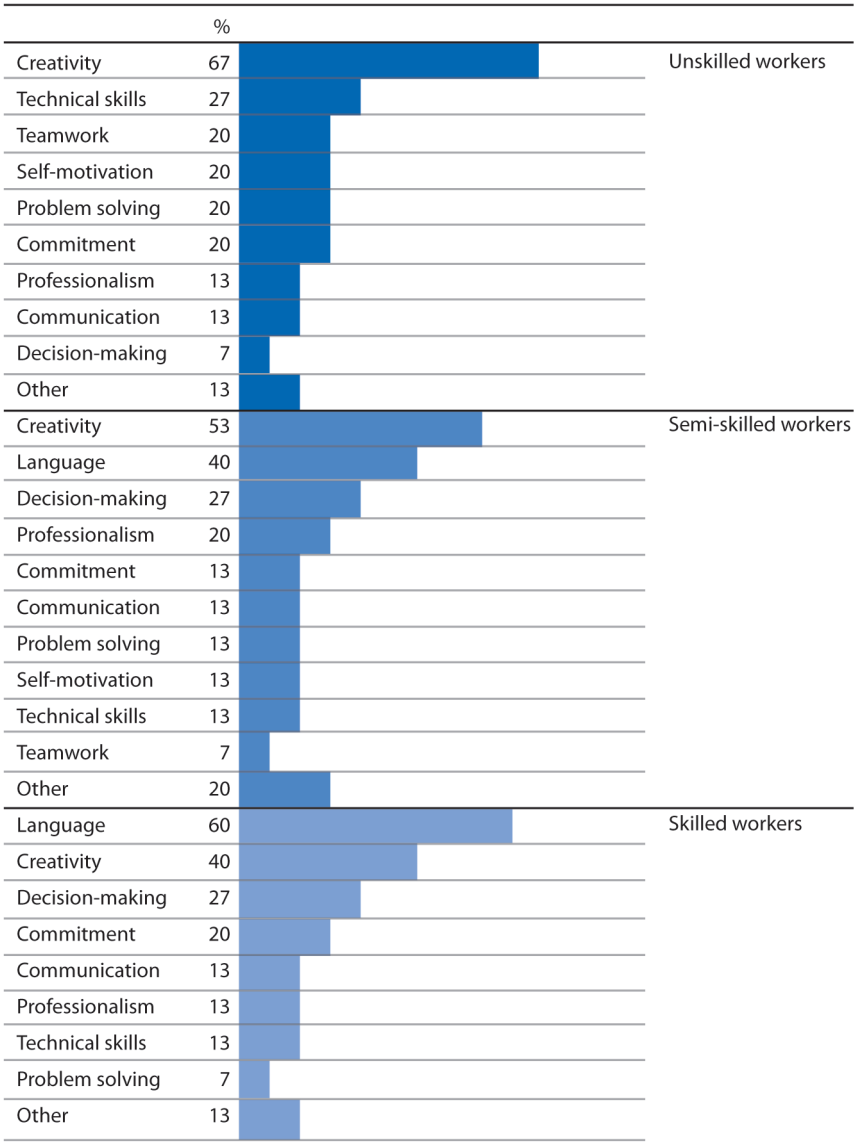
In terms of the skills gaps of workers in the garment industry, firms do not appear to consider gaps as excessively severe given that it remains relatively easy to train a worker to use a specific machine. Yet the sector faces slight shortages of university graduates, and there is an ongoing strong demand for qualified salesman. Also, lack of language proficiency of professional workers, in particular English and Chinese, remains a big barrier to upgrading the sector, with language skills becoming crucial to manage connections with workers, buyers, clients and company owners.

Furthermore, creativity is also an important skill in the garment sector, but surveys show that this is the skill that seems to be most lacking. Creativity is the most difficult skill to find in most employees and across all skill levels, but it is particularly marked among unskilled workers (67 percent), although there seems to be a big gap also among semi-skilled (53 percent) and skilled workers (40 percent).

Major constraints lie in poor decision-making skills, among both semi-skilled and skilled workers. For skilled positions, 93 percent of employers demand a university degree, whereas 7 percent of employers find vocational training sufficient. Unskilled workers in the garment sector have very poor technical skills. There were complaints from one-quarter of employers about the lack of technical skills among unskilled workers, in particular sewing, applying buttons and mechanical abilities. One-fifth claimed that poor soft skills are a constraint among unskilled workers, including: team spirit, motivation, problem solving ability and commitment to a job.

Cambodian short to long-term competitiveness within the global garment sector therefore still remains a big issue for the country, an issue already highlighted in US Agency for International Development (USAID) reports (USAID 2005, USAID 2009) indicating that the market is dominated by a high number of expatriates in upper management and senior positions. While they comprised only 2 percent of the garment sector workforce, they made up 10 percent of the wage bill. Training opportunities for Cambodian nationals as managerial candidates have been put forth, complemented by the various vocational and technical training programmes, so that employees might be able to see opportunities and incentives to excel while contributing to value added activities that increase overall firm revenues and productivity. According to a World Bank Report (2010), increasing productivity means promoting skills and training. The top performing garment exports are supplying more, but at lower prices, which could not be sustainable as garment exports might not be able to compete in wages, and therefore there is a need to further promote skills and upgrade the human capital in this field.

Figure 3.5 Major gaps in skills in the garment sector in Cambodia



Source: World Bank 2010c, p. 59.

3.3.2.2 Human capital deficits in the hospitality and tourism sector

The tourism and hospitality industry in the past decade has grown to become one of the main pillars of economic growth in the country with levels of tourism reaching their height of approximately 2.16 million people travelling into Cambodia in 2009. This is extraordinary growth compared to the mere 20,000 tourists in 1992 (MoT 2010). Growth in the tourist industry has been the result of the attainment of peace and stability since the late 1990s, tourist attractions like Angkor Wat becoming a world heritage site in 1992, an increase in international and domestic travel, and the governments' policies on tourism development (i.e. open sky policy, visa on arrival, etc.).

Box 3.1 Foreign direct investment and the volatility associated with it*

There are a number of reasons why volatility of FDI inflows may be negatively associated with economic growth.

1. The first possibility is that volatility in FDI has a negative effect on growth. If FDI inflows are uncertain then costs of (and returns to) investment are uncertain because FDI can provide a stimulus to domestic investment and innovation. It may therefore be the case that volatility in FDI flows undermines inward investment, with the consequence of an adverse effect on domestic economic growth.
2. A second possibility might be that the volatility of FDI flows gives a proxy for economic or political uncertainty. Where FDI is volatile there may be underlying instability (political and economic) in a country. There is evidence that growth is lower in those countries that face greater economic uncertainty like Cambodia, and some developing countries tend to be particularly vulnerable to financial shocks.

In the case of garments, and other such products for export, FDI can provide a channel out of rural areas and out of the informal economy for workers. FDI inflows therefore have a positive effect on growth, whereas volatility of FDI has a negative impact on a country's economy and there is no evidence to show that the effectiveness of FDI to contribute to growth is determined by the level of human capital in the host country.

It is therefore not the volatility of FDI *per se* that retards growth, but that such volatility captures the growth-retarding effects of unobserved variables. One possibility is that economies with high levels of economic uncertainty will tend to have lower and/or more variable growth rates, and may also appear less attractive to foreign investors. This is consistent with the evidence for a weak negative correlation between FDI and its volatility. One interpretation of these findings is that certain types of FDI are less affected by economic instability (or political instability) than are other types. It is certain components of FDI that are volatile, and it is these components that are responsive to (and may therefore proxy for) economic uncertainty. This is an area which will need to be analysed in future work.

** Lensink and Morrissey 2001*

The number of hotels and guesthouses has, as a consequence, increased dramatically. This rapid expansion of hotel services has been accompanied by an increase in the number of people working in the hospitality sector – requiring an increase in manpower in the service industry. Hotels have grown together with travel agents and tour operators, trained licensed tour guides, airports, infrastructure, and roads. However, despite the high growth rate where hotels and restaurants have grown at an average annual rate of 15 percent, the sector is highly vulnerable to international shocks, as seen from the decline during the Asian financial crisis (1997-1998), the SARS epidemic (2003) and the global financial crisis (2008-2009). Tourism has experienced cutbacks with the number of tourist declining by 2.3 percent from 2007 to 2008. According to the Ministry of Tourism, during the economic crisis, tourism in Cambodia showed a 10.7 percent decrease compared to the first quarter of 2009. The second quarter however was marked again with an increase of 4.66 percent when compared with the same period the previous year.

During the economic crisis, there were more regional tourists from mid- to low-income countries (Viet Nam and China) in 2009. With the decline of hotel occupancy rates,

many luxury hotels closed temporarily during this period, and hotel staff were either found to be taking temporary leave or to be laid-off.

Table 3.1 Total number of people directly employed in the tourism sector

Sectors	Number of direct jobs	%
Accommodation	11,117	29
Food and beverage	8,287	15
Shopping	4,212	8
Transportation	10,417	19
Guides	2,235	4
Airport staff	5,274	10
Travel agencies	2,660	5
Tourism related civil servants	4,763	9
Other	1,000	2
Total	**54,965**	**100**

Source: Naron 2009, p. 288.

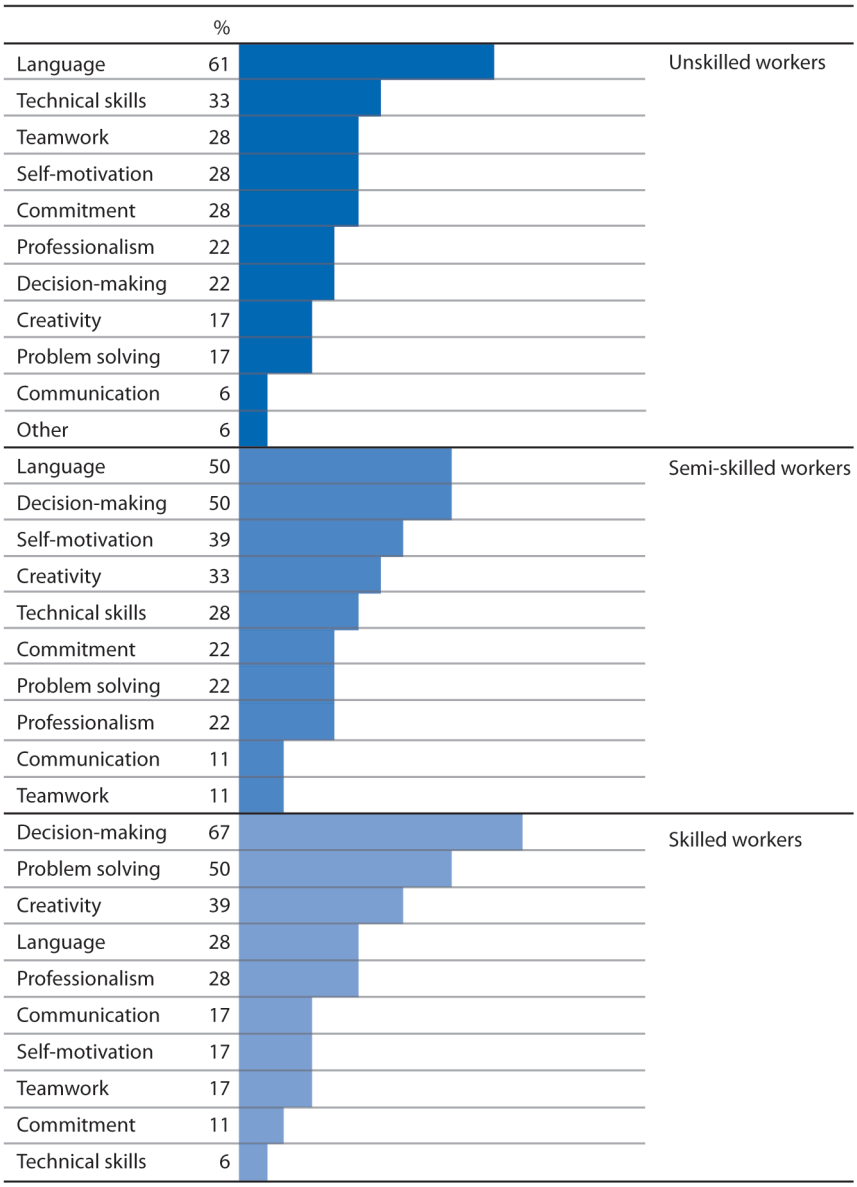
The tourism sector accounts for than 13 percent of GDP, with about 4 percent from hotels and restaurant services. Yet tourist activity has been concentrated in and around the temples and therefore has not contributed largely to the wider economy. Most of the tourists are concentrated in the areas of Siem Reap, Sihanoukville and Koh Kong, where most of the hotels are located.

Normally the set of skills required for employees in this sector are very broad in scope. The skills vary based on the position, but generally the basic skills and aptitudes needed include pleasant personality, communication skills, computer skills, good attitude, patience, outgoing personality, general knowledge with adequate information and knowledge of the job to meet the customers' expectations, organisational skills and the ability to organise things on time and meet travel schedules.

Language in the hospitality sector, which is a crucial skill, faces an important gap, where only 12 percent (NIS 2007) of employers claim that graduates have the necessary language and technical competencies to perform the job. In this sector there naturally is a strong demand for foreign languages, even for unskilled workers, to serve tourists, offer quality customer service and remain competitive in an increasingly active sector. To complement this deficiency, finding people with strong decision-making and problem solving skills remains difficult despite the fact that these skills are strongly needed for managerial positions at all levels in this sector. Employers also complain about the lack of soft skills at all levels. For the technical skills, it seems difficult to find workers with housekeeping skills. Lack of team spirit and self motivation are also mentioned as constraints. Interestingly, in the hospitality sector, formal education requirements do not appear to be as strong as in other sectors: for professional and managerial positions (skilled workers) only 44 percent of employers required a university degree, with 39 percent of employers found a vocational training curriculum sufficient and 17 percent wanted at least a high school education.

"..broadening job skills, no matter at what level an individual is working, can improve career options."

Figure 3.6 Major gaps in skills in the hospitality sector in Cambodia



Source: World Bank 2010c, p. 58.

The need for languages skills for all unskilled, semi-skilled and skilled workers might not seem fully relevant, especially for the unskilled and semi-skilled categories. Yet broadening job skills, no matter at what level an individual is working, can improve career options. Learning a foreign language, for instance, improves an individual's overall job skills, and makes the unskilled worker more valuable as an employee. It also broadens future career options and can become a critical indicator for a potential career option and for the possibility to decide on different career paths.

There is a broad-based lack of competencies throughout the various skilled segments of society. This is compounded by the fact that filling jobs seems to be difficult in the hospitality sector, particularly for positions such as chefs, receptionists, and food and beverage managers and bar managers. Training also seems to be a difficult challenge, which needs to be tackled given that tourism continues to play a vital role to support

Cambodia's economic growth and poverty reduction efforts. High turnover of staff is also a characteristic of this sector.

3.3.2.3 Human capital deficits in the construction sector

The construction sector has been one of the most important for Cambodia's economic growth. In 2009 construction accounted for 7 percent of GDP, and most of the focus for the last 15 years has been on reconstruction of infrastructure, which has contributed to the expansion of construction activities. The annual growth rate was on average 13 percent between 1994-2007, with a construction boom between 2002 and 2006, where the annual growth rate was close to 20 percent. The boom was driven particularly by infrastructure projects and residential construction in the capital.

The global economic crisis affected the construction sector in Cambodia in mid-2008, with about 5 percent of jobs in the sector affected. The financial crisis also decreased demand for real estate as there was a greater supply of property, which resulted in a decrease in property prices. About 30 percent of construction projects have been either cancelled or scaled back. In the first 11 months of 2008, Cambodia had a total of 1,869 construction projects, down from 1,942 in 2007. According to the Ministry of Land Management, Urban Planning and Construction, most of the affected projects were funded by FDI, and as the world faced difficulties in 2010, the decline in the real estate market kept the sector stagnant.

Human capital gaps in this sector are widely visible, with only 20 percent of employers considering that graduates are fully equipped with the required skills. There is also an apparent shortage of architects and engineers. According to the employers' survey, 53 percent of employers claim that engineer positions are the most difficult to fill, followed by architects at 47 percent. Often firms are forced to import foreign architects and engineers for important projects and positions. Differences lie in the technologies and tasks that workers are expected to perform. Yet, when employers stress the importance of soft skills, as opposed to technical skills, one of the main constraints comes from the technology mismatch. A lack of both hard and soft skills appear to be a general feature of the Cambodian labour market, affecting the few skilled and the majority of unskilled workers.

Filling jobs seems to be difficult in the construction sector, particularly hiring semi-skilled or unskilled carpenters, plumbers, metal and iron workers, and electricians. Most of the skills required for low-skill construction workers include learning and reading basic symbols with specific and correct meaning, numeracy and understanding basic measures, relevant social and communication skills, and behaviour in different aspects of conflict management. All these skills are a mix of soft and hard skills, which most employers are trying to address within their own firms.

3.3.2.4 Human capital deficits in the agricultural sector

According to the Strategy Framework 2015[7] it is perceived that demand for Cambodian agricultural products will remain strong in the international market. Based on current economic trends the growth of food, beverages and tobacco is expected to be strong

with about 14 percent growth, despite the fact that agribusiness investments are limited. This perspective provides a good basis for industrial development, where more resources and new mechanisms are needed to build domestic productive capacity and competitiveness. Efforts should therefore concentrate on diversifying the industrial base and on modernising the sector. However the high cost of mechanisation has discouraged the introduction of modern farming practices.

"Historically agriculture has been... one of the most important sectors for Cambodia."

Historically agriculture has been (and still is) one of the most important sectors for Cambodia. Accounting for 29 percent of GDP in 2007 – down from 43.7 percent of GDP in 1998 (Naron 2009). Given the rural nature of the country, agriculture supports nearly 59 percent of the population (World Bank 2009b). Subsistence farming accounts for 90 percent and business farming 10 percent of the sector, with subsistence farming often employing unpaid family help, and business farming employing seasonal migrant workers.

Lack of modernisation in the agricultural sector is widespread. The country can produce crops at a low unit cost, but only thanks to very cheap labour and spending little on inputs. The supply chains that link farmers to inputs such as fertilisers and markets are weakly developed, resulting in sector development being only a fraction of its capacity because of lack of working capital (UNDP 2009).

In terms of human capital in the agriculture sector, one of the strengths for upgrading the industry is the abundant and low cost labour available in rural areas, combined with diverse agricultural ecosystems offering several types of soil (although soil fertility is poor in many locations). However, modern farming implies a number of challenges through technology transfers, and access to technology, and expertise by farmers and extension officers. Still, upgrading the sector will increase the value-added of primary agricultural production, enabling farmers to get out of subsistence agriculture and encouraging their involvement in agricultural marketing – a field they are not fully involved in.

3.3.2.5 Human capital deficits in the mining sector[8]

At its current stage, Cambodia's mining sector is composed of industrial minerals operations generally serving the domestic market, along with base and precious metals operations largely at the exploration stage. Artisanal and small scale gold mining also occur in Cambodia. Exploration of minerals currently comprises about 0.4 percent of GDP.

Cambodia's mineral resources remain largely unexplored, but several important minerals have been discovered, including bauxite, copper, gold, iron ore, coal, gemstones and ilmenite. Minerals currently extracted include gemstones and gold (mostly mined by small-scale operators) marble, granite, sand, limestone and salt. Mineral production in Cambodia has increased over recent years, and so too have the number of mineral exploration licences granted to both foreign and local companies. While exploration appears to have slowed during the financial crisis, steady recent increases in commodity prices (for example, the price of gold is currently at historical

highs), have triggered renewed interest in mineral exploration and development in the country.

In order to successfully develop the mining and petroleum sectors, Cambodia needs to upgrade its capacity to manage the sectors effectively. This implies supporting capacity development in the public sector, to increase the skill levels required to manage and contract petroleum and other minerals exploitation. Capacity development should therefore focus on individual and technical capacity of people and institutions. UNDP and the Ministry of Industry, Mines and Energy (MIME) signed a Memorandum of Understanding in January 2011 which will focus on policy, regulatory and capacity strengthening of Cambodia's mining regulatory department. UNDP is also working with the Asian Development Bank (ADB) and other development partners to improve the skills and capacities of staff at the Cambodian National Petroleum Authority.

Particularly for the petroleum industry, Cambodia has expressed interest in developing a local industry. Yet the country recognises that the petroleum industry is capital intensive and employs little labour. In fact, apart from the initial workforce needed for the construction of plants, the labour required in the industry is generally specialised and highly skilled. This often results in high level positions being filled by expatriates brought into the country by companies involved in the extractive industries (World Bank 2009e) and represents another area in which greater education levels would provide large returns for Cambodia's economy.

Shortages of manpower and the lack of specialised skills in the mining and petroleum authorities are among the key challenges. Cambodian educational institutions that were training geological and mining technicians and engineers ceased operations in the 1990s. The result is that human resources in areas such as geology are brought in from other countries at high cost. In response to this important need, UNDP is partnering with the Institute of Technology of Cambodia to reopen Cambodia's geosciences and engineering school. The new Department of Geo-Resources and Geotechnical Engineering could open by late 2011 and graduate its first students by 2015.

3.3.2.6 Human capital deficits in the ICT sector

The information and communications technology (ICT) sector in Cambodia has expanded rapidly, and it is estimated to be generating over US$429 million per year. However, challenges for growth in this sector include the high price of Internet and the small pool of qualified people in this sector, which hamper the country's international competitiveness. This is visible especially when compared to countries like India that have strongly invested in ICT, currently contributing the majority of the country's economic growth through exports.

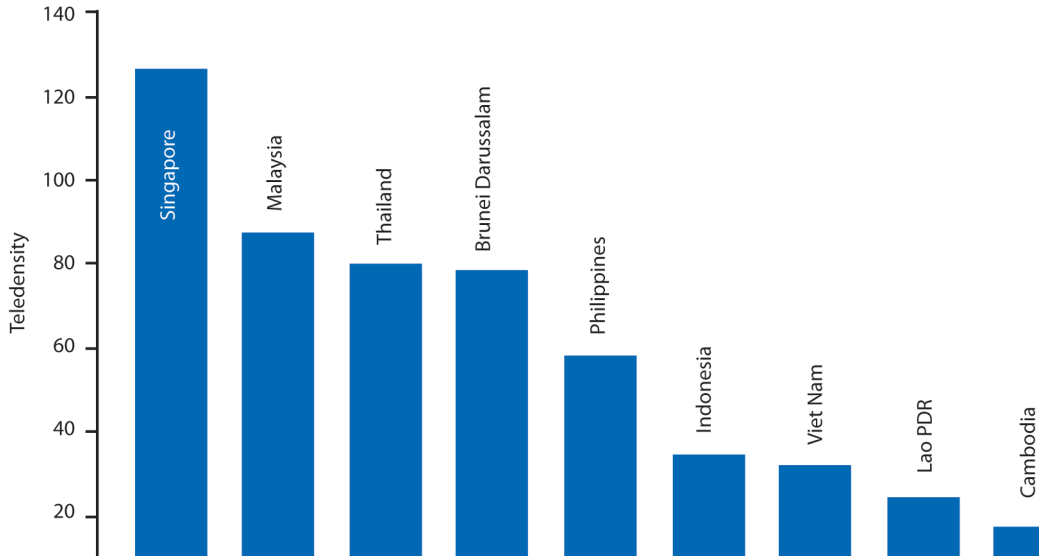
The civil war disrupted much of the ICT infrastructure within Cambodia. For example, Cambodia has the lowest rates of fixed landlines among ASEAN countries.

It is not easy to properly assess the impact of ICT in Cambodia given the scarcity of data in this area. The general trend, however, shows that the vast majority of households in developing countries like Cambodia have limited access to ICT, including computers

and the Internet. Traditional indicators, such as fixed telephone lines and mobile subscribers, are not sufficient to determine the extent of the digital divide, but are still able to highlight the need to measure community or public access to ICT beyond traditional methods. Suggestions include the use of a wider range of indicators to measure community access, including tracking the percentage of communities, in villages and towns, connected to the public telephone network (fixed and/or mobile), and those with a public Internet access centre, even starting from the most basic access means.

"The RGC, through the NSDP, shows the country's commitment to keep exploring new economic frontiers..."

Figure 3.7 ICT in Cambodia compared to other ASEAN countries (fixed telephone landlines)



Source: ITU 2008

Lack of competitiveness in the ICT sector is caused by a number of hindering factors, including the high cost of Internet broadband (second highest among ASEAN Countries with a price of up to US$400 per MB bandwidth) and a low number of qualified ICT workers in Cambodia. According to UNDP (UNDP 2009), employers face a small pool of labour and high turnover. Yet workers with only 2 or 3 years experience get a low wage, up to US$600 per month, which shows the high demand for skilled workers in this field, as wages for similarly skilled workers in Viet Nam and Cambodia are much lower when compared to Cambodia. It is argued that the government should consider creating a standard accreditation scheme for ICT education and training, and including ICT curriculum in primary and secondary schools to upgrade skills and increase the pool of professionals able to make use of ICT effectively.

The RGC, through the NSDP, shows the country's commitment to keep exploring new economic frontiers while nurturing existing and emerging sectors such as ICT, including telephones, telecommunications and mass media. Especially with increasing competition and largely led by private operators, Cambodia has moved considerably ahead in the use of mobile phone devices. The use of computer technology has spread equally fast along with increased expertise among young people.

The Government states in the NSDP its intention to continue to enhance the efficient use of information technologies, implementing improved personnel management and

"Certification, accreditation and financial support are suggested to improve the relevance and quality of informal training programmes."

capacity building for government officials. It aims to create an enabling environment to attract private investors, both domestic and foreign, to ensure the transfer of know-how and technology to all sectors of society – from agriculture to industry and services.

3.4 Current interventions to fill the knowledge and skill gaps among workers in Cambodia

In a context of high numbers of youth entering the job market with a low level of hard and soft skills, what are the policy options that best suit countries that have a development landscape like Cambodia?

The main bottlenecks in skill development in Cambodia that need to be addressed include: drop-out rates, poor quality education, and the need for training for out-of-school youth who have little chance to reintegrate themselves into the formal education system. Particularly the last intervention could have large impacts on the current workforce of Cambodia. Certification, accreditation and financial support are suggested to improve the relevance and quality of informal training programmes. Three short-term policy recommendations are outlined in Chapter 6 for Cambodia in order to fill in the knowledge and employment gaps.

3.4.1 Industrial diversification and skill gaps in Cambodia

The current composition of the Cambodian economy shows that sectors significantly contributing to GDP have changed quite dramatically between 1995 and 2009, reflecting a shift from agriculture to industry. Employment distribution reflects these changes. Industry (mostly garments), services (mainly tourism) and agriculture (mainly paddy rice) are the leading sectors of the Cambodian economy, and have been central to rapid GDP growth in the past. However, growth in these sectors alone cannot support an adequate level of employment and revenue generation to sustain national development. In the context of industrial development, the thinking should go beyond the traditional cheap labour and low end sectors.

Diversification of the economy therefore requires upgrading low-skill workers, exploring opportunities for expansion along value chains, and identifying and enabling new emerging industries. The emergence of the extractive industries and agricultural sectors highlights the opportunities for Cambodia. A strategic vision for Cambodia's economic development has also been stressed in the government's diversification strategy. There certainly are challenges in achieving this vision, but taking advantage of the global and regional economy would enable Cambodia to create a market economy which would be able to reduce poverty and improve living standards.

However, in addressing the skills gap it is important to create and improve coordination mechanisms between prospective employers and education and training providers, increasing the quantity of public training provision and encouraging workplace learning. There should be a focus on improving access to quality skill development outside high growth urban areas, implanting systems for the recognition of prior

learning, and targeting entrepreneurship training so that it encourages and enables the formalisation of small enterprises.

"...focus should also be placed on increasing the effectiveness of delivery mechanisms, while increasing access to training centres..."

3.4.2 Targeted interventions

Enhancing skills needs a two-pronged approach to address the immediate needs of the private sector. A key constraint that firms face relates to basic training, including overall attitudes towards work. Thus basic training needs to be reinforced and expanded on a country-wide scale. Firms also face difficulties acquiring people with specialised skills. Thus focus should also be placed on increasing the effectiveness of delivery mechanisms, while increasing access to training centres, partnering with business associations and universities, and creating training institutes managed by a coalition of private sector firms.

Cambodia's economy is dominated by a large informal sector, often considered hard to upgrade into industry. Small- and medium-sized enterprises (SMEs) comprise the main source of the production base for the country, but these sections of the economy are in much need of upgraded technology and assistance preparing for regional and global competition. Cash transfers and the availability of credit through commercial banks could create opportunities for these SMEs to open up and grow faster in areas such as food, beverage, tobacco, construction materials, etc.

The lack of social protection is a critical aspect of the informal economy so creating systems to increase social protection coverage for workers, both male and female, in formal and informal sectors is also important.

There are a set of opportunities that have been outlined in the government's industrial diversification strategy for potential sector growth in Cambodia, including: agriculture forward linkages (land, labour); garments and footwear and accessory linkages (trade opportunity, labour); and tourist attractions. For the development of these industries, Cambodia needs to focus on sector-based competitive advantages, and understand and capture more value-added in the existing industries. By doing so, it could compete well in the international market. However, developing the skills of its workers will remain a precondition for success in development.

IV. HUMAN CAPITAL IN GOVERNMENT AND THE NON-BUSINESS SECTORS IN CAMBODIA

"...identifying skill gaps and areas of mismatch between the supply and demand for skilled labour must go hand in hand with an appropriate set of policy recommendations..."

4.1 Introduction

Existing discussions of human capital, competitiveness and economic growth in Cambodia focus almost exclusively on the skill gaps and associated training and education requirements of workers in the private sector. This is understandable given the severity of the economic downturn and the need to generate new employment through a robust economic recovery. Nevertheless, it tends to push into the background major human capital problems in the country as a whole (those relating to government and non-business agencies such as professional associations, civil society organisations and independent regulatory bodies). Yet, reducing the human capital deficit in Cambodia in order to place economic recovery on a sustainable and robust path is a task which requires a comprehensive approach to human capital development which spans private business, government and civil society organisations.

This may seem a tall order in a country in the midst of a growth slow-down. However, as argued in Chapter 1, diversification of the Cambodian economy such that it is able to tap into the global knowledge products and technologies of the future requires going beyond the immediate skill gaps in the private sector to examining the human capital requirements and performance within government and relevant civil society organisations. Thus, identifying skill gaps and areas of mismatch between the supply and demand for skilled labour must go hand in hand with an appropriate set of policy recommendations on educational reform and training curricula, better coordination across different government agencies, and secure funding for education and vocational training activities. Accomplishing this will mean examining and analysing the ability of government to create and sustain these initiatives. And it raises the question of whether the factors which create skill deficits in private business (underlying educational quality, inadequate wages, poor incentives to upgrade existing skills) are present in public agencies.

Another concern is based on political and administrative expediency: civil service reform is an expensive and painstaking process requiring considerable political will (Table 4.1). This will be harder to achieve when the economy is in recession than in periods of high growth and revenue. Hence, in lean economic times it makes sense to focus on economic recovery while attending to governance issues during less stressful times.

In fact, there are several good reasons why a Human Capital Development Roadmap to promote competitiveness and economic growth needs to include the human capital requirements of key areas outside private business, and should engage reform and increased capability in the public sector which is making the policy decisions. This chapter will examine some of these considerations.

Table 4.1 Historical size of the civil service by source [a/b/]

Year	Budget law	CAR
1994	148,353	N/A
1995	143,855	N/A
1996	147,086	N/A
1997	153,372	N/A
1998	156,731	161,466
1999	155,233	162,772
2000	165,539	162,991
2001	164,397	162,969
2002	164,219	165,369
2003	167,778	166,381
2004	N/A	165,953
2005	N/A	164,595
2006	N/A	163,469

Note: The Council for Administrative Reform's:
a/ 2004-2006 figures based on CAR projections.
b/ Budget law data includes political appointees and contract and floating staff, while CAR data do not.
Source: Taliercio, R.R. Undated.

4.2 Competitiveness, economic growth and the state of development

Current literature and development experience suggests several arguments for inclusion of human capital deficits and requirements of the state in deriving an overall Human Capital Development Roadmap needed to foster future sustainable economic growth. Perhaps the single most important reason is the size and complexity of modern democratic, developmental states. Despite many attempts to roll back the state during the ideologically polarised days of the 1980s, few if any democratic states have been able to significantly reduce public expenditure to GDP ratios, a common measure of the size of the state (Table 4.2).

The size of the state has been much lower in many Asian economies, partially because of lower revenue to GDP ratios, but also because they have often underspent on critical health, education, R&D, infrastructure and other public goods. It has also been lower due to the fact that democratic governance has been a recent arrival in many countries of the region. The overall effect of the advent of democracy and the media freedom that goes with it is to raise the demand for public services for the majority. Democratic states are not small states and overall one would expect the size of the state to increase over time as these social welfare and infrastructure demands are institutionalised.

The increasing complexity of the state is another phenomenon of modern governments. The traditional roles of keeping order and providing a legal framework for the enforcement of property rights and settlement of disputes has given way to a bewildering variety of tasks such as, among many others, providing physical infrastructure, ensuring availability and access to key public services in health and education, managing a stable macro-economy, managing and protecting the environment, and helping populations develop, while taking part in international negotiations and interactions. This is a very large set of responsibilities for a nascent

state, especially one in which its democratic governance is under constant public scrutiny.

Table 4.2 Public spending as percentage of GDP and Human Development Index

Country	Year of highest level	2002	HDI
Norway	52.0 (1992)	42.3	0.942
Sweden	67.5 (1993)	52.6	0.941
Canada	49.9 (1992)	38.2	0.940
Belgium	57.1 (1985)	46.2	0.939
Australia	37.7 (1985)	32.5	0.939
United States	34.8 (1992)	30.9	0.939
Iceland	40.5 (1992)	40.3	0.936
Netherlands	53.3 (1987)	41.8	0.935
Japan	—	37.9	0.933
Finland	59.1 (1993)	45.2	0.930
France	51.8 (1993)	49.0	0.928
United Kingdom	43.2 (1993)	39.1	0.928
Denmark	58.0 (1996)	50.1	0.926
Austria	53.3 (1993)	48.8	0.926
Luxembourg	44.0 (1992)	40.5	0.925
Germany	47.3 (1996)	46.3	0.925
Ireland	50.7 (1985)	31.8	0.925
New Zealand	51.8 (1986)	39.0	0.917
Italy	55.4 (1993)	45.5	0.913
Spain	47.2 (1993)	38.8	0.913

Source: Tanzi 2004

The proliferation of modern government does not stop here either. Promoting quality assurance and surveillance requires the participation of user groups and related associations. Regulatory agencies are needed to provide independent oversight and control over commercial operations; professional associations provide minimum service standards; citizen's self-help bodies are an important source of local information and self-help in natural disasters; media outlets provide mechanisms to explain policy choices to the general public and prepare it for a shift in policy. Modern democratic government is a study in persuasion and in non-violent dispute management.

It is no surprise then that the last two decades, during the advance of globalisation, international trade and capital integration, governments in advanced as well as in many developing countries have been occupied with modernising. Some important aspects of these efforts have included streamlining intra-government coordination and financing mechanisms, establishing working groups and strategy units, and creating public consultative mechanisms such as government position papers which invite public participation and expert overview. All the developments in modern government and, by extension, patterns of governance, show that the state is not just a clearing house for legal disputes or the policeman of last resort. It has also become an agent of change and a means of anticipating and mitigating the effects of future emergencies and crises.

Hence, any human capital development strategy which leaves out the largest and most influential player in the system is unnecessarily limiting and partial. Moreover, it is unlikely to promote international competitiveness or lasting growth for the simple reason that all the indicators needed for generating these results require significant action from the state itself.

These activities require human capital development within the state no less than in private business. E-governance, results-based management, public consultation, public opinion response and management, adaptable and flexible working groups and taskforces, independent reviews and performance management audits have all become the armoury of modern government. The Human Capital Development Roadmap is at best incomplete and at worst unhelpful in solving urgent policy problems if capacity, technological and coordination human capital deficits are left out of the equation.

It is for these reasons that the importance of institutions and governance is being increasingly emphasised in recent development literature. The Rectangular Strategy is quite right when it places governance centre stage in promoting equitable and sustainable growth. The issue goes much further than skill mismatches in private business. It goes to the heart of the wider issue of by whom and how policy recommendations in particular sectors might be solved, how and over what period they may be financed and the overall international and domestic policy context in which they will have to function.

4.3 The state and the creation of a knowledge economy

An important conclusion of the international experience in laying the foundations of a knowledge economy is that while tertiary education and vocational training are essential components of the overall design, they by themselves are necessary but not sufficient conditions for a successful transition to a knowledge economy. Information infrastructure, innovation networks and the institutional framework for effective governance (e.g. protection of intellectual property rights) is just as critical.

As the tables below show (Table 4.3, Table 4.4), despite a decade of record economic growth, Cambodia is still behind the average level of information infrastructure, R&D and product emulation capability, and in the human development related coverage of public services in education and health. This is not to say that the Cambodian performance on many of these indicators (especially the Human Development Index) has been unimpressive (cf. UNDP Human Development Reports); it clearly has not. But because of the low base and the human capital erosion under the twin pressures of political conflict and prolonged economic stagnation during the period before the late 1990s, there are still major human capital and development deficits to be filled.

An industrial diversification strategy, based either on technological classifications such as information or biotechnology, or along sector definitions such as electronics or mining, or along skill categories such as financial services or the hospitality industry, will also place additional demands on current government capacity to organise, coordinate and finance the human capital investments associated with such diversification. It will require considerable new capacity to forecast industry trends, the impact of regional

economic integration and the most effective mechanisms of promoting private investment in public projects, as well as a whole host of skills in pricing, negotiating, risk management and project planning over a long period.

"...the overall human capital needs of an industrial diversification strategy require... an assessment of the complementary skills in

Table 4.3 Expenditure on R&D in selected countries, 2000 and 2007

	000 PPP$		As percentage (%) of GDP		Per capita (PPPS)		GERD performed by higher education sector (%)	
Country	**2000**	**2007**	**2000**	**2007**	**2000**	**2007**	**2000**	**2007**
Burkina Faso	19,659	18,392	0.19%	0.11%	1.6	1.2	—	—
Cambodia	6,838	—	0.05%	—	0.5	—	11.8%	—
Canada	16,687,599	23,970,003	1.91%	2.03%	543.8	729.1	28.1%	36.0%
Finland	4,439,726	6,320,699	3.34%	3.47%	857.8	1,197.8	17.8%	18.7%
France	32,920,326	43,359,554	2.15%	2.10%	556.2	703.3	18.8%	19.2%
Georgia	21,111	27,805	0.22%	0.18%	4.5	6.2	28.6%	26.8%
Germany	52,283,497	69,334,450	2.45%	2.54%	635.2	839.4	16.1%	16.3%
Greece	1,269,719	1,845,571	0.51%	0.50%	115.3	165.6	44.9%	50.4%

Source: Altbach, P.G. et al. 2009.

Hence, the overall human capital needs of an industrial diversification strategy require not only identification of the skills needed at the industry level or in a given geographical region. It also needs an assessment of the complementary skills in government to plan, finance, execute and evaluate such policy shifts. This is not only a matter of identifying skill shortages and training requirements at the individual government civil service level or even at the level of a particular institution or agency. Technological and process-related gaps in E-governance, budgeting processes, evaluation techniques and negotiation procedures are just as important. This is in addition to specific line ministry capacity gaps in a given sector: providing more teachers to improve secondary school enrolment rates and minimum standards, coordinating more closely with agencies involved in vocational and on-the-job training (e.g. the Ministry of Labour and Vocational Training in the Cambodian context), and the design of new curricula based on stakeholder participation and industry surveys.

The subject of state deficits in human capital in the context of industrial diversification and building foundations for a future knowledge economy are important enough to merit separate and detailed treatment. The aim here is to underscore the importance of the question and to emphasise the dangers of using a partial, short-term vision approach to human capital needs assessment in Cambodia as it tries to design a workable strategy for future economic growth.

Table 4.4 Public educational expenditure on tertiary education as % of total public education expenditure, 2000 and 2007

Country	2000	2007
Burkina Faso	—	11.1
Cambodia	5.0	3.4
Canada	35.7	—
Finland	34.0	31.7
France	17.6	21.4
Georgia	—	—
Germany	24.2	25.2
Greece	24.0	36.1

Source: Altbach, P.G. et al 2009.

4.4 Current realities and challenges to human capital development for the Government

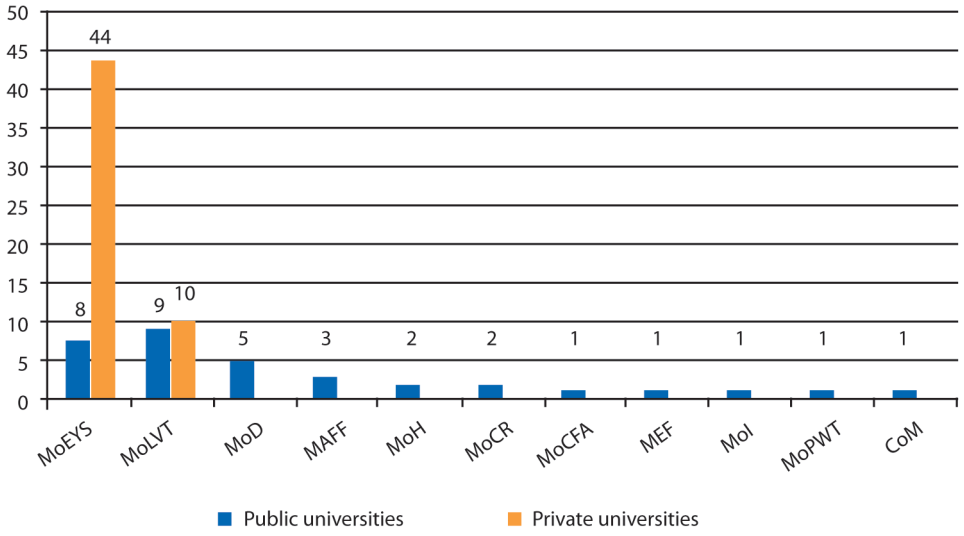
Within Cambodia, there are many manifestations of the human capital deficit within the Government that is affecting the development of human capital in the wider society. In tackling the human capital development challenges in the country, the Government will have to simultaneously make changes to their internal structures and in the systems that are responsible for undertaking the reforms. In order to determine how the Government should go about addressing its internal human capital needs, it is important to look at the current situation, and what some of the challenges are.

4.4.1 Institutional challenges and improving coordination

To begin with, there are various challenges presented in terms of the delivery of educational services, including the supply side constraints (demand side constraints were discussed in Chapter 2). These include issues such as the coordination problems of Government ministries involved in the education sector, the quality of education resources (teachers, access in different regions, and educational supplies) and the quality of the education itself. All of these factors create a suboptimal education system delivered to Cambodians, which in turn translates into human capital deficits in the Government itself.

In examining supply side constraints, one must first look to the source. In Cambodia, there are significant institutional constraints caused by failures in coordination among Government ministries, and these are a major concern for the reform of the education system. For example, there is competition between different ministries that control different parts of the education system. There are MoEYS, and MoLVT, which compete for control over the provision of education and training. Additionally, other ministries share supervision of the various universities in Cambodia. As Figure 4.1 shows, for the 88 public and private university institutions in the country, there are 11 different ministries who supervise at least one. For MoEYS itself, there are also some concerns about its ability to take in, process, and disseminate global funds for the education system, to formulate appropriate policies and responses to educational reform needs, and to implement these policies and strategies (Chhingh and Dy 2009).

Figure 4.1 Universities under supervision of ministries



Source: MoEYS 2009.

"The private sector must become more deeply involved in the education sector. if they are to see the improvements in skills and training that they seek"

There also, to some extent, needs to be a change of mindset within the Government. While the efforts made to improve education, especially basic education, have been indisputably impressive, there needs to be a more cooperative attitude within the Government in terms of both reforms of the education system and reforms of the operating *status quo* within the ministries. The current competition within the Government is inhibiting the full realisation of Cambodia's human capital potential. Additionally, without this top-down initiative for change, the bottom-up changes that are necessary, such as teacher training and a reduction in corruption (discussed below), will never happen.

An essential part of this change in attitude will be a concomitant increase in the education budget. As will be explained, this is a huge restricting factor on education reform, and it is unlikely that any plan will be able to be rolled out comprehensively and appropriately without a substantial enough budget.

The Government also needs to re-evaluate its attitudes and perceptions regarding the role of the private sector in the provision of education. The private sector must become more deeply involved in the education sector if they are to see the improvements in skills and training that they seek. However, the Government must realise that this will likely not happen, or will happen in too disparate a manner for it to be effective or measurable, unless the Government takes a strong hand in organising, initiating, and leading these efforts. Without a more cooperative and proactive attitude the Government will not be able to realise the full potential created from private investments in the education system.

These coordination and attitude problems are also important because they lead to further problems in the education sector. Without effective leadership and oversight, there is less regulation of the inputs in the education system, such as teachers. Cambodia suffers from a severe shortage of teachers, and in 2007, there were 51 primary school students and 29 secondary school students to every one teacher (World Bank 2010c).

"...lack of coordination has led to incompatibilities in standards and qualifications in education."

Teachers are also often not adequately trained, further inhibiting the learning process. Lack of regulation also leads to lower quality resources. One example is with regard to the location of physical school buildings. While Phnom Penh and other urban centres are well equipped with schoolhouses which can accommodate pupils, other regional or more rural areas may be far removed from the nearest school building. If this is the case, families may decide the school is simply too far away to make their children's attendance economical. Other resource constraints may include educational supplies. Limited basic facilities, whether it is the school house or school supplies such as textbooks and paper and pencils, inhibit the ability for teaching to be effectively carried out.

These resource and regulation restraints contribute to issues with the quality of the actual education as well. Often, because of lack of good pay, teachers will charge students informal fees, which seriously affect the quality of the education being provided. Students can also pay for their grades, another way for teachers to supplement their inadequate income. This then leads to a climate of unaccountability in the schools, making it more difficult to build a school system based on meritocracy (Tan 2006). There is also a lack of quality control in educational institutions and little adherence to international standards, meaning that participation in an educational institution does not guarantee quality education.

There are also serious concerns stemming from the fact that this lack of coordination has led to incompatibilities in standards and qualifications in education. This is twofold: first, a lack of a recognised qualification system means that for students that have only partially completed lower levels of education, or those that have undertaken informal or work-sponsored education, there is no system for verifying the skills they have gathered; second, a lack of coordination for standards that do exist mean that for a typical secondary or tertiary education, the skills that individual students emerge with may be vastly different from region to region or school to school. This complicates attempts at further education, as well as making it difficult for employers to be assured that hiring an employee with a certain education level will provide a certain skill set (see Chapter 3 for implications of this in various sectors). It is important to note as well that any such qualification scheme will have to be based on a strong, corruption-free education system. Having qualifications will be of no use if people can still buy degrees or certifications as they do now. And there will have to be a higher body to determine qualifications, such as a committee of accreditation for universities and vocational training. Of course, without a strong educational system which is capable of adequately teaching and training students, a qualification system is largely meaningless. Still, qualification standards are an important element in taking the education system forward.

These institutional constraints are creating difficulties in carrying a comprehensive educational system forward. Of course, there are serious impediments to improving this situation. One of the greatest concerns is the limited budget available, which has resulted in low pay for civil servants as well as teachers, the inability to finance improvements to resources, and difficulties in implementing changes to the system.

The lack of competitive pay has numerous implications. As discussed above, for teachers the pay does not incentivise individuals to become teachers, to produce quality education, and can lead to corruption within the school system. For civil servants, this can lead to similar impediments: skilled individuals will not chose to enter the civil service as they will not be duly rewarded; those that are members are not incentivised to work hard and/or improve their skills; corruption will continue to be a pressing concern.

The lack of an adequate budget means that the Government will face challenges in financing improvements to existing resources, such as building new skills, providing educational tools, or providing financial incentives for poor families to send their children to school. And of course it will also make it difficult to implement and sustain changes, as adjustments to the system always require substantial capital to get them up and running and to ensure that they are fully and properly implemented. Given these resource constraints, the Government must be specific in their efforts to reform the system. When undertaking the Roadmap, they will have to bear in mind these constraints so as not to focus solely on one area – all areas are equally important.

4.4.2 Creating a stronger information database

In examining and undertaking reforms to the challenges presented above, a comprehensive and up-to-date information system will be essential to ensure that the correct changes are made and that they are implemented in the right way. In the past, as currently, a key concern has been that there is not adequate information available to predict and comprehensively address issues and challenges that will arise in the future, or even that exist now. This lack of information can be seen to some extent in this report, as there are various gaps in the data collected that exhibit the piecemeal availability of information. Creating a strong, comprehensive database of information is a key element in education reform.

The first issue which must be tackled in this area is the collection of information. Major indicators will have to be decided on by the Government, in cooperation with key stakeholders within and outside the education system, to determine how to accurately and effectively measure the evolution of education and training efforts and reforms. This will involve coordination among various actors, mostly importantly between the Government and the private sector, in order to identify skill gaps and training requirements. These indicators will then have to be regularly and systematically collected in order to create an expansive database from which to draw knowledge and undertake analysis. This collection will have to occur in all sectors of education, meaning that greater cooperation and coordination of ministries in charge of universities of vocational training sectors will have to be ensured. It also means that a greater effort will have to be made to collect information from the private sector, both on the skills that are missing and on private sector attitudes towards potential remedies for these skill gaps. The private sector will also have to be engaged in order to collect market information, which will be key to tracking changes and growth. Finally, it will also be important to gather information from the workforce itself, in order to determine the motivations and opinions of workers, and why they are or are not completing or

"Cambodia must focus in the future on the development of capcity in both its major economic sectors and the public sector."

continuing their education, and finally and most importantly, what needs to be done to incentivise them to gain a higher level of education and training.

However, collection of this data is, of course, only the first step. The analysis of this data in order to track changes and make the appropriate changes to the education system will be a crucial element in developing a versatile and relevant education system. One of the most notable features of the education system now is that employer attitudes seem to show that even with higher levels of education, employees are not found to have the requisite levels of skills necessary (see Chapter 3). Thus, the education system needs to be tailored to address this deficit. After the necessary education and market data is collected, the Government will need to properly analyse and assess the data in order to develop or reform the education system.

There are two challenges in this regard. First of all, as is mentioned elsewhere in this chapter, the Government will have to have a highly capable workforce in order to undertake this analysis in an effective manner, which reinforces the idea that the Government needs to be inwardly as well as externally focused when undertaking human capital analysis. The second major challenge will be discussions with the private sector. Without their input, it is likely that any reforms undertaken, even with a skilled interpretation of the data, will be inadequate. Their views are imperative in terms of understanding various areas, from skill gaps to the benefits of retraining to employee attitudes to cooperative training efforts. Additionally, the market data they can provide, in terms of where they see their industry going in the future, will be key to developing a system for predicting how the economy will change in coming years, and preemptively adjusting education to meet these future needs.

In order to undertake the collection of information, analysis of that information, and the creation of insightful policy solutions for the education system based on that analysis, the Government will require significant human capital capabilities. If the Government hopes to be able to undertake these efforts, as well as all the other increasingly complex and interrelated tasks of a modern government, developing the human capital of its civil service will have to be a priority.

4.5 The role of human development in Cambodian human capital investment

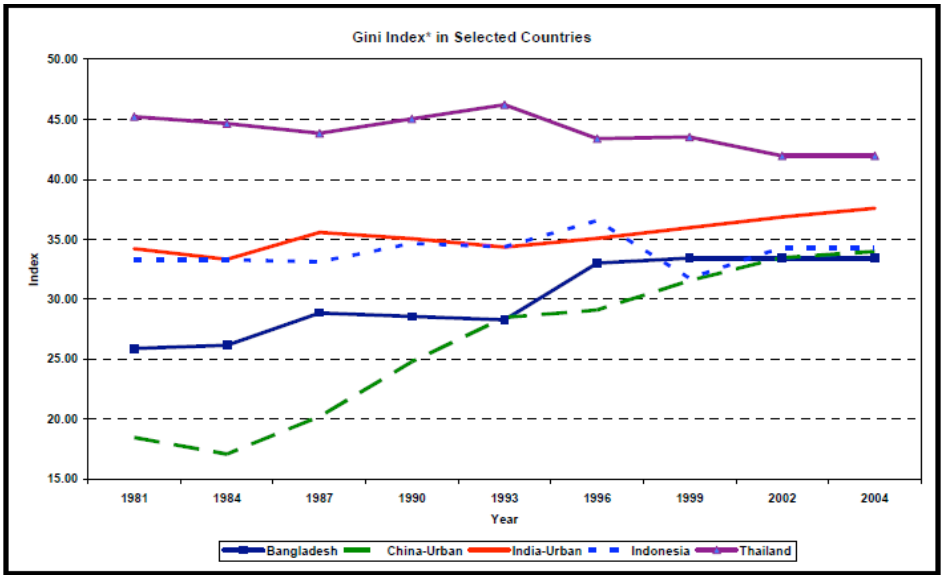
Thus, Cambodia must focus in the future on the development of capacity in both its major economic sectors and the public sector. However, policy concentration on the skill deficits of only industry or government misses a major dimension of human capital accumulation policy, especially in the effort to build a strong base for a future knowledge economy. These are the equity, access and quality of life dimensions that have been highlighted by successive Human Development Reports by UNDP.

Equity is a major policy objective in almost all fast growing economies of South and East Asia. The reason is clear. Almost all of these economies, including India and China, have witnessed a sharp deterioration in equality as economic growth has taken off. The reasons are many: structural transformation along the lines of the Kuznet's U,[9] widening wage differentials between skilled and unskilled labour due to increasing

global demand for the former and greater opportunities for entry into global labour markets, widening inter-regional inequality due to patterns of urbanisation, natural resource concentration and the urban-industrial agglomeration, differences in computer and information technology access across regions, and the location of industry near transport and export outlets.

Two dimensions of the inequality questions are relevant here. First, there is the very speed at which long standing patterns of income distribution have begun to change under the joint impact of global capital markets and the structural change of GDP. China is a good example of the speed with which income inequality (Figure 4.2), especially in urban areas, can rise. The same is now true of India, Indonesia and more recently Cambodia (not indicated in figure).

Figure 4.2 Economic inequality in selected Asian countries



Note: Gini Index: a measure of inequality between 0 (everyone has the same income) and 100 (richest person has all the income)

Source: UNDP, Human Development Report 2005, data reworked by the Strategic Asia team

Second, the transition to a market economy combined with the loss of fiscal and policy space in the global economy has meant a reduction of state welfare provisions and employment guarantees. The demise of strong labour movements and intra-industry collective bargaining mechanisms has only weakened the position of labour in the overall political system. Third, the policy instruments designed to keep inequality at some socially agreed level are not always effective. Historical patterns of geographical and income inequality tend to perpetuate themselves, becoming a source of local social or ethnic conflict on the one hand and of political instability on the other. In recent years, equity problems in economic growth have worsened due to structural shifts in GDP, thus increasing the inelasticity of growth to employment on the one hand and the elasticity of poverty reduction to economic growth on the other. All this is notwithstanding the fact that the sheer tempo of growth in many countries in South-East and South Asia has helped to bring down absolute poverty within the span of a single decade. Cambodia provides a good example of this tendency.

"...people are not just units of human capital, but ends of the development process itself."

In the world of a knowledge economy driven by innovation and information technology, equity has acquired yet another critical dimension. At the root of the success of the knowledge economy and the explosion of new products and technologies on the world economic stage is the dramatic dissemination of knowledge to almost everyone at very low cost and in real time. Innovation and the creation of new products are outcomes not just of formal education in elite institutions, but also the historically unprecedented dissemination of all kinds of knowledge in the global economy. Equity of information access and the interconnections between different fields are two of the most effective drivers of the new knowledge economy. Thus, the digital divide has become a matter of such concern not only because it accentuates income inequality between different regions and people, but also because it robs entire communities from contributing to innovation processes. As already mentioned above, sustainable economic growth needs increased human capital both in terms of its quality and depth, as well as the sharing of knowledge and adaptation of frontier technologies to local economic signals. Both excellence and equity are key drivers of the knowledge economy.

Of course human development as distinct from human capital is not only concerned with the productivity of enterprises and workers. It is also based on a philosophy which redefines social welfare not just in terms of income per capita and purchasing power, but also in terms of rights, capabilities and deprivations. This underscores the fact that people are not just units of human capital, but ends of the development process itself. Economic incentives are likely to work best when people have access to a minimum acceptable level of good health, training and education and are free to participate in the social and political dimensions of life. In this scenario, a long-term expansion of human capital is not sustainable without at the same time promoting a rise in human 'development,' a point increasingly being recognised in the modern literature on the quality as distinct from the rate of economic growth.

As Tables 4.5 and 4.6 show, despite its decade of impressive growth, Cambodia is rife with inequalities in many different ways: between urban and rural, between educated and less educated, between different provinces, across age groups and industries/ occupations. A necessary part of the human capital plan is to determine how much weight should be placed on equity and human development in the overall programme of human capital investment. This is not a new dilemma but one which is increasing in urgency given the incessant excess demand for higher education, increasing labour mobility and the greater political demands of unemployed or underprivileged youth.

4.6 Human capital and state-civil society interactions

Finally, human capital development is a pre-requisite in the solution of a new category of policy problems which are difficult to define and may never be solved permanently but can be managed and kept under tolerable limits. Such 'wicked problems' (Box 4.2) have by now sparked a massive policy based literature. The wicked problem concept reflects the fact that where issues of income distribution or cultural or ethnic dimensions of development are involved, the best way to create a solution is to work at creating a new social consensus on both the nature of the problem as well as options towards a 'fair' solution (Sen 2000). Such community-based agreements need continuous

interaction and consultation between the state and civil society. They have become indispensable features of present day democracies although many different models and processes of arriving at such a consensus exist.

Table 4.5 Cambodia's predictive poverty rates by province computed from Commune Database

Province	2004	2005	2006	2007	2008	2009	2010
1-Banteay Meanchey	39.9	38.7	37.1	34.1	32.5	31.4	29.7
2-Battambang	37.8	36.5	35.4	33.3	31.7	29.7	28.7
3-Kampong Cham	33.1	32.1	31.0	29.0	27.6	25.8	24.3
4-Kampong Chhnang	37.9	37.2	36.7	35.6	34.2	32.3	30.4
5-Kampong Speu	41.4	40.3	39.5	37.3	35.2	32.2	30.1
6-Kampong Thom	41.1	40.5	39.3	37.7	36.5	34.3	32.7
7-Kampot	26.6	25.6	25.0	23.4	22.4	20.5	19.1
8-Kandal	27.6	26.2	24.1	21.2	19.7	17.6	15.9
9-Koh Kong	34.8	34.7	32.6	30.7	29.0	26.5	25.1
10-Katie	43.9	43.3	42.5	41.5	40.2	38.6	37.1
11-Mondulkiri	47.0	45.1	44.0	42.4	40.3	38.0	37.1
12-Phnom Penh	6.8	6.9	5.8	0.5	0.3	0.2	0.1
13-Preah Vihear	50.2	48.2	47.2	45.7	44.5	43.1	41.5
14-Prey Veng	33.2	33.2	32.2	30.2	29.1	27.3	25.5
15-Pursat	40.7	39.9	39.0	37.5	35.8	34.1	32.0
16-Rattanakiri	50.7	48.9	46.6	45.0	43.8	41.5	41.2
17-Siem Reap	42.2	40.7	38.8	36.0	34.4	32.3	31.1
18-Preah Sihanouk	31.6	30.7	29.4	24.8	22.8	20.5	19.6
19-Stung Treng	46.1	45.9	46.1	44.3	43.5	42.4	41.1
20-Svay Rieng	32.5	31.6	30.1	27.8	25.9	23.6	21.5
21-Takeo	31.6	30.7	29.2	28.1	26.8	25.2	23.4
22-Oddar Meanchey	46.6	45.9	44.0	42.3	40.6	39.1	36.5
23-Kep	33.6	33.0	31.5	28.6	25.2	22.8	21.4
24-Pailin	41.7	40.5	38.9	36.9	35.0	31.0	28.1
Cambodia	**35.1**	**34.2**	**32.9**	**30.7**	**29.3**	**27.4**	**25.8**

Source: MoP 2010.

Table 4.6 National poverty line by domain, 2004 and 2007 (in current Riel per capita per day)

Domain		2004	2007
Phnom Penh	Food	1,782	2,445
	Non-food	569	647
	Total	2,351	3,092
Other urban	Food	1,568	2,274
	Non-food	384	430
	Total	1,952	2,704
Rural	Food	1,298	1,965
	Non-food	364	402
	Total	1,826	2,367
National	Food	1,442	2,042
	Non-food	384	428
	Total	1,825	2,471

Source: MoP 2010.

"The State is an important actor on the Cambodian economic stage, but is likely to become even more important."

In Cambodia such processes are likely to become more important over time. The reason is not only the need to deal with the prospect of growing inequality and perceptions of economic injustice. They will also become important in industrial diversification, e.g. in mining or in the context of Special Economic Zones, which create economic enclaves and new forms of social division. Similarly, more industry-driven communication will be needed between the Government and the private sector. And of course, the establishment of public monitoring of service delivery, a decrease in corruption in public procurement, and in the timeliness of service delivery will be essential. Again, the competence and skill of Government personnel and agencies to continue this public dialogue and communication are an important aspect of human capital development as the country prepares for the next round of economic growth.

4.7 Conclusion

The above discussion points to the importance of integrating human capital demands and deficiencies in the state and civil society sectors as a part of the human capital investment strategy for a future Cambodia. This is an important omission in current thinking on the subject. The State is an important actor on the Cambodian economic stage, but it is likely to become even more important as democratic institutions take firmer root over time and as the highly prioritised governance reform indicated in the Rectangular Strategy is implemented.

Moreover, human development aspects of human capital involving greater participation in development efforts as well as a fairer distribution of its growth outcome are key dimensions of any strategy of human capital development. The precise balance between equity and promoting high quality in a few restricted activities and skills can only be determined by a new social consensus. Public participation also holds the key to quality monitoring of public goods and services, an endeavour in which new technologies in E-governance have made major contributions. These are yet more areas in which the human capital deficit gaps in government need to be closed.

Box 4.1 Tackling Wicked Problems: A Public Policy Perspective Avoiding a Narrow Approach

A number of publications have been using the term wicked problem now, starting from the landmark article "Dilemmas in a General Theory of Planning" by Horst Rittel and Melvin Webber, or the "Wicked Problems, Righteous Solutions" by Peter DeGrace and Leslie Hulet Stahl or the most recent 'Tackling Wicked Problems – a public policy perspective' by the Australian Public Service Commission (2007) – investigating the scientific bases for confronting problems of social policy which are difficult to solve, mostly due to the nature of these problems. These problems have been labeled as 'wicked', since they cannot be definitely described or resolved with traditional approaches.

Wicked problems are not unique to public policy and often carry the following characteristic:

- **There is no definitive formulation of a wicked problem.** Formulating the problem and the solution are essentially the same thing. Each attempt at creating a solution changes the understanding of the problem.
- **Wicked problems have no stopping rule.** Since you cannot define the problem, it is difficult to tell when it is resolved. The problem solving process ends when resources are depleted, stakeholders lose interest or political realities change.
- **Solutions to wicked problems are not true-or-false but good-or-bad.** Since there are no unambiguous criteria for deciding if the problem is resolved, getting all stakeholders to agree that a resolution is 'good enough' can be a challenge.
- **There is no immediate and no ultimate test of a solution to a wicked problem.** Solutions to wicked problems generate waves of consequences, and it is impossible to know how all of the consequences will eventually play out.
- **Every implemented solution to a wicked problem has consequences.**
- **Wicked problems do not have a well-described set of potential solutions.** Various stakeholders will have differing views of acceptable solutions. It is a matter of judgment as to when enough potential solutions have emerged and which should be pursued.
- **Every wicked problem is essentially unique.** There are no 'classes' of solutions that can be applied to a specific case. Part of the art of dealing with wicked problems is the art of not knowing too early what type of solution to apply.
- **Every wicked problem can be considered a symptom of another problem.** A wicked problem is a set of interlocking issues and constraints which change over time, embedded in a dynamic social context.
- **The causes of a wicked problem can be explained in numerous ways.** There are many stakeholders who will have various and changing ideas about what might be a problem, what might be causing it, and how to resolve it.
- **The planner (policymaker) has no right to be wrong.** A scientist is expected to formulate a hypothesis, which may or may not be supportable by evidence. A designer doesn't have such a luxury, they are expected to get things right.

For wicked problems one cannot understand the problem without knowing a set of variables affecting the issue. As a consequence one cannot meaningfully search for information without the orientation of a solution concept. The best way to tackle wicked problems is to discuss them. Consensus will then emerge from the progress of paying out alternative understandings of the problem, competing interests, priorities and constraints. The application of more formal analysis tools is impossible before the problem can be articulated in a concise, agreed upon, well bounded manner.

Source: Commonwealth of Australia 2007

V. ELEMENTS OF A CONSOLIDATED ROADMAP FOR HUMAN CAPITAL IN CAMBODIA

"The vision of human capital in Cambodia going forward should embrace the realisation that education must start during the first years of life..."

5.1 Is there a Human Capital Development Roadmap for Cambodia?

Previous chapters have shown how Cambodia is now faced with an evolving paradigm of human capital, presenting direct links between investments in human capital and economic growth. While confronted with this situation, the RGC is faced with a challenge to shape its development vision in ways that will allow it to strengthen investments in education, training, skills, vocational training and development of public-private partnerships (PPPs) for economic gains in the short and long run. The growing number of initiatives aimed at increasing these PPPs is fuelled by the idea that economic growth is possible by bringing together all parties involved in the process of improving human capital, including the Government, the private sector, donors and society itself. However, while there are several initiatives in place, a comprehensive view of the investment and involvement plan for those contributing to human capital development in Cambodia is still not clear. While many of the jigsaw pieces are available, they lack a unified vision able to mobilise all policies and actors towards a single goal.

The vision of human capital in Cambodia going forward should embrace the realisation that education must start during the first years of life and will not end with a university degree. Indeed, many countries are now faced with the challenge of keeping up with both social and technological change, and education is evolving to a point where learning can no longer only be confined to early days of an individual's personal development. The 21st century has, in fact, been described as a century of 'lifelong learning' where current and future generations will most likely be expected to return to learning on more occasions across a lifetime, to refresh knowledge, upgrade skills and sustain their employability.

If human capital development begins in the early days of life and is sustained through a lifetime, no short-term processes to upgrade a country's human capital are available. If a large portion of people are to eventually graduate from university, the foundations have to be laid from kindergarten, and therefore decades can pass before additionally-skilled workers enter the labour market – or before mistakes in educational policy become visible through a shortage of qualified labour.

5.2 Government initiatives (existing Government programmes)

Emphasis on the need to upgrade the skilled labour force in Cambodia has long been acknowledged. The NSDP 2006-2010 priorities include:

1. Improvements to productivity and diversification in agriculture
2. Private sector development and employment generation
3. Rehabilitation and construction of physical infrastructure
4. Capacity building and human resource development

Goal number four relates to human capital deficits addressed in this section of the report. The NSDP 2009-2013 was compiled with the intention of increasing awareness on the new challenges that the crisis has brought to Cambodia's future and development.

Box 5.1 Education, human capital and GDP

Most of the literature on human capital development strategy concentrates on the direct link between human capital and measured per capita output or productivity growth, and suggests that interventions should be focused on improving education outreach and outcomes. Human capital is often narrowly defined by measures of education – usually through the average years of schooling at primary, secondary and tertiary levels.

Yet a simple glance at the data shows that the regions where the growth rate of schooling has been the fastest are also those where is started from very low levels. It is therefore hard to believe that a country that increased the average years of schooling from 1 to 2 doubled its stock of human capital and therefore doubled its output (Cohen and Soto 2006). There is a direct link between the fact that human capital is an exponential function of the years of schooling, and correspondence between income and years of schooling.

Temple (2000) claims that much of the literature fails to incorporate measures of vocational training and fails to recognise it as part of the definition for human capital. Studies conducted by Broadberry and Wagner 1994 have show that vocational training is closely connected with corporate production strategies and also national output growth. Yet the extreme variability in vocational training approaches across countries makes it difficult to measure and quantify to facilitate inclusion in countries' comparative models. Often it is difficult to draw conclusions given that in many countries training is often informal, on-the-job, and is not systematically recorded.

There are many different measures of human capital that all have some value. The best available measure at the moment is the average years of education of the population aged between 25 and 63. As the importance of human capital is likely to increase further going forward, new formulas will be available combining the quantity and quality of human capital, including experience and value as well as further education.

The NSDP, in its fourth strategic goal, puts a strong focus on the development of vocational training policy linked with the labour market, proposing to: provide basic skills training to people in rural areas to increase income; provide training or skill development to factory workers in cooperation with employers; continue the expansion of technical and vocational training to provinces, with entrepreneurial training programmes; and establish a National Agency for Professions and Employment as well as employment centres in provinces and mechanisms for the dissemination of market information.

5.2.1 Current situation vs. future vision

The RGC is undertaking various efforts to advance the levels of human capital in the workforce. The focus in examining these will be on the two main methods for organising education and training: formal education and vocational training.

Formal Education:

"Strengthening the quality of education is a critical element for human development and poverty reduction in Cambodia."

Strengthening the quality of education is a critical element for human development and poverty reduction in Cambodia. Throughout the 1990s, the focus of educational reform was on supply-side improvements, such as building more schools, increasing the number of teachers, providing more teaching materials, etc. Since the beginning of the 2000s, the focus has shifted to more demand-side factors, putting more attention on providing Cambodian students and families the assistance they need to ensure school attendance, through programmes such as the Priority Action Plan, which aims to reduce the cost of education for Cambodian families (Tan 2006).

The Education Strategic Plan 2001-2005 was a timely contribution by MoEYS to foster broader equity for education opportunities and to improve the quality, standards and management of education services. The strategy was based on a Sector-wide Approach (SWAp), aimed at tackling the enormous challenges in the education sector while building on partnerships to carry out joint planning and programming for education at all levels. The SWAp has made mechanisms available to MoEYS for aligning development cooperation assistance with the needs of the education sector, while also aiming to reduce the transaction costs of the Ministry's bilateral transactions with development partners.

The new country strategy for education, the Education Strategic Plan 2006-2010, focuses on building upon previous achievements and enhancing equitable access to education for all Cambodian children. Cambodia remains committed to further strengthening the quality of education and has committed to further increase the recurrent expenditure allocation for the education sector in the national budget, increasing from 183.2 billion riel in 2000 to 742.5 billion riel in 2009.

The formulation of the Education Strategic Plan 2006-2010 reflects the commitment and degree of responsibility of MoEYS to upgrade the country's development through capacity building and human resource development. Upgrading human capital is one of the main strategies of the Rectangular Strategy in the third mandate of the National Assembly. The policies have been strategically outlined in order to accelerate the speed of education reform towards achieving the NSDP 2006-2010, the Millennium Development Goals 2015 and the Education for all National Plan 2004-2015 (MoEYS 2010).

MoEYS is placing particular attention on capacity building and human resource development, in order to strengthen the capacity of the nation's human capital for technical and scientific skills and to respond to labour market needs for entrepreneurship, creativity, responsibility, discipline, morality, professional ethics and honesty (MoEYS 2010).

Vocational training:

Cambodia has directed a lot of skills-building efforts to vocational education. This is the result of the fact that many secondary school graduates are either not continuing with their education and skills training or are going on to university programmes that

only lead to unemployment. Before becoming employed these young workers receive little or no preparation for self-employment and there are very few jobs available in the formal sector to absorb them. For many, vocational training is the only option to prepare a basic set of skills for employment.

The objectives of TVET are: to prepare young people for decent jobs, a decent life, and self-employment; to upgrade the existing workforce over time; and to keep up with technology development and globalisation. Linking training, employment and self-employment, and helping graduates find work, are the basis of TVET.

Box 5.2 Government-led human capital interventions in Korea

Several countries have witnessed impressive changes in levels of human capital over the past 20 years. These changes occurred through policies aimed at increasing the average number of years in education combined with quality skill training. Examples of this can be found in South Korea, which was able to increase by more than 20 percent the number of students enrolled between 1985 and 2000, and extended the basic number of years of schooling to a total of 13.

This was possible through a clear investment of more than 8 percent of GDP in education and a political strategy aimed to boost human capital, in the framework of a long-term strategy targeting people from their early life stages.

While it is possible to derive valuable information for growth forecasts, these long-term policy lags may prevent the implementation of effective economic policy given the short time spans in the political arena. Higher growth means that the gains in human capital require significant reforms as quickly as possible, although they will only bear fruit 10 or more years down the road.

In countries like Korea, the institutional framework in education was improved over the past decades to allow a rapid accumulation of human capital through equitable policies aiming to include equity as the most important way to tackle poverty in both rich and poor countries. In fact differences in educational attainment explain the major part of the differences in income, both among individuals and across countries.

In the Strategic Plan for 2006-2010, MoLVT outlines its roadmap to develop technical vocational education and training programmes in response to labour market demands, while also strengthening the management and provision of job centres. Currently, vocational training and other short course training aims to provide skills training at a relatively low cost to students who cannot afford to continue to university.

Vocational training plays an important role in teaching youth the skills they will need for the workplace, especially poor youth. Given its importance, it is crucial that vocational training provides the right types of skills at a reasonable quality. Stakeholders have often stressed the need to raise public awareness of the value of vocational training, as relevant high-quality vocational training can provide youth with practical skills that are valued by employers. However, there still is a perception that vocational training is the second-best option for those who miss out at university. The challenge is how to correct this misunderstanding. This is partly the result of the divergence between the quality levels of various vocational training programmes: some are high-quality, while others lack quality and relevance. Raising the profile of vocational training can only be successful if there are continuing efforts to improve quality and relevance.

It is also important that vocational training systems have appropriate links to the broader higher education system. Vocational training qualifications are of great value to students if they are used, recognised and accredited in some way by higher education providers, such as universities. This enables students to use vocational training as a platform to further study. Education providers and Government ministers should explore ways to maximise these linkages (CAMFEBA 2008).

"Vocational training qualifications are of great value to students if they are used, recognised and accredited in some way by higher education providers..."

The 2008 Strategic Plan for Technical and Vocational Training recognises the need for the continuous expansion and improvement of work force skills in order to increase the rate of economic growth. The NTB has a mandate to respond to the NSDP 2006-2010 framework, with a National Technical Vocational Education and Training Development Plan. The Directorate General of Technical and Vocational Education and Training (DGTVET) manages the national implementation strategy of the NTB. The DGTVET, under direction of the NTB aims to: develop and sustain a TVET system meeting the needs of the country for economic and social development, in line with the Rectangular Strategy; provide enterprise with a skilled and adaptable workforce; and respond to the life-long needs of individuals for decent jobs or self-employment with appropriate training.

The first NTDP was approved by the NTB in 2006 and outlines the two-track development approach of the TVET with an immediate priority on poverty reduction. Two financial mechanisms have been established to sustain the process: the National Training Fund supported by Government funds and the Education Sector Development Programme (ESDP II) supported by ADB.

The government of Cambodia sees that for the near future the best short-term plan for poverty alleviation and growth (especially in rural areas) is through vocational training. The NSDP aims to increase the resources of rural areas through increased attention to productive activities like agriculture, rural development and health and education in order to increase and enhance human capital and better contribute to overall development. The government of Cambodia also acknowledges the increasing pressure faced by young people graduating from secondary school who have few training options, and the difficulty to recruit post-secondary students to attend TVET institutions. The government is therefore developing ways to strengthen community-based skills development with a new emphasis on strengthening institution-based TVET.

The NTB's mandate is to link skills development with the demands of enterprises and communities, while keeping in mind economic change and the attendant changes in the demand for skills, as well as the current supply of skills. However, it should be noted that while this mandate indicates close cooperation between the NTB and the private sector, in reality there are few PPP efforts or concrete engagement between the two sectors.

Expansion data for most industries is important to signal a growing demand for skilled workers and to highlight those areas with the most rapid growth that may require the earliest attention in terms of needs analysis. Distribution of employment across different sectors might also indicate the importance of investment in rural productivity

"Reforming the agenda for private sector involvement in human capital development is a key priority for Cambodia."

as a focus for TVET in poverty reduction. This will require action in matching the growth of different sectors with reviews of the policies needed to address skilled labour needs. A closer focus on understanding where the jobs are in Cambodia will help to forecast the distribution of employment and skills to provide inputs and leadership to TVET. Government intervention has focused on this short-term strategy to fill the skill gaps of the majority of youth in Cambodia.

Table 5.1 Growth rates of industry by sector are shaping what is being taught in vocational education in Cambodia

	2005	2006	2007
Garments	10.3	21.9	17.6
Food, beverages and tobacco	8.0	2.5	5.0
Other manufacturing	10.2	8.6	5.5
Electricity, gas and water	4.5	4.7	6.3
Construction and mining	20.4	15.5	11.8
Total industry	12.3	17.1	14.1

Source: National TVET Development Plan 2008

5.3 Private sector and government-private sector initiatives

Reforming the agenda for private sector involvement in human capital development is a key priority for Cambodia, although progress in hindered by significant fragmentation. The Government's rectangular strategy and the NSDP have a vision of private sector-led growth, however, progress in the sector is constrained by institutional fragmentation on the Government side. This is compounded by fragmentation of efforts on the development partners' side.

Government intervention in skill building is no longer limited to 'formal training', and current strategies on human capital development are shifting to involve the private sector. However, in order to engage the private sector a number of incentives must be in place. Entrepreneurs will require an 'enabling state' providing direction, policy, support services, and social and physical infrastructure. With these state support systems, the private sector will be more willing to participate in human capital development by ensuring their business interests are met. For example, returns on this involvement could include setting a transparent agenda with accountability of the public sector and the optimal use of resources based on agreed priorities by negotiating with the government and civil service.

A number of initiatives are in place, including the Government-Private Sector Forum, which has so far received a favourable evaluation. The system has been able to deliver both improved reform processes and direct and measurable economic impacts. Some examples of their success include the consultation on investment and tax law, the introduction of private sector monitors within the Customs Department, and improved labour standards. On the other hand, the Chambers of Commerce in Cambodia have played a very small role in trying to engage the Government with the private sector. The general position of firms seems to be that if they are not required to become members of the Chamber, they will not voluntarily join (Maddock unpublished).

Box 5.3 Distance learning opportunities

National Autonomous University of Mexico: Investing fees to meet the demands of the knowledge economy

Distance learning has now been widely made available to the people of Mexico, helping people to pursue their studies at their own pace and time, and it has become an excellent alternative to formal education systems. For the professional and the elderly, various modes of distance learning have emerged as a useful alternative for continuing their education, promoting the idea of 'lifelong learning'. The introduction of fees in the 1990s has helped Mexican universities to upgrade their capacity to take advantage of the knowledge economy, and information technology has also contributed significantly to the advancement of distance education in Mexico. Distance learning institutes in Mexico offer course websites, videotapes, DVDs, audiotapes, audio CDs, and CD-ROMs, depending on the nature of the course, so that face-to-face interaction is not required. As distance education gains popularity among students, more and more universities in Mexico have started offering various courses in this manner.

Online learning in Spanish universities*

The Open University of Catalonia (UOC) in Spain has a long history in the field of online learning, and the university has now become 100 percent online. Students are the centre of the academic programme and the university is becoming a main point for new learning models. The university has moved from the stage where professors are giving lectures to a point where students, mentored by their faculty members, can pursue the knowledge that they need directly. For example, the UOC's virtual desktop allows students to navigate at will through tabs that feature planning and scheduling, teacher and classmate communications, a digital library, web resources, testing and assessment.

Many of those who attend the UOC are full-time workers, or have families or other commitments. They come to the UOC mostly to pursue post-graduate degrees, to obtain specialised certification, or to complete their bachelor's requirements. Inspired by technology and by the knowledge economy, the UOC recognised that distance education is not only about recording videos and putting them online, but creating a more proactive and interactive way to help students in their learning process.

The computer is not the only interface for high-quality distance learning, and mobile technologies will allow an increasingly diffuse array of interactions, extending the reach and accessibility of educational offerings to more students.

*Source: *The Economist Intelligence Unit. 2008. "The Future of Higher Education: How Technology will Shape Learning".*

Despite challenges, there have been increased pushes for the private sector to work with the Government. SMEs (and Cambodia has many of them) were identified as a problem area and they have been encouraged to look at strategies such as working in clusters and developing the skills of key workers to act as mentors to less skilled workers. Workers were also encouraged to seek the support of the Government to encourage industries to train their workers, and to develop strategies for negotiating with the Government for incentives. With the high costs of training and the difficulties in keeping pace with changing technologies, partnerships are becoming more and

more important as a means of sharing the cost of training and meeting key challenges in skill development (MoLVT and ILO 2010).

Box 5.4 Unfolding an economic renaissance in Asia

The World Bank's study on the East Asian 'miracle' gave some of the credit for East Asia's (including Thailand, Indonesia, and Malaysia) success to the relationship between entrepreneurs and the state. In particular, states were said to have engaged in productive discussions with their entrepreneurs, receiving and giving guidance on industrialisation. While this does seem to characterise the northern tier of Asian countries, with Japan as the foremost example, this kind of consultation has been nascent at best in Southeast Asia. Yet the countries there have made some efforts to institute consultative mechanisms. Malaysia is probably the furthest along in this regard, and its major formal consultations only began in 1991. As of 1993, Indonesia had no formal government-business links for policy coordination, and although Thailand did establish such links, there is considerable debate over whether or not they have been effective.

Source: World Bank 2007b

There are incentives for both sides in this, since the private sector wants good and predictable circumstances for growth, while the public sector needs the tax revenues and job creation that growth provides. For the private sector, this often means helping shape the actions of sub-national administrations in getting funds to finance infrastructure and services which firms want. NGOs are also often part of this process, particularly in representing the needs of lower income groups and as watchdogs (Maddock unpublished). Engagement is often through representative organisations. There are Chambers of Commerce in Cambodia, but their contributions are hobbled by state oversight and a focus on larger firms. There is currently very little private sector engagement at the sub-national level and limited arrangements for it to take place. There are, nonetheless, informal associations which, in their discussions with government, are moving beyond immediate contract-related questions to discussing broader matters.

Additionally, the sub-national structure is important in encouraging PPPs. Given people's unwillingness to travel long distances to get training, this will probably be partly under the sub-national administration's control (Maddock unpublished). Financially and economically, the sub-national administration should welcome private sector provision of services since it means that the Government does not have to provide them. The public sector will therefore be concerned with (and planning will have to take account of) the services that the private sector will not provide. These can be 'pure' public goods where there are no revenues or 'club goods' where the administration puts in the infrastructure and charges a fee for use. In many such cases, PPPs could be possible.

Some key public-private initiatives in the field of vocational training in Cambodia include commune- and enterprise-based training. Often, education systems are centred on buildings and schools, but TVET is not necessarily centred in this way. It is often very difficult for poor villagers to leave farming for job training. Thus, training for villagers must be short, often only part of a day, and should be close to village

work sites to reduce travel costs. Institutionally-based residential learning models are expensive and not always accessible to those who can most quickly apply training. One strategy entails providing funding for commune- and enterprise-based training to be assisted by Provincial Training Centre (PTC) staff. PTCs will receive 10 percent of the value of this training in payment for assisting in developing and finding trainers to implement the training plans. Ensuring that National Training Fund funds are allocated to support training that is demand driven and community/enterprise responsive is key (NTB 2008).

"International experience demonstrates that financing must be a partnership of the state, enterprise, communities and trainees."

5.3.1 PPP financing of TVET

International experience demonstrates that financing must be a partnership of the state, enterprise, communities and trainees. Beneficiary financing of TVET (NTB 2008) is the main goal of developing and maintaining a system that meets real needs by responding to real demands for skills. To achieve this, a PPP is required. However, stakeholders must be involved in the design, decision-making and the delivery of TVET if they are expected to support the programme. One strategy entails developing an employer-based levy on payroll or a payroll tax to enable enterprises to support TVET and develop enterprise co-managed Sector TVET Centres. Setting up Enterprise Sector Councils and beginning the process of inviting financial participation in sector-level training is another. Establishing an Enterprise Advisory Council to the NTB could also help provide private sector input to the NTB.

The Government should also think about the possibility of a levy-grant system or a corporate profits tax transfer with the Ministry of Economy and Finance. The government could ask Commune Councils to contribute to training costs in a Voucher System, and while it is recognised that in many cases no financial contribution is possible, a start must be made to changing attitudes from entitlement to participation. Trainees could also be asked to make a small contribution as experience shows that even a small contribution greatly increases trainees' commitment.

5.3.2 PPP expanding the provision of TVET

The Government's central role in TVET is to ensure the development of an overall system, access for all, availability of a skilled workforce to meet economic needs, and quality of provision. To achieve this, private sector providers need incentives to enter the training market in response to the demand for skills. One strategy entails training systems being purchased from qualified private sector training providers by the NTF and by a Commune/Enterprise Voucher System. Each PTC could develop a list of private sector and NGO training providers in the province, which will be asked to register with the provincial branch of the National Training Trainer Network as the first step in qualifying to provide training in the voucher programme (NTB 2008).

5.4 Initiatives of international agencies and donors

Aid effectiveness has evolved over the last decade in Cambodia, and actions have been categorised into three broad areas: strengthening programme-based approaches and sector strategies; capacity development and the use of national systems; and

"Aid effectiveness has evolved over the last decade in Cambodia."

promoting sound partnership practices. However, despite the valuable efforts of these organisations, it can be seen that their activities are largely disparate and do not follow an orchestrated plan or framework. While all are working towards increasing human development, and are working with the Government to enhance this, there is not enough coordination between the donors themselves, leading to redundancies and repetition in the work being done.

5.4.1 Asian Development Bank

The ESDP II was part of the first NSDP and approved in March 2006, was supported by a loan from ADB. ESDP II has been implemented in seven provinces (Takeo, Kampot, Siem Reap, Battambang, Kampong Chhnang, Stung Treng and Svay Rieng), but is still at the pilot stage. Currently, MoLVT has a new project created through an ADB grant, which will strengthen TVET and will commence in 2010 and continue until 2016, operating in 24 provinces (MoLVT and ILO 2010).

With the assistance of the ADB Loan, demand-driven TVET is being developed in DGTVET institutions. The move from a supply focus to a demand focus requires a shift in attitude in both DGTVET and in the institutions. By using a carefully staged series of pilot projects which link institutions to the needs of communities, institutions understand their revenue is dependent on responding to demand and not directing training regardless of employment outcomes. The Voucher Skills Training programme gives target communes a voucher worth up to US$4000 per year for three years to meet the commune economic plan (NTB 2008).

One example of the success of this Voucher Skills Training Programme is the fact that it has trained over 154,000 rural residents in skills they chose, based on opportunities in their own villages and provinces. The programme will be extended to all provinces in the country using both the government budget and grant assistance from ADB (MoLVT and ILO 2010). NTB will seek ways to expand and sustain the Voucher Skills Training Programme and to more closely link the training provided for new TVET staff to ensure that they meet the evolving needs of TVET institutions.

5.4.2 International Labour Organization

The ILO has supported skills development in Cambodia since 1990 and has seen a number of initiatives come to fruition. Support has been provided to expand opportunities for quality employment, effective social dialogue and improved social protection. ILO has identified an action strategy for Cambodia, taking into account the current opportunities and interests of the country in upgrading its human capital (MoLVT and ILO 2010). This strategy includes: committing to the government's Rectangular Strategy, clearly mentioning employment creation and increasing productivity as a central pillar of the strategy; enhancing poverty reduction debates and discussions among the key public figures, researchers, civil society and international partners; and improving the labour force deployed in the informal sector.

Selected actions by ILO in various areas include:

- **Centralising employment:** ILO has worked with MoLVT to develop a national strategy for employment which incorporates gender equality and addresses the needs of specific vulnerable groups and rural workers.
- **Training and skills development:** ILO has provided technical support in the implementation of NTVET development plan, and the MoLVT and MIME Gender Mainstreaming Action Plan, and has promoted the linking of training to industry and employers' needs. It has also worked towards improving skills policies and systems through a progressive skills certification process adapted to Cambodia's needs. In response to the financial crisis, technical assistance has been provided to MoLVT in the complimentary areas of training and employment needs assessment for staff, as well as technical assistance and guidance on TVET.
- **Employment services:** In 2009-2010 ILO established and sustained a network of job centres in four provinces. Alongside this, ILO also implemented a range of capacity building exercises for the newly created National Employment Agency (NEA), including comprehensive training in employment services, development of standard operational guidelines for job centres, and a study tour to China for NEA and job centre staff to observe the workings of provincial and district level employment service centres.
- **Institutional capacity for extension of social security:** ILO has assisted MoLVT in drafting legislation and designing the management and administrative structures for the establishment of an employment injury insurance scheme. It also has assisted MoLVT, Ministry of Social Affairs, Veterans and Youth, and the Ministry of Health in the development of social security schemes including drafting legislation, conducting financial studies, and supporting the implementation of such schemes.

5.4.3 United Nations Development Programme

Key priority areas for the 2011-2015 United Nations Development Assistance Framework (UNDAF) are aligned with the Government's rectangular strategy and focus on Cambodia being able to meet its Millennium Development Goals (MDGs). Objectives include promoting and supporting: economic growth and sustainable development; health and education; gender equality; governance; and social protection.

The new Country Programme Action Plan 2011-2015 for UNDP has been designed, aligning itself with the UNDAF, to respond to the national priorities in the NSDP, with a special focus on helping accelerate progress towards the Cambodia Millennium Development Goals before 2015.

The main focus will be in reinforcing the themes of the MDGs and poverty reduction, environment and sustainable development, democratic governance and gender equity.

With the aim to strengthen national and sub-national capacities to develop a more diversified, sustainable and equitable economy, UNDP will support the design of

policies and strategies necessary for emerging sectors to expand and contribute to poverty reduction. Human capital development strategies will be supported to help generate the skills the private sector needs.

5.4.4 World Bank

The World Bank lends money to the Government of Cambodia through the International Development Association. Projects focus on rural infrastructure and rural development as the majority of the poor live in rural areas. The Bank is currently adopting a new Country Assistance Strategy (CAS) for Cambodia, with a focus on governance and poverty reduction and sources of economic growth.

Through the CAS, the World Bank has outlined the priority areas to assist client countries with their own development programmes. It includes lending, studies, and forms of technical assistance. In the 2005-2008 strategy, the Bank identified governance issues as the primary obstacle to sustainable poverty reduction in the country, with assistance also focusing on achieving the Millennium Development Goals and supporting strategies and investments needed for their attainment. Over the past decade the World Bank has been actively working to fill the gaps between uncoordinated donor-led aid, which had often slowed down the development of good governance. The World Bank strategy has focused on lessons learned, drawing attention to a greater focus on governance throughout the country programme, improving donor coordination and partnerships, and on the need for a clear focus on development results.

The World Bank's assistance to Cambodia has helped to produce positive changes on the ground in the field of education. Through an education quality improvement project, teachers, administrators and communities from Takeo, Kandal and Kampot provinces are now working together to identify school enhancement activities financed through annual school cluster grants in order to improve children's education. Some of the activities include building new libraries, investing in educational materials, providing teacher training, and improving the environment around schools.

Furthermore, the IFC's Mekong Project Development Facility is supporting the development of private SMEs in Cambodia. One of the main priorities of the Facility is to integrate in-house and job training programmes for impoverished women and their children, one of the major poverty fighting initiatives.

5.4.5 European Union[10]

European Commission cooperation in Cambodia is designed to support the RGC's policies, as reflected in the NSDP. It also follows the overall development cooperation policies of the EU. A limited number of focal sectors have jointly been agreed in the EC-Cambodia Country Strategy Paper 2007-2013:

1. Support to the NSDP (which includes support to Public Financial Management Reform)
2. Support to basic education

The EU has provided substantial development assistance and maintained a close relationship with Cambodia. The EU-Cambodia Cooperation Agreement provides the framework for relations and sets out areas in which cooperation will take place. Cooperation between the EU and Cambodia also takes place in a regional setting through ASEAN and ASEM.

VI. A HUMAN CAPITAL DEVELOPMENT ROADMAP FOR CAMBODIA, AND REASONS FOR OPTIMISM

"A variety of sectors are facing great pressure in Cambodia to upgrade hard and soft skills of their workers..."

In order to create a plan for Cambodia to improve its human capital development and education system, both short-term and long-term plans are vital.

6.1 Short-term interventions

6.1.1 Filling the skills gap

It is clear that training people is the first step to matching the needs of employers. Basic training, however, might not be sufficient given that trainers often do not take into consideration what people expect to get out of a training exercise. Assessing people's interests and skill levels for potential employment in skilled technical positions is equally important. By focusing on the foundation skills necessary to be successful, training programmes should also be directed to incorporate apprenticeships, certificates and programmes, and should focus on upgrading the potential skills of the individual.

6.1.1.1 Conventional training versus an all encompassing approach

Conventional training is necessary to cover essential work related skills, but in Cambodia a more progressive and positive approach is also needed. For this reason, it is important to understand the most effective ways to develop people and how to upgrade the country's human capital by moving away from conventional methodologies for skills training. People in Cambodia undertake a variety of work-related training, but ultimately might not find it worthwhile as there are poor salary prospects which will not bring them out of poverty. When moving away from a notion of providing 'basic work-related skills training', and shifting to one centred on enabling 'learning for people as individuals', the impact of training may expand in ways beyond traditional work skills and knowledge by creating more exciting and motivating opportunities for people and employers.

A variety of sectors are facing great pressure in Cambodia to upgrade hard and soft skills of their workers, yet currently there is no mechanism to facilitate and encourage a person's development and fulfilment and to improve work attitudes, beyond traditional training. Organisations which are able to approach training and development from a more wholesome, worker-oriented standpoint will be able to encourage people to work and perform well, and people will tend to remain at the same company longer, enabling them to increase their relevant skills and consequently their productivity, as well as help train others.

Of course, corporate understanding and expectations about what training should include cannot be changed overnight. Most sectors see training as being limited to work skills, but if training is seen in terms of 'developing people', training should not only be focused on skill training but should also include policies aimed at enabling learning, facilitating meaningful personal development, and developing the relationship between the success of people and the success of their work.[11]

Traditional trainings often forget about providing guidance on soft skills, something that employers normally expect people to have. Training should thus focus on a wider approach which takes into consideration anything that can help a person to grow in ability, skills, confidence, tolerance, commitment, initiative, inter-personal skills or understanding.

Additionally, conventional skill training gives people new techniques and methods, but it will not develop an individual's maturity, belief, or courage, all of which are essential for the development of strategic capabilities. Acquiring learning experiences for an individual's personal development and fulfilment is connected to performance and capability, but is especially dependent on a person's attitude and maturity. When people develop confidence and integrity, they become more proactive, solution-focused and responsive, and this helps to develop the essential drive for people to grow and change.

6.1.1.2 Providing effective training for new employees

Effective training for junior staff is particularly important and employers should undertake proper induction training. This is because good induction training ensures new employees are able to settle in quickly and happily. Induction training is more than just skills training; it is about the basics that more senior employees all take for granted. New employees need to understand an organisation, its mission and goals, and be clear about its methods, timescales and expectations.

Induction training principles are based on the basic codes of conduct and soft skills, and are essential for new people to settle into and enjoy their jobs. Trainers should address newcomers' personal development, long-term goals, and opportunities. Mentoring and proper coaching should be used along with formal structured training.

6.1.1.3 Training tips

It is difficult to provide a standard set of skills that are necessary for personal development and the facilitation of learning, since the nature of learning involves wide development methods and experiences. It is therefore not sufficient to establish training around a job description. It is important to go beyond skills, establishing a behaviour set, although of course this is more difficult to assess. There need to be further studies of training, qualifications, job grades and pay reward levels, since these activities are inevitably linked and the connections should be visible and understood. Beyond conventional work skills, issues of personal development and learning, for life and not just for work, are the most significant areas of personal development policy makers need to focus on.

Post-secondary educational institutions and employers should work together in innovative ways to meet the needs of today's students and the growing demands for skilled labour. Training programmes will give students a clear and well marked path through vocational training and into a growing field of well-paying jobs. Additionally, training centres should partner with educational institutions, industrial sectors and

government and focus on creating a pool of workers that can meet the needs of their country's economy.

Effective training should be able to provide structured models for entry into skilled technical positions, with pathways to higher level jobs in a variety of work settings. If successful, this type of policy could help improve the lives of low income young adults by providing them with effective methods to not only gain the skills to avoid unemployment, but continue building on those skills in pursuit of a career and an improved life. Doing so will provide jobs to those who need them and supply industries with skilled workers while at the same time strengthening the nation's economy by increasing the capacity of its labour force to not just perform menial labour, but also to create value-added opportunities for themselves, their companies and their industries.

"Education has been at the centre of anti-poverty and pro-growth policies in developed and developing countries..."

6.1.2 Stopping school drop-outs

Students often report a variety of different reasons for dropping out of school (as discussed in Chapter 2), so the approach to prevent this phenomenon has to have a multi-dimensional approach. These strategies include mentoring, tutoring, service learning, alternative schooling, and after school opportunities.

Education has been at the centre of anti-poverty and pro-growth policies in developed and developing countries, and it is seen as a key determinant of development and to the ability of a country to keep up with the fast-paced move towards technological development. This has been the basis of a world-wide focus on school drop-out problems and a number of policies have aimed to reduce school drop-out rates (for instance, the introduction of free secondary school education and an increase in the compulsory school leaving age). The evaluation of this programme can provide valuable information on whether subsidies, which can reduce the cost of education, can reduce school drop-out rates. The impact of subsidies could be quite substantial, especially for those from poorer backgrounds, given that both boys and girls coming from low socio-economic background have very high drop-out rates, and cash transfers could prove effective in stopping or slowing the drop-out rate for the most vulnerable groups.

6.1.3 Addressing unemployment in Cambodia through poverty infrastructure development, as a crisis response strategy

Countries are affected by a financial crisis in different ways, and countries with economies that are heavily reliant on exports are generally more affected than economies with large domestic markets. At higher risk are those countries that were already vulnerable before the crisis and have few coping mechanisms, and those paying the highest consequences are often the poor and their dependent families. Crisis response measures need to target vulnerable rural and urban people whose livelihoods are likely to be adversely affected by the crisis. These groups require additional social assistance as they are often excluded from economic stimulus packages, if they exist in the first place.

"Crisis response mechanisms require international organisations and governments to work together..."

Box 6.1 The Education Maintenance Allowance*

The Education Maintenance Allowance (EMA) was an initiative piloted for the first time in 1999 in 10 education authorities in the United Kingdom. The scheme paid benefits to 16-18-year-olds that remained in full time education after year 11, when education ceased to be compulsory. Payments included: weekly allowances (during terms only); a retention bonus every term for those attending consistently; and an achievement bonus paid at the end of the course if students fulfilled the targets agreed to in the learning agreement signed by parents and students when joining the EMA programme. The maximum payment, of UK£30-40, was allocated to people whose family income was below UK£13,000 a year. Another scheme with smaller incentives was in place for families earning between UK£13,000-30,000 a year.

The EMA resulted in growth in participation, indicating that this type of policy does have an effect. The programme had a positive and significant effect on the post-compulsory education participation among eligible young people.

**Deardon et al 2010*

Crisis response mechanisms require international organisations and governments to work together to address the crisis and mitigate impacts. Cambodia has been particularly vulnerable to the global financial crisis because of its openness to trade and investment. Poverty is still widespread, while the near-poor are at risk of falling back into poverty. Cambodia lacks the fiscal space to achieve a stimulus package. The government developed a strategy for social protection in cooperation with development partners, planning to create social safety nets that can reduce the negative impact of crises on the poor and vulnerable. Social safety nets comprise targeted cash and in-kind transfers, which included employment intensive public work schemes.

Economic stimulus packages and social safety nets provide an opportunity to enhance the job content of the crisis recovery. Countries need, however, to have sufficient fiscal space to have a stimulus package in place, whereas poorer countries like Cambodia will be more dependent on international assistance to develop their social safety nets to respond to a crisis.

Cambodia lacks the fiscal space to design and implement an economic stimulus package. To mitigate the effects of the recent crisis it was decided to reinforce the provision of social safety nets. Various social safety nets have been used in the country to reduce poverty and assist the vulnerable in coping with economic and social shocks. Infrastructure and public works have been integral components of such safety nets (cash for work, food for work).

Reliance on social safety nets to mitigate the impacts of an economic crisis in Cambodia will require adequate and dedicated financing. The development of an affordable and effective social safety nets system in poor developing countries needs development partners to contribute to financing. According to ILO, Cambodia lacks an integrated system or sustainable programme which can respond to this and other crises once they occur. Current efforts are not enough, they are fragmented or uncoordinated, and joint efforts are needed to develop social safety systems that are affordable and sustainable for the Government.

Box 6.2 Social safety nets and supporting the unemployed

In today's increasingly volatile economy, working individuals and families need strong safety nets that provide financial support and retraining and job search assistance in difficult economic times. In developing countries, however, existing unemployment safety nets have failed to keep pace with the changing labour force, especially the growth in women, part-time and low-wage workers.

Low-wage workers are particularly hard hit by unemployment and are much more likely to experience joblessness than their higher-wage counterparts. With unemployment so prevalent, a country's economy counts on unemployment insurance benefits to smooth out the unexpected hardships that hit workers and their families when they lose their jobs. These benefits enable workers to escape temporary poverty and lasting financial hardships caused by job loss.

The notion that creating societies with strong social safety nets, such as unemployment insurance, results in a diminished desire to work is not necessarily true. Welfare programmes and social assistance programmes display evidence suggesting that in societies with strong social safety nets programmes, there is no diminution of the happiness and satisfaction that working brings for the majority of workers.

In the Organisation for Economic Co-operation and Development there are various types of programmes that provide a large number of examples of potential models for developing countries. While programme rules differ substantially from country to country, the following are some main types of social transfers:

- Minimum income programmes, where the government is able to provide minimum income financial assistance for people without resources
- Housing benefits, supporting housing-related costs of various forms
- Family benefits, benefits directed towards families with children to support the development of the family
- Benefits for lone parents, attempting to mitigate the high poverty risk for single parents
- Employment-conditional benefits for able-bodied individuals, in an attempt to ensure that at least some incentive to work is maintained; allowing benefit recipients to work a certain number of hours without stopping eligibility or taxing the full amount of the income earned while re-entering employment
- Childcare benefits, financial support for families with small children in order to aid in child-rearing

Pressures across many of the developed countries have driven the production of policy reforms for social services in a few common directions. Traditionally, social safety nets were designed to protect against old age, short-term unemployment, disability and low income. Recently, however, social protection policy regimes have adapted to address:

- Increasing long-term unemployment, a result of a severe market change and the globalisation of production causing a reduction in the number of unskilled jobs
- Population aging, which has led to increasing dependency not only on social insurance but also on targeted social assistance for the low-income elderly
- Changing family structures, with an increasing number of single parents
- Funding and delivery tensions, between central and local authorities, with regional governments demanding more authority over the financing and administration of social protection benefits

Developing countries can learn from the experiences of developed countries, and use their social safety net systems as case studies from which to pick and choose practices best adapted to their particular situations. Designing model policies and generating the empirical research needed to document best practices, especially during recessions, will be key to stimulating the economy and relieving hardship.

"It is also essential that the manner in which learning outcomes are acquired and assessed is made more flexible."

6.2 Short to long-term interventions

6.2.1 Vocational training

Technology and information technology are developing fast, and the labour market needs highly qualified manpower. Weak PPPs, especially among the TVET institutions, do not create links with industries, and schools and are not able to fully provide people with the skills needed in the labour market. Lack of labour market information systems prevents stakeholders from understanding the requirements of the market. Capacity building of TVET instructors is limited and some skills do not have instructors or mentors. Materials provided by TVET are obsolete. Curriculums are not flexible and TVET institutions are time-based, trainer-based, and school-based. Citizens must be able to acquire the skills, knowledge and competencies required of them in today's knowledge-based economy. Vocational education and training plays a key role in ensuring that the labour market is open to all.

It is also essential that the manner in which learning outcomes are acquired and assessed is made more flexible. This includes the need to improve the provision of TVET by employers, traditional training providers and higher education institutions, all helping to validate skills acquired outside of formal education and training. At the same time, the pathways between TVET and higher education must be opened up and tertiary TVET programmes should be developed. The transition from training to employment as well as between jobs must also be facilitated, to which end guidance and counselling services should be provided.

Improving the quality and efficiency of education and training and of teachers and trainers is the key to increasing the relevance of TVET for the labour market. In order to improve the quality and efficiency of vocational training there need to be systems for: quality assurance, to be implemented at the national level on the basis of internationally agreed standards; continuing the development of skills and competencies of teachers and training systems, reviewed in light of their evolving roles; fostering the development of key competencies together with vocational skills that are relevant to market needs, in particular through different forms of work-based learning; and creating forward planning tools to match skills and jobs, and partnerships with relevant stakeholders, in order to strengthen labour market relevance.

Vocational training should also be focused on as a means to promote equity, social cohesion, active citizenship and inclusive growth. Disadvantaged learners may benefit more from non-classroom-based learning that is relevant to the country/region's labour market. Integrated in mainstream technical and vocational training, training should be flexible and modularised, providing individualised learning pathways. Social mobility can also be strengthened by facilitating the transition from vocational training to higher education systems, and accessible and targeted guidance services must be put in place.

Enhancing creativity, innovation and entrepreneurship in the framework of technical and vocational training is important. Vocational training should foster creativity and encourage risk taking and experimentation. Accessible, flexible, experience-based, and

active learning should be promoted in Cambodia. Education and entrepreneurship should also be promoted in order to instill a sense of initiative, creativity and the ability to actualise ideas.

Furthermore, dialogue and mutual learning should be developed and exchanged with the international community through regional vocational training networks, and there should be structured cooperation with the view to improve: transnational collaboration; regional development; and legal management of mobility. Cooperation in research activities and evidence-based policy-making should be further strengthened with international donor organisations.

Given these target areas, the following policy interventions should be considered:

1. **Strengthen existing TVET mechanisms to address current gaps.** This policy entails pushing the NTB, Advisory Industrial Technical Committees and the Provincial Training Board (PTB) to provide more activities focused on the outcomes needed to meet the requirements of Cambodia's current industrial development. This policy needs to be complemented by activities aimed at strengthening and expanding PPPs, especially providers of TVET, and link them to industries by establishing advisory councils and promoting liaison between offices, curriculum development units and instructors working with industries. This strategy would ultimately expand to develop a national committee on skills and standards led by the labour market itself, increasing Cambodia's competitiveness within ASEAN.
2. **Improve the quality of TVET teaching and curriculum.** This policy would entail moving curriculum from time-based and trainer-based to a modular-based, competence-based or specific sector-based focus. This entails developing and upgrading programmes to be located at regional centres, developing new technical teacher training programmes with more hands-on skills and business development knowledge, as well as direct working knowledge of the industry and its requirements. Integrating small business programmes into TVET curriculums, with graduates having specialised skills and knowledge of small business, could further complement this. TVET should also encourage the promotion of exchange programmes for sharing experiences, which could in turn improve the quality of monitoring and evaluation.
3. **Improve the quality of TVET facilities and equipment.** Expansion of TVET could improve the coverage of people receiving technical training. Upgrading and equipping training centres to equip them with new workshops matched with labour market needs should be a priority.
4. **Strengthen regional training centres**, making programmes more accessible to people throughout the country. Such a system could be complemented with TVET institutions under MoLVT to conduct skill courses for drop-out youths from the secondary general education levels.
5. **Expand private sector or NGO providers of TVET**, and ensure the quality of instruction. This should be combined with the provision for registering private sector trainers as a system of quality control over the services provided.
6. **Expand the ILO Job Centre Programme** to match training with industrial demand. This policy could lead to aligning training with enterprise demand for

"Policy makers in almost all countries agree on the importance of education and skills to ensure future economic prosperity."

skills, while putting the NEA in place as a Special Operating Agency under the NTB.

7. **Focus on the decentralization and deconcentration of TVET programmes**, developing PTBs as extensions of the NTB to assess local demand for skills and propose training to the NTB. TVET institutions should also be strengthened to assess and respond to local industry and community needs.

6.3 Long-term interventions

The roadmap to improve human capital in Cambodia needs to focus on a balance of long-term interventions mixed with a set of short-term interventions.

In the past two decades the importance of intellectual capital has grown as a result of the worldwide shift towards more knowledge-based, rather than manufacturing-based, production. Lynn (2004) claimed that there has been a metamorphosis from a resource and manufacturing based economy to one in which knowledge and services are key drivers of economic growth. Much of the current knowledge is created through investments in human capital, with high levels of education and training inputs (Wilson and Briscoe 2004). Coupled with this, of course, is evidence of the positive influence of education, training and skills on performance of the individual and the national economy. Furthermore, much of the literature indicates that there may be important additional spill-over effects and externalities from higher human capital levels.

Thus, it is becoming increasingly important, in this changing world economy, to focus on the long-term development of human capital, going beyond basic levels of education towards high skill areas requiring many years of formal higher education as well as constant training and upgrading of knowledge throughout one's career. Such a goal cannot be achieved in the short-term – nor can it be achieved without a thorough, well thought out, comprehensive long-term plan for the development of a nation's education system.

6.3.1 Life-long learning and the changing concept of higher education

Policy makers in almost all countries agree on the importance of education and skills to ensure future economic prosperity. Studies show that countries with the highest levels of education and skills have on average higher levels of productivity and economic growth. The issue of schooling and its impact on long-term economic growth has been important to social science discourse since the 1960s, with the dominant hypothesis being that education positively affects economic growth since it increases the level of cognitive skills possessed by the labour force and, consequently, its marginal productivity.

Box 6.3 The nature of TVET and its contribution to building human capital in the short- and long-term

According to the Task Force on Higher Education (2004):

> "...since education is considered the key to effective development strategies, technical and vocational education and training (TVET) must be the master key that can alleviate poverty, promote peace, conserve the environment, improve the quality of life for all and help achieve sustainable development..."

In fact, there is a fresh and growing awareness among policy makers, development organisations and the donor community of the critical role that TVET can play in a country's national development and human capital improvements.

The importance of TVET today is reflected in various ways. For instance, it is incorporated in poverty reduction strategies or national development plans due to its natural orientation towards the world of work, and its emphasis on curriculums for the acquisition of employable skills. TVET is well placed to upgrade the skills of the workforce, creating avenues for wealth and a path out of poverty. TVET institutions, in turn, can also deliver skill training at different levels of sophistication, to respond to the different needs of learners from different socio-economic and academic backgrounds, and prepare them for gainful employment and sustainable livelihoods. Youth and the most vulnerable can especially benefit from TVET.

Given its flexible nature, learning through TVET channels can be both a short-term and long-term intervention for a country, to both fill in the skill gaps needed immediately by current workers and to provide workers with avenues to upgrade their skills while providing and complementing alternatives to higher education and questions of equity associated with it. TVET is therefore a mean of empowering individuals to take control of their lives, and should be considered complementary to the general education system. Many developing countries are in fact starting to recognise that huge numbers of young people are outside the formal school system, and informal learning methodologies and literacy programmes, are benefitting from TVET.

More specifically, the contributions of TVET to strengthening human capital make a series of short- to long-term contributions by:

- Providing individuals with skills not acquired in university;
- Empowering individuals, by expanding access and participation with an emphasis on underserved groups of both youth and adults;
- Limit early drop-outs and as a mean to improve employability or long-term employment;
- Complements issues of lifelong learning, by adapting the workforce to market needs;
- Brings different kinds of contributions, including becoming a vehicle for cooperation and integration as well as socio-economic development as it relates to improvements in infrastructure, technological progress, energy, trade, tourism, agriculture and good governance;
- Strengthens shrinking or stagnant wage employment, especially in the industrial sector;
- Upgrades the skills of poorly educated, unskilled and unemployed youth; and
- Fills in gaps caused by geographical, gender and economic inequalities.

To complement the short- and long-term vision of TVET, strategic issues need to be addressed, including: improving the poor perception of TVET; improving instructor training; creating clearer linkages between vocational and general education, which gives a sense of perceived inferiority of vocational training; improve links between TVET and the labour market; better harmonisation of TVET programmes and qualifications.

Furthermore, a series of strategic objectives – including the delivery of quality TVET, assuring the employability of trainees, improving the coherence and management of training provision, promoting life-long learning and enhancing the status and attractiveness of TVET – should also be addressed.

In essence, the flexible nature of TVET, with horizontal and vertical short-term and long-term dimensions, suggests that the implementation of strategies to re-vitalise the sector and strongly contribute to skill building and human capital development in a given country, can be successful if properly integrated within national policy frameworks with clear implementation guidelines and policy roles for the various actors.

"There is a need to create a life-long learning cycle for Cambodia."

However, the higher education sector today is facing a number of funding challenges, which is a result of a tendency of fast growing demand on one side, and the inability of the state to meet the required public resources for higher education institutions (HEIs) on the other. In this context, HEIs are facing an increasing need to secure funds from a variety of different sources, and the international tendency seems to show that the main vehicle to fill this gap is to shift costs over to students and families. If countries are to substantially increase and improve their human capital stock, however, continued government support (both financially and in policy decisions) for HEIs will be essential.

6.3.2 Long-term view

There is a need to create a life-long learning cycle for Cambodia. The components needed include a long-term vision, the development of industry-specific strategies, and the development of systems whereby the country is able to cope with the impact of the world economy and its crises.

Hence, the long-term view requires a budget, quality assurance, a long gestation period (10 years), raising enrolment ratios, decreasing drop-outs, and reducing existing gaps. International experience shows that there are five relevant issues for these challenges:

1. **Access and equity:** This includes promoting the expansion and outreach of institutions, addressing ways to include a multitude of students from a variety of backgrounds, increasing enrolments and participation rates, and increasing the number and types of institutions. The major forces driving this have been: the expansion of primary and secondary education, creating a wider demand for tertiary education; greater demand from an increasingly service-oriented labour market coupled with a process of urbanisation to meet the demands of the modern world; and increased incentives from governments to provide students with equitable access to higher education.
2. **Financing:** Reforming the fiscal governance of higher education institutions is a crucial component to secure enough funding through diversified sources, and to allow students from poorer backgrounds better access to HEIs. Meeting tuition fees and various expenses is in fact a major issue for many students, and this issue has to be carefully addressed, especially as costs in higher education are rising faster than unit costs in the overall economy – a tendency accelerated by the rapidly increasing costs of technology.
3. **Accountability:** This implies creating better internal structures to provide improved management and meeting demands for greater accountability from institutions and faculty for students, employers, and taxpayers. This is caused by a general perception that HEIs are insufficiently accountable to students and governments.
4. **Research and relevance:** Improving HEIs capability to do research, by enhancing their ability and presence in a world where science, technology and international competition are progressively playing important roles in the future economic prospects of a country. This means, among other things, meeting the international challenge and mainstreaming the idea of life-long

learning to adapt the future workforce to the solutions and orientations of a more globalised market.

5. **Quality and efficiency:** This will involve reviewing and reforming curricula and reorganising courses and study programmes to be more in line with the modern working world. Focusing on this will be crucial given problems of control over the quality or behaviour of teaching staff or inappropriate curricula which can be unrelated to the needs of specific economies. Furthermore, it is important to upgrade the quality of facilities, libraries, computers, and other equipment.

Thus, in order to make this work for Cambodia, the country requires an institutional framework or elements for a comprehensive human capital vision.

Success or failure for Cambodia, following its 2004 accession to the WTO, will depend on how well the country is able to tackle issues that affect its international trade competitiveness and mitigate the negative effects of accession, especially for the poor. Many issues are related to governance, issues that have so far eroded the country's competitiveness (i.e. corruption), and impeded job creation and efforts in poverty reduction. Joining the WTO therefore implies reinforcing national production and competitiveness, and sub-regional trade, while recognising the need to accelerate legal and judicial framework reform so that the private sector can operate under more certain market rules.

6.4 Cambodian Human Capital Development Roadmap

Cambodia should be given enormous credit that despite a recent history of internecine conflict and political instability, these events, which might have pushed other countries into a prolonged state of institutional decay and economic ruin, have not inhibited its ability to consolidate a new political system of electoral democracy, to usher in a period of record growth and sharply raise its human development performance.

While a low economic base is certainly part of the explanation, as is a one-off peace dividend with the demise of the Khmer Rouge, this is not the whole story. Such factors by themselves do not explain why some countries can embark on massive structural change and create new industrial and service sector capabilities while others merely go back to historical levels of agricultural growth, and thus do not give Cambodia enough credit.

Cambodia has not only recovered from social conflict and mass murder, it has undertaken wholesale institutional transformation, established completely new sources of growth and employment (such as bringing enormous numbers of female workers into the labour force), decisively moved away from central planning to an open market economic system, reached out to international and inter-regional organisations and agencies (such as ASEAN), and initiated a formal and organised system of regular dialogue with the private sector. It has also had to battle with the fallout from two massive economic shocks, the first in the form of the Asian Economic Crisis in its own neighbourhood, and the second on a global scale triggered by the US mortgage crisis.

Box 6.4 To upgrade human capital in Cambodia, a long-term strategy with short-term components is needed

Government coordination across various ministries:
Need to identify good governance practices for coordination and provide an institutional mapping of the allocation of roles and responsibilities in design, regulation and implementation. Identification of key coordination mechanisms and capacity gaps will be essential, along with the assessment of pros and cons of governance mechanisms used by the Government to bridge gaps.

Coordination with the Ministry of Economy and Finance to sustain spending for the education sector:
In order to sustain a process that can upgrade higher education systems, there is a pressing need for the country to plan ahead for the next 10 years, and provide a financial commitment that can sustain this process. This implies a strong commitment from the Ministry of Economy and Finance in planning and budgeting for this end. Yet whatever education sector officials can do, the context in which they are working is often beyond their control. In an era of intensified thirst for knowledge, full financing of higher education is expensive everywhere. There are many competing, urgent Government expenditures, and overall fiscally related budget cuts mean stark choices.

Coordination between Cambodia and other institutions across Asia (i.e. part of a wider ASEAN market):
Many countries in Asia and Pacific region are faced with a growing challenge to respond to the skills needed from their workforce in an increasingly technologically competitive and globalised world. National skills strategies must correspond and support economic growth and employment, and should be responsive to the needs of the disadvantaged. Cambodia should also focus on integrating with the ASEAN Movement of Skilled Workers by 2015, ensuring the harmonisation of competency-based standards (MoLVT and ILO 2010).

It is also to Cambodia's credit that it joined ASEAN not during the best of times but during some of the worst faced by the organisation. It is equally to its credit that the partial collapse of its principal export industry and industrial employer did not tempt the country into a path of protectionism or policy paralysis. Instead, Cambodia has increased its engagement with the private sector and has invited aid organisations to work with it in many complex areas of economic policy from aid effectiveness to international competitiveness, investment climate, labour markets and human capital needs.

In fact, even during times of great economic stress Cambodia has stuck to its Rectangular Strategy, emphasising the inherent inter-linkages between economic growth, governance and social welfare. Its major policy agency, the Supreme National Economic Council (SNEC), is constantly engaged with the question of a future structure of production and economic growth, the physical and human capital resources needed to bring this about, and the options in international assistance and bilateral credit which can help boost domestic savings to GDP ratios. The policy agenda has not descended to pulls and counter-pulls from international donors and civil society with an overworked civil service alternating between one donor mission and another.[12]

It is important to note that while future growth is unlikely to be a repeat of the past for reasons examined closely in the World Bank's country growth diagnostic report and

mentioned in the present paper, the prospects are not as dreary as might appear from a dry recitation of global economic data, competitiveness surveys or the quality of FDI and the footloose nature of the international garment industry.

There are many reasons for optimism with respect to the economic future of Cambodia. As argued above it has, unlike many low-income developing countries, crafted a stable political system with relatively open entry and exit of private businesses into the market. It has successfully navigated the disruption brought about by the 1997-98 Asian Economic Crisis and negotiated entry into ASEAN at the time of its most critical challenge. It has organised a significant fiscal stimulus, while still maintaining fiscal probity, to ease the social impact of the recent economic crisis. It has earnestly sought a dialogue with the domestic and international private sector in search of the best way to diversify the economy and improve international competitiveness.

In addition (see appendix Box A.7) it is increasingly being integrated into the regional Asian economy by shifting patterns of trade and investment, and as a tourist destination. It has kept governance reform high on the policy agenda, including the eradication of corruption. Moreover, the spectacular success of many of the economies in the neighbourhood – including Viet Nam, China, India, and now Indonesia – provide a large menu of good practices which allow Cambodia to leapfrog over many other developing economies in search of a more diversified, robust, technologically advanced, and knowledge-oriented economy.

"The RGC has placed a high priority on industrial diversification as part of the essential learning from the recent economic shock."

6.4.1 Economic diversification, competitive advantage and human capital

The RGC has placed a high priority on industrial diversification as part of the essential learning from the recent economic shock. If such a programme is to be implemented, it will not only require investment in physical capital, but also much investment in human capital formation. Given that in many fields of enterprise, human capital development involves a longer gestation period than physical capital, the government faces a dilemma in terms of how to design a future industrial diversification plan; whether it should first identify industries for future expansion based on existing and projected human capital stock, or chose industrial sectors based on global economic and technological trends or changing patterns of regional integration and then find the most effective ways of meeting human capital requirements of the new set of industries.

A further dilemma is whether to fashion an industrial policy at all or to focus instead on improving the investment climate and reducing the cost of doing business to become a favoured destination for future FDI and complementary domestic investment. As argued in the first chapter of this report, the role of the state in economic management as well the degree to which it can successfully determine its own development path is still a matter of great debate. The fact is that almost every developed country as well as successful Asian economies have all used state direction of the economy to set out development visions and targeted particular industries for special economic and fiscal support. The Korean example particularly illustrates the spectacular results of the state and the private sector working together to create new patterns of comparative advantage quite different from what had been inherited.

"Whatever path is chosen, investment in human capital in different forms is likely to remain the order of the day."

In a very real sense, however, the development debate has moved on from the large state/small state argument or from the desirability of picking industrial winners or promoting inward FDI through an improvement of the investment climate. Over the last 15 years, a new development consensus has taken root, a consensus based on the critical importance of the knowledge economy in which investment in human capital is likely to yield higher growth returns than that in physical capital. The transmission channel for this result is the association between human capital and productivity, both through the ability to move up the value chain in a given industry as well as through the expansion of the supply of new knowledge products into the market. While water-tight econometric evidence of the factors causing a given pattern and rate of growth is still absent, there is an overall agreement that human capital and knowledge is going to become increasingly more important in the future. Moreover, most developed countries and many developing ones have already embarked on a sustained programme of technological upgrading and higher education reform, often in partnership with business itself. This is itself raising the stakes for those economies who fail to follow in this technological and innovation capacity building. One cannot afford to wait for a completely convincing econometric result on the impact of educational investment before preparing for this new economic world.

An interesting question in this regard is whether the advent of the knowledge economy is beginning to change the meaning of industrial diversification itself. As the Task Force on Higher Education and Society (2000) and many other similar studies point out, much depends on what one means by 'picking winners' in the choice of industrial policy. This can be done in differing degrees of specificity; from garments to textiles, from domestic tourism compared to tourism generally, from the automobile industry to vehicles, rice milling instead of rice production, processing food against growing food crops. It can also more interestingly be specified along technological or design lines in the ways in which we increasingly speak of the information industry or creative industries (such as films or even education) or even along the lines of a defining character trait as in the case of the hospitality industry. The variety of options is brought out in growth and industry literature with the argument that Cambodia should focus first on diversifying its areas of broad comparative advantage before it endeavours to promote new industries such as information technology or electronics through state support.

The advent of the knowledge economy opens up the possibility of technological leapfrogging while Cambodia's own human capital deficits encourage focus on what is immediately practical, such as retraining of retrenched workers, promoting labour migration, and importing new technologies through imported equipment and FDI. Whatever path is chosen, investment in human capital in different forms is likely to remain the order of the day. Moreover, the priority on human capital investment is likely as the Cambodian economy becomes more integrated into regional Asian economies and the larger world market.

6.4.2 Towards a Cambodian Human Capital Development Roadmap

An important conclusion of this study is the need for a comprehensive Human Capital Development Roadmap to guide the post-crisis economic development of Cambodia.

Moreover, such a Roadmap needs to be grounded not in the immediate training and vocational training needs of the Cambodian recovery, but in alternative scenarios focusing on the possibilities of industrial diversification in Cambodia as well as a more general, all-encompassing effort to build the foundations of a future knowledge economy. This does not mean that Cambodia must make a major investment effort in R&D or in the immediate development of innovation networks with the private sector. It does, however, mean a focus on all the elements that go into making a robust knowledge economy framework: from higher education within a life-long learning system and coordination of relevant knowledge institutions, to entering into lasting partnerships with international knowledge institutions and resource pools.

Specific recommendations and needed actions are captured in a policy matrix appended to this report and described in some detail above. They include both a set of long-term measures creating the institutional architecture of a knowledge economy as well as a set of short-term crisis management and employment recovery measures, some of which are already being undertaken by the RGC. In addition, they include opportunities for building international knowledge partnerships. This is probably the best that can be done in terms of the broad direction of the Human Capital Development Roadmap, given the lack of a clear industrial strategy and the country's fast evolving economic integration into ASEAN. Nevertheless, it does set the stage for thinking about human capital needs, investment and institutional structures as Cambodia searches for the best path to economic recovery in a more uncertain globalising world.

An important feature of this report is the emphasis on identifying and correcting the human capital deficits in the Government and relevant civil society sectors. The main reason for this is the greatly increased role of the state in laying the foundations of the knowledge economy: tertiary education and on-the-job training, supporting R&R and innovation networks, expanding information technology coverage and information sharing networks, identifying external knowledge partners and facilitating knowledge hubs and partnerships, and promoting public dialogue on the quality and access of public services such as education and health. It is also important to consider government/state human capital deficits because international experience suggests that the size of the state will most likely continue to expand in Cambodia. This provides early warning of impending problems and the possibility of proactive solutions using E-governance, new forms of public communication and dialogue, and knowledge sharing through public policy research and think tanks.

Another major dimension of the Human Capital Development Roadmap is the integration of human development into human capital planning and investment. Emphasis on human development is a significant way to improve the 'quality of growth' in the sense of extending the benefits of growth to a large group of regions and households. As argued in Chapter 4, promotion of human development is compatible with the needs of the knowledge economy since innovation, as distinct from formal learning, is an important product of knowledge sharing through near universal access to frontier technologies and knowledge products.

Another important contribution to raising human development indicators is to generate incentives for further learning and the acquisition of new skills both because of the establishment of universal basic skills and health thresholds as well as reducing

"In their search for a new economic diversification map, human capital and human development may well be the next frontier."

vulnerability to absolute poverty. That in turn widens household and individual choices in job searches and mobility, in shortening the waiting period for appropriate jobs in line with acquired skill sets and in lowering school drop-outs.

Finally, this report argues that there is much to be optimistic about in Cambodia's future economic development. It has navigated three decades of extraordinary hardship and uncertainty. It could have easily entered into the growing catalogue of low-income countries that have become trapped in the depressing cycle of social conflict, state failure, stagnant structure of production, inward orientation, and political instability. A Human Capital Development Roadmap needs to be acutely sensitive to the human dimensions of policy-making and the massive erosion of human resources which have taken place since the beginning of the Khmer Rouge regime to the beginning of the last decade. In their search for a new economic diversification map, human capital and human development may well be the next frontier.

REFERENCES

Aghion, P., L. Boustan, C. Hoxby and J. Venderbussche 2009. "The Causal Impact of Education on Economic Growth: Evidence from the United States". Brookings Papers on Economic Activity. Brookings Institution: Washington, DC.

Alam, S.A. 2008. "Expansion of Tourism Sector in Bangladesh". University of Chittagong, Bangladesh.

Ali, M.M. and R. Parvin. 2010. "Strategic Management of Tourism Sector in Bangladesh to Raise Gross Domestic Product: An Analysis". AIUB Bus Econ Working Paper Series. American International University-Bangladesh: Dhaka.

Altbach, P.G., L. Reisberg, L.E. Rumbley. 2009. "Trends in Global Higher Education: Tracking an Academic Revolution". Report prepared for the UNESCO 2009 World Conference on Higher Education. UNESCO: Paris.

Anderson, Lisa (ed.). 1999. *Transitions to Democracy.* Columbia University Press: New York.

Antonio, E.T., W. Conrad, B. Padojinog, C.L.S. Rodolfo, and L. Molina. "Directions for Industrial Restructuring in the Twenty-First Century: The Philippine Case". In Industrial Restructuring in East Asia: Towards the 21st Century, pp. 72-108. Masuyama, S., D. Vandenbrik, C.S. Yue (eds.). 2001. Institute of Southeast Asian Studies (ISEAS): Singapore.

Asian Development Bank (ADB). 1997. *Emerging Asia: Changes and Challenges.* ADB: Manila.

_____. 2007. "Development Effectiveness Country Brief: Cambodia". ADB: Phnom Penh.

_____. 2008. *Asian Development Outlook 2008 Update.* ADB: Manila.

_____. 2009a. *Building a Sustainable Energy Future: The Greater Mekong Sub Region.* ADB: Manila.

_____. 2009b. "Fact Sheet: Cambodia". ADB: Phnom Penh.

_____. 2009c. "Greater Mekong Subregion: Maturing and Moving Forward". ADB Learning Curves. ADB: Manila.

_____. 2009d. *Key Indicators for Asia and the Pacific 2009: Cambodia.* ADB: Manila.

_____. 2009e. "Enterprises in Asia: Fostering Dynamism in SMEs". In Key Indicators for Asia and the Pacific 2009. ADB: Manila.

_____. 2009f. "Tourism Sector in the Greater Mekong Subregion". ADB: Manila.

_____. 2009g. "Transport and Trade Facilitation in the Greater Mekong Subregion: Time to Shift Gears". ADB: Manila.

Bakht, Z., Md. Salimullah, T. Yamagata, and M. Yunus. 2008. "Competitiveness of the Knitwear Industry in "Bangladesh: Background of Its Development amid Global Competition". IDE Discussion Paper No. 169. Institute of Developing Economies, Japan External Trade Organization (IDE-JETRO): Chiba, Japan.

Bannon, I. and P. Collier. 2003. *Natural resources and violent conflict.* World Bank: Washington, DC.

Bardhan, P. "Sharing the Spoils: Group Equity, Development and Democracy". In *The Success of India's Democracy,* Kohli, A. (ed.). 2001. pp. 226-241.

Barr, N. 2005. "Financing Higher Education". *Finance and Development,* 42(2), pp. 34-37.

Bauer, A. and M. Thant (eds.). 2010. *Poverty and Sustainable Development in Asia: Impacts and Responses to the Global Economic Crisis.* ADB: Manila.

Bhattacharya, D., M. Rahman, A. Raihan. 2002. "Contribution of the RMG Sector to the Bangladesh Economy". CPD Paper 50. Centre for Policy Dialogue: Dhaka.

Booth, A.1999. "Education and Economic Development in Southeast Asia: Myth and Realities". *ASEAN Economic Bulletin,* 16(3).

Broadberry, S. and K. Wagner. 1994. "Human Capital and Productivity in Manufacturing during the Twentieth Century: Britain, Germany and the United States". CEPR Discussion Papers 1036.

Cabinet Office of the UK. 1999. "Modernising Government". A Labour government white paper.

Cambodian Federation of Employers and Business Associations (CAMFEBA). 2008. *Youth and Employment: Bridging the Gap.* CAMFEBA: Phnom Penh.

CAMFEBA and EDLink (Cambodia) Co., Ltd. 2010. *Understanding the Impact of the Global Economic Crisis on the Cambodian Garment Sector.* ILO: Phnom Penh.

Chandararot, K. and L. Dannet. 2010. "Tracking Study of Cambodian Garment Sector Workers Affected by the Global Economic Crisis: First Tracking Report". Cambodian Institute of Development Studies: Phnom Penh.

Chandararot, K., S. Sina, L. Dannet. 2009. "Rapid Assessment of the Impact of the Financial Crisis in Cambodia". ILO Asia-Pacific Working Paper Series. ILO: Phnom Penh.

Chea, S., D. Sarin, and H. Sok. Undated. "ASEAN Economic Forum: Trade in Services in Cambodia". World Bank: Washington, DC.

Chen, C.Y., P. Sok, K. Sok. 2007. "Benchmarking Potential Factors Leading to Education Quality: A Study of Cambodian Higher Education". *Quality Assurance in Education* 15(2).

Chheang, V. 2009. "Hun Sen's Talks and Cambodia's Tourism Development: The Discourse of Power". Ritsumeikan Journal of Asia Pacific Studies 25(March 20090. Ritsumeikan Center for Asia Pacific Studies (RCAPS): Beppu-City, Oita, Japan.

Chhibber, A., J. Ghosh, and T. Palanivel. 2009. *Asia Rebounds but Lasting Recovery Needs New Paradigm: A Synthesis Study Incorporating Evidence from Country Case Studies.* UNDP Regional Centre for Asia and the Pacific: Bangkok.

Chhingh, S. and S.S. Dy. 2009. "Education Reform Context and Process in Cambodia". In Hirosato Y. and Y. Kitamura (eds.). *The Political Economy of Educational Reforms and Capacity Development in Southeast Asia,* pp.113-129. Springer: New York.

Cimoli, Mario, G. Dosi and J. Stiglitz. 2009. "The Future of Industrial Policies in the New Millennium: Toward a Knowledge-Centred Development Agenda". Initiative for Policy Dialogue Working Paper Series. Initiative for Policy Dialogue: New York.

Cohen, D. and M. Soto. 2006. "Growth and Human Capital: Good Data, Good Results". PSE, OECD Development Centre and CEPR.

Collier, P. and A. Hoeffler. 1998. "On Economic Causes of Civil War". Oxford Economic Papers 50(4):563-573.

_____. 2004. "Aid, Policies and Growth in Post-Conflict Societies". *European Economic Review*, 8(5).

Collier, P., A. Hoeffler and M. Soderbom. 2006. "Post-Conflict Risks". *Journal of Peace Research*, 45(4).

Collier, P., V.L. Elliott, H. Hegre, A. Hoeffler, M. Reynal-Querol, N. Sambanis. 2003. "Breaking the Conflict Trap (Civil War and Development Policy)". World Bank Policy Research Report. World Bank: Washington, DC.

Commonwealth of Australia. 2007. *Tackling Wicked Problems: A Public Policy Perspective.* Government of Australia: Canberra.

Dahrendorf, R. 1990. *The Modern Social Conflict: An Essay on the Politics of Liberty.* University of California Press: Berkeley.

Dearden, L., C. Emmerson, C. Frayne and C. Meghir, "Can Education Subsidies Stop School Drop-outs? An Evaluation of Education Maintenance Allowances in England." http://www.aeaweb.org/annual_mtg_papers/2005/0107_0800_0801.pdf. Accessed August 2004.

Diamond, L. and M.F. Plattner (eds.). 1996. *The Global Resurgence of Democracy.* John Hopkins Press: Baltimore.

Dy, S.S. 2004. "Strategies and Policies for Basic Education in Cambodia: Historical Perspectives". *International Education Journal* 5(1), pp. 90-97.

Ericson, E. and A. Ronning. 2008. "Sustainable Tourism Development in Cambodia: A Report about Positive and Negative Effects of International Tourism". Karlstads University: Karlstads, Sweden.

Fernandez, S.M. and M. Powell. 2009. *Employment and Skills Strategies in Southeast Asia: Setting the Scene.* Organization for Economic Cooperation and Development (OECD): Paris.

Ferreira, F.H.G., D. Filmer, N. Schady. 2009. "Own and Sibling Effects of Conditional Cash Transfer Programmes: Theory and Evidence from Cambodia". World Bank Policy Research Working Paper 5001. World Bank: Washington, DC.

Filmer, D. and N. Schady. 2006. "Getting Girls into School: Evidence from a Scholarship Programme in Cambodia". World Bank Policy Research Working Paper 3910. World Bank: Washington, DC.

_____. 2009. "School Enrollment, Selection, and Test Scores". World Bank Policy Research Working Paper 4998. World Bank: Washington, DC.

Fukase, E. and W. Martin. 2001. "Free Trade Area Membership as a Stepping Stone to Development: the Case of ASEAN". Wold Bank Discussion Paper No.421. World Bank: Washington, DC.

Gereffi, G. 2002. "The International Competitiveness of Asian Economist in the Apparel Commodity Chain". ERD Working Paper Series No.5. ADB: Manila.

Ginting, E. and K. Bird. 2009. "Explaining Inflation in Cambodia". Presentation at the Third Economic Forum, Phnom Penh, 5 February 2009.

Gropello, E.D. and C. Sakellariou. 2010. "Industry and Skill Wage Premiums in East Asia". World Bank Policy Research Working Paper 5379. World Bank: Washington, DC.

Guarcello, L. and. F.C. Rosati. 2007. "Does School Quality Matter for Working Children". Working Paper. World Bank: Washington, DC.

Guimbert, S. 2010. "Cambodia 1998-2008: An Episode of Rapid Growth". World Bank Policy Research Working Paper 5271. World Bank: Washington, DC.

Hill, H. (ed). 2002. *The Economic Development of Southeast Asia Volume II.* Edward Elgar Publishing: Cheltenham.

HR, Inc. 2010. "Higher Education and Skills for the Labor Market in Cambodia". HR, Inc.: Phnom Penh.

Hughes, C. 2008. "Cambodia in 2007: Development and Dispossession". *Asian Survey* 4(1):69-74.

International Finance Corporation (IFC). 2006a. Public-Private Dialogue. "The PPD Handbook and Assessing the Impact of the Mekong Business Forums on the Business Environment". Presentation at "Creating Better Business Environments for Enterprise Development; Regional and Global Lessons for More Effective Donor Practices". 30 November 2006 at the Imperial Queen's Park Hotel, Bangkok, Thailand.

_____. 2006b. "Ready-Made Garments: Challenges in Implementing a Sector Strategy". *IFC Monitor*. IFC: Washington, DC.

_____. 2008. "The Tourism Law in Cambodia: Balancing Regulation and Facilitation of the Sector". IFC: Phnom Penh.

_____. 2009a. "The Establishment of Commercial Arbitration Services in Cambodia". Private Sector Discussion Paper No. 24. IFC: Washington, DC.

_____. 2009b. The Provincial Business Environment Scorecard in Cambodia: A Measure of Economic Governance and Regulatory Policy. IFC: Washington, DC.

International Labour Organization (ILO). 2007. "Developing National Skills Strategies". *Report of ILO/SKILLS-AP/Japan Regional Technical Meeting on Developing National Skills Strategies.* Chiba, Japan, 27-30 March 2007. ILO Regional Centre for Asia and the Pacific: Bangkok.

_____. 2008. "Labour and Social Trends in ASEAN 2008: Driving Competitiveness and Prosperity with Decent Work". ILO Regional Centre for Asia and the Pacific: Bangkok.

_____. 2009. "The Work of the ILO in Cambodia". Video message by ILO Director General Juan Somavia on ILO's 90th Anniversary, 21 April 2009.

_____. 2010a. *Labour and Social Trends in ASEAN 2010: Sustaining Recovery and Development through Decent Work.* ILO Regional Centre for Asia and the Pacific: Bangkok.

_____. 2010b. *Labour and Social Trends in Cambodia.* ILO: Phnom Penh.

International Monetary Fund (IMF). 2007. *Cambodia Country Report 2007.* IMF: Washington, DC.

_____. 2009a. *Cambodia Country Report 2008.* IMF: Washington, DC.

_____. 2009b. *Cambodia Country Report 2009.* IMF: Washington, DC.

International Telecommunications Union (ITU). 2008. *Asia-Pacific Telecommunication/ICT Indicators 2008: Broadband in Asia-Pacific Too Much Too Little?* ITU: Geneva.

Islam, M.A. and C. Deegan. 2007. "Motivations for an Organisation within a Developing Country to Report Social Responsibility Information: Evidence from Bangladesh". School of Accounting and Law, Royal Melbourne Institute of Technology.

Jalilian, H. and G. Reyes. 2010. "Cambodia Phase 2". Global Financial Crisis Discussion Series, Paper 14. ODI: London.

Kanapathy, V. 2001. "Industrial Restructuring in Malaysia: Policy Shift and the Promotion of New Sources of Growth". In *Industrial Restructuring in East Asia: Towards the 21st Century,* pp. 108-138. Masuyama, S. et al. 2001. ISEAS: Singapore.

Kanbur, R. and A.J. Venables (eds.). 2005. *Spatial Inequality and Development.* Oxford University Press: Oxford.

Khin, P. and R.R. Kato. 2010. "The Impact of the Global Economic Crisis on Cambodia". Working Paper no.A-21. Shiga University, Japan.

Khoman, S. 1995. "Thailand's Industrialization: Implications for Health, Education, Science and Technology. In *The Economic Development of Southeast Asia Volume II,* pp. 346-362. Hill, H. (ed). 2002. Edward Elgar Publishing: Cheltenham.

King, V.T. 2008. "Tourism in Asia: A Review of the Achievements and Challenges". *Sojourn: Journal of Social Issues in Southeast Asia* 23(1): pp.104-136.

Knight, J. (ed.). 2009. *Financing Access and Equity in Higher Education.* Ontario Institute for Studies in Education, University of Toronto: Toronto.

Lensink, R. and O. Morrissey. 2001. "Foreign direct investment: Flows, volatility and growth in developing countries". Credit Research paper. University of Nottingham: Nottingham, UK.

Lin, T and F.D. de Guzman. 2007. "Tourism for Pro-Poor and Sustainable Growth: Economic Analysis of Tourism Projects". Economics and Research Department, Technical Note Series No. 20. ADB: Manila.

Lynn, B.E. "The management of intellectual capital: the issues and the practice". In "The impact of human capital on economic growth: a review". 2004. Third report on vocational training research in Europe: Background report. Office for Official Publications of the European Communities: Luxembourg.

Maddock, N. Unpublished. "Private Sector Engagement and Service Provision in Sub-national Planning under Deconcentration and Decentralisation in Cambodia". Background paper written for UNDP Cambodia.

Masuyama, S., D. Vandenbrik and C.S. Yue (eds.). 2001. *Industrial Restructuring in East Asia: Towards the 21st Century.* ISEAS: Singapore.

Ministry of Commerce (MoC). 2004. "Cambodia's Garment Industry" Meeting the Challenges of the Post-Quota Environment". MoC and ADB: Phnom Penh.

Ministry of Education, Youth and Sport (MoEYS). 2005. "Cambodia Education Strategic Plan 2006-2010".

_____. 2009. "National Education Congress Summary Report on the Education, Youth, and Sport Performance for the Academic Year 2007-08 and the Academic Year 2008-2009 Goals".

_____. 2010. "Education Strategic Plan 2009-2013".

Ministry of Labour and Vocational Training (MoLVT). 2010. "Labour Migration Policy for Cambodia".

MoLVT and ILO. 2010. "National Technical Workshop on Developing Skills TVET linked to employment". MoLVT: Phnom Penh.

MoLVT (Directorate General of TVET). 2010. "Challenges and Strategic Development of TVET linked with Employment in Cambodia". Presented by Tep Oeun, Deputy Director General of TVET, Ministry of Labour and Vocational Training. March 2010. Intercontinental Hotel. Phnom Penh.

Ministry of Planning (MoP). 2010. "Achieving Cambodia's Millennium Development Goals". MoP: Phnom Penh.

Ministry of Tourism (MoT). 2009. "Tourism Statistics: Annual Report 2009". MoT: Phnom Penh.

Ministry of Tourism (MoT). 20010. "Tourism Statistics: Annual Report 2010". MoT: Phnom Penh.

Mishra, S. 2009. "Economic Inequality in Indonesia: Trends, Causes, and Policy Responses". Report prepared by Strategic Asia, commissioned by UNDP Regional Office Colombo.

Morris, E. 2007. *Promoting Employment in Cambodia: Analysis and Options.* ILO Regional Centre for Asia and the Pacific: Bangkok.

Naron, H.C. 2009. *Cambodian Economy: Charting the Course of a Brighter Future, a Survey of Progress, Problems, and Prospects.* Ministry of Economy and Finance: Phnom Penh

National Institute of Statistics (NIS). 2004. *Cambodia Socio-Economic Survey 2004.* NIS: Phnom Penh.

NIS. 2007. *Cambodia Socio-Economic Survey 2007.* NIS: Phnom Penh.

NIS. 2009. "Education 2007". NIS: Phnom Penh.

NGO Forum on Cambodia. 2009. "Analysis of 2009 Draft Budget Law: Budget Trend for Ministries of Agriculture, Rural Development, and Water Resources". NGO Forum on Cambodia: Phnom Penh.

_____. 2010. "Analysis of the Draft Law on Finance for 2010 Management: Draft National Budget Law 2010". *Cambodia Development Watch,* 7(1).

Nuruzzaman, Md. and A. Haque. 2009. "Lead time Management in the Garment Sector of Bangladesh: An Avenues for Survival and Growth". *European Journal of Scientific Research* 33(4): pp. 617-629.

O'Callaghan, B.A. 2002. "Human Capital Accumulation and Economic Growth in Asia". Paper prepared for the Workshop on Asia-Pacific Studies in Australia and Europe, Australian National University, 5-6 July 2002.

Olson, M. 2000. *Power and Prosperity: Outgrowing Communist and Capitalist Dictatorships.* Basic Books: New York.

Organization for Economic Co-operation and Development (OECD). 2009a. "Cambodia: Aid for Trade Figures". OECD: Paris.

Phoumin, H. 2008. "Human Capital and Hours Worked of Children in Cambodia: Empirical Evidence for Policy Implications". *Asian Economic Journal* 22(1):25-46.

Poapongsakorn, N. and S. Tangkitvanich. 2001. "Industrial Restructuring in Thailand: A Critical Assessment". In Masuyama, S., D. Vandenbrik and C.S. Yue. 2001. *Industrial Restructuring in East Asia: Towards the 21st Century,* pp. 73-108. ISEAS: Singapore.

Prime Minister's Strategy Unit (UK). 2004. "Strategy Survival Guide".

Rahman, M. and A. Anwar. 2006. "Bangladesh Apparels Export to the US Market: An Examination of Her Competitiveness vis-a-vis China". CPD Paper 62. Center for Policy Dialogue: Dhaka.

Rahman, S. 2006. "Is the High-Road Strategy Enough: Vulnerability of the Garment Industry in Bangladesh". *Labour and Management in Development Journal* 7(3):1-16

Rasiah, R. 2007. "Garment Exports from Asian LDEs: Can it be Sustained?" Background paper for *Least Developed Countries Report 2007: Knowledge, Technological Learning and Innovation for Development.* UNCTAD: New York.

Rodrik, D. 1997. *Has Globalization Gone Too Far?* Institute for International Economics: Washington DC.

RGC. 2008. "National TVET Development Plan-2008".

_____. 2010a. "Law on Finance for 2010 Management".

_____. 2010b. "National Strategic Development Plan Update 2009-2013".

Saktheara, M. 2009. "Concept Paper on the Strategy Framework for 2010-2015 (Strategy 2015)". Ministry of Industry, Mines, and Energy: Phnom Penh.

Sen, A. 1997. "What's the point of a development strategy?" DEDPS, 3. Suntory and Toyota International Centres for Economics and Related Disciplines., London School of Economics and Political Science, London, UK.

Sen, A. 1999. "Democracy as a Universal Value". *Journal of Democracy* 10(3):3-17.

Sen, A. 1999. *Development as Freedom.* Oxford University Press: Oxford.

Sen, A. 2008. "Global Doubts". Commencement address delivered at Harvard University. 8 June 2000.

Segerera, F.L. 2009. "Trends and Innovations of Higher Education Worldwide and in Latin America and the Caribbean". Research and Occasional Paper Series. Centre for Studies in Higher Education. University of California, Berkeley.

Son, H.H. Undated. "Human Capital and Economic Growth". Draft.

Stewart, F. 2002. "Horizontal Inequalities: A Neglected Dimension of Development". Working Paper Number 81. Centre for Research on Inequality, Human Security and Ethnicity (CRISE). Oxford University: Oxford.

Stewart, F., G. Brown and L. Mancini. 2005. "Why Horizontal Inequality Matter: Some Implications for Measurement". Working Paper No. 19. CRISE. Oxford University: Oxford.

Stiglitz, J.E. 1998. "More Instruments and Broader Goals: Moving Toward the Post-Washington Consensus". Address to the 1998 WIDER Annual Lecture, Helsinki, Finland, 7 January 1998.

Strategic Policy Making Team for the Cabinet Office of the UK. 1999. "Professional Policy Making for the twenty first century".

_____. 2001. "Better Policy Delivery and Design".

Supreme National Economic Council (SNEC). 2009. "Labor Market and Youth Employment". SNEC: Phnom Penh.

Taliercio,R.R. Undated. "From a Whole of Government to a Whole of Reform Approach? Reforming the Cambodian Civil Service". World Bank: Phnom Penh.

Tan, C. 2006. "Education reforms in Cambodia: Issues and Concerns". Educational Research for Policy and Practice 6(1):15–24.

Tang, T.C. and K.N. Wong. 2007. "Foreign Direct Investment, Merchandise and Service Trade in a Transition Economy: The Case of Cambodia". Asian Business and Economics Research Unit Discussion Paper 46. Monash University: Melbourne.

Tanzi, V. and L. Schuknecht. 2000. *Public Spending in the 20th Century: A Global Perspective.* Cambridge University Press: Cambridge.

Tanzi, V. 2004. "A Lower Tax Future? The Economic Role of the State in the 21st Century". Policy Series No. 44. Politeia: London.

Task Force on Higher Education and Society. 2000. *Higher Education in Developing Countries: Peril and Promise.* World Bank: Washington, DC.

Temple, J. 2000. "Growth effects of education and social capital in the OECD countries". ECO/WKP(2000)36. OECD: Paris.

Thomsen, L. 2007. "Accessing the Global Value Chains? The Role of Business-State Relations in the Private Clothing Industry in Vietnam". *Journal of Economic Geography,* 7(6):753-776.

Ty, M., J. Walsh and P. Anurit. 2008. "Training and Development in Social Enterprises in Cambodia" in Proceedings of the Second International Colloquium on Business and Management in conjunction with the International Conference on Business and Management Education. School of Management, Shinawtra University: Bangkok.

Um, K . 2008. "Cambodia: A Decade after the Coup". *Southeast Asian Affairs,* 1(2008):107-120.

UN Educational, Scientific and Cultural Organization (UNESCO). 2010. "TVET Policy Review Malawi". UNESCO: Paris.

_____."The Bonn Declaration on Learning for Work, Citizenship and Sustainability". International Experts Meeting on Technical and Vocational Education and Training. Bonn, Germany, 29 October 2004.

UNESCO - Centre for Technical and Vocational Education and Training (UNEVOC). 2006. Participation in *Formal Technical and Vocational Education and Training Programmes World Wide: An Initial Statistical Study.* UNESCO-UNEVOC: Bonn.

UN Development Programme (UNDP). 2006. "A SWOT Analysis of the Cambodian Economy". Discussion Paper No. 1. UNDP: Phnom Penh.

_____. 2007. *Cambodia Human Development Report 2007: Expanding Choices for Rural People.* Ministry of Planning and UNDP Cambodia: Phnom Penh.

_____. 2009. "Cambodia Country Competitiveness: Driving Economic Growth and Poverty Reduction". Discussion Paper No. 7. UNDP: Phnom Penh.

_____. 2005. *Human Development Report.* UNDP: New York.

United Nations (UN). 2009. *The Global Economic Downturn: Opportunity or Crisis.* UN in Cambodia: Phnom Penh.

_____. 2010. "Cambodia Common Country Assessment 2009". UN in Cambodia: Phnom Penh.

UN Conference on Trade and Development (UNCTAD). 2001. "Country Presentation by the Royal Government of Cambodia". Third UN Conference on the Least Developed Countries. Brussels, 14-20 May 2001.

_____. 2003. *An Investment Guide to Cambodia: Opportunities and Conditions.* UNCTAD: New York.

_____. 2009. "Multi-Year Expert Meeting on Services, Development, and Trade: The Regulatory and Institutional Dimension, Cambodia Country Report". UNCTAD: New York.

United States Agency for International Development (USAID). 2005. "Measuring Competitiveness and Labor Productivity in Cambodia's Garment Industry". Trade Developments paper.

_____. 2009. "Garment Industry Productivity Center, Cambodia: Final Report".

Walque, D.D. 2004. "The Long-Term Legacy of the Khmer Rouge Period in Cambodia". World Bank Policy Research Working Paper 3446. World Bank: Washington, DC.

_____. D.D. 2008. "Armed Conflict and Schooling: Long-term Evidence from Cambodia and Rwanda". Research Brief. World Bank: Washington, DC.

Warren, C. and R. Robertson. 2010. "Globalization, Wages, and Working Conditions: A Case Study of Cambodian Garment Factories". Honors Projects. Paper 25. Macalester College: St. Paul.

Wilson, R.A. and G. Briscoe. 2004. "The impact of education and training". In "The impact of Human capital on economic growth: a review". Third report on vocational training research in Europe: background report". Luxembourg: Office for Official Publications of the European Communities.

Woo, C. 2001. *Industrial Upgrading of Korea: Process, Prospects, and Policies. In Industrial Restructuring in East Asia: Towards the 21st Century,* pp. 256-306. Masuyama, S., D. Vandenbrik, C.S. Yue (eds.). 2001. ISEAS: Singapore.

World Bank. 1993. "The East Asian Miracle: Economic Growth and Public Policy". World Bank Policy Research Report. World Bank: Washington, DC.

_____. 1997. *East Asian Economic Miracle.* World Bank: Washington, DC.

_____. 2000. "Higher Education in Developing Countries: Perils and Promise. The Task Force on Higher Education and Society". World Bank: Washington, DC.

_____. 2005. "Corporate Responsibility and the Tourism Sector in Cambodia". World Bank: Washington, DC.

_____. 2006. *World Development Report 2006: Equity and Development.* World Bank and Oxford University Press: New York.

_____. 2007a. "Building Knowledge Economies: Advanced Strategies for Development". World Bank Development Studies. World Bank: Washington, DC.

_____. 2007b. "An East Asian Renaissance: Ideas for economic growth". World Bank: Washington, DC.

_____. 2008. "Doing Business in Cambodia 2008". World Bank: Washington, DC.

_____. 2009a. "Doing Business in Cambodia 2009". World Bank: Washington, DC.

_____. 2009b. "Sustaining Rapid Growth in a Challenging Environment: Cambodia Country Economic Memorandum". World Bank: Washington, DC.

_____. 2010a. "Do Scholarships Help Students Continue their Education?" Note Series from Evidence to Policy. World Bank: Washington, DC.

_____. 2010b. "Doing Business in Cambodia 2010". World Bank: Washington, DC.

_____. 2010c. "Providing Skills and for Equity and Growth: Preparing Cambodia's Youth for the Labor Market". World Bank: Washington, DC.

World Travel & Tourism Council (WTTC). 2010a. "World Travel and Tourism Economic Impact 2010: Cambodia". WTTC: London.

_____. 2010b. "World Travel and Tourism Economic Impact 2010: Laos". WTTC: London.

_____. 2010c. "World Travel and Tourism Economic Impact 2010: Thailand". WTTC: London.

_____. 2010d. "World Travel and Tourism Economic Impact 2010: Vietnam". WTTC: London.

Yue, C.S. 2001. "Singapore: Towards a Knowledge-based Economy". In *Industrial Restructuring in East Asia: Towards the 21st Century,* pp. 169-208. Masuyama, S., D. Vandenbrik, C.S. Yue (eds.). 2001. ISEAS: Singapore.

Zakaria, F. 2003. *The Future of Freedom: Illiberal Democracy at Home and Abroad.* W.W. Norton: New York.

Annex 1: Royal Government of Cambodia Rectangular Strategy (National Strategic Development Plan Update 2009-2013)

ROYAL GOVERNMENT OF CAMBODIA RECTANGULAR STRATEGY (November 2009) NATIONAL STRATEGIC DEVELOPMENT PLAN UPDATE 2009-2013	
Specific Objective of the Rectangular Strategy	The "Rectangular Strategy" synthesised the key elements of the "Cambodia Millennium Development Goals", the "Socio-Economic Development Plan 2001-2005" (SEDP II), the "Cambodia National Poverty Reduction Strategy 2003-2005" (NPRS), and various important policies, strategies, plans and other reform programmes, all of which had been formulated through broad consultations with all national and international stakeholders. The main aim of the "Rectangular Strategy for Growth, Employment, Equity, and Efficiency" was to promote economic growth, generate employment for Cambodian workers, ensure equity and social justice, and enhance the efficiency of the public sector through the implementation of the "Governance Action Plan" and in-depth reforms that are coordinated and consistent across all levels and sectors.
Core of the Rectangular Strategy	**Specific interventions**
	Good Governance: The core of the Rectangular Strategy needs, above all, equitable and fair public participation in all matters through democratic and peaceful means to ensure that the free will and informed choices of the majority are adopted and implemented, while at the same time protecting the rights and welfare of the minority.
	Fighting Corruption: The RGC adopted a holistic approach to fighting corruption that recognises the limitations of the existing legislative framework as well as the existing capacities of its institutions, in particular the legal and judicial system. This approach recognises that fighting corruption requires capacity to effectively manage and enforce the implementation of any anti-corruption laws that are put in place.
	Legal and Judicial Reform: The Royal Government is committed to accelerating the Legal and Judicial Reform process. The Council for Legal and Judicial Reform, established in June 2002, has a mission to "initiate and encourage the process and to follow up the implementation of legal and judicial reform policy and programmes in accordance with the objectives of the Supreme Council of State reforms". The "Legal and Judicial Reform Strategy" has seven strategic objectives which are as follows: Improvement of the protection of fundamental rights and freedoms; Modernisation of the legislative framework; Provision of better access to legal and judicial information; Enhancement of the quality of legal processes and related services; Strengthening of judicial services; Introduction of alternative dispute resolution mechanisms; and Strengthening of Legal and Judicial sector institutions to fulfil their mandates
	Public Administration Reform: Public Administration is one strategic instrument of implementation for the Rectangular Strategy. Since 2000, the Council for Administrative Reform (CAR) has implemented a series of National Programmes for Administrative Reform to systematically and gradually transform the Administration and the Civil Service into effective providers of public services and trusted development partners. The Royal Government intends to continue to vigorously pursue the implementation of the National Programme for Administrative Reform to transform the Administration and the Civil Service into effective providers of public services and trusted development partners.

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	Decentralization and De-concentration Reform Programme: to achieve broad-based and sustainable development and strengthen vibrant local economic foundations so that every citizen has an equal opportunity to participate in local development, effective environment and natural resource management, and delivery of quality public services to meet the needs of citizens and poverty reduction by focusing on vulnerable groups, indigenous minorities, women and children.
	Reform of the Royal Cambodian Armed Forces: The reform of the Royal Cambodian Armed Forces (RCAF) as one angle of the Royal Government's Rectangular Strategy demands an effective response from the RCAF in its reform to absolutely ensure peace, stability, security, sovereignty, territorial integrity and the nation's development. Based on the 'Defence White Paper' as a compass for the RCAF to successfully implement the RGC defence policy, the reform and further capacity enhancement of the armed forces are proceeding according to plan through demobilisation and establishment of more effective armed forces.
1. Enhancement of Agricultural Sector	I**mproving agricultural productivity and diversification:** The "Agriculture Sector Strategic Development Plan: 2006-2010" has identified the following seven strategic objectives for the agriculture, fisheries and forestry sectors: • Food security, productivity, and diversification. • Improve and strengthen agricultural research and extension systems. • Market access for agricultural products. • Institutional and legislative development framework. • Land reform - land market development and pro-poor land access. • Fisheries reform - sustainable access. • Forestry reform - promote sustainable conservation and management of forests, ensure better management of natural protected areas. To achieve the seven strategic objectives, the Ministry of Agriculture, Forestry and Fisheries has organised its activities in the following five programme areas: Programme I: Improving productivity and diversifying agriculture sectors. Programme II: Promote market access of agriculture products. Programme III: Strengthen institution, legal framework and human resources development. Programme IV: Management of sustainable fishery resources. Programme V: Management of sustainable forestry resources.

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	Land reform and clearing of mines: The priority is an emphasis on strengthening security of land tenure for state land, private land, and land of indigenous people's communities through systematic and sporadic land registration in order to issue land titles to general citizens, institutions, and indigenous communities that are eligible to tenure rights. To strengthen land management, the required policy and legal and regulatory framework for effective implementation of the Land Law has been developed and approved. The work so far has included: (a) Sub-decree on State Land Management, (b) Sub-decree on Procedures of the Registration of Indigenous Community Land, (c) Sub-decree on Procedures of Commune Land Use Planning, (d) Sub-decree on the Management and Use of Co-owned Buildings, (e) Circular on Illegal Occupancy of State Land, (f) Joint Prakas on State Land Identification, Classification and Mapping, (g) Joint Prakas on Mechanism for the Provision of Agricultural Extension Services to Farmers Using Social Land Concession, (h) Joint Guidelines on Strengthening of the Cadastral Commission Performance at all levels, (i) Draft Law on Providing Ownership Right of Private Unit in Co-owned Building to Foreigner (this is under request for approval from the legislative institution).
	Fisheries reform: The new Fisheries Law was promulgated in May 2006; the fisheries sector has since undergone major reforms and now has a more poverty-focused approach. Plans have been developed based on Cambodian Code of Conduct for Responsible Fishery. Since the release of the fishing lots for community use, 468 Community Fisheries have been established (433 inland, 35 coastal), of which 173 were formally legally registered in October 2008. In addition, 235 Community Fish Refuges (CFR) have also been established mostly in the remote areas far away from important water bodies.
	Forestry reform: The Reforestation/tree plantings, community's forestry establishment, forest boundary demarcation, wildlife and forest research and conservation and the National Forest Programme development were actively carried out as planned and Forestry Administration on behalf of RGC has set up and proceeded with the business of Cambodian Forest Carbon Credit through the implementation of a sample Carbon Credit project for the forestry communities in Banteay Meancheay in order to reduce the poverty of populations in rural areas and to reduce climate change and global warming. Private sector employment generation: RGC has recognised and accorded a critical place for the private sector as the main engine for investment and growth in the country. RGC's role is that of a fosterer, promoter, enabler, facilitator and regulator.
2.Further rehabilitation and construction of physical infrastructure	**Further rehabilitation and construction of transport infrastructure:** Significant progress has been made in rehabilitating and construction of physical infrastructure of the national roads network, ports and main airports to put in place a transportation network connecting all parts of the country, as well as neighbouring countries. RGC has also given a high priority to ensuring that the transportation network is properly maintained and has encouraged and promoted the participation of the private sector in the operations and maintenance of the transportation network.

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	Management of water resources and irrigation: The Ministry of Water Resources and Meteorology (MoWRAM) has made significant progress during 2006-2008 in rehabilitating and constructing irrigation infrastructure to expand capacity of the irrigation system and to provide protection from natural disasters (floods and drought) that are becoming more unpredictable because of climate change. The Law on Water Resources Management was approved and adopted in June 2007.
	Development of the energy sector: To guide the development of the energy sector, an Energy Sector Development Plan, 2005-2024 has been prepared. A Rural Electrification Master Plan focusing on the use of renewable energy has also been prepared and is being implemented. Offshore oil and gas fields are a common asset of all Cambodians, now and in the future.
	Development of ICT: Information and communication technology includes telephones and telecommunications, and mass media. With increasing competition and largely led by private operators, Cambodia has leaped ahead in the use of mobile phones.
3.Private sector development and employment generation	**Strengthening private sector and attracting investment:** The Government-Private Sector Forum, that meets every six months, as well as the work of the Steering Committee and various sub-committees have provided an important venue for meaningful cooperation and understanding between the RGC and the private sector. An additional working group for improving employer-employee relations has been set up. To reduce barriers to seeking approval from line ministries and agencies, the Royal Government has created a 'Single Window' mechanism through which investors can receive a complete set of approvals, all paper requirements to seek approval of their investment applications. The Cambodia Investment Board/Council for the Development of Cambodia has also established an 'Investor Aftercare' mechanism and an 'Investor Tracing System' to deal with challenges faced by investors and to monitor the progress in the implantation of the approved investment projects. The Ministry of Commerce has been working on streamlining the procedures for new business registration, providing market information, organising product associations, implementing 'better factories' programme, trade facilitation and promotion, and enforcement of intellectual property laws
	Creation of jobs, and ensuring improved working conditions: The Ministry of Labour and Vocational Training (MoLVT) provides employment placement services to assist job-seekers in finding employment in private sector businesses in the country and overseas. To ensure improved working conditions, the Ministry has continued its focus on strengthening the enforcement of the Labour Laws and regulations, disseminating information about these laws, conducting inspections of working conditions, hygiene and occupational safety, child labour and foreign employees at business establishments across the country.
	Promoting SMEs: The planned work ahead will focus on three main aspects, viz., (1) legal framework and adjustment – limitation of procedures of inspection and product justification for import and export without sacrificing essential quality aspects, preparation and adoption of a sub-decree on business facilitation through risk management, and widening registration through Internet; (2) financing, creation of a financial leasing company, company classification by credit points, and strengthening governance and financial reporting; and, (3) supportive actions for SMEs – creation of a new business development service, prevention of all kinds of smuggling, subsidies for SMEs for export, and adding SMEs into a global value chain. Adoption and acceleration of the 'One Village, One Product' movement is among many measures to be pursued.

Annex 2: Cambodia in the Human Capital Development Roadmap and possible interventions

Policy recommendations	*Specific objective*	*Expected results*	*Verifiable indicators*	*Sources and means of verification*	*Risks*	*Lead*	*Time*
Immediate interventions							
Crisis response and recovery	Poverty alleviation	• Decrease the number of highly vulnerable people • Reduce exposure of the most vulnerable people to shocks from the global economy • Ensure the inclusion of highly vulnerable individuals into the human capital development plan for Cambodia • Ensure the ability of highly vulnerable people to maintain their livelihoods	• Percentage of people below the absolute poverty line • Number of people formally employed • Number of people receiving government aid and participating in government support programmes • Rate of industrial development • Rate of growth and FDI	• Government reports and figures • Donor reports • Growth diagnostic reports • Unemployment and household income and expenditure surveys	• Failure to homogenously disperse government support • Failure to identify the most vulnerable populations • Private sector disengagement • Lack of long-term vision for the inclusion of highly vulnerable people in Cambodian development	Various ministries in the Government of Cambodia with support from development partners	Next 6 months

Policy recommendations	*Specific objective*	*Expected results*	*Verifiable indicators*	*Sources and means of verification*	*Risks*	*Lead*	*Time*
	Increase social safety nets and ensure safety nets have adequate funding	• Sustained income despite economic shocks or fragility of industries • Sustained income despite change in orientation of industrial sector • Reduce vulnerability of unemployed • Increase capacity of the Government to deliver social support services with sustained funding	• Percentage increase in Government funding for social safety nets and social support services • Number of beneficiaries receiving funding through social support services in times of crisis • Increased number of programmes to sustain social safety net policies	• Statistical reports on the receipt of social support systems • National development plans • Monitoring reports • Surveys of recipients	• Unequal distribution of social support services • No change in provision of social safety net systems and programmes • Decreased or lack of support from development partners	• MEF • MoP • Development partners	2012

Policy recommendations	*Specific objective*	*Expected results*	*Verifiable indicators*	*Sources and means of verification*	*Risks*	*Lead*	*Time*
	Dealing with internal migration	• Greater support systems for individuals migrating to new areas • Better cooperation between the Government and private sector for generating employment for migrants • Providing educational opportunities for migrants • Increasing the flexibility and mobility of workers to move from one sector to another based on skills and ability	• Figures on migration, employment, and economic growth • Rate of FDI inflows and withdrawals • Number of migrant-related Government support programmes • Figures on the skill and education levels of migrant workers	• Government reports • Employment reports • Census data • Migrant surveys • Monitoring reports • Development partner reports	• Unwillingness or disinterest of migrants to participate in support programmes • Inability to systematically access migrant workers for training and skill-building • Lack of cooperation from private sector	• MoLVT • Private sector • Development partners	1 year

Policy recommendations	*Specific objective*	*Expected results*	*Verifiable indicators*	*Sources and means of verification*	*Risks*	*Lead*	*Time*
	Promoting private sector development and cooperation	• Ensure the sustained inflow of FDI through a friendly investment environment • Ensure a strong production base across industries • Sustained dialogue between the private sector and the Government • Maintain the overall growth of the Cambodian economy • Address skill gaps and labour market information	• Amount of FDI inflows into Cambodia • Employment, industrial diversification, and growth figures • Rate of overall investment in the Cambodian economy • Number of workers matching job skills and competency needs	• Employment, growth, and industry reports • Industry surveys • Development partner reports • Monitoring and evaluation	• Development in select sectors without economy-wide diversification • Lack of dialogue between Government and private sector • Continued external shocks • Lack of skilled labour • Lack of interest from foreign companies in investing in Cambodia	• Various government ministries • Private sector	1 year

Policy recommendations	*Specific objective*	*Expected results*	*Verifiable indicators*	*Sources and means of verification*	*Risks*	*Lead*	*Time*
Addressing unemployment	Targeting rural and poor individuals and communities most affected by economic crises	• Decreasing unemployment among rural poor • Enhance capability of key industries to respond to external economic shocks • Provide alternative employment possibilities for rural and poor • Incorporation of this target into the national industrial diversification strategy	• Number of un- and under-employment among rural and poor • Increased provision of non-traditional work avenues • Number of groups and individuals having received formal employment training (soft and hard skills) to sustain employability • Establishment of a roadmap for this target in national industrial diversification strategy	• Employment statistics among rural and poor • Surveys • Monitoring reports of development partners and private sector • Training reports • Reviewing changes to national industrial diversification strategy	• Interventions focus more on rural or poor rather than all-encompassing strategies • Lack of coordination between government and private sector employment providers • Sustained fragility of Cambodian industries to global economic shocks	• MoEYS with support from private industry and development partners • Training providers	2012

Policy recommendations	*Specific objective*	*Expected results*	*Verifiable indicators*	*Sources and means of verification*	*Risks*	*Lead*	*Time*
	Investments in infrastructure that are employment intensive and encourage local development	• Increased and sustained employment • Increasing quality of employment and reducing under-employment • Changing mindset of employees to encourage motivation and career prospects • Invest in ways to increase employability of laid-off workers • Address the needs for industrial diversification strategies and long-term Human Capital Development Roadmap	• Percentage of people in sustained employment • Percentage of people underemployed • Percentage of employment satisfaction for individuals • Rate of promotion and/or salary increases • Rate of change in nationally un- and under-employed individuals • Number of soft-skill trainings provided by employers	• National unemployment and under-employment statistics • Employee surveys • Employer surveys • Monitoring reports by various development partners • Training reports	• Unemployment not decreasing • Increasing under-employment • Unemployment decreases only in major urban centres and is not homogenous throughout the country • Lack of sustained economic conditions encouraging employability and job creation	• MoEYS • Private sector • Development partners	End of 2011 for decreasing unemployment End of 2012 for implementation of employment sustaining activities

Policy recommendations	*Specific objective*	*Expected results*	*Verifiable indicators*	*Sources and means of verification*	*Risks*	*Lead*	*Time*
	Improve labour market information	• Individuals employed in sectors matching their skills • Improve systems for job seekers • Less un- and under-employment • Greater ability to address changes in industries and economies • Better understanding of the country's industrial diversification efforts leading to more focused skills development	• Rate of un- and under-employment • Number of individuals recruited based on education and skill-base • Number of employers having adequately skilled workers • Percentage of individuals who obtain new skills based on market information	• Employment figures • Industrial diversification figures • Government reports • Employee and employer surveys	• Unemployment not decreasing • Increasing under-employment • Unemployment decreases only in major urban centres and is not homogenous throughout the country • Lack of sustained economic conditions encouraging employability and job creation • Unequal national coverage or inability to reach all areas or regions • Lack of basic education on which to increase training • Lack of cooperation from private sector • Lack of direction on skills needed	MoLVT with private sector cooperation	1 year

Policy recommendations	*Specific objective*	*Expected results*	*Verifiable indicators*	*Sources and means of verification*	*Risks*	*Lead*	*Time*
Stopping school drop-outs	Increase in subsidies for continuing education	• Reducing the number of people out of school by improving access to school and retention rates and increasing financial incentives for families with children in school • Double the number of beneficiaries	• Number of subsidies distributed • Variation in retention and transition rate • Number of families receiving subsidies • Number of beneficiaries	• Calculating how much money has been disbursed • Reports on statistical analysis of student retention • Surveys	• Money will not be disbursed homogenously throughout the country (rural areas may be left out) • Enabling learning environment does not improve	• MoEYS	Within 1 year
	Strengthen and expand the Scholarship for the Poor Programme (lower secondary scholarships and pilot of primary scholarships)	• Improve national coverage • Expand the programme basis, extending to primary school children • Expand the equity base of beneficiaries • Reallocate public finances in favour of priority industries	• Securing sufficient financial base to sustain programme • Number of regions receiving increased funding • Number of beneficiaries receiving funding • Number of disbursements spread between beneficiaries by type (ultra poor, poor and middle income)	• Statistics of beneficiaries • Surveys through school management committees • Data collection analysis through consolidated database	• Money not disbursed homogenously • Unfair distribution of funding to beneficiaries by type	MoEYS with support from various develop-ment partners	Within 1 year

Policy recommendations	*Specific objective*	*Expected results*	*Verifiable indicators*	*Sources and means of verification*	*Risks*	*Lead*	*Time*
	Increase minimum school leaving age	• Decrease in drop-out rates • Increase in overall education rates • Increase in secondary and higher education graduation rates	• Number of students graduating with higher levels of education • Percentage transition and retention rates • Percentage of younger working population with higher levels of education	• Database statistics • Major reports on education (i.e. MDG report) • Data from MoEYS • Employer surveys • Monitoring reports on education (from various development partners)	• Higher levels of education do not match quality and skills improvement • Unequal distribution of types of graduates throughout provinces (gender and income)	MoEYS with support from development partners	2012

Policy recommendations	*Specific objective*	*Expected results*	*Verifiable indicators*	*Sources and means of verification*	*Risks*	*Lead*	*Time*
Establish system able to pool data and information on relevant education and industry statistics	Create information system of education industry and statistics	• Creation of comprehensive information system compiling all relevant and important education data and statistics • Identification of relevant performance indicators • Establishment of system which is able to fully map education and industry realities • System able to predict and comprehensively and strategically address issues and challenges	• Amount of immediately available statistics for education policy analysis and development purposes • Increasing the demand for statistical information for evidence- based decision-making, policy formation and monitoring and evaluation	• Major indicators are identified by the government in cooperation with private sector • Collection and processing of accurate data • Increased use, availability, and reliability of data • Developing and increasing human resources capable of collecting and analysing data	• Un-sustained or un-systematic collection of data and information • Unavailability of human capital possessing adequate skills for collection and analysis of data	• NIS • MoP • MoEYS • MoLVT • Support from development partners	End of 2011 for creation of system End of 2012 for gathering of data

Policy recommendations	*Specific objective*	*Expected results*	*Verifiable indicators*	*Sources and means of verification*	*Risks*	*Lead*	*Time*
	Create system able to analyse and process information collected from information database for appropriate policy formulation	• More focused policy interventions appropriate to the development priorities of Cambodia • Permanent establishment of channels serving policy development needs • Increased capability of government to provide direction to development partners (ownership)	• Number of times information systems are used by Government and development partners • Number of useful and frequently cited performance indicators • Number of policy recommendations implemented in line with the country's priorities based on data collected	• Incorporation of performance indicators into national development plans • Development partners making use of newly available data in policy formulation and report writing • Monitoring reports • Evidence-based impact of development programmes in line with data provided	• Indicators chosen for database are inadequate, or do not completely reflect all areas • Inadequate data collection for database • Lack of sustained support from development partners to build capacity	• NIS • MoP • MoEYS • MoLVT • Support from development partners	2012

Policy recommendations	*Specific objective*	*Expected results*	*Verifiable indicators*	*Sources and means of verification*	*Risks*	*Lead*	*Time*
Short-term interventions							
Policy recommendations	Specific objective	Expected results	Verifiable indicators	Sources and means of verification	Risks	Lead	Time
Filling the skills gap	Improve conventional training to increase soft and hard skills	• Address the essential work-related skills while shifting attention from basic skill training to individual learning • Training enables learning, facilitates meaningful personal development and helps people realise their personal potential	• Percentage increase in people with appropriate hard and soft skills • Percentage of people who have benefited from education in terms of career and personal development • Figures regarding persistent skill gaps in the market	• Employee and employer surveys • Data on market needs • Training reports • Monitoring and evaluation	• Lack of information to properly assess the needs of the market • Lack of skilled teachers and training personnel	• MoLVT • MoEYS • In cooperation with private sector and development partners	2014
	Identify and expand training for key areas which are in need of increased skill provision	• Individuals are better equipped with the necessary soft and hard skills to fulfill their job requirements • Labour force more able to address the needs of the market and individual employers • Developing a more capable workforce in a larger range of sectors	• Percentage of people adequately equipped with skills required for their job • Percentage increase in employers satisfied with the skills provided by their workers • Increased productivity of the workforce	• Employer and employee surveys • Monitoring and evaluation • Reports on recruitment process	• Training is not focused enough to address skill gaps • Lack of information to properly assess the needs of the market	• MoLVT • MoEYS • In cooperation with private sector and development partners	2015

Policy recommendations	*Specific objective*	*Expected results*	*Verifiable indicators*	*Sources and means of verification*	*Risks*	*Lead*	*Time*
	Ensuring adequate financial backing for new training and skill building programmes	• Sustained budget commitment to skill-building and training • Capacity building and continued development of training programmes for workers	• Percentage of budget allocated to schools, training and skill building, including TVET • Figures for sustained budget commitments and impact on service coverage and quality	• Government budget reports • Budget reports from training institutions • Public expenditure reviews	• Sustained or increased funding does not improve quality of training provided • Funding is regionally concentrated and not homogenous	MEF in cooperation with MoLVT and MoEYS	2 to 3 years

Policy recommendations	*Specific objective*	*Expected results*	*Verifiable indicators*	*Sources and means of verification*	*Risks*	*Lead*	*Time*
Short to long-term interventions							
Policy recommendations	Specific objective	Expected results	Verifiable indicators	Sources and means of verification	Risks	Lead	Time
Improve vocational training	Increasing flexibility and modularisation of training	• Providing individual learning paths • Greater decentralization and ability of TVET to react to the needs of different regions • Greater usage of TVET to upgrade skills • Greater responsiveness to changes in market demands and skill gaps • Encourage creativity, innovation, and entrepreneurship in the TVET framework	• Percentage increase of employed recent graduates who have undertaken flexible and modularised training • Percent of TVET programmes adjusted in line with local or market changes • Percentage increase in ownership, creativity and determination of TVET participants	• Surveys of recent TVET graduates • Surveys of TVET providers • Employer and employee surveys • Reports from MoEYS and MoLVT on changes in TVET programmes • Monitoring and evaluation of TVET programmes	• Lack of quality despite changes in training and programming • Coordination problems between types of training provided and skills demanded by labour market • Coordination problems between MoLVT and MoEYS	• MoLVT • MoEYS	End of 2014 but sustained over the long run (10 years at least)

Policy recommendations	*Specific objective*	*Expected results*	*Verifiable indicators*	*Sources and means of verification*	*Risks*	*Lead*	*Time*
	Increase systems of quality assurance in TVET	• Development of skills and competencies of teachers and training systems • Create forward planning tools to match skills with jobs available • Increase partnerships with relevant stakeholders for vocational training provisions	• Percentage of individuals undertaking vocational training that have acquired the necessary skills • Number of teachers trained in vocational training • Number of workshops and trainings provided • Number of partnerships with non-governmental entities for the provision of vocational training	• Employer and employee surveys • Research and surveys conducted to verify impact of TVET • Monitoring and evaluation of Government and private sector partnerships in TVET	• Increasing number of TVET programmes without increasing quality or outreach • Ability of the private sector and Government to work together • Lack of interest among individuals for participation in TVET	MoLVT and MoEYS with support from development partners and in cooperation with the private sector	2 to 3 years but sustained over the long run (10 years at least)
	Improve quality of TVET facilities and equipment	• Population better equipped with appropriate skills for labour market demands • Increased motivation of TVET participants • More targeted and effective teaching • Increased TVET participation	• Percentage increase of TVET participants • Increased number of physical supplies provided to TVET institutions • Percentage of individuals who have gained adequate skills for employment	• Surveys of TVET participants • Government/ independent providers' budgets for TVET supplies • Data on TVET participation (M&E)	• Increase in budget doesn't lead to improved quality of equipment and training • Increased budget and better facilities does not increase public interest in TVET training	• MoLVT • MoEYS • Support from development partners • Independent TVET providers	2 years but sustained on the long run (10 years at least)

Policy recommendations	*Specific objective*	*Expected results*	*Verifiable indicators*	*Sources and means of verification*	*Risks*	*Lead*	*Time*
	Opening up of pathways between TVET and higher education	• Development of tertiary TVET programmes • Increasing partnerships between interested institutions • Greater coordination between TVET and higher education in providing the skills demanded in the market	• Number of TVET service providers cooperating with higher education institutions • Percentage increase in engagement from Government to foster partnership between TVET and higher education institutions	• Reports outlining successful partnerships and the impact of these partnerships on training provided • Monitoring and evaluation of extent and impact of partnerships • Satisfaction surveys	• Institutional inertia • Unwillingness of higher education and TVET institutions to cooperate • Lack of coordination and leadership within and between MoEYS and MoLVT	MoEYS and MoLVT	2013 but sustained over the long run (10 years at least)
	Expansion of private and NGO TVET providers	• Better coverage of TVET institutions • Increase of skills base in the labour force • Increased diversity of programmes provided by TVET	• Number of TVET institutions run by independent providers • Percentage of population undertaking TVET training provided by independent sponsors • Percentage increase in access to TVET	• Government reports on TVET institutions • Monitoring and evaluation • Employer and employee surveys	• Lack of coordination between TVET providers • Lack of leadership by MoLVT for the development of independent TVET providers	• MoLVT • Independent TVET providers	2 to 3 years but sustained over the long run (10 years at least)

Policy recommendations	*Specific objective*	*Expected results*	*Verifiable indicators*	*Sources and means of verification*	*Risks*	*Lead*	*Time*
Long-term interventions							
Policy recommendations	Specific objective	Expected results	Verifiable indicators	Sources and means of verification	Risks	Lead	Time
Reform higher education	Reorganisation of management, governance, and financing of higher education institutions	• More equitable higher education system able to allow access for all members of Cambodian society • More efficient management of higher education system • Ability to react to changes in the market and appropriately reform the education system • Fill the mismatches of skills between graduates and markets	• Percentage of recent graduates who gain employment rapidly after graduation • Percentage of individuals undertaking higher education • Percentage of individuals in higher education that come from different sectors of society (equity) • Data on the management of higher education by the Government and its partners	• Monitoring and evaluation • Employee and employer surveys • Existence of Government policy for the reform and development of the higher education system • Government budgets • Official MoEYS reports • Reports of development partners on the education system	• Lack of commitment by the Government for the sustained development of the higher education system • Lack of vision from development partners	MoEYS with support from development partners	10 to 15 years

Policy recommendations	*Specific objective*	*Expected results*	*Verifiable indicators*	*Sources and means of verification*	*Risks*	*Lead*	*Time*
	Increased and sustained funding of higher education	• Increased funding for the cost of instruction, operations, investment, and facilities and equipment • Continued funding for scholarships, fellowships, and research programmes • Indirect funding supporting students and families	• Percentage of Government budget allocated to higher education • Number of recipients of scholarships/grants for higher education • Number of recipients of indirect educational funding • Percentage of poorest layers of society benefiting from Government education support systems	• Government budget expenditure review • Incorporation of this as a priority of the national development plan	• Uneven distribution of funds throughout the country • Lack of Government vision and direction leading to decreased commitment	• MoEYS • MoLVT • MEF	10 to 20 years with a commitment to sustain programme
Governmental institutional reform	Government focus shifting to more cooperative engagement in the higher education system	• Increased cooperation across various ministries • Joint initiatives in creating new programmes and systems for the education sector • Increased ability to jointly develop policy	• Number of education programmes developed by more than one ministry • Percentage of funds allocated from different ministries for education programmes (equity)	• Government budget reports • National development plan • Monitoring reports by donors • Evaluation by the education sector about the involvement of different ministries	• Competition between ministries in various areas • Overlap of mandates and competencies between the ministries • Lack of agreement by select ministries on methods for cooperation	• MoEYS • MoLVT • Other relevant and involved ministries-Leadership from the executive branch	5 to 10 years

Policy recommendations	*Specific objective*	*Expected results*	*Verifiable indicators*	*Sources and means of verification*	*Risks*	*Lead*	*Time*
	Increasing Government and private sector cooperation	• Increased Government involvement with the private sector on education • Promotion of public-private partnerships • Bringing the private sector more deeply into education reform process • Government encouragement of independent private sector initiatives	• Number of privately initiated education programmes • Number of public-private partnership initiatives • Number of consultations between the public and private sector on education reform • Number of private firms mobilised under a Government mandate • Number of investments in education and training	• Government reports including outside investments in the education sector • Private sector reports • Development partner reports • Monitoring reports	• Lack of private sector interest in investment in education and training • Lack of support from development partners in setting up mechanisms and fostering this cooperation	• MoEYS • MoLVT • Private sector • Support from development partners	5 to 10 years

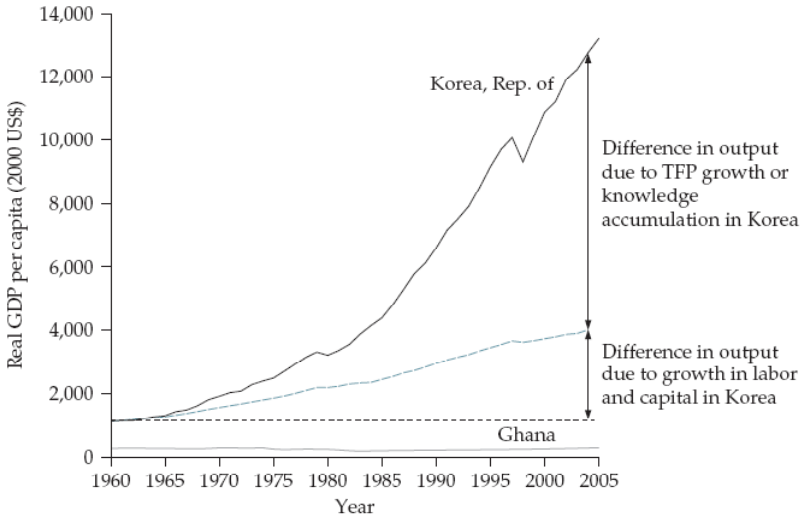
Policy recommendations	*Specific objective*	*Expected results*	*Verifiable indicators*	*Sources and means of verification*	*Risks*	*Lead*	*Time*
Life-long learning	Creation of life-long learning vision for Cambodia	• Creation of general and industry-specific long-term strategy and vision • Creation of systems to deal with future economic crises • Development of systems to encourage on-going participation in education and training among the Cambodian population • Creation of mechanisms to encourage cooperation between private sector, higher education, and the Government	• Percentage of higher education institutions involved in the development of the knowledge economy • Percentage of individuals undertaking higher education • Percentage of individuals participating in education and training during employment	• Existence of Government policy to encourage life-long learning • Sustained financial commitment of the Government and development partners • Progress reports on milestones in the development of the education system • Monitoring reports on the advancement of the higher education sector	• Lack of willingness of the Government and development partners to work towards a knowledge economy • Creation of a strong teacher training system to ensure that the education system is consistently strong and relevant	• MoEYS • MoLVT • Development partners	10 to 15 years, with a commitment to sustain the programme

Policy recommendations	*Specific objective*	*Expected results*	*Verifiable indicators*	*Sources and means of verification*	*Risks*	*Lead*	*Time*
	Increased focus on individual returns generated from learning throughout their lifetime	• Aim to refresh knowledge and upgrade skills after the end of formal education process in order to sustain employability • Meet demands of an increasingly knowledge-oriented world economy • Increase the adaptability and flexibility of the Cambodian economy to adapt to changes in the market and industries	• Percentage of individuals undertaking higher education • Percentage of individuals participating in education and training during employment • Percentage of people who become entrepreneurs and begin developing products around the knowledge economy (services)	• Employer and employee surveys • Reports on upgrading of higher education sector • Data on the development of the knowledge economy • Data on the emergence of industrial diversification as a result of knowledge and high-skill oriented products and services	• Lack of consensus between Government and development partners to move the education sector towards a knowledge-oriented economy • Sustained financing • Greater success in the completion of lower levels of education among the Cambodian workforce	• MoEYS • Development partners	8 to 10 years

Policy recommendations	*Specific objective*	*Expected results*	*Verifiable indicators*	*Sources and means of verification*	*Risks*	*Lead*	*Time*
	Increasing coordination and decreasing incompatibilities in the standards of qualification of education	Development of widely recognised and adhered to standards for all areas of education and training development Formal establishment of skills quality and training Increasing coordination between educational institutions and systems for adherence to set standards	Number of students graduating with certificates in developed qualification framework Number of institutions adhering to qualification framework Number of institutions and teachers which meet accreditation standards Percentage of employers who find their employees' skills match the qualification standards	Employer reports Government reports National statistics on graduates from and participation in qualification framework Reports from education institutions on use and acceptance of qualification framework standards	Development of qualification framework without coordination with the private sector Development of qualification framework without insurance of skills attributed to qualification Lack of sustained commitment	• MoEYS • MoLVT • Educational institutions • Private sector	

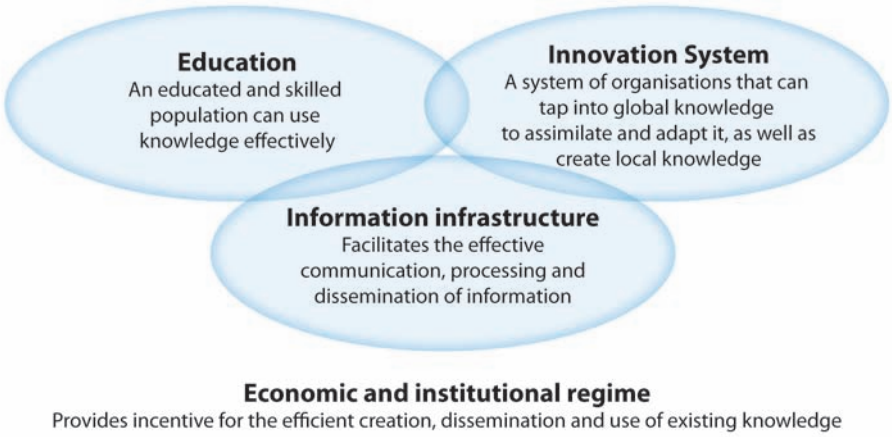
ANNEX 3: STATISTICAL APPENDIX

Figure 1 GDP Growth in Republic of Korea and Ghana over 50 Years



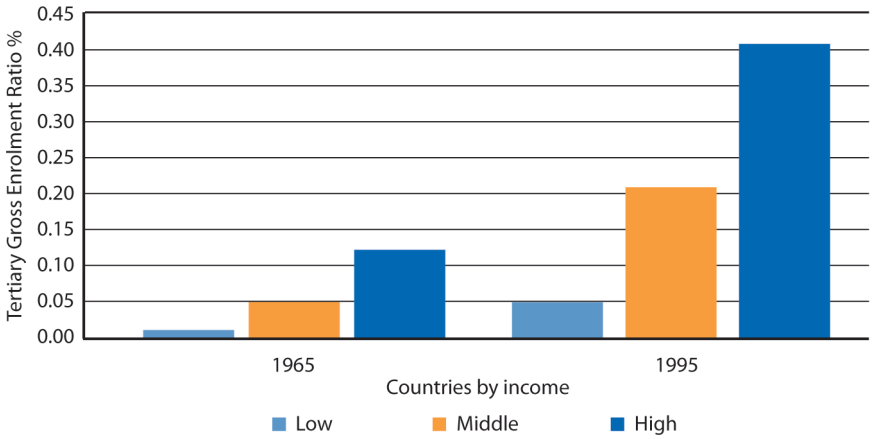
Source: World Bank Development Studies. 2007. Building Knowledge Economies: Advanced Strategies for Development. World Bank

Figure 2 The Four Interactive Pillars of Knowledge Economy



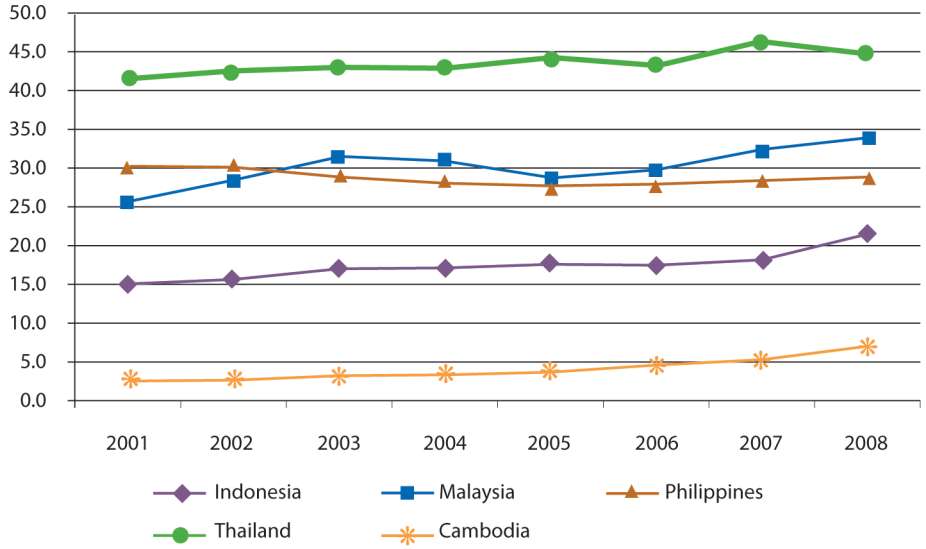
Source: World Bank Development Studies. 2007. Building Knowledge Economies: Advanced Strategies for Development. World Bank

Figure 3 Average Tertiary Gross Enrollment Ratios by National Income, 1965 and 1995



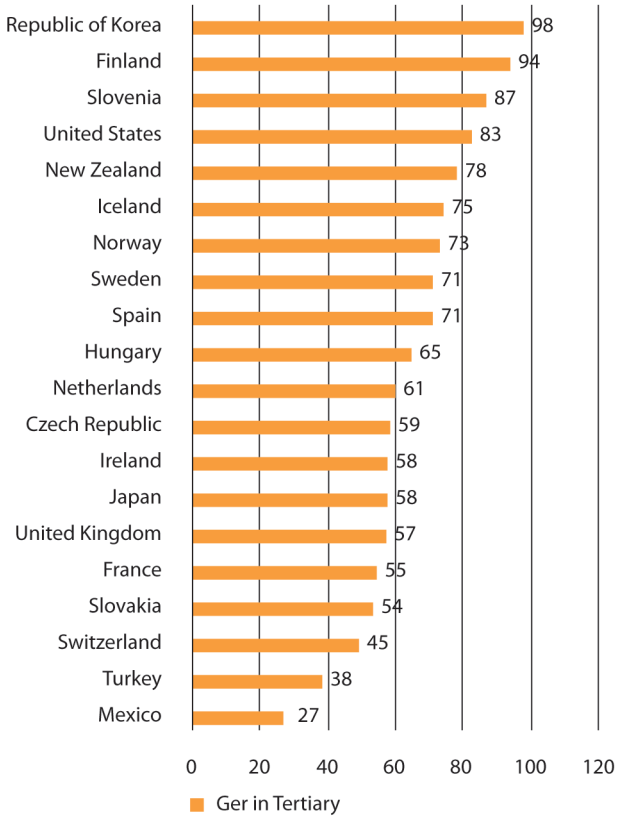
World Bank. 2000. Higher Education in Developing Countries: Perils and Promise. The Task Force on Higher Education and Society World Bank.

Figure 4 Gross Enrolment Rate across ASEAN Countries, 2001-2008



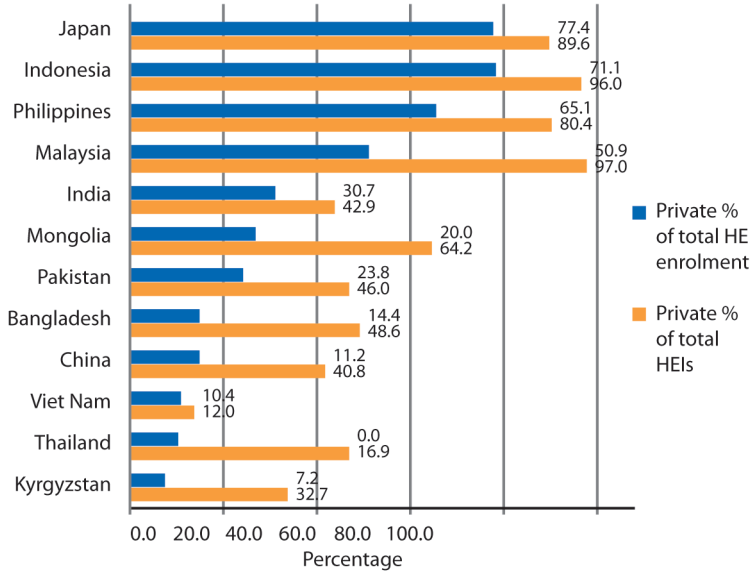
Source: UNESCO Institute for Statistics online database

Figure 5 Gross Enrolment Rate across OECD Countries, 2008



Source: UNESCO Institute for Statistics online database

Figure 6 Asia's Private Enrolment and Institutional Shares by Country (2001-2007)



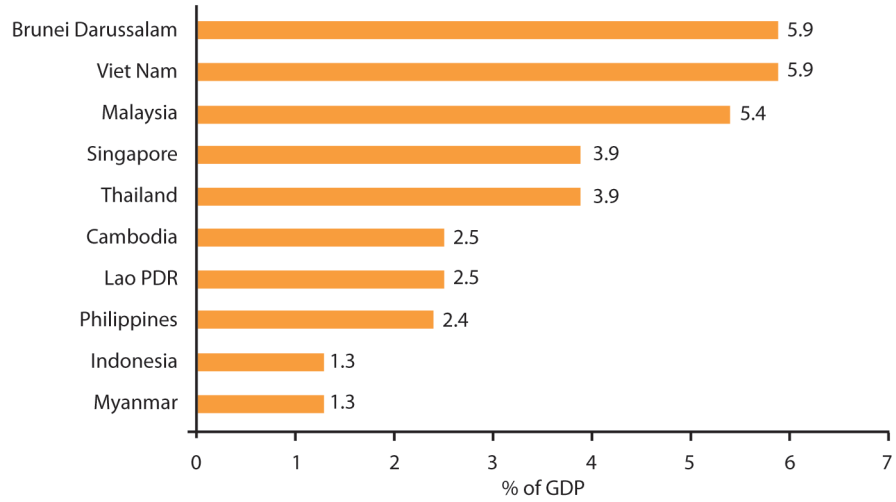
Source: UNESCO, 2009.A new dynamic: private higher education.

Table 1 Public Expenditure and Gross Enrolment Rate for selected Asian Countries

	Public expenditure per student/GDP per capita (%)		Gross enrolment ratio (GER)	
Country	**1980**	**1997**	**1985**	**2002**
China	246.2	65.3	2.9	13.2 (2001)
India	83.3	92.5	6.0	6.5 (1995)
Indonesia	25 (1985)	12.3	8.5	12.8
Thailand	59.7	25.4	18.1	31.92
Malaysia	140.6	53.6	5.8	28.26
Philippines	13.7	14.8	N/A	29.45 (1999)
Viet Nam	N/A	86.1	2.3	9.66 (2000)

Source: Indonesian Higher Education Long-term Strategy 2003-2010:10

Figure 8 Education Budget in Southeast Asian Countries (% GDP



Source: Moelidihardjo, et al, World Bank Higher Education Sector Assessment 2010:p.74

Table 2 Asia's Private and Public Higher Education Shares, 2001-2008*, **, *, ****, *****

Country	Private % of total HEI enrolment	Year	Private % of total HEIs	Year	Private % of total Univ. enrolment	Year	Private % of total Univs.	Year
Australia	3.5 (40,000/N/A)	2008	—	—	—	—	—	—
Bangladesh	14.4 (61,108/423,236)	2003-04	48.6 (54/111)	2005-06	44.2 (91,648/207,577)	2005	71.6 (53/74)	2005
Cambodia	58.0 (56,563/97,524)	2006	64.5 (40/62)	2006	—	—	69.2 (18/26)	2004
China	19.9 (4,013,010/20,210,249)	2008	28.3 (640/2,263)	2008	0	2008	0	2008
Hong Kong, China	59.0 (127,256/215,637)	2007-08	54.5 (12/22)	2007-08	59.4 (95,238/160,295)	2007-08	22.2 (2/9)	2007-08
India	30.7 (3,219,000/10,481,000)	2005-06	42.9 (7,720/17,973)	2005-06	—	—	—	—
Indonesia	71.0 (2,392,417/3,371,156)	2007	95.5 (2,766/2,897)	2007	—	—	89.0 (372/418)	2007
Japan	77.4 (2,924,022/3,776,623)	2007	89.6 (4,199/4,689)	2007	73.2 (2,071,642/2,828,635)	2007	76.7 (580/756)	2007
Kazakhstan	46.5 (347,100/747,100)	2004	71.8 (130/181)	2004	—	—	—	—
Kyrgyzstan	7.2 (15,800/218,300)	2004	32.7 (16/49)	2004	—	—	—	—
Lao PDR	32.4 (14,371/44,289)	2004-05	79.5 (31/39)	2005	—	—	—	—
Malaysia	50.9 (322,891/634,033)	2004	97.0 (559/576)	2004	7.5	2000	39.3 (11/28)	2004
Myanmar	0 (0/156)	2005	0	2005	0	2005	0	2005
Mongolia	26.0	2003	64.2	2003	8.3	2003	27.2	2003
New Zealand	9.3 (23,763/256,468)	2006	85.6 (172/201)	2007	0	2007	0	2007
Pakistan	23.8 (103,466/435,130)	2007-08	46.0 (57/124)	2007-08	—	—	42.6 (40/94)	2007-08
Philippines	65.1 (1,589,866/2,438,855)	2005-06	89.4 (1,431/1,599)	2005	—	—	—	—
South Korea	80.0 (2,565,888/3,204,036)	2006	87.0 (280/322)	2002	78.4 (1,439,297/1,836,649)	2004	84.8 (145/171)	2004
Taiwan	71.9	2004	65.8	2004	66.8	2004	64.1	2004
Thailand	9.9 (173,007/1,750,777)	2007	46.9 (70/149)	2007	16.8	2001	28.3	2003
Viet Nam	10.4 (137,760/1,319,754)	2005	12.6 (29/230)	2005	—	—	—	—

Notes: * If we sum all the enrolment data for Asia, we get a private share of 36.4 percent, excluding countries and regions where either private enrolments or total enrolments are not available.

** Although the data come from the most reliable sources found—usually official sources—criteria and inclusiveness both vary greatly across countries, so comparisons should be drawn only with caution. For example, the meaning of higher education, university, and tertiary education varies. In some databases, only accredited or at least licensed institutions are counted; in others, the figures are more broadly inclusive. There are also differences in how to count enrolments and in many other respects. Further details and caveats on international tables at http://www.albany.edu/dept/eaps/prophe/data/international.html. Attention to such matters is keener in PROPHE's in-depth data work on individual countries. See http://www.albany.edu/dept/eaps/prophe/data/national.html.

*** Georgia, Israel, Russia, and Turkey are listed in the Europe table, though they could also be listed in Asia.

**** Although some numbers for these countries are shown by sources, they are not solid enough to place in the table, particularly in regard to inconsistency about what is counted as higher education.

***** The main preparers of this table are Yingxia Cao, Daniel Levy, Prachayani Praphamontripong and Chunyue Zhang.

Source: International Databases, PROPHE, available online at http://www.albany.edu/dept/eaps/prophe/data/international.html.

Table 3 Full Time and Part Time Tertiary Teaching Staff in Selected Asian Countries 2000 and 2007

	2007		2007	
Country	Total	Part-time	Total	Part-time
Cambodia	1,664	—	3,261	830
China	523,326	—	1,326,058	303,764
India	399,023	—	—	—
Indonesia	217,403	—	265,527	—
Malaysia	29,915	—	39,809	—
Philippines	93,956	—	112,941	—
Thailand	50,639	3,738	75,398	—
Viet Nam	30,309	—	53,518	—
Singapore	—	—	14,209	6,118

Note: This table provides selected country numbers for full and part-time teaching staff for years 2000 and 2007. UNESCO defines teacher or teaching staff as persons employed full time or part time in an official capacity to guide and direct the learning experience of pupils and students, irrespective of their qualifications or delivery mechanism. This definition excludes personnel who have no active teaching duties and persons who work occasionally or in a voluntary capacity un educational institutions.
Source: Altbach,P.G. et al. 2009. Trends in Global Higher Education: Tracking an Academic Revolution. Report Prepared for the UNESCO 2009 World Conference on Higher Education. UNESCO

Table 4 Civil Service Numbers, 2003

Category	Education	Non-education	Total	%
A	6,747	12,061	18,808	11%
B	21,713	18,203	39,916	24%
C	51,601	15,961	67,562	40%
D	4,395	27,324	31,719	19%
Other a/	606	8,261	8,867	5%
Total	85,062	81,810	166,872	100%

Source: Taliercio,R.R. Year Unknown. From a Whole of Government tio a Whole of Reform Approach?: Reforming The Cambodian Civil Service

Table 5 ASEAN World Market Shares by Priority Sectors, 2004-2008

	Share of world merchandise exports (%)				
	2004	2005	2006	2007	2008
Agro-based products	8.8	7.9	8.5	10.1	10.4
Automotives	1.5	1.8	2.0	2.3	2.6
Electronics	12.3	12.3	12.2	12.7	11.8
Healthcare	1.5	1.9	2.4	2.5	2.1
Textiles and apparel	4.4	3.9	3.9	4.3	4.5
Wood-based products	6.7	6.7	7.1	7.4	7.7
Total, all products	6.2	6.6	6.3	6.2	5.5

Source: United States International Trade Commission.2010. ASEAN: Regional Trends in Economic Integration, Export Competitiveness, and Inbound Investment for Selected Industries. p.2-17

Table 6 Cambodia and Intra-regional Trade

	1998				2007				1998-2007 annual growth	
	Total exports (US$ b)	% to Asia	% regional exports	% intra-regional exports	Total exports (US$ b)	% to Asia	% regional exports	% intra-regional exports	Total exports	Intra-regional exports
Cambodia	**0.9**	**52.9**	**0.1**	**0.1**	**4.1**	**13.1**	**0.1**	**0.0**	**17.8**	**0.8**
China	183.7	49.0	13.9	15.9	1,218.1	38.0	32.4	25.0	23.4	19.9
Hong Kong, China	173.7	48.9	13.1	15.0	344.7	63.2	9.2	11.8	7.9	11.0
Indonesia	48.9	54.1	3.7	4.7	114.1	59.2	3.0	3.7	9.9	11.0
Japan	388.0	33.7	29.4	23.0	714.3	46.9	19.0	18.1	7.0	11.0
Korea (DPRK)	0.9	35.9	0.1	0.1	1.6	41.0	0.0	0.0	6.9	8.6
Korea (Rep.)	132.8	40.7	10.0	9.5	371.4	48.2	9.9	9.7	12.1	14.2
Lao PDR	0.4	48.4	0.0	0.0	1.3	63.1	0.0	0.0	15.2	18.6
Malaysia	73.5	48.3	5.6	6.3	176.2	54.6	4.7	5.2	10.2	11.7
Mongolia	0.3	47.6	0.0	0.0	1.7	74.2	0.0	0.1	19.2	25.2
Myanmar	1.1	35.2	0.1	0.1	4.8	67.0	0.1	0.2	17.2	25.9
Papua New Guinea	2.4	27.4	0.2	0.1	7.4	20.7	0.2	0.1	13.6	10.1
Philippines	29.5	40.6	2.2	2.1	50.5	60.8	1.3	1.7	6.1	11.0
Singapore	109.9	48.8	8.3	9.5	299.2	63.2	8.0	10.2	11.8	15.0
Taiwan, China	110.8	43.7	8.4	8.5	244.1	65.7	6.5	8.7	9.2	14.2
Thailand	55.4	43.2	4.2	4.2	152.5	52.9	4.1	4.4	11.9	14.4
Viet Nam	9.3	55.8	0.7	0.9	48.6	41.6	1.3	1.1	20.1	16.3
Total Asia	1.322	42.9	100.0	100.0	3.754	49.2	100.0	100.0	12.3	14.0

Source: World Bank.2009.Sustaining Rapid Growth in a Challenging Environment. p. 46

Annex 4: Boxes

Box A1 Knowledge and Growth: Empirical Evidence

Education

Recent studies of international differences in output per worker and economic growth rates have focused on the role of human capital in economic development. Indeed, most empirical, cross-country studies of long-term growth now include some measure of human capital. Barro (1991), using data for 98 countries for 1960-85 and school enrolment rates at the primary and secondary levels in 1960 as proxies for initial human capital, found that enrolment rates had statistically significant positive effects on growth of per capita real GDP. Similarly, Cohen and Soto (2001), using cross-country time-series data on educational attainment (or average years of school completed), fond that education had statistically significant positive effects on socio-economic growth. Hanushek and Kimko (2000) focused on the effects of educational quality on economic growth. Using international test scores as a proxy for the quality of educational systems, they found that educational quality had a positive effect on economic growth.

Information and communications technologies

A growing body of evidence shows that ICTs contribute to a country's overall economic growth – and not just growth in its ICT sector. A recent study by the London Business School found that, in a typical developing country, an increase of 10 mobile phones per 100 people boosts GDP by 0.6 percentage points (cited in "Calling Across the Divide", *The Economist*, 10 March 2005). Other literature suggests ICT investment and growth contributes to labour productivity through increases in the level of ICT investment and growth in the sectors that produce ICTs (Zhen-Wei Qiang, Pitt and Ayers 2004). While individual firms or sectors of the economy are not automatically made more productive and competitive by ICTs, the potential advantages are numerous. A recent report on ICTs and economic growth in transition economies indicates strongly that ICTs are a major contributor to productivity, profitability and growth at the level of the firm (InfoDev 2006).

Innovation

Various studies have shown that innovation and the generation of technical knowledge have substantial positive effects on economic growth and growth in productivity. For example, Lederman and Maloney (2003), using regressions on data panels of five-year averages between 1975 and 2000 for 53 countries, found that a 1 percentage point increase in the ratio of total R&D expenditure to GDP increased the growth rate of GDP by 0.78 percentage points. Cencera and van Pottelsberghe (2001) investigated the long-term effects of various types of R&D on multifactor productivity growth, using OECD panel data for the period 1980-98.[a] They found that business, public and foreign R&D all had statistically significant positive effects on productivity growth. Adams (1990), using numbers of academic scientific papers in various scientific fields as a proxy for the stock of knowledge, found that technical knowledge contributed significantly to the growth in total factor productivity of U.S. manufacturing industries for the period 1953-80.[b]

a. Cincera and can Pottelsberghe (2001) define public R&D as R&D performed by government and higher education sectors, and foreign R&D as business R&D performed in other 15 OECD countries.

b. Adams (1990) used worldwide annual counts of publications in nine sciences: agriculture, biology, chemistry, computer science, engineering, geology, mathematics and statistics, medicine, and physics.

Source: World Bank Development Studies. 2007. Building Knowledge Economies: Advanced Strategies for Development. World Bank. p. 27

Box A2 Key aspects of General and Vocational Education

General Education	Vocational Education
Creates 'general human capital'	Creates 'specific human capital'
Advantage: General education provides labour force with a range of knowledge with workers able to easily change tasks or even type of work	Advantage: Vocational education provides specific job-relevant skills, which can make the worker more readily suitable for a given job and would make them more productive.
More flexible, thus suitable for flexible labour force because it is portable across one's life and from job to job.	More specified, thus difficult for labour force to get jobs out of its main profession.

Source: J. B. G. 2002, "Vocational Education and Training In Asia", in Keeves, J.P. and R. Watanabe eds.) The Handbook on Educational Research in the Asia Pacific Region. Kluwer Academic Publishers.

Box A3 Australian Government Productivity Commission

Below is information on the Australian Government Productivity Commission, an independent research and advisory body undertaking studies in a range of different areas to increase the ability of the Australian government to make informed policy decisions. This is an excellent example of the kind of increased human capacity skills that Cambodia will need to tackle major policy problems in the future. By developing research and analysis capabilities on the same line as this Commission, the RGC will be able to more deftly deal with not just education reform, but many of the wicked policy problems it will face in the coming years.

The Commission's Role

The Productivity Commission is the Australian Government's independent research and advisory body on a range of economic, social and environmental issues affecting the welfare of Australians. Its role, expressed most simply, is to help governments make better policies, in the long-term interest of the Australian community. The Productivity Commission was created as an independent authority by an Act of Parliament in 1998, to replace the Industry Commission, Bureau of Industry Economics and the Economic Planning Advisory Commission.

The Commission's Four Main Output Streams

1. Public inquiries & research studies requested by the government
2. Performance monitoring & benchmarking and other services to government bodies
3. Competitive neutrality complaints
4. Supporting research & annual reporting on productivity, industry assistance and regulation
    - The Productivity Commission is an advisory body. It does not administer government programmes or exercise executive power. Its contribution hinges on the value of the independent advice and information it provides to governments, and on the educative functions of its public processes.
    - The Commission is an Australian Government agency, located within the Treasury portfolio. However its activities cover all levels of government and encompass all sectors of the economy, as well as social and environmental issues.
    - The core function of the Commission is to conduct public inquiries on key policy or regulatory issues bearing on Australia's economic performance and community wellbeing. In addition, the Commission undertakes a variety of research at the request of government and to support its annual reporting, performance monitoring and other responsibilities.
    - It has a key role in benchmarking and reviewing regulation, as well as advising on the competitive neutrality of government business activities.

The Commission is independent

The Commission operates under the powers, protection and guidance of its own legislation. Its independence is formally exercised under the Productivity Commission Act through the Chairman, Deputy Chairman and Commissioners, who are appointed by the Governor-General for fixed periods. The Productivity Commission has its own budgetary allocation and permanent staff, operating at arm's length from other government agencies. While the Government largely determines its work program, the Commission's findings and recommendations are based on its own analysis and judgments. The Commission reports formally through the Treasurer to the Australian Parliament, where its inquiry reports are tabled. However, the statutory requirement to promote public understanding of policy issues with a view of improving Australia's living standards means that its reports are also directed at the wider community.

Its processes are transparent

The Commission's advice to government, and the information on which it is based, are all open to public scrutiny. Its processes provide for extensive public input through hearings, workshops and other consultative forums, and through the release of draft reports and preliminary findings.

It adopts a community-wide perspective

The Commission is obliged under its statutory guidelines to take a broad view, encompassing the interests of the economy and community as a whole, rather than just particular industries or groups. Environmental, regional and social dimensions of its work are also carefully considered, informed by public consultation and the Commission's own research capability.

Source: Australian Government Productivity Commission: A Quick Guide to the Productivity Commission

Box A4 Civil Service Structure in Cambodia

Structure/Composition	Four categories civil servants:			
	Category A: Administrator (Leader, Decision Maker) sub-divided to 3 grades:	**Category B: Mid Level Civil Servant (Leadership Assistant) sub-divided to 3 grades:**	**Category C: Secretary or Skilled Operators (Executive) sub-divided to 3 grades:**	**Category D: Administrative Agents, sub-divided to 3 grades:**
The Cambodian Civil Service is defined as a set of civil servants, who are located in both main and regional office, as indicated under the Common Statute of Civil Servants. The State Secretariat for Civil Service (SSCS) manages all of the civil servants, excluding military, police force, and judges of the juridical order and civil servants of the legislative order.The total amount of civil servant personnel in Cambodia reached to 166,381 in 2003, of which sixty nine percent (69%) are male and thirty one percent (31%) are female (2000). The personnel within each age bracket are as follows: • 20 and below: 0.3% • 21-30: 32.5% • 31-40: 29.7% • 41-50: 27% • 51-60: 11% • 61-70: 0.03% (2000) There are two levels in the civil service structure, the Main Office and the Regional Office. Those considered as main offices have Ministries, State Secretariats, and Institutions such as Authorities, Committees, and Councils, etc. Those considered as regional offices include the provincial and municipal department and district office. There are 25 ministries and two state secretariats in the Royal Government. There are prescribed and designated uniforms for civil servants. With the exception of the Ministry of Royal Palace, Ministry of Foreign Affair and International Cooperation, Ministry of National Defense, Ministry of Justice, Council of Ministers, Ministry of Interior, State Secretariat for Civil Services and State Secretariat for Civil Aviation, each ministry has its own provincial and municipal department, with each department having its own districts.	**Grade A1:** Chief Administrator (has 6 steps A1-6 to A1-1) Position: Secretary General, Deputy Secretary General, Director General, General Inspector, Provincial and Municipal Governor.	**Grade B1:** Chief Mid Level Civil Servant (has 6 steps from B1-6 to B1-3) Position: Central Head Office, Vice Chief of Local Department, Deputy Chief of District.	**Grade C1:** Chief Secretary (has 6 steps from C1-6 to C1-1) Position: Deputy Head Office of District.	**Grade D1: Chief** Administration Agent (has 6 steps from D1-6 to D1-1) Position: High Skill Worker.
	Grade A2: Principle administrator (has 10 steps from A2-10 to A2-1) Position: Deputy Director General, Deputy General Inspector, Director of Central Department Provincial and Municipal Vice Governor, Chief of District, Inspector.	**Grade B2:** Principal Mid-Level Civil Servant (has 30 steps from B2-10 to B2-1) Position: Central Deputy Head Office, Provincial Head Office.	**Grade C2:** Principal Secretary (has 10 steps from C2-10 to C2-1)Position: Communal Clerk.	**Grade D2:** Principal Administrative Agent (has 10 steps from D2-10 to D2-1) Position: Mid-Skill Worker.
	Grade A3: Administrator (has 14 steps from A3-14 to A3-1) Position: Deputy Director of Central Department, Chief of Local Department, Bachelor, Master and Doctor without position.	**Grade B3:** Mid Level Civil Servant (has 14 steps from B3-14 to B3-1) Position: Provincial Deputy Head Office, District Head Office.	**Grade C3:** Secretary (has 14 steps from C3-14 to C3-1)	**Grade D3:** Administrative Agent (has 14 steps from D3-14 to D3-1) Position: Low Skill Worker.

Source: UNITED NATIONS PUBLIC ADMINISTRATION NETWORK – NEW YORK EASTERN REGIONAL ORGANIZATION FOR PUBLIC ADMINISTRATION.2004. Civil Service System in the ASEAN Region: A Comparative Perspective.

Box A5 Civil Service Requirement for Employment Cambodia

1. There are basic qualifications for employment in Government that are common to all positions.

These include:
a. Must be a Cambodian citizen;
b. Must be at least 18 years but not more than 25 year old. However, exceptions shall be made for:

- Candidates with a diploma of higher education, in which case the age limit shall be: candidates having studied a year or more of higher education without having obtained a final diploma, in which case the age limit of 25 years shall be pushed back to a length of time equal to their studies without exceeding the age limit of 30 years;
- Candidates having effectively accomplished their service in the military, in which case the age limit shall be pushed back to a length of time equal to their service in the army; and
- The ability of the Royal Government to lift, in case of necessity, by Anukret (Sub-decree) all restrictions regarding a candidate's age in order to satisfy the needs found to be priorities and in the national interest;

c. Must not be deprived of his/her civil rights, civic and political;
d. Must not have been condemned for a crime or attempted offence of good moral conduct, honor or integrity;
e. Must satisfy the condition of physical aptitude for the exercise of the function as required by guidelines and applicable regulations;
f. Candidates belonging to ethnic minorities, coming from remote regions, as well as women, may benefit from facilities or prioritised measures of recruitment; and
g. Must satisfy the aptitude conditions required by the particular statue governing his/her body.

2. The unique requirements for specific positions are:

Category A: It requires at least Bachelor Degree;
Category B: It requires at least Higher Vocational Certificate (High School Education Diploma+ 2)
Category C: It requires at least High School Education Diploma.
Category D: No Degree requirement for this category.

Through the proposal of the ministry concerned, the SSCS coordinates and makes an annual personnel plan by maintaining the quantity of personnel in order to request the Royal Government for its decision. SSCS then informs the ministry concerned to prepare the competitive examination.

3. The following is the standard recruitment procedure:
Before the examination date, a Board Recruitment Commission is created in the presence of the representatives of SSCS. A written examination will be conducted covering the following areas:
a. Main Subject (Law, IT, Finance, Management...)
b. General Knowledge
c. Language (English)

Source: UNITED NATIONS PUBLIC ADMINISTRATION NETWORK – NEW YORK EASTERN REGIONAL ORGANIZATION FOR PUBLIC ADMINISTRATION.2004. Civil Service System in the ASEAN Region: A Comparative Perspective.

Box A6 Harnessing ASEAN Partnerships

The global financial crisis which started in 2007 affected practically every country. Some could sustain the economic shock and deal with it astutely, but there were also those which could not. Cambodia was part of the latter group. Given this, a way needs to be found to help it re-establish its economic development plans which suffered significantly in the crisis.

One of the ways out of this quagmire is to foster greater cooperation and develop closer and more proactive ties with the member countries of ASEAN. It must be remembered that Cambodia has come a long way from its turbulent Khmer Rouge years and a sort of political normality and economic advancement had begun to exist. It is therefore imperative that every chance and opportunity must be afforded to help and support a neighbor and a member country of the ASEAN region. Lessons from the EU market integration, which has been very successful, tells us that regional cooperation and integration within the ASEAN region could yield many dividends.

The ASEAN member countries could benefit a great deal. Some advantages would include a freer flow of goods, services and investments, increased competition, better utilisation of comparative advantage for efficient usage of resources, reduced trade tariff for intraregional trade, equitable economic development and an enlarged market base. On trade effect, Rosabel B. Guerrero states: "in which economic welfare increases as resources previously engaged in costly domestic production are efficiently reallocated to the direction of a country's comparative advantage and by that, will generate greater opportunities".[13] An obvious point to make: the regional market is also viewed and treated as a trade opportunity by other countries outside the ASEAN region.

It is also relevant to note the role of ASEAN regarding the goal of free movement of people by 2015 and the more recent focus of ASEAN members on human resources and skill development across the region. During the ASEAN Leaders' Statement on Human Resources and Skills Development for Economic Recovery and Sustainable Growth in October 2010, leaders affirmed the need to:

- Strengthen cooperation on education to achieve an ASEAN Caring and Sharing Community, which recognises the role of education for economic development in developing national skills frameworks as an incremental step towards an ASEAN skills recognition framework;
- Recognise the importance of human resources and skills development in raising productivity and accelerating economic recovery and sustainable growth in the light of the recent global economic crisis;
- Recognise that the major human resources challenges that ASEAN has been facing in sustaining economic recovery and growth will include enhancing workforce competitiveness, improving workforce skills, rebuilding employment and accelerating productivity

All these objectives are leading to the goals of: (i) fostering technical cooperation and capacity-building activities in ASEAN, (ii) promoting tripartite and public-private sector cooperation, (iii) enhancing the quality and skills of workers in all ASEAN Member States and (iv) promoting lifelong learning

Several agreements that have moved the region closer into its 2015 ASEAN Economic Community vision:

1. The ASEAN+6 can import and export almost all goods across their borders, while more than 99 percent of tariff lines have been reduced to 0-5 percent for Cambodia along with Lao PDR, Myanmar, and Vietnam
2. The ASEAN-China Free Trade Area was also fully implemented in which tariffs on at least 90 percent of ASEAN-China bilateral trade have been eliminated
3. Under the ASEAN–Korea Free Trade Area 90 percent of products on ASEAN-Korea bilateral trade have also been eliminated
4. The ASEAN-Australia-New Zealand Free Trade Area (AANZFTA) came into being
5. ASEAN-India Trade in Goods Agreement came into force which will set into motion the creation of an ASEAN-India Free Trade Area

Challenges to achieving full economic integration:

1. Due to the non-invasive structure of the ASEAN region, implementation of trade agreements plus other integrated projects are difficult to coordinate.
2. Limited integration and many trans-border obstacles among ASEAN member countries make it difficult to increase investor confidence.
3. ASEAN markets are still small and fragmented in comparison with the Chinese market, the EU market and others.

Economic values for Cambodia as a member region of ASEAN:

1. The ASEAN Integration System of Preference (AISP), the Special Tariff (SPT) with China, the Greater System of Preference (GS) with Japan and the republic of Korea.
2. ASEAN has implemented joint activities with Russia in the areas of science and technology (S&T), tourism, SMEs and education.
3. ASEAN is in the middle of an emerging regional architecture in East Asia: the ASEAN+3 and the East Asia Summit (EAS) processes are looking at the possibility of integrating their respective participating countries for an FTA, i.e. East Asia Free Trade Area (EAFTA) for the ASEAN+3 and the Comprehensive Economic Partnership for East Asia (CEPEA) for the EAS participating countries.[14]
4. Given that trade is a key driver for economic growth, the expansion of intra-regional trade driven by ASEAN's commitment to establish the ASEAN Community by 2015 provides an important opportunity for Member Countries to benefit from regional integration and strengthen resilience against future external shocks (ILO, 2010).

The Royal Cambodian government has stipulated several measures to accelerate the country's integration with the regional market by committing to:

1. Engage in discussions/negotiations to become a member of Asia-Pacific Economic Cooperation (APEC) forum, and continue to participate in building the ASEAN community and network of East Asia.
2. Actively promote the creation of ASEAN + China, ASEAN + Korea, ASEAN + Australia-New Zealand as well as establishing ASEAN + China and ASEAN + Korea Centres.
3. Actively participate in implementing the Great Mekong Sub-Region, Ayeyawada-Chao Phraya Mekong Economic Cooperation Strategy (ACMECS) focusing on the cross-border investment development, cross-border transportation, and investment along the borders.
4. Actively participate in the development of the economic corridor through the Economic Corridors Forum of the Great Mekong Sub-Region with the active involvement of Provincial Governors Forum, and ensure the rehabilitation and construction of transport infrastructure needed to support the development of the Greater Mekong Sub-region economic corridors to promote the development of the remote areas.

Source: UNITED NATIONS PUBLIC ADMINISTRATION NETWORK – NEW YORK EASTERN REGIONAL ORGANIZATION FOR PUBLIC ADMINISTRATION.2004. Civil Service System in the ASEAN Region: A Comparative Perspective.

Box A7	Timeline of important milestone in ASEAN Economic Integration	
1967	Bangkok Declaration	ASEAN founded by Indonesia, Malaysia, Philippines, Singapore and Thailand.
1977	Agreement on ASEAN preferential trading arrangements	One of the earliest ASEAN agreements to carry some local obligation. Members agreed to apply preferential tariff rates based on a margin of preference over MFN rates on basic commodities, products of ASEAN industrial projects and others of interest.
1984	Brunei joins ASEAN	
1987	Enhanced preferential trading arrangements	Improved the preferential trading arrangements by, e.g., reducing exclusion lists, further reducing tariffs, and relaxing ASEAN content requirements in the rules of origin.
1987	Investment Guarantee Agreement (IGA)	The IGA provides investment protections for FDI between ASEAN member countries, including compensation in case of expropriation; guarantees of an investor's right to repatriate earnings, subject to local laws; and provision for arbitration between parties in case of disputes.
1 January 1993	AFTA implemented	Members agreed to establish the ASEAN Free Trade Area (AFTA) and a Common Effective Preferential Tariff (CEPT) scheme, where 99 percent of product categories will have intra-ASEAN tariff rates reduced to 0-5 percent.
1995	Viet Nam joins ASEAN	
1995	ASEAN Framework agreement on Services (AFAS)	Based closely on the General Agreement on Trade in Services (GATS). Aims to eliminate restrictions on trade in services, enhance intra-ASEAN services cooperation, and liberalise services trade based on the GATS-plus principle. Mandates successive negotiations to progressively liberalise services trade.
1996	ASEAN Industrial Cooperation Scheme (AICO)	Replaced earlier ASEAN industry project cooperation programmes. Promotes joint manufacturing industrial activities between ASEAN-based companies. AICO products enjoy preferential tariff rates of 0-5 percent.
1997	Myanmar and Lao PDR join ASEAN	
1997	ASEAN Vision 2020	Laid out a vision of ASEAN in 2020, including closer economic integration and a commitment to create "a stable, prosperous and highly competitive ASEAN Economic Region in which there is a free flow of goods, services and investments, a freer flow of capital, equitable economic development and reduced poverty and socio-economic disparities".
1998	Framework Agreement on the ASEAN Investment Area (AIA)	Aims to ensure a free flow of investment (in manufacturing, fisheries, forestry, mining, agriculture and services) by 2020. Reservations made by members are scheduled to be eliminated in 2015 for ASEAN investors and 2020 for non-ASEAN investors. The ASEAN-6 countries (original ASEAN members and Brunei) agreed to accelerate this process by eliminating reservations in manufacturing for ASEAN investors by 2003 and for all investors by 2010.
1998	Hanoi Plan of Action	First of a series of action plans to help implement the ASEAN Vision 2020. It lays out steps to promote economic integration over the period 1999-2004.
1999	Cambodia joins ASEAN	
2000	Initiative on ASEAN Integration (IAI)	Goal is to address the development gaps between member states through soft infrastructure projects (such as training, technical studies, and capacity building) and physical transport and communication infrastructure projects, and to mobilise funding from international financial institutions and developed countries for support. About 258 projects have been completed to date.
October 2003	Declaration of ASEAN Concord II: ASEAN Community by 2020 (9th ASEAN Summit or Bali Concord II)	Agreed to establish an ASEAN Community by 2020 that consists of three pillars or communities based on political and security cooperation, economic cooperation, and socio-cultural cooperation. The ASEAN Economic Community (AEC) is the end goal of the economic integration process described in the ASEAN vision. Eleven priority sectors are identified for accelerated integration.
November 2004	Vientiane Action Plan	Successor to the Hanoi Plan of Action to help realise the ASEAN Vision and the ASEAN Community. It covers the period 2004-2010.
November 2004	ASEAN Framework Agreement for the Integration of Priority Sectors	Includes roadmaps for each priority sector that identify measures to be implemented and timelines for their implementation.
January 2007	ASEAN Community by 2015	Leaders at the 12th ASEAN Summit agreed to accelerate the establishment of an ASEAN Community. The target date is now 2015.

Box A8	Timeline of important milestone in ASEAN Economic Integration (cont.)	
November 2007	ASEAN Economic Community Blueprint	Leaders at the 13th ASEAN Summit adopted the ASEAN Economic Blueprint, which provides the framework for achieving the AEC by 2015.
15 December 2008	ASEAN Charter implemented	Established the legal and institutional framework for ASEAN
26 February 2009	ASEAN Comprehensive Investment Agreement (ACIA) signed	ACIA adds to investor protections under the AIA in several ways: includes comprehensive investment liberalisation and protection provisions, including prohibition of performance requirements; includes an investor-state dispute settlement process; and extends benefits to foreign-owned, ASEAN-based investors. The ACIA Framework is a 'negative list' framework: each member state also compiles a list of reservations, or exclusions, to the agreement.
March 2009	Roadmap for the ASEAN Community, 2009-2015	Consists of the Economic Community Blueprint (approved in 2007), the Political-Security Community Blueprint, the Socio-Cultural Community Blueprint, and the second IAI work plan. Replaces the Vientiane Action Programme.
17 May 2010	ASEAN Trade in Goods Agreement (ATIGA) enters into force	ATIGA builds on existing initiatives related to trade in goods (e.g. CEPT-AFTA, non-tariff measures, customs, ASEAN single window, mutual recognition agreements, e-ASEAN, integration of priority sectors, etc.). Goal is to achieve the free flow of goods to establish a single market and production base, making it possible to realise the AEC by 2015.

Source: USITC. ASEAN Regional Trends in Economic Integration, Export, Competitiveness, and Inbound Investment for Selected Industry. 2010:2.2-2.3.

ENDNOTES

1. The report continues as follows: "This poses a serious challenge to the developing world. Since the 1980s many national governments and international donors have assigned higher education a relatively low priority. Narrow – and in our view misleading – economic analysis has contributed to the view that public investment in universities and colleges brings meagre returns compared to investment in primary and secondary schools, and that higher education magnifies income inequality…As a result higher education systems in developing countries are in great strain. They are chronically underfunded but face escalating demand – approximately half of today's higher education students live in the developing world. Faculty are often under qualified, lack motivation and are poorly rewarded. Students are poorly taught and curricula underdeveloped. Developed countries meanwhile are constantly raising the stakes. Quite simply, many developing countries will need to work hard just to maintain their position, let alone catch up." (ibid, p. 10).

2. See Figure 1in Appendix.

3. World Bank 2007a, p. 13, table 1.2.

4. For an interesting debate on the issue between the World Bank's Chief Economist Justin Lin and Cambridge economist Ha-Joon Chang, see Development Policy Review (2009),27(5) "Should Industrial Policy in Developing Countries Conform to Comparative Advantage or Defy it? A Debate between Justin Lin and Ha-Joon Chang". Development Policy Review (2009),27(5):483-502.

5. For an excellent review of the impact of human capital on economic growth, see Wilson and Briscoe 2004. For a discussion in the context of the US education system, see Aghion et al 2009. L. Boustan, C. Hoxby and J. Venderbussche 2009. "The Causal Impact of Education on Economic Growth: Evidence from the United States". Apart from the analyses of the impact of human capital and education on growth in both Wilson and Briscoe and in Aghion et al, they both highlight well known problems in measuring human capital both within and across countries. These data problems, as well as the problem of determining quality equivalence across countries and regions, make it difficult to derive reliable predictions on the impact of investment in education on economic growth. At the same time, there is broad agreement on the fact that an increase in human capital does raise labour productivity, employee income and social mobility.

6. Mining and utilities is the third largest source of employment generation, but is not mentioned in the study produced by the World Bank (2010e2010c) and has not been made available for this graph.

7. As part of a strategy to diversify reliance on small and medium enterprises, and reduce poverty, the government of Cambodia established an SME Development Strategic Framework, adopted in 2005. This framework (Strategy 2015) lays out consistent strategic directions for planning and executing targeted interventions to promote the development of the SME sector.

8. This section is limited due to the scarcity of data and information available.

9. When a county begins developing economically, its income inequality worsens. But after a few decades, when the rich begin investing more in the economy and wealth begin to trickle down, income equalises and people are more wealthy then they would otherwise have been.

10. For more details on the EU-Cambodia relationships, see the EU website: http://ec.europa.eu/delegations/cambodia/eu_cambodia/index_en.htm.

11. Many different types of training can be provided: on the job training, informal training, classroom training, internal training courses, external training, on the job coaching, life coaching, mentoring, training assignments and tasks, skill training, product training, technical training, behavioural training, attitude training and development, accredited training and learning, distance learning, vocational training – which can all be developed according to individual training needs, sectors, people's profiles and people's orientation. Ideas relating to training methods to foster this type of self development around training and learning include: assessing and agreeing on training needs by conducting some training needs analysis; creating training or development specifications, breaking down training and learning into the most important elements; considering learning styles and personality, which could affect what type of training an individual will find easiest and most effective; planning training and evaluation, by considering the evaluation training effectiveness, before and after measurements; and designing materials and methods and delivering training, by considering modern and innovative methods.

12. As was the case of several former Tiger Economies during the Asian Financial Crisis, Indonesia was the worst affected in this regard since political implosion accompanied economic collapse.

13. For more details on regional integration see Rosabel B. Guerrero.Regional integration: the ASEAN vision in 2020.

14. As consolidation of ASEAN's Plus One FTAs begins, priority is being given to rules of origin, tariff nomenclature, customs procedures and economic cooperation. ASEAN Annual Report 2009-2010: Bridging Markets, Connecting People. p. 25.

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